

Liquid Waste System Plan

Revision 24.1

Discontinue ABD & Decouple MST/SS from DWPF

Approvals:



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Reviews



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Revision 24 of the LW System Plan¹ (Rev. 24) noted two opportunities, among others:

- **Discontinuation of Accelerated Basin Deinventory (ABD):** The ABD program is projected to increase the number of canisters produced at DWPF by 268 (included in this *Plan*). While some of these incremental canisters will still occur as a result of ABD and Fast Critical Assembly (FCA) discards into Sludge Batch 11 that have already occurred, if H-Canyon were to resume uranium recovery, a number of the incremental canisters would be eliminated which would result in a corresponding reduction of the LW mission. The reduction in canisters from eliminating ABD would be offset to some extent by the waste resulting from uranium recovery at H-Canyon.
- **Decouple SWPF Monosodium Titanate/Sludge Solids (MST/SS) Stream from DWPF:** Transferring the SWPF MST/SS stream into the DWPF sludge batch that is being prepared in the Tank Farm would relieve a close-coupling constraint between SWPF and DWPF. Additionally, this would reduce variability between SRAT batches which would enable simplification of SRAT processing enabling accelerated processing at DWPF. Furthermore, by directing the MST/SS stream to the Tank Farm additional tankage within DWPF could be utilized for SE Lag Storage.

Per the Amended Record of Decision² Savannah River Nuclear Solutions (SRNS) is discontinuing the ABD program and reverting to uranium recovery. This is expected to result in a life-cycle reduction in the canister forecast of approximately 150 canisters.

Similarly, beginning with Sludge Batch 11, anticipated to begin processing in 2027, the MST/SS stream is expected to be incorporated into sludge batch processing, decoupling that stream from DWPF³. This enables a waste loading increase to 38% from the 36% assumed in Rev 24. This is expected to result in an additional life-cycle reduction in the canister forecast of approximately 150 canisters.

Table 1 1 — *Results of Modeled Cases* of Rev 24 is updated to:

Parameter	Goal	Baseline
Date last LW facility turned over to Dismantlement and Decommissioning (D&D)	2037	2041
Final Type I and II tanks complete operational closure	2031	2032
Complete SWPF salt processing	2034	2035
Complete DWPF operations	2036	2039
Last tank closed	2037	2041
Salt Solution Processed via SWPF	77 Mgal	85 Mgal
Total number of canisters produced	7,376	7,440
Total number of SDUs	12	12

Two appendices from Rev 24 are updated to depict these changes. Attached are the revised Appendix B1 and Appendix B2.

¹ Chew, D.P., Jung, A.W., Wells, M.W., SRMC-LWP-2023-00001, Liquid Waste System Plan, Revision 24, January 2026

² Walsh, T.J., Amended Record of Decision—Spent Nuclear Fuel Management, Recovery of Uranium and Production of High Assay Low Enriched Uranium (HALEU) in the H-Canyon Facility, at the Savannah River Site (DOE/EIS-0279), January 2026

³ Flores, P.J., SRMC-CES-2026-00002, *Feasibility Evaluation for SWPF MST/Sludge Solids Transfers from SWPF to CSTF*, Revision 0 (Draft), April 2026

Appendix B1 — Canister Storage (Baseline Case)

End of Fiscal Year	SRS Cans Poured		SRS Cans in GWSB 1 (4,524 capacity) ^a		SRS Cans in GWSB 2 (4,680 capacity) ^b		SRS Cans pending storage ^c
	Yearly	Cum.	Added	Cum.	Added	Cum.	
FY96	64	64	64	64			
FY97	169	233	169	233			
FY98	250	483	250	483			
FY99	236	719	236	719			
FY00	231	950	231	950			
FY01	227	1,177	227	1,177			
FY02	160	1,337	160	1,337			
FY03	115	1,452	115	1,452			
FY04	260	1,712	260	1,712			
FY05	257	1,969	257	1,969			
FY06	245	2,214	244	2,213	1	1	
FY07	160	2,374	28	2,241	132	133	
FY08	225	2,599		2,241	225	358	
FY09	196	2,795		2,241	196	554	
FY10	192	2,987	3	2,244	183	737	Cans in Vit Bldg: 6
FY11	264	3,251		2,244	260	997	Cans in Vit Bldg: 10
FY12	277	3,528		2,244	277	1,269	Cans in Vit Bldg: 15
FY13	224	3,752		2,244	224	1,493	Cans in Vit Bldg: 15
FY14	125	3,877		2,244	125	1,629	Cans in Vit Bldg: 4
FY15	93	3,970	(193)	2,051	281	1,910	Cans in Vit Bldg: 9
FY16	136	4,106	(153)	1,898	291	2,201	Cans in Vit Bldg: 7
FY17	52	4,158	14	1,912	34	2,235	Cans in Vit Bldg: 11
FY18	15	4,173		1,914	19	2,254	Cans in Vit Bldg: 5
FY19	34	4,207		1,914	34	2,288	Cans in Vit Bldg: 5
FY20	8	4,215		1,914	4	2,292	Cans in Vit Bldg: 9
FY21	59	4,274	131	2,045	(66)	2,226	Cans in Vit Bldg: 3
FY22	45	4,319		2,045	44	2,270	Cans in Vit Bldg: 4
FY23	76	4,395	7	2,668	69	1,719	Cans in Vit Bldg: 8
FY24	49	4,444	38	2,706	8	1,727	Cans in Vit Bldg: 11
FY25	28	4,472	24	2,730	1	1,728	Cans in Vit Bldg: 14
FY26	140	4,612	295	3,025	(150)	1,578	
FY27	213	4,825	363	3,388	(150)	1,428	
FY28	242	5,067	242	3,630		1,428	
FY29	156	5,223	156	3,786		1,428	
FY30	222	5,445	222	4,008		1,428	Remaining Capacity
FY31	189	5,634	189	4,197		1,428	3,570
FY32	238	5,872	238	4,435		1,428	3,332
FY33	218	6,090	67	4,502	151	1,579	3,114
FY34	240	6,330		4,502	240	1,819	2,874
FY35	233	6,563		4,502	233	2,052	2,641
FY36	243	6,806		4,502	243	2,295	2,398
FY37	260	7,066		4,502	260	2,555	2,138
FY38	260	7,326		4,502	260	2,815	1,878
FY39	114	7,440		4,502	123	2,938	1,764

