



Please file as a record document for construction

Permit No. 17,424-IW

WASTEWATER

FINAL APPROVAL TO PLACE INTO OPERA

Bany

ISSUED TO: US DEPARTMENT OF ENERGY
SAVANNAH RIVER SITE
BUILDING 705-3C
AIKEN SC 29808

17424-IW

for the operation of a wastewater treatment/collection system permitted under Construction Permit No. 20,234-IW, dated November 1, 2018.

PROJECT NAME: SRS/SALT WASTE PROCESSING FACILITY (SWPF) Final Tie-Ins

COUNTY: Aiken

PROJECT DESCRIPTION: The Salt Waste Processing Facility (SWPF) is designed to extract and concentrate cesium, strontium, and actinides from salt wastes in the tank farms resulting in effluents that are acceptable for treatment at the Defense Waste Processing Facility (DWPF) and the Saltstone Production Facility (SPF). Attachment A provides a list of equipment.

The effluent concentrations of those constituents the wastewater treatment system is designed to remove or reduce for wastewater transferred to Tank 50 to the SPF are contained in Construction Permit No. 18,801-IW for the SPF. The solid waste from the SPF will be disposed in the Saltstone Disposal Facility (SDF) in accordance with Solid Waste Industrial Permit #025500-1603. The wastewater sent to the DWPF will be vitrified and poured into canisters that are transferred to the Glass Waste Storage Buildings.

PERMITTED FLOW: System Nominal Daily Flow: 35,840 gallons per day
System Design Capacity Flow: 185,736 gallons per day

WWTP: US DOE/SAVANNAH RIVER SITE Salt Waste Processing Facility (SWPF)

SPECIAL CONDITIONS:

1. This permit is in addition to Construction Permit No. 19,219-IW (Salt Waste Processing Facility (SWPF)), Construction Permit No. 20,194-IW (SWPF NGS Cold Chemical Feed Facility), Construction Permit No. 18,801-IW (Saltstone Production Facility (SPF)), Construction Permit No. 17,424-IW (F-Area and H-Area Tank Farms), and Construction Permit No. 16,783, Defense Waste Processing Facility.



2. The jumpers that will tie the SWPF in with the SPF and DWPF are permitted by this construction permit. There shall be no radioactive salt solution received from the High Level Waste (HLW) tanks for processing and transfer to the DWPF and/or the SPF until these jumpers have been installed and the Department has issued the Approval to Place into Operation for this construction permit.

This approval is based on the APO request letter (SRR-ESH-2019-00118) signed by Ms. Patricia M. Allen. Note that Attachment 1 is the Engineer's letter of certification (signed by Andrew R. Redwood, P.E., South Carolina Registration No. 20525).

Barry S. Mullinax

Barry S. Mullinax, Engineer
(for) Environmental Affairs
AIKEN EA OFFICE

Date Issued: October 29, 2019

cc: Bureau of Water Permitting File – Construction Permit No. 20,234-IW
Bureau of Water Permitting File – Construction Permit No. 19,219-IW
Bureau of Water Permitting File – Construction Permit No. 20,194-IW
Bureau of Water Permitting File – Construction Permit No. 18,801-IW
Bureau of Water Permitting File – Construction Permit No. 17,424-IW
Bureau of Water Permitting File – Construction Permit No. 16,783-IW
Travis Fuss, Aiken EA Office
Crystal Robertson, Aiken EA Office
Shawn M. Clarke, BOW, Columbia Office
Crystal Rippey, BOW – Columbia Office
Andrew Redwood, P.E., SRR



Attachment A Equipment List

The equipment included in Construction Permit No. 20,234-IW is listed below:

1. Transfer Line SDP1 and Jumper 6-7(SPP2)2 for Raw Salt Solution (RSS) Transfer Line
2. Jumper 6-7(SPP3)3 for Strip Effluent (SE) Waste Transfer Line
3. Jumper 3(SPP3)15 for Monosodium Titanate Precipitate (MSTPCP) Waste Transfer Line
4. Transfer lines DSS-0077, SSP077, and WTS-SSP4 for the Decontaminated Salt Solution to Tank 50 and the Saltstone Production Facility.

SEP 13 2017

Mr. Josh Yon
Environmental Quality Control Division
South Carolina Department of Health and Environmental Control
206 Beaufort Street, N. E.
Aiken, SC 29801

Request to Remove Tank 241-912H from Construction Permit No. 17,424-IW: F and H-Area High-Level Radioactive Waste Tank Farms

Dear Mr. Yon:

The Department of Energy (DOE) documented completion of Removal from Service / Operational Closure of Tank 12 located in the H-Tank Farm (HTF) on April 28, 2016 (Reference 1). The Tank 12 Final Configuration Report was submitted in December 2016 (Reference 2), and included certification by South Carolina Professional Engineers that all work was completed in accordance with the approved HTF General Closure Plan (Reference 3), the Tank 12 Closure Module (Reference 4), and the Addendum to the Tank 12 Closure Module (Reference 5). DOE is requesting that Tank 12, having completed removal from service in accordance with Section IX of the *Federal Facility Agreement for the Savannah River Site* (Reference 6), be removed from F and H-Area High-Level Radioactive Waste Tank Farms Construction Permit No. 17,424-IW (Reference 7).

Maintenance and monitoring of the stabilized tank will continue consistent with the Bureau of Land and Waste Management Hazardous and Mixed Waste Permit No. SC1 890 008 989 (Reference 8), which states that annual visible engineered barrier inspections shall be conducted in accordance with the *Explanation of Significant Difference (ESD) for Incorporating Tank 12 Into the Revision 1 Interim Record of Decision Remedial Alternative Selection for the H-Area Tank Farm, Waste Tank 16, Revision 0, December 2016* (Reference 9) for individual tanks and ancillary structures that have been removed from service.

Please direct any questions to Steve Thomas at (803) 557-8960.

Sincerely,



J. Kent Fortenberry
Chief Engineer/Waste Determination Official

SEP 13 2017

References:

- Reference 1: *Completion of Operational Closure of Tank 12H, CERCLIS Number: 89, WDPD-16-39, Revision 0, April 28, 2016*
- Reference 2: *Tank 12 Final Configuration Report for H-Tank Farm at the Savannah River Site, SRR-CWDA-2016-00068, Revision 0, December 2016*
- Reference 3: *Industrial Wastewater General Closure Plan for H-Area Waste Tank Systems, Industrial Wastewater Construction Permit #17,424-IW, SRR-CWDA-2011-00022, Revision 0, May 2012*
- Reference 4: *Industrial Wastewater Closure Module for Liquid Waste Tank 12H H-Area Tank Farm, Savannah River Site, SRR-CWDA-2014-00086, Revision 0, May 2015*
- Reference 5: *Addendum to the Industrial Wastewater Closure Module for Liquid Waste Tank 12H H-Area Tank Farm, Savannah River Site, SRR-CWDA-2014-00086, Revision 0, May 2015, SRR-CWDA-2015-00074, Revision 0, October 2015*
- Reference 6: *Federal Facility Agreement for the Savannah River Site, <http://www.srs.gov/general/programs/soil/ffa/ffa.pdf>, WSRC-OS-94-42, August 16, 1993*
- Reference 7: *Construction Permit #17,424-IW for F and H-Area High Level Radioactive Waste Tank Farms (SCDHEC Bureau of Water, Permit to Construct), January 25, 1993*
- Reference 8: *SCDHEC Letter, RE: Savannah River Site, SC1 890 008 989, Final Permit Decisions for: M-Area and Metallurgical Lab (MAML) Hazardous Waste Management Facilities, F-Area Hazardous Waste Management Facility (HWMF), H-Area Hazardous Waste Management Facility (HWMF), Mixed Waste Management Facility (MWMF), Appendix VIII-A Solid Waste Management Remedy Selection, August 17, 2017*
- Reference 9: *Explanation of Significant Difference (ESD) for Incorporating Tank 12 Into the Revision 1 Interim Record of Decision Remedial Alternative Selection for the H-Area Tank Farm, Waste Tank 16, CERCLIS Number: 89, SRR-CWDA-2016-00107, Revision 0, December 2016*

