

**U.S. Department of Energy
Savannah River Operations Office
and
Savannah River Remediation, LLC**

**Authorization Agreement (AA)
for the
Concentration, Storage, and Transfer Facilities (CSTF)**

Revision Log

<u>Rev</u>	<u>Date</u>	<u>Purpose</u>
0	6/2009	The initial issuance of this CST AA incorporates the former CST AA (WSRC-RP-2001-00154, Rev. 15) and reflects the new contract agreement between Savannah River Remediation, LLC and DOE.
1	9/2009	To update the revision number of the DOE Safety Evaluation Report, to include the Wastewater Treatment Facility permit for the 299-H Facility, to update the current staging document in the RWMB, to add an Environmental Impact Statement Supplement Analysis for Salt Processing Alternatives, and to update the S/RID number.
2	5/2010	Updated the Safeguards and Security Basis document number in Section 3.0, added the Wastewater Treatment Facility Permit for the Saltstone Production Facility in Section 4.0, and the Waste Incidental to Reprocessing Citation Determination document number in the CSTF RWMB.
3	8/2011	Revised Section 2.A to allow future transfers of aluminum laden supernate into Tanks 11 and 8. Revised Section 2.C to update the closure documents. Deleted RWMB (Attachment 2) from AA as it has been made a stand-alone document.
4	2/2014	Revised Section 2.A to allow transfers of DWPF recycle to Tank 13. Revised Section 3.B to update DOE Safety Evaluation Report. Revised Section 5 to update President of Savannah River Remediation, LLC.
5	4/2014	Revised Section 2.A to allow transfers from Tank 42 to Tank 13.
6	6/2014	Revised Section 3.B to update DOE Safety Evaluation Report.
7	10/2018	Revised 2.A to allow transfers of aluminum leachate containing non-appreciable amounts of sludge solids.
8	12/2018	Revised to allow operation of Tank Closure Cesium Removal.

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Section 1 – Facility Name, Function, and Location

This Authorization Agreement (AA) applies to the Concentration, Storage, and Transfer Facilities (CSTF), a group of facilities and support services designed to receive, store, process and safely manage radioactive wastes from production and research facilities at SRS. The facilities include the F-Tank Farm (FTF), the H-Tank Farm (HTF), and the Waste Management Maintenance Facility (Building 299-H).

The FTF facility includes waste storage tanks, pump tanks, evaporators, and numerous associated transfer structures/components (e.g., diversion boxes) located in FTF, as well as the F/H Inter-Area Transfer Line. The HTF facility consists of waste storage tanks, pump tanks, evaporators, Modular CSSX Unit (MCU), Actinide Removal Process (ARP), Tank Closure Cesium Removal (TCCR), and numerous associated transfer structures/components (e.g., diversion boxes) located in HTF as well as the H/Z Inter-Area Transfer Line. The Waste Management Maintenance Facility includes Building 299-H.

The CSTF are located within F-Area and H-Area of the Savannah River Site (SRS) near Aiken, South Carolina. The facilities, major functions, subsystems, and support facilities are described in the CSTF Safety Basis (SB) documents, hereinafter referred to collectively as the CSTF SB. The SB for the CSTF is defined in Manual WSRC-IM-94-10 and listed in Attachment 1. This AA does not apply to the Effluent Treatment Facility.

Section 2 – Authorized Scope of Operations

The scope of operational activities being authorized by this AA is as described in: (a) Contract Number DE-AC09-09SR22505, (b) the CSTF SB, as defined in Manual WSRC-IM-94-10 and listed in Attachment 1, and (c) the Environmental Impact Statements (DOE/EIS-0082-S, DOE/EIS-0082-S2, DOE/EIS-0082-S2-SA-01, DOE/EIS-0217, and DOE/EIS-0303) and the associated Records of Decision except with the following restrictions:

- A. Waste transfers into Type I and II Tanks are prohibited unless the transfers are used to retrieve the waste contained in Type I, II, or IV Tanks, except as follows. Transfer of aluminum laden supernate (including transfers categorized as sludge transfers that are demonstrated to contain non-appreciable amounts of entrained sludge solids, such as the transfer described in X-ESR-H-00965), from sludge batch preparation, into

Tank 241-908F and Tank 241-911H is allowed. Transfer of DWPF recycle into Tank 241-913H is allowed. Transfer of supernate from Tank 241-942H to Tank 241-913H is allowed.

- B. Storage of In-Tank Precipitation process precipitate and supernate in Tank 241-949H is only permitted in the event of a leak in the primary containment of Tank 241-948H and following DOE approval of a Response Plan.
- C. Tank closure activities may be performed in accordance with the CSTF SB listed in Attachment 1 and applicable Industrial Wastewater Closure Plans and Tank Specific Closure Modules.