^a GWSB 1 filling began in May 1996. From 2016 to March 2024, conversion of the 2,262 standard canister storage locations enabled, via double stacking, each position to hold two cans for a total capacity of 4,524 canisters.

^b GWSB 2 has 2,340 standard storage locations and filing began in 2006. Beginning in April 2024, conversion of the 2,262 standard canister storage locations to enable each position to hold two cans for a potential capacity of 4,680 canisters. Enough positions are planned to be converted to allow storage of all canisters produced.

^c At the end of each year, a certain number of cans are not emplaced in the GWSBs, having been retained in the vitrification building. At the end of the program, all canisters will be stored in the GWSBs pending final disposition. The "Remaining Capacity" is the number of additional canisters that could be stored.

Note: These values are estimates based on the best inventory information available at the time and assumptions about future waste inventory and processing.

Appendix B2 — Canister Storage (Goal Case)

End of Fiscal Year	SRS Cans Poured		SRS Cans in GWSB 1 (4,524 capacity) ^a		SRS Cans in GWSB 2 (4,680 capacity) ^b		SRS Cans pending storage ^c
	Yearly	Cum.	Added	Cum.	Added	Cum.	
FY96	64	64	64	64			
FY97	169	233	169	233			
FY98	250	483	250	483			
FY99	236	719	236	719			
FY00	231	950	231	950			
FY01	227	1,177	227	1,177			
FY02	160	1,337	160	1,337	<i>Numbers in italics are actuals through FY25. FY26 and beyond are forecast based on modeling assumptions</i>		
FY03	115	1,452	115	1,452			
FY04	260	1,712	260	1,712			
FY05	257	1,969	257	1,969			
FY06	245	2,214	244	2,213	1	1	
FY07	160	2,374	28	2,241	132	133	
FY08	225	2,599		2,241	225	358	
FY09	196	2,795		2,241	196	554	
FY10	192	2,987	3	2,244	183	737	<i>Cans in Vit Bldg: 6</i>
FY11	264	3,251		2,244	260	997	<i>Cans in Vit Bldg: 10</i>
FY12	277	3,528		2,244	277	1,269	<i>Cans in Vit Bldg: 15</i>
FY13	224	3,752		2,244	224	1,493	<i>Cans in Vit Bldg: 15</i>
FY14	125	3,877		2,244	125	1,629	<i>Cans in Vit Bldg: 4</i>
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FY25	28	4,472	24	2,730	1	1,728	<i>Cans in Vit Bldg: 14</i>
FY26	246	4,718	401	3,131	(150)	1,578	
FY27	220	4,938	370	3,501	(150)	1,428	
FY28	285	5,223	285	3,786		1,428	
FY29	139	5,362	139	3,925		1,428	
FY30	265	5,627	265	4,190		1,428	<i>Remaining Capacity</i>
FY31	292	5,919	292	4,482		1,428	3,285
FY32	281	6,200	20	4,502	261	1,689	3,004
FY33	287	6,487		4,502	287	1,976	2,717
FY34	302	6,789		4,502	302	2,278	2,415
FY35	299	7,088		4,502	299	2,577	2,116
FY36	288	7,376		4,502	297	2,874	1,828

^a GWSB 1 filling began in May 1996. From 2016 to March 2024, conversion of the 2,262 standard canister storage locations enabled, via double stacking, each position to hold two cans for a total capacity of 4,524 canisters.

^b GWSB 2 has 2,340 standard storage locations and filing began in 2006. Beginning in April 2024, conversion of the 2,262 standard canister storage locations to enable each position to hold two cans for a potential capacity of 4,680 canisters. Enough positions are planned to be converted to allow storage of all canisters produced.

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