SEP 13 2017

c: M. D. Wilson, SCDHEC
S. B. Fulmer, SCDHEC
C. D. Rippy, SCDHEC
H. Reed, SCDHEC
B. S. Mullinax, SCDHEC
J. Richards, EPA-4
R. H. Pope, EPA-4
J. L. Folk, DOE-SR, 704-S
J. M. Ridley, 704-S
J. K. Seitz, 704-S
B. T. Hennessey, 730-B
J. G. Demass, 730-B
B. T. Hays, 730-B
T. A. Foster, SRR, 766-H
M.A. Schmitz, 766-H
K. A. Hauer, 766-H
J. W. Barker, 241-284H
J. E. Occhipinti, 704-56H
J. R. Tihey, 241-162H
G. C. Arthur, 241-284H
S. A. Thomas, 705-1C
L. B. Romanowski, 705-1C
K. H. Rosenberger, 705-1C
T. W. Coffield, 705-1C
T. F. England, 705-1C
J. F. Xiao, 705-1C
P. M. Allen, 766-H
O. D. Stevens, 766-H
P. S. Moutzouris, 766-H
K. R. Liner, 704-S
S. L. McFalls, SRNS, 730-4B
J. M. Griffith, 730-4B

Request to Remove Tank 241-912H from Construction Permit No. 17,424-IW

Tiffany.Kinard@srs.gov on behalf of steven.thomas@srs.gov

Wed 9/13/2017 12:29 PM

To: Yon, Joshua <YONJC@dhec.sc.gov>;

Cc: Wilson, Shelly <WILSONMD@dhec.sc.gov>; Fulmer, Susan <fulmersb@dhec.sc.gov>; Rippy, Crystal <RIPPYCD@dhec.sc.gov>; Reed, Harry (Trey) <reedhm@dhec.sc.gov>; Mullinax, Barry <MULLINBS@dhec.sc.gov>; Richards, Jon@epa.gov <Richards.Jon@epa.gov>; Pope, Robert <Pope.Robert@epa.gov>; james.folk@srs.gov <james.folk@srs.gov>; jean.ridley@srs.gov <jean.ridley@srs.gov>; Jolene.Seitz@srs.gov <Jolene.Seitz@srs.gov>; brian.hennessey@srs.gov <brian.hennessey@srs.gov>; jim.demass@srs.gov <jim.demass@srs.gov>; brenda.hays@srs.gov <brenda.hays@srs.gov>; Thomas.Foster@srs.gov <Thomas.Foster@srs.gov>; Mark.Schmitz@srs.gov <Mark.Schmitz@srs.gov>; kim.hauer@srs.gov <kim.hauer@srs.gov>; James.Barker@srs.gov <James.Barker@srs.gov>; john.occhipinti@srs.gov <john.occhipinti@srs.gov>; john.tihey@srs.gov <john.tihey@srs.gov>; gregory.arthur@srs.gov <gregory.arthur@srs.gov>; steven.thomas@srs.gov <steven.thomas@srs.gov>; larry.romanowski@srs.gov <larry.romanowski@srs.gov>; kent.rosenberger@srs.gov <kent.rosenberger@srs.gov>; tim.coffield@srs.gov <tim.coffield@srs.gov>; thomas.england@srs.gov <thomas.england@srs.gov>; James.Xiao@srs.gov <James.Xiao@srs.gov>; patricia.allen@srs.gov <patricia.allen@srs.gov>; Owen.Stevens@srs.gov <Owen.Stevens@srs.gov>; phyllissmith.moutzouris@srs.gov <phyllissmith.moutzouris@srs.gov>; keith.liner@srs.gov <keith.liner@srs.gov>; Shelia.Mcfalls@srs.gov <Shelia.Mcfalls@srs.gov>; mike.griffith@srs.gov <mike.griffith@srs.gov>; bruce.martin@srs.gov <bruce.martin@srs.gov>;

📎 1 attachments (103 KB)

SRR-CWDA-2017-00063.pdf;

Dear Mr. Yon,

Please find attached Revision 1 of Savannah River Remediation's letter SRR-CWDA-2017-00063, *Request to Remove Tank 241-912H from Construction Permit No. 17,424-IW: F and H-Area High-Level Radioactive Waste Tank Farms*. Revision 1 has been issued to correct the Tank 12 closure date, found in the first sentence, from April 28, 2015, to April 28, 2016.

The original letter will be mailed to your attention. This email is considered distribution to all others on cc.

Thank you,

Steve Thomas
Manager, Waste Disposal Authority
Savannah River Remediation
Office: (803) 557-8960
Cell #: (803) 646-8940



October 10, 2017

Mr. J. Kent Fortenberry, Chief Engineer/Waste Determination Authority
Savannah River Remediation, LLC
Savannah River Site
Aiken, SC 29808

RE: (1) Letter, J. Kent Fortenberry (SRR) to Josh Yon (SCDHEC), *Request to Remove Tank 241-912H from Construction Permit No. 17,424-IW:F and H-Area High Level Radioactive Waste Tank Farms*, SRR-CWDA-2017-00063, Revision 1, Dated September 13, 2017
(2) Letter, Josh Yon (SCDHEC) to J. Kent Fortenberry (SRR), *Request to Remove Tank 241-912H from Construction Permit No. 17,424-IW:F and H-Area High Level Radioactive Waste Tank Farms*, Dated October 4, 2017

Dear Mr. Fortenberry:

In Reference 1, SRR informed the Department that Tank 12H had been closed in accordance with the HTF General Closure Plan and the Closure Module for Tank 12H. This letter also requested that the Department remove this tank from Tank Farm Construction Permit No. 17,424-IW since the tank had been removed from service. Reference 2 documents the Department's inspection of the closure activities for Tank 12H as well as the Department's decision that closure of this tank has been successfully completed. This letter is a programmatic follow-up action to acknowledge closure of Tank 12H and to inform you that this action represents a partial completion of the Tank Farm Construction Permit No. 17,424-IW.

Attachment A is included to provide an updated description of equipment that remains in the active portion of the Tank Farm Permit as well as the equipment that has been removed from service. Please note that the previous closure of Tanks 5F, 6F, 16H, 17F, 18F, 19F, and 20F also represent partial closures of this permit.

If you have any questions, please contact me by telephone at (803) 898-4157 or contact me by e-mail at debessjp@dhec.sc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeffrey P. DeBessonnet". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Jeffrey P. DeBessonnet, P.E.,
Director, Water Facilities Permitting Division

I:\NPDES\INDUST\~SRS\Closure of HLW Tanks\Removal of Tank 12H From the Tank Farm Permit.doc

cc (via e-mail):

Jolene Seitz, DOE
Steve Thomas, SRR
Jon Richards, EPA R4
Shelly Wilson, Federal Facilities Liaison
Travis Fuss, Midlands BEHS – Aiken Office
Susan Fulmer, Federal Remediation Section

Attachment A to October 10, 2017 letter to SRS (Kent Fortenberry) for removal of Tank 12H from the Tank Farm Permit

Project Description and List of Equipment for F and H-Area Construction Permit No. 17,424-IW

Section 1: Project Description for Tank Farm Permit

This permit involves the construction of two wastewater storage and treatment facilities and associated transfer systems, one in F-Area and the other in H-Area, designed to treat wastewater generated at F-Area Separations Facility, H-Area Separations Facility, Defense Waste Processing Facility, Receiving Basin for Offsite Fuels and Resin Regeneration Facility, and the Savannah River National Laboratory. The treatment facilities were also designed to receive reactor filter backwash, incidental wastes, and process chemicals.

