



SAVANNAH RIVER REMEDIATION LLC

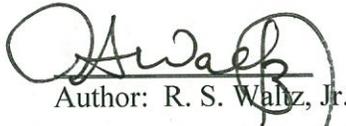
We do the right thing.

Savannah River Site, Aiken, SC 29808

C-ESR-G-00003 (Rev. 17)
Track #:10067/10080
Disposal Auth.: DOE/ADM 17-30.c
(1)/DOE/ADM 17.32.a
Retention: 5 Years, Destroy 5 years after
facility closure

February 12, 2019

SRS High Level Waste Tank Crack and Leak Information (Rev. 17)


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Technical Review: W. R. West


Management Approval: D. M. Hopkins

The location of known cracks and the estimated amount of leaked waste remaining on the annulus floor are the subject of this report. As new cracks or indications are found, this document will be revised to reflect those changes. The attached table reflects all known conditions as of 2/12/19.

Details of crack locations for Tanks 5, 6, 12, 16, 19 and 20 were removed from this report because all of these tanks are closed. Tanks 5 and 6 were filled with grout and closed in 2013, Tank 16 was filled with grout and closed in 2015, Tank 12 was filled with grout and closed in 2016, Tank 19 was filled with grout and closed in 2012 and Tank 20 was filled with grout and closed in 1997.

This revision is to provide details of two cracks documented in Tank 15 during monitoring of waste removal activities in 2018.

SRS High Level Waste Tank Crack and Leak Information

C-ESR-G-00003
Revision 17

TANK NUMBER	TANK TYPE	NUMBER OF KNOWN LEAKSITES	DATE OF DISCOVERY	WASTE ON ANNULUS FLOOR	AMOUNT OF WASTE ON FLOOR (est.)	LOCATION [4]	ELEVATION FROM TANK BOTTOM	PERCENT OF TANK WALL INSPECTED	Acceptable Fitness for Service [3]
1	I	≥ 1	Feb. 1969	Yes	small deposits on floor	unknown; suspected to be in bottom	unknown	25%	Yes
4	I	4	Oct. 2011 Sept. 2013 Sept. 2013 Sept. 2013	No No No No	None None None None	South North North North	234 inches 234 inches 234 inches 234 inches	25%	Yes
5 Closed 2013	I	44	Crack data can be found in Rev. 11						NA
6 Closed 2013	I	11	Crack data can be found in Rev. 11						NA
9	I	≥ 4	Oct. 1957	Yes	8-10 inches	1 West 2 West 3 South 4 unknown	276 inches 271 inches 269 inches source of waste in pan unknown	13%	Yes
10	I	≥ 1	Jul. 1959	Yes	2 - 3 inches	unknown	unknown	19%	Yes
11	I	2	Apr. 1974 [3]1974 & 1982	Yes	nodules/waste on wall and trace amounts on annulus pan due to solids washing down wall	1 West 2 South	235 inches 189 inches	25%	
12 Closed 2016	I	15	Crack data can be found in Rev. 13						
13	II	3	Mar. 1977 May. 1980 Oct. 2012	Yes	nodules/waste on wall and trace amounts on annulus pan due to solids washing down wall	1 West 2 North 3 West	279 inches 269 inches 270 inches	90%	Yes
14	II	~ 50	May. 1959 thru 1974 Oct. 2012	Yes	12 - 13 inches	the majority are on the bottom weld	lowest 16 inches highest 288 inches	89%	Yes

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15	II	34	Apr. 1972	Yes	nodules on tank wall	140	34 inches	96%	Yes
			Apr. 1972			144	34 inches		
			1973			13	150 inches		
			1973			115	88 inches		
			1973			112	30 inches		
			1973			105	96 inches		
			1973			102	30 inches		
			1973			171	74 inches		
			1973			176	30 inches		
			1973			173	30 inches		
			1973			171	150 inches		
			1973			136	34 inches		
			1973			165	150 inches		
			1997			207	150 inches		
			1998			192	150 inches		
			1997		53	200 inches			
			2000		50	30 inches			
			2000		205	30 inches			
			2002 UT		175	129 inches			
			2005		211	31 inches			
			2015		5	73 inches			
			2015		205	100 inches			
			2015		5	92 inches			
			2015		171	126 inches			
			2017		99	30 inches			
			2017		20	160 inches			
			2018		239	152 inches			
			2018		225	150 inches			
			2018		238	76 inches			
			2018		238	70 inches			
2018	82	200 inches							
2018	82	176 inches							
2018	238	65 inches							
2018	238	67 inches							
16	II	~ 300 - 350							NA
19	IV	4	Crack data can be found in Rev. 11						NA
20	IV	4	Crack data can be found in Rev. 11						NA

[1] Percentage of tank normally inspected using traditional methods

[2] Percentage of tank inspected in 2001 using a magnetic crawler device

[3] The identified tank flaws have been evaluated against calculations - T-CLC-G-00159 and T-CLC-H-00639 and are acceptable for service.

[4] Circumferential feet clockwise from South riser

The leaksites detailed in this chart were documented by the presence of salt nodules or stains and marks. Additional leaksites may exist in areas that have not been inspected. One crack detected in 2002 in Tank 15 was located using UT techniques.