

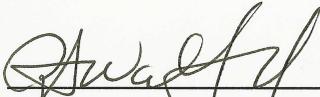


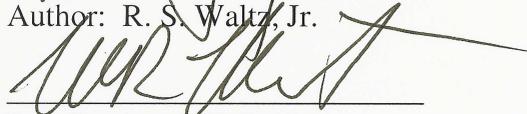
WESTINGHOUSE SAVANNAH RIVER COMPANY
INTEROFFICE MEMORANDUM

CBU-LTS-2004-00104

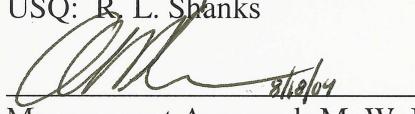
Track #: 10712
Disposal Auth.: NI-434-98-28 DOE/ADM 1.d.10.c
Retention: 5 Years, Destroy 5 years after facility
closure

SRS High Level Waste Tank Leaksite Information (8/04)


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Peer Review: W. R. West

 USQ-HTF-2004-00285
USQ: R. L. Shanks


Management Approval: M. W. Loibl

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. This revision is being issued to add the new leak site that was identified in Tank 12.

Tank 16, 17 and 20 are included in this report, however, none have waste in the tank. Waste removal from the interior of Tank 16 was completed in 1980 and the tank status was changed to "out of service". Tanks 17 and 20 were filled with grout and closed in 1997.

Type I, II and IV High Level Waste Tank Leaksite Information Summary

TANK NUMBER	TANK TYPE	NUMBER OF KNOWN LEAKSITES	DATE OF DISCOVERY	WASTE ON ANNULUS FLOOR	AMOUNT OF WASTE ON FLOOR	LOCATION	ELEVATION FROM TANK BOTTOM	PERCENT OF TANK INSPECTED
1	I	≥ 1	Feb. 1969	Yes	small deposits on floor	unknown; may be in bottom	unknown	25%
5	I	15	Jun. 2001	Yes	cup	1 NE	94 inches	[1] 25% [2] 75%
					1 gallon for sites 2, 3 and 4	2 SSE 3 SSE 4 SSE	31 inches 31 inches 58 inches	
					none	5 SSE	84 inches	
					1 gallon for sites 6 and 7	6 South 7 South	62 inches 62 inches	
					none	8 SW	72 inches	
					< gallon	9 SW	84 inches	
					1 gallon for sites 10, 11, 12 and 13	10 West 11 West 12 West 13 West	53 inches 53 inches 87 inches 115 inches	
					none	14 North	55 inches	
					none	15 North	45 inches	
6	I	6	Feb. 2001	Yes	~ 92 gallons liquid observed during original leakage. ≤ 1 inch dried waste	1 NW 2 NW 3 NW 4 NW 5 West 6 WSW	233 inches 233 inches 233 inches 165 inches 129 inches 145 inches	[1] 25% [2] 73%
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%
10	I	≥ 1	Jul. 1959	Yes	2 - 3 inches	unknown	unknown	19%
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	I	3	1984 May. 1974 Apr. 2004	Yes	nodules/waste on wall and trace amounts on annulus pan due to solids washing down wall	1 North 2 North 3 North	93 inches 105 inches 95 inches	25%
13	II	2	Mar. 1977 May. 1980	Yes	nodules/waste on wall and trace amounts on annulus pan due to solids washing down wall	1 West 2 North	279 inches 269 inches	90%

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14	II	~ 50	May. 1959 thru 1974	Yes	12 - 13 inches	the majority are on the bottom weld	lowest 16 inches highest 288 inches	89%
15	II	19	Apr. 1972 Apr. 1972 1973 1973 1973 1973 1973 1973 1973 1973 1973 1973 1973 1973 1973 1998 1998 1998 2000 2000 2002	Yes	nodules on tank wall with trails to annulus floor and small amount of waste on annulus floor	1 North 2 North 3 South 4 NW 5 NW 6 NW 7 NW 8 NW 9 NE 10 NE 11 NE 12 NE 13 NE 14 East 15 East 16 West 17 NW 18 East 19 NE	34 inches 34 inches 130 inches 90 inches 30 inches 96 inches 30 inches 34 inches 30 inches 30 inches 150 inches 38 inches 150 inches 150 inches 200 inches 30 inches 30 inches 129 inches	96%
16	II	~ 300 - 350	1959	Yes	~ 30, 000 curies of Cs-137 remain in ~1 - 2 inches on annulus floor		tank is empty	73%
19	IV	2	[4] [4]	NA	NA	SW ESE	317 inches 330 inches	[5] [5]
20 (closed 1997)	IV	4	1983 1983 1990 1983	NA	NA	SW SW E NE	264 294 315 319	[5] [5] [5] [5]

[1] Percentage of tank normally inspected using traditional methods

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

[3] First observed in 1974 and confirmed in 1982

[4] Inspection records documented that these leaksites existed before 1994. Inspections had to track artifacts to judge that inleakage had occurred

[5] Percentage of tank steel wall inspected depends on waste level.

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.