Section 2: List of Equipment in the Active Portion of the Tank Farm

The following F-Area equipment have not been operationally removed from service:

<u>Equipment Description</u>	<u>SRS Identifier^a</u>
Tank 1	FL-241901-WTE-TK-1
Tank 2	FL-241902-WTE-TK-2
Tank 3	FL-241903-WTE-TK-3
Tank 4	FL-241904-WTE-TK-4
Tank 7	FL-241907-WTE-TK-7
Tank 8	FL-241908-WTE-TK-8
Tank 25	FM-241925-WTE-TK-25
Tank 26	FM-241926-WTE-TK-26
Tank 27	FM-241927-WTE-TK-27
Tank 28	FM-241928-WTE-TK-28
Tank 33	FL-241933-WTE-TK-33
Tank 34	FL-241934-WTE-TK-34
Tank 44	FM-241944-WTE-TK-44
Tank 45	FM-241945-WTE-TK-45
Tank 46	FM-241946-WTE-TK-46
Tank 47	FM-241947-WTE-TK-47

242-F (1F) Evaporator Pot	EP 41.20 (W230983)
242-F (1F) Condenser	EP 41.20-2 (W230983)
242-F (1F) Cesium Removal Column Pump Tank	EP 13-1 (W713707)
242-F (1F) Overheads Tank South	EP 42.20-1 (W231013)
242-F (1F) Overheads Tank North	EP 42.20-2 (W231013)
242-F (1F) Overheads Diverting Tank	EP 13-2 (W713707)
242-3F Concentrate Transfer System	EP 100 (W235849)
242-16F (2F) Evaporator Pot	FM-242016-WEE-EVP-1
242-16F (2F) Condenser	FM-242016-WEE-COND-1
242-16F (2F) Mercury Collection Tank	FM-242016-WEE-TK-5
242-16F (2F) Cesium Removal Column Pump Tank	FM-242016-WEE-TK-6
242-16F (2F) Overheads Tank #1, South	FM-242016-WEE-TK-8
242-16F (2F) Overheads Tank #2, North	FM-242016-WEE-TK-9
FPP-1	FL-641000-IT-PPIT-1
FPT-1	FL-641000-IT-TK-1
FPP-2	FM-241021-WTS-PPIT-2
FPT-2	FM-241021-WTS-TK-2
FPP-3	FM-241021-WTS-PPIT-3
FPT-3	FM-241021-WTS-TK-3
FDB-1	FL-241002-WTS-DBX-1
FDB-2	FL-641000-WTS-DBX-2
FDB-3	FL-241077-WTS-DBX-3
FDB-4	FM-241021-WTS-DBX-4
FDB-5	FM-241033-WTS-DBX-5
FDB-6	FL-241032-WTS-DBX-6
F-Area Catch Tank	FL-241091-WTS-TK-1

^a The SRS Identifier is either the Smart Plant Component Location Indicator (SPCLI) number or the engineering drawing number showing the component. Sometimes, both the SPCLI number and engineering drawing number are provided.

The following H-Area equipment have not been operationally removed from service:

<u>Equipment Description</u>	<u>SRS Identifier^a</u>
Tank 9	HL-241909-WTE-TK-9
Tank 10	HL-241910-WTE-TK-10
Tank 11	HL-241911-WTE-TK-11
Tank 13	HL-241913-WTE-TK-13
Tank 14	HL-241914-WTE-TK-14
Tank 15	HL-241915-WTE-TK-15
Tank 21	HL-241921-WTE-TK-21
Tank 22	HL-241922-WTE-TK-22
Tank 23	HL-241923-WTE-TK-23
Tank 24	HL-241924-WTE-TK-24
Tank 29	HL-241929-WTE-TK-29
Tank 30	HL-241930-WTE-TK-30
Tank 31	HL-241931-WTE-TK-31
Tank 32	HL-241932-WTE-TK-32
Tank 35	HL-241935-WTE-TK-35
Tank 36	HL-241936-WTE-TK-36
Tank 37	HL-241937-WTE-TK-37
Tank 38	HM-241938-WTE-TK-38
Tank 39	HM-241939-WTE-TK-39
Tank 40	HB-241940-WTE-TK-40
Tank 41	HM-241941-WTE-TK-41
Tank 42	HB-241942-WTE-TK-42
Tank 43	HM-241943-WTE-TK-43

Tank 48	HI-241948-WTE-TK-48
Tank 49	HI-241949-WTE-TK-49
Tank 50	HI-241950-WTE-TK-50
Tank 51	HB-241951-WTE-TK-51
242-H (1H) Evaporator Pot	EP-1 (M-M6-H-1343)
242-H (1H) Condenser	EP-3 (M-M6-H-0227)
242-H (1H) Mercury Collection Tank	(M-M6-H-1645)
242-H (1H) Cesium Removal Column Pump Tank	EP-13-1 (M-M6-H-1647)
242-H (1H) Overheads Tank #4	EP-4 (M-M6-H-1341)
242-H (1H) Overheads Tank #5	EP-5 (M-M6-H-1341)
242-3H (Old) Concentrate Transfer System ^b	W238683
242-18H (New) Concentrate Transfer System	EP-20-10-1 (W702921)
242-16H (2H) Evaporator Pot	HM-242016-WEE-TK-3
242-16H (2H) Condenser	HM-242016-WEE-HX-2
242-16H (2H) Mercury Collection Tank	HM-242016-WEE-TK-7
242-16H (2H) Cesium Removal Column Pump Tank	HM-242016-WEE-TK-8
242-16H (2H) Overheads Tank #1	HM-242016-WEE-TK-5
242-16H (2H) Overheads Tank #2	HM-242016-WEE-TK-6
242-25H (3H) Evaporator Pot	HL-242025-WEE-EVP-1
242-25H (3H) Condenser	HL-242025-WEE-COND-223
242-25H (3H) Mercury Collection Tank	HL-242025-WEE-TK-311
242-25H (3H) Overheads Tank #1	HL-242025-WEE-TK-1
242-25H (3H) Overheads Tank #2	HL-242025-WEE-TK-2
HPP-1 ^c	HL-241035-WTS-PPIT-1
HPP-2	HL-241035-WTS-PPIT-2
HPT-2	HL-241035-WTS-TK-2
HPP-3	HL-241035-WTS-PPIT-3
HPT-3	HL-241035-WTS-TK-3

HPP-4	HL-241035-WTS-PPIT-4
HPT-4	HL-241035-WTS-TK-4
HPP-5	HM-241070-WTS-PPIT-5
HPT-5	HM-241070-WTS-TK-5
HPP-6	HM-241070-WTS-PPIT-6
HPT-6	HM-241070-WTS-TK-6
HPP-7	HG-241100-WTS-PPIT-7
HPT-7	HG-241100-WTS-TK-7
HPP-8	HG-241100-WTS-PPIT-8
HPT-8	HG-241100-WTS-TK-8
HPP-9	HG-241100-WTS-PPIT-9
HPT-9	HG-241100-WTS-TK-9
HPP-10	HG-241100-WTS-PPIT-10
HPT-10	HG-241100-WTS-TK-10
HDB-1	HL-241000-WTS-DBX-1
HDB-2	HL-241035-WTS-DBX-2
HDB-3	HL-241003-WTS-DBX-3
HDB-4	HL-241008-WTS-DBX-4
HDB-5	HL-241052-WTS-DBX-5
HDB-6	HL-241056-WTS-DBX-6
HDB-7	HM-241031-WTS-DBX-7
HDB-8	HG-241100-WTS-DBX-8
H –Area Catch Tank	HL-241909-WTS-TK-1

^a The SRS Identifier is either the Smart Plant Component Location Indicator (SPCLI) number or the engineering drawing number showing the component. Sometimes, both the SPCLI number and engineering drawing number are provided.