Section 3 – Bases

The Department of Energy (DOE) has determined:

- A. Through a series of comprehensive reviews under the Integrated Performance Assurance Program, the facility will be operated in compliance with the Standards/Requirements Identification Document (S/RID) SRR-RP-2009-00558, as amended, and this AA as specified in Contract Number DE-AC09-09SR22505, between DOE and Savannah River Remediation (SRR), LLC. The S/RID has a separate review and approval process and may be amended without need to revise and re-approve this AA.
- B. The facility hazards have been adequately analyzed and appropriate operational controls have been employed as properly documented by the CSTF SB listed in Attachment 1 to this AA. The basis for this determination is documented in the DOE Safety Evaluation Report (SER) below, as supplemented. Each safety document individually has a separate review and approval process; thus each may be amended without need to revise and re-approve this AA. This AA serves to document the complete set of DOE-SRS approved safety documents tailored for use by the facility and specifically approved by the DOE as the basis for safe operations. The latest revisions to the SRR and DOE approved SB documents for the CSTF will be identified in Manual WSRC-IM-94-10, as amended.
 - Safety Evaluation Report, Revision 4, for the Savannah River Site Concentration, Storage, and Transfer Facilities (CSTF), Operated by Savannah River Remediation LLC Under Contract No. DE-AC09-09SR22505, CSTF Documented Safety Analysis, WSRC-SA-2002-00007, Revision 15, and CSTF Technical Safety Requirements, S-TSR-G-00001, Revision 42 as supplemented (Letter, Smith/Moody to Bair, 6/16/2014, WDED-14-16).
- C. In accordance with the NEPA regulations, the environmental impacts of facility construction and operation have been evaluated. The environmental impacts of facility construction and operation have been documented in the Environmental Impact Statements. DOE has issued Records of Decision, and the scope of the activity contained

in this agreement is consistent with the selected alternative. NEPA documentation has a separate review and approval process and may be amended without necessarily requiring revision and re-approval of this AA.

- DOE/EIS-0082-S, Final Supplemental Environmental Impact Statement Defense Waste Processing Facility (Record of Decision 60 FR 18589).
- DOE/EIS-0082-S2, Savannah River Site Salt Processing Alternatives Final Supplemental Environmental Impact Statement (Record of Decision 66 FR 52752 as amended in 71 FR 3834).
- DOE/EIS-0082-S2-SA-01, Supplement Analysis, Salt Processing Alternatives at the Savannah River Site (Amended Record of Decision 71 FR 3834).
- DOE/EIS-0217, Savannah River Site Waste Management Final Environmental Impact Statement (Records of Decision 60 FR 55249, 62 FR 27241, and 66 FR 34431).
- DOE/EIS-0303, Savannah River Site High-Level Waste Tank Closure Final Environmental Impact Statement (Record of Decision 67 FR 53784).

D. Through performance of Operational Readiness Reviews (ORRs) and Readiness Assessments (RAs), there is reasonable assurance that the facility can be operated without endangering the health and safety of the public, the workers or the environment.

- Operational Readiness Review for the ITP Facility (Operational Readiness Review (ORR) for In-Tank Precipitation Facility Savannah River Site, May 1995; and DOE Letter MB-95-0230, Fiori to Schwallie, In-Tank Precipitation (ITP) Start-up Authorization, September 1, 1995).
- Replacement High Level Waste Evaporator (Letter, Rudy to Buggy, Operational Readiness Review for the Start of the Replacement High-Level Liquid Waste Evaporator at the Savannah River Site, December 1999).
- Operational Readiness Review for the Restart of the 242-16H Evaporator (Letter, Anderson to Piccolo, U.S. Department of Energy Savannah River Office Operational Readiness Review Report for 2H Evaporator, DOE Letter OD-02-001, October 3, 2001).
- Operational Readiness Review for the operation of ARP/MCU (Letter, Allison to Sain, U.S. Department of Energy Operational Readiness Review (ORR) Final Report for the Interim Salt Disposition Project, WDOD-08-12, March 2008).
- Operational Readiness Assessment for the Operation of TCCR (Memorandum, M.A. Schmitz to D.C Bumgardner, Authorization to Startup TCCR, SRR-DPM-2018-00024, December 2018).

- E. Through DOE's adherence to Federal Acquisition Regulations, Department of Energy Acquisition Regulations regarding selection of competent contractors, as well as SRR's contractual commitment to an Integrated Safety Management System and S/RID requirements for personnel selection, training and qualification, DOE is assured that SRR is technically qualified to engage in the activities authorized by this AA.
- F. Through DOE's review of an approved and current Radioactive Waste Management Basis (Q-RWM-H-00007), the facility's handling, documentation and control of radioactive waste ensures compliance with all state, local and federal radioactive waste regulatory requirements.
- G. Through DOE's approval of the current Emergency Planning Hazard Assessment (S-EHA-G-00002, latest revision), the CSTF response and notification of accident conditions ensure adequate protection for public and workers in surrounding facilities.
- H. Through DOE's review of the Safeguards and Security Basis per the General Site Security Plan, SRNS-RP-2008-00137, latest revision, as amended, the facility meets its applicable safeguards and security requirements.