^b The transfer tank has been removed from the 242-3H Concentrate Transfer System.

^c HPP-1 did not have a pump tank.

Ancillary equipment such as piping, pumps, tanks, valves, meters and other associated equipment are not specifically listed in the Tank Farm Permit (Construction Permit No. 17,424-IW). This permit also includes the transfer line between the F-Area and the H-Area facilities, the line between the H-Area facility and the DWPF, and the pump pits (APP and LPPP) associated with the line from H-Area to the DWPF including associated pumps and tanks.

Section 3: List of Equipment Removed from Service (Inactive Portion of the Tank Farm)

In this context, removed from service includes equipment that has been grouted and/or equipment that has been physically isolated so that the equipment can no longer be involved with receiving, treating, or transferring waste material from the F-Area Tank Farm and the H-Area Tank Farm.

Equipment removed from service in F-Area consists of the following equipment:

<u>Equipment Description</u>	<u>SRS Identifier^a</u>
Tank 5	FL-241905-WTE-TK-5
Tank 6	FL-241906-WTE-TK-6
Tank 17	FL-241917-WTE-TK-17
Tank 18	FL-241918-WTE-TK-18
Tank 19	FL-241919-WTE-TK-19
Tank 20	FL-241920-WTE-TK-20

Equipment removed from service in H-Area consists of the following equipment:

<u>Equipment Description</u>	<u>SRS Identifier^a</u>
Tank 12	HL-241912-WTE-TK-12
Tank 16	HL-241916-WTE-TK-16

^a The SRS Identifier is either the Smart Plant Component Location Indicator (SPCLI) number or the engineering drawing number showing the component. Sometimes, both the SPCLI number and engineering drawing number are provided.



October 4, 2017

J. Kent Fortenberry
Savannah River Remediation, LLC
Savannah River Site
Building 766-H, Room 2006
Aiken, SC 29808

RE: REQUEST TO REMOVE TANK 241-912H FROM CONSTRUCTION PERMIT
NO. 17,424-IW: F AND H-AREA HIGH-LEVEL RADIOACTIVE WASTE TANK
FARMS (Fortenberry to Yon, September 13, 2017)

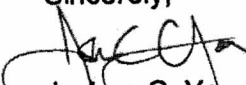
Mr. Fortenberry:

On January 11, 2017, Department personnel performed a document review and inspection of Tank 241-912H and associated appurtenances in regards to closure activities outlined in the approved *Industrial Wastewater Closure Module for Liquid Waste Tank 12H H-Area Tank Farm, Savannah River Site, SRR-CWDA-2014-00086, Revision 0*.

In response to the referenced September 13, 2017 letter, the Department agrees that closure activities for Tank 12 have been completed in accordance with the approved closure module. This tank will now be removed from the F and H-Area High-Level Radioactive Waste Tank Farms Construction Permit No. 17,424-IW.

If you have any questions or concerns please do not hesitate to contact me at 803-642-1637.

Sincerely,


Joshua C. Yon
SC Department of Health and Environmental Control
Midlands Region EA – Aiken
206 Beaufort Street, NE
Aiken, SC 29801

cc: Shelly Wilson, SCDHEC
Barry Mullinax, SCDHEC
Travis Fuss, SCDHEC

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Promoting and protecting the health of the public and the environment

November 23, 2010

Ms. Patricia M. Allen
Savannah River Remediation, LLC
Bldg. 705-1C
Aiken, SC 29808

RE: Request to Include Tank 241-916H Dated October 14, 2010
Construction Permit Nos. 17,424-IW F and H Area High Level Waste Tank Farms
Savannah River Site
Aiken County

Dear Mr. Campbell:

This Office has reviewed the referenced letter regarding your request to include Tank 16 in the Tank Farm construction permit. This letter approves the change to Construction Permit No. 17,424-IW to include Tank 16. Please note that this is a letter modification for an administrative change only to this construction permit to include Tank 16 with the other HLW tanks during the closure phase for these tanks.

This information will be submitted as a supplemental record for Construction Permit No. 17,424-IW.

If there are any questions, please contact me by telephone at 803.898.4012 or contact me by e-mail at mullinbs@dhec.sc.gov.

Sincerely,

A handwritten signature in cursive script that reads 'Barry Mullinax'.

Barry Mullinax, PE
Environmental Engineer
Industrial Wastewater Permitting Section
Water Facilities Permitting Division

cc: Josh Yon, Region 5 EQC – Aiken Office
Shelly Wilson, Federal Facilities Liaison
Rodney Wingard, Operations Engineering

I:\NPDES\INDUST\~SRS\SRS Construction Permits\Approval to Include Tank 16 in Tank Farm Permit.doc



SAVANNAH RIVER REMEDIATION LLC

We do the right thing.

Savannah River Site, Aiken, SC 29808

SRR-CES-2010-00067

OCT 14 2010

Mr. Barry S. Mullinax, P.E.
Industrial Wastewater Permitting Section
Bureau of Water
South Carolina Department of Health and
Environmental Control
2600 Bull Street
Columbia, SC 29201

RECEIVED

OCT 19 2010

WATER FACILITIES
PERMITTING DIVISION

Re: Construction Permit No.: 17,424-IW: F and H-Area High-Level Radioactive Waste Tank Farms
Request to Include Tank 241-916H

Reference 1: Savannah River Site Federal Facility Agreement, WSRC-OS-94-42, August 16, 1993.

Reference 2: As-Built Construction Permit Application for an Industrial Wastewater Treatment Facility
for the F and H-Area High-Level Radioactive Waste Tank Farms, Revision 0, April 1991.

Dear Mr. Mullinax:

Savannah River Remediation, LLC (SRR) requests that Tank 241-916H (Tank 16H) be added to the referenced construction permit to facilitate waste removal efforts in support of this tank being removed from service under the approved waste removal and operational closure schedule. [Reference 1, Appendix L, Savannah River Site Federal Facility Agreement (FFA)]. Currently, Tank 16H is addressed in Appendix K of the FFA. This appendix lists the facilities to be decommissioned as directed by the Department of Energy (DOE), the lead decommissioning agency under the FFA. Adding Tank 16H to the wastewater treatment facility permit [Reference 2] will allow DOE to include this tank in H-Tank Farm's General Closure Plan and use the existing process jointly developed between the South Carolina Department of Health and Environmental Control and the DOE for removal of old-style tanks from service.

Tank 16H is a Type II tank which had a nominal capacity of 1,030,000 millions gallons. The carbon steel primary tank is 85 feet in diameter and 27 feet high. The tank has a secondary containment system which consists of a carbon steel pan 5 feet in height. The pan is approximately 5 feet larger in diameter than the primary tank, providing approximately 2.5 feet of annular width between the pan and the primary tank. Typical Tank 16H diagrams and sections are attached.

Tank 16H was constructed in 1956 and waste storage operations were initiated in 1959. However, this tank was removed from active waste service in 1972 due to excessive leakage from the primary tank into the annulus pan. From 1977 to 1978, much, but not all, of the waste which had leaked into the annulus was removed. Approximately 4,760 gallons of waste are estimated to remain in the annulus. The primary tank was cleaned with water and oxalic acid washes between 1978 and 1980. Liquid material has not been returned to the primary tank for storage since it was cleaned.

WWW.SRREMEDATION.COM

TEL 803.952.6560

FAX 803.952.7982

Mr. Barry S. Mullinax, P.E.
SRR-CES-2010-00067
Page Two

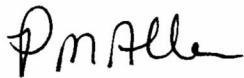
OCT 14 2010

Since Tank 16H has been out of service since 1972, it was excluded from the F/H Area Tank Farms' Liquid Radioactive Waste Storage Tanks' construction permit application submitted to SCDHEC in 1991. [Reference 2, Section 2.2]. Thus, the tank was excluded from the construction permit issued January 1993 and subsequent approval to operate issued March 1993.

SRR intends to complete waste removal efforts for Tank 16H and to operationally close the tank. As the proposed technology for the waste removal effort becomes defined, we will provide you with that information.

We request your timely review and approval of adding Tank 16H to Construction Permit 17,424-IW. If you have any questions, please contact either myself (803-208-3152) or Ron Campbell at (803) 557-6585.

Sincerely,



Patricia M. Allen, Manager
Environment, Safety, Health, Quality Assurance and Contractor Assurance

Attachments:

1. Type II Waste Tank Cross-Sectional View
2. Tank 16H Annulus Access Risers and Inspection Ports
3. Tank 16H Annulus Ventilation
4. Tank 16H Tank Section Details
5. Tank 16H Annulus Details
6. Tank 16H Annulus Views from Riser IP 262

cc: C. D. Rippey, SCDHEC, Columbia SC
J. R. Hughes, SCDHEC, Aiken SC
J. C. Yon, SCDHEC, Aiken SC
M. Berry, EPA Region 4
R. H. Pope, EPA Region 4

Mr. Barry S. Mullinax, P.E.
SRR-CES-2010-00067
Page Three

OCT 14 2010

cc cont. (via e-mail):

D. F. Hoel, DOE-SR, 730-B
J. M. Ridley, DOE-SR, 704-S
S. R. Ross, DOE-SR, 704-S
J. K. Seitz, DOE-SR, 704-S
S. L. Southern, DOE-SR, 730-B
P. C. Suggs, DOE-SR, 704-S

N. L. Bethurem, SRR, 705-1C
C. E. Blair, SRR, 241-120H
W. A. Bledsoe, SRR, 704-56H
M. N. Borders, SRR, 704-56H
D. C. Bumgardner, SRR, 766-H
J. R. Cantrell, SRR, 704-26F
W. C. Clark, Jr., SRR, 766-H
G. R. Davis, SRR, 241-156H
N. R. Davis, SRR, 704-26F
T. F. England, SRR, 705-1C
E. J. Freed, SRR, 704-56H
B. L. Green, SRR, 704-26F

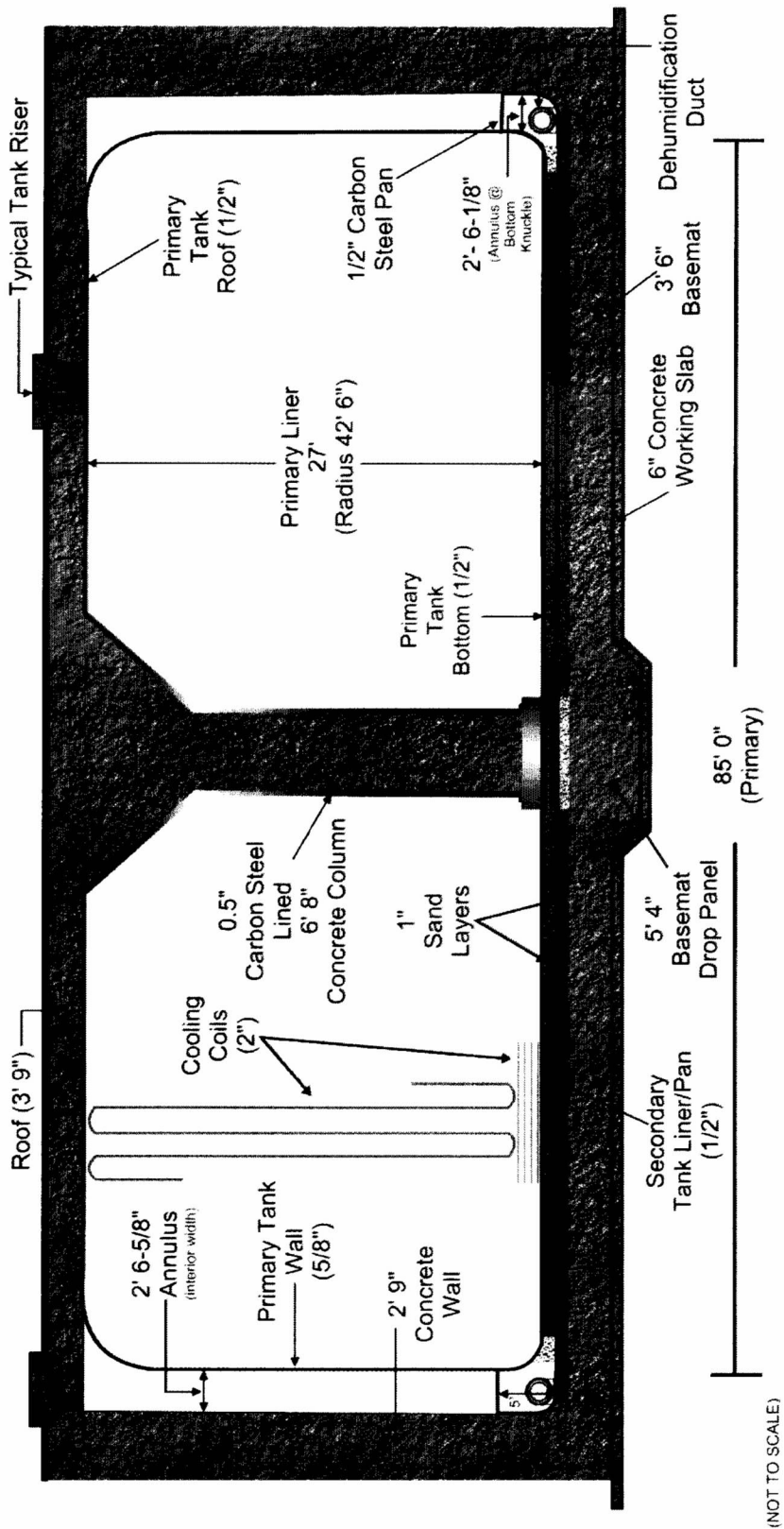
J. M. Griffith, SRNS, 705-3C
J. E. Hyatt, SRNS, 705-3C
V. E. Millings III, SRNS, 705-3C

M. D. Hasty, SRR, 704-26F
P. J. Hill, SRR, 766-H
K. A. Hauer, SRR, 766-H
W. L. Isom, Jr., SRR, 704-26F
K. R. Liner, SRR, 704-S
D. B. Little, SRR, 766-H
M. J. Mahoney, SRR, 766-H
L. D. Olson, SRR, 766-H
R. R. Salmon, SRR, 704-26F
D. P. Skiff, SRR, 766-H
O. D. Stevens, SRR, 766-H
C. J. Winkler, SRR, 766-H

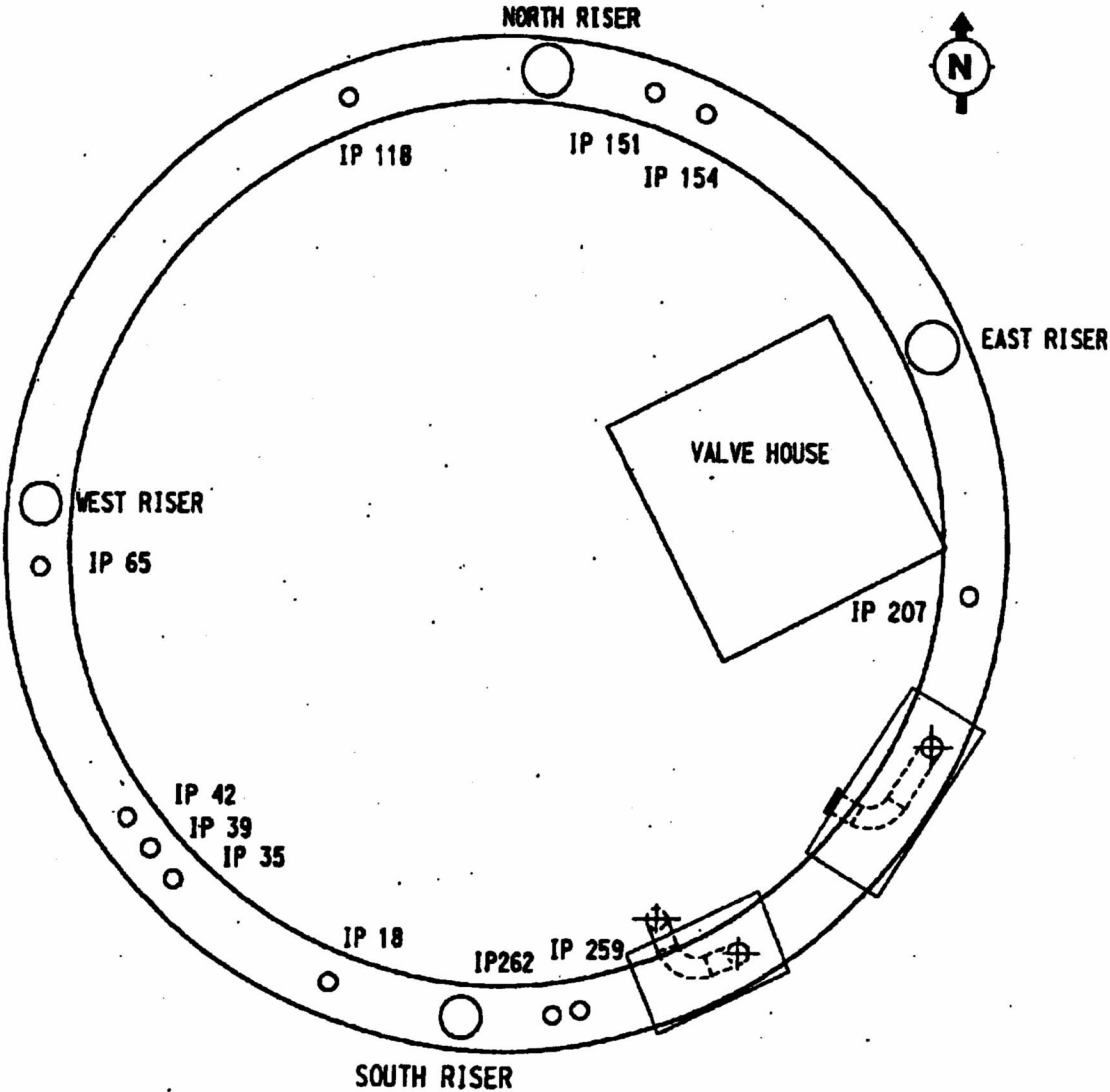
File Information:

SCDHEC
Industrial Wastewater Treatment Facility
Liquid Radioactive Waste Storage Tanks
Federal Facility Agreement
Tank 241-916H
1066, DOE/ADM
16-1.5(a) Permanent

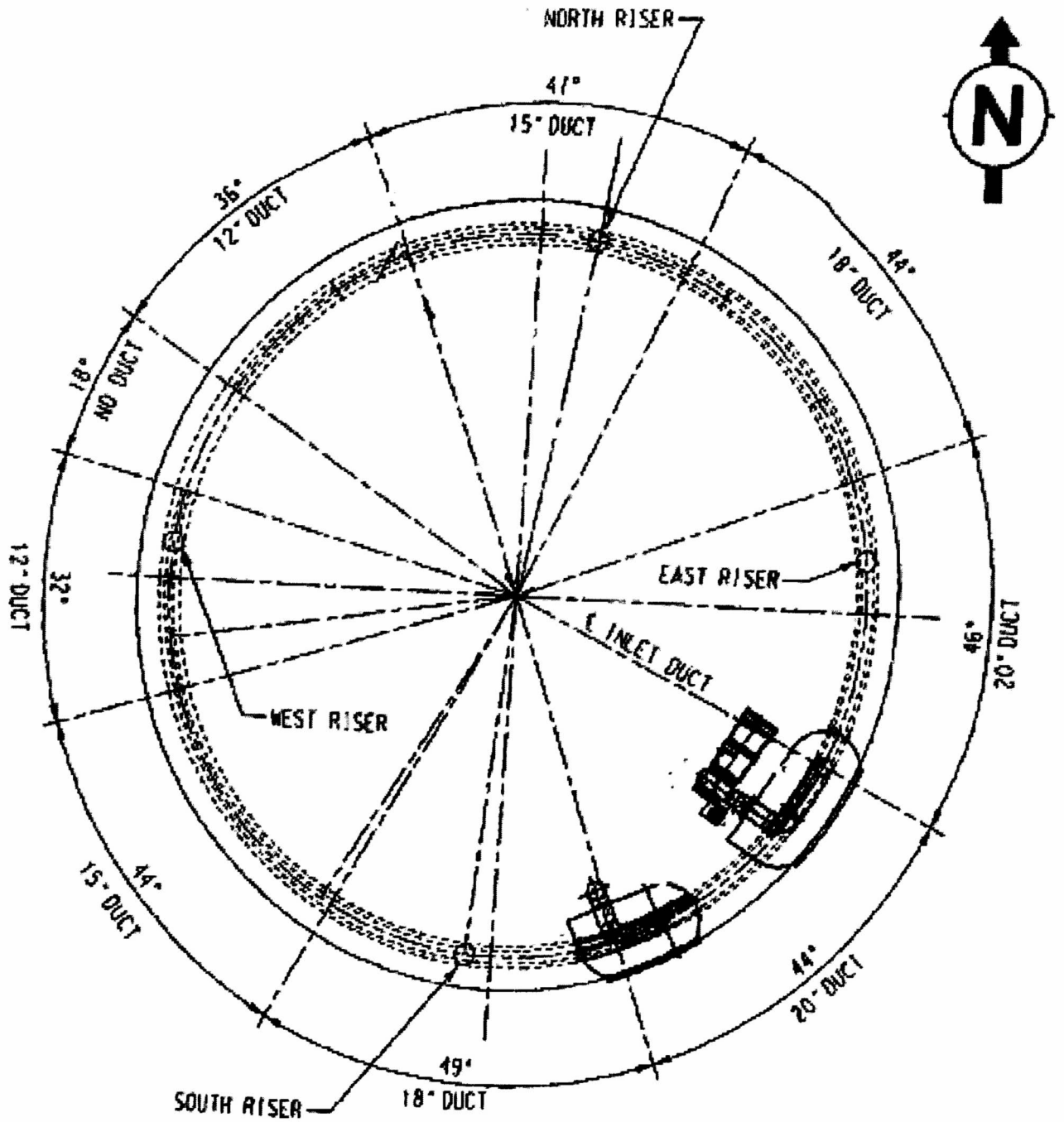
Typical Type II Waste Tank (Cross-Sectional View)