Section 4 – Requirements and Conditions

Operation of CSTF is subject to the following requirements and conditions:

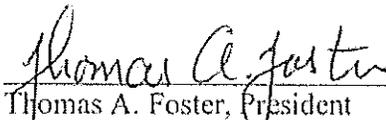
- A. SRR shall operate the facilities in compliance with the S/RID (latest revision). In accordance with Contract Number DE-AC09-09SR22505, the S/RID identifies the rules, regulations, orders, standards, and directives of DOE and other federal, state, or local agencies that are applicable to the activities associated with CSTF. Authorized deviations shall be documented by SRR and approved by DOE through Exemption Requests, Compliance Schedule Agreements, Implementation Plans, or modification of the S/RID, as appropriate. New or revised requirements shall be incorporated into the S/RID as directed by DOE. SRR shall ensure compliance commitments are tracked and completed within established time frames.
- B. SRR shall operate the CSTF in accordance with the operational controls specified in the latest revision of the SB documents as defined by Attachment 1 to this AA and Manual WSRC-IM-94-10, as amended.
- C. SRR shall implement and maintain an Environmental Protection program, including radioactive effluent monitoring, complying with applicable environmental protection and environmental permit requirements as specified in S/RID Functional Area 20, Environmental Protection. Permits with general applicability are listed below. Compliance is required with all applicable environmental permits even if not listed herein.

- South Carolina Department of Health and Environmental Control Industrial Wastewater Division Partial Permit to Operate, Project F and H Area High Level Radioactive Waste Tank Farms Construction Permit No. 17,424-IW, as amended. (Note: Permit No. 17,424-IW includes Tank 50 and the H/Z Inter-Area Transfer Line.)
 - South Carolina Department of Health and Environmental Control Industrial Wastewater Treatment Facility Permit to Operate No.: 17,980-IW, as amended, for Maintenance Facility 299-H and associated transfer lines.
 - South Carolina Department of Health and Environmental Control National Pollutant Discharge Elimination System Permit for Discharge to Surface Waters No. SC0000175 for outfalls H-05, H-07, H-12, H-16 (via the Effluent Treatment Project), F-01 and F-08, as amended.
 - South Carolina Department of Health and Environmental Control National Pollutant Discharge Elimination System Permit for Stormwater Discharges Associated with Industrial Activity, No. SCR000000 for outfall H-08, as amended.
 - South Carolina Department of Health and Environmental Control Part 70 Air Quality Permit No. TV-0080-0041 (which includes among other facilities the H-Area and F-Area Tank Farms and 299-H), as amended.
 - South Carolina Department of Health and Environmental Control Industrial Wastewater Treatment Facility (IWT) Permit to Operate 241-96H Actinide Removal Process Capacity Enhancements, Permit No. 19,169-IW (241-96H) and Permit to Operate a Modular Caustic-Side Solvent Extraction Unit, Permit No.: 19,037-IW.
 - South Carolina Department of Health and Environmental Control Industrial Wastewater Treatment Facility Permit to Operate No.: 18,801-IW for the Saltstone Production Facility.
 - South Carolina Department of Health and Environmental Control Class 3 Landfill Permit for the Savannah River Site Z-Area Saltstone Disposal Facility, ID No.: 025500-1603.
 - South Carolina Department of Health and Environmental Control Final Approval to Place Into Operation the Wastewater Treatment/Collection System Permitted Under Construction Permit 20150-IW for SRS/Tank Closure Cesium Removal System – Phase 1.
- D. Generation, storage and treatment of mixed waste shall be in compliance with the “Savannah River Site Approved Site Treatment Plan,” SRNS-TR-2008-00101, latest revision, as amended.

E. SRR shall operate the facility in accordance with the RWMB documents listed in Q-RWM-H-00007.

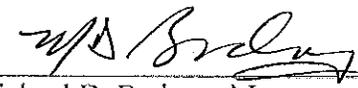
Section 5 – Contractual Citation Effective Dates and Approval Signatures

This AA is subject to the conditions specified in Contract Number DE-AC09-09SR22505 between SRR and DOE. DOE and SRR agree to the conditions and limitations contained herein. The conditions and limitations within this AA are effective upon the date both parties have signed this AA, or, if applicable, upon revision of Manual WSRC-IM-94-10 and implementation of this revision, which shall be completed within 5 days from the date both parties have signed this AA. This AA shall expire upon expiration or termination of Contract Number DE-AC09-09SR22505.



Thomas A. Foster, President
Savannah River Remediation, LLC

12/19/18
Date



Michael D. Budney, Manager
Savannah River Operations Office

12/20/2018
Date

Attachment 1

CSTF Safety Basis Documents

[The latest effective revision is defined in Manual WSRC-IM-94-10]

1. Concentration, Storage, and Transfer Facilities Documented Safety Analysis, WSRC-SA-2002-00007, latest revision, as amended.
2. Concentration, Storage, and Transfer Facilities Technical Safety Requirements, S-TSR-G-00001, latest revision, as amended.