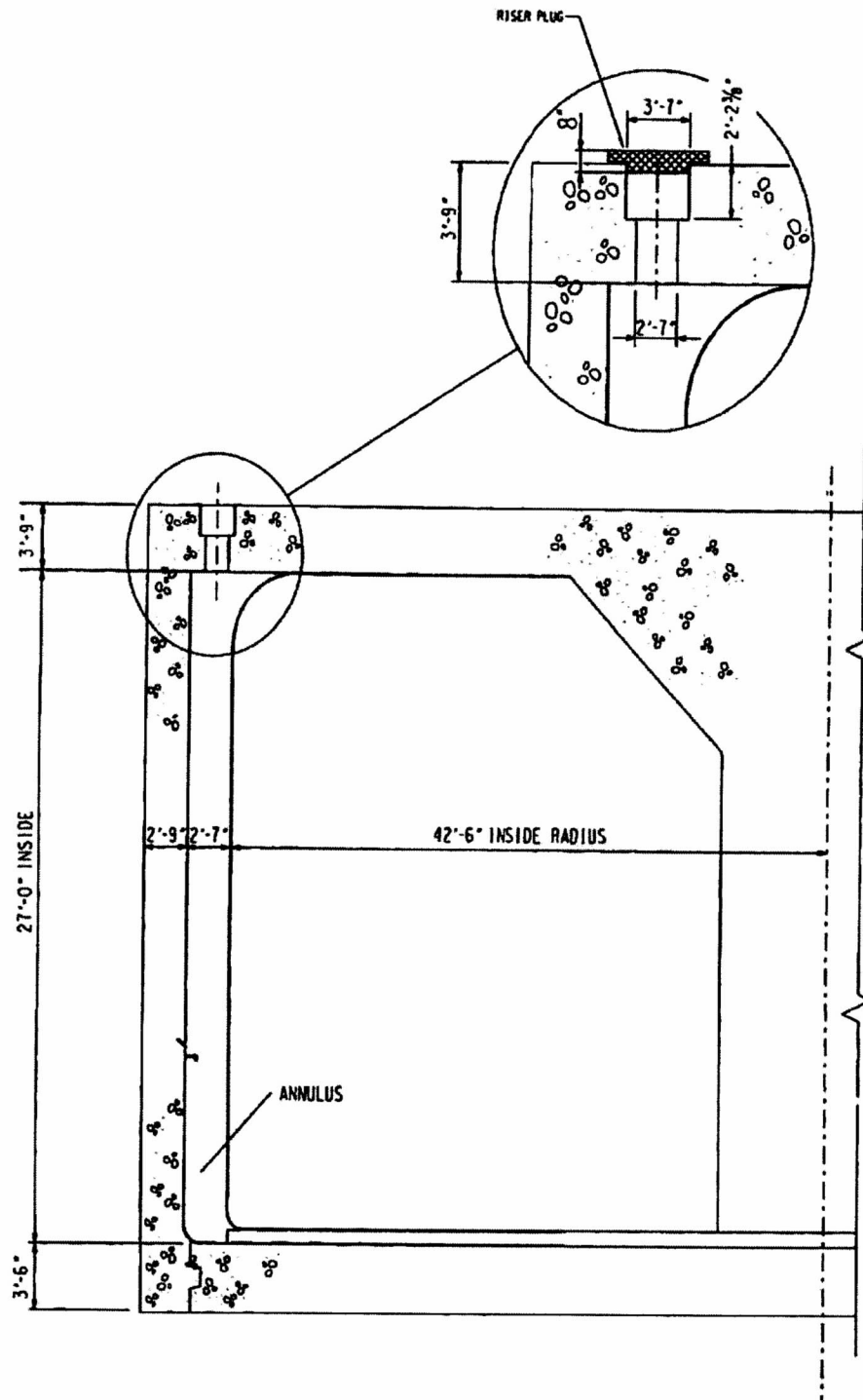
(NOT TO SCALE)



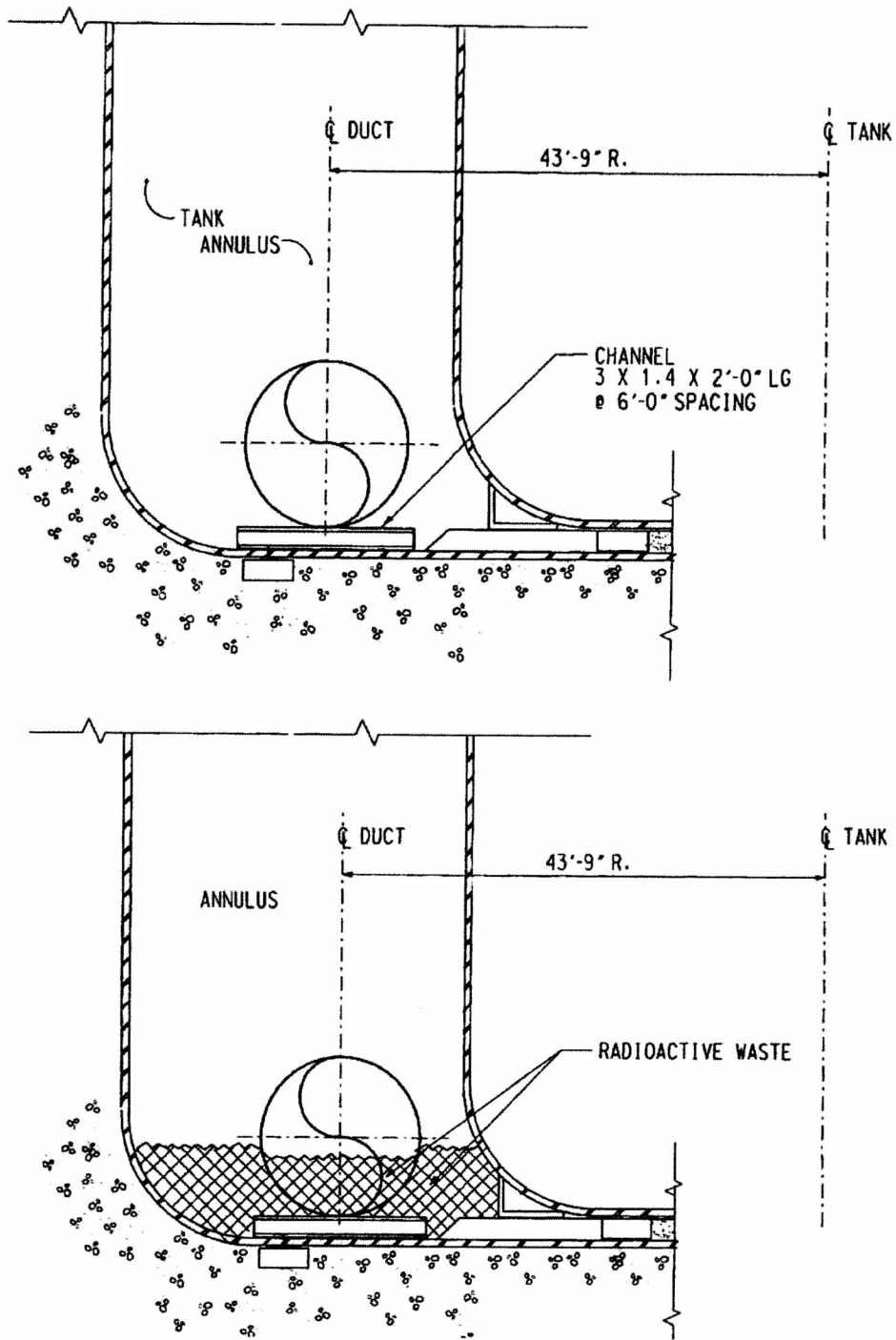
TANK 16H ANNULUS ACCESS
RISERS and INSPECTION PORTS



Tank 16, Type II Tank
Showing the Annulus Ventilation

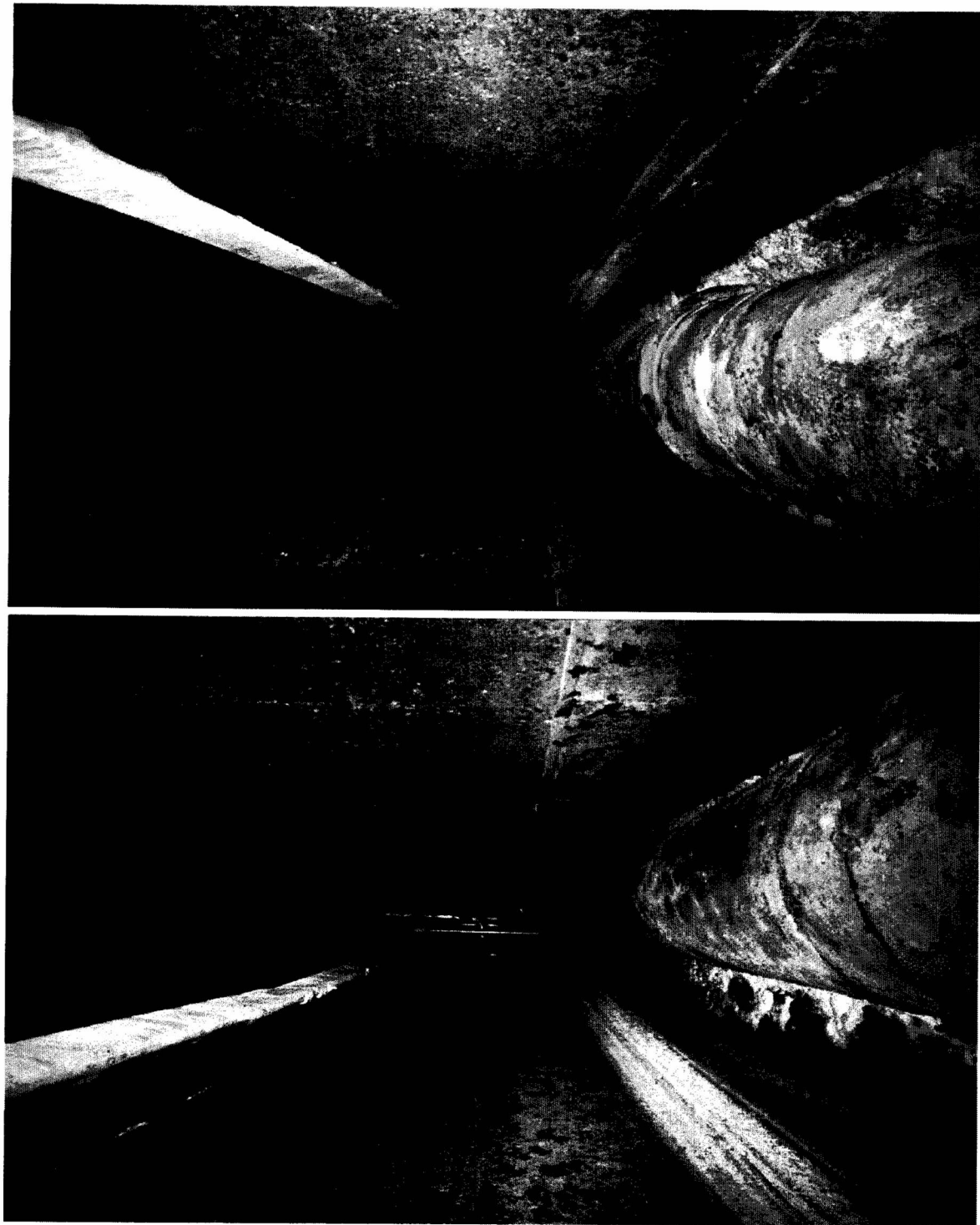


Tank 16, Type II Tank, Tank Section
Tank annulus access, four entry points called "Risiers"
Risiers are located in the North, South, East, and West sections of the annulus



Tank 16, Type II Tank Annulus Details showing Ventilation Duct
Ventilation duct runs along the bottom of the annulus.

Tank 16, 2005 View of Annulus Waste from Inspection Port IP-262



BOARD:
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Secretary



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Promoting and protecting the health of the public and the environment

BOARD:
Henry C. Scott
M. David Mitchell, MD
Glenn A. McCall
Coleman F. Buckhouse, MD

January 28, 2008

Mr. Ronald M. Campbell
Washington Savannah River Company
Environmental Protection Department
Bldg. 735-B
Aiken, SC 29808

RE: Construction Permit No. 17,424-IW
F/H Area HLW Tanks
Removal of Equipment
Letter from R. M. Campbell (WSRC) to Barry Mullinax (SCDHEC) dated 1/03/08
Savannah River Site
Aiken County

Dear Mr. Campbell:

The referenced letter listed some equipment that was being removed to allow room for capacity enhancements for the ARP facility. The equipment to be removed involved two cylindrical sintered metal cross-flow filters and associated pumps, piping, valves, instrumentation, and ventilation systems. This removal action is considered to be a partial closure for Construction Permit No. 17,424-IW. This letter hereby approves this partial closure plan and this letter will be a supplemental record for our construction permit files.

If you have any questions, please contact me by phone at (803) 898-4012 or by mail at the DHEC address on Bull Street.

Sincerely,

Barry S. Mullinax, P.E.
Environmental Engineer
Industrial Wastewater Permitting Section
Bureau of Water

/bsm

cc: Josh Yon, Region 5 EQC - Aiken Office
Ted Millings, Region 5 EQC - Aiken Office

I:\NPDES\INDUST\~SRS\SRS Construction Permits\Partial Closure for Const Permit 17424-IW.doc

**SAVANNAH RIVER SITE**

Aiken, SC 29808 • www.srs.gov

ESH-EPG-2007-00094
RSM Track # 10667

July 26, 2007

Mr. Barry S. Mullinax, P.E.
Industrial, Agricultural and Stormwater Permitting Division
South Carolina Department of Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201-1708

Re: Construction Permit No.: 17,424-IW
F- and H-Area Radioactive Liquid Waste Tank Farms
Use of Tank 241-911H

Dear Mr. Mullinax:

Request is made by the Washington Savannah River Company LLC (WSRC) to use Tank 241-911H (Tank 11H) for the storage of waste residing in other F/H Area Tank Farm tanks. Currently, Tank 241-951H (Tank 51H), a Type III tank that is used for feed preparation for the Defense Waste Processing Facility, has waste high in aluminum content, that originated from waste removal operations in Tank 11H. It is desirable to treat the high aluminum waste in Tank 51H to remove as much of the aluminum as practical. Tank 11H, an older style Type I tank, has been identified as being capable of safely storing this material. Suitable waste storage is not currently available in a newer Type III style tank.

Removal of the aluminum rich waste from Tank 51H and storage of this decanted supernate in Tank 11H would be beneficial to DWPF vitrification operations and provide the tank farm with scarce supernate storage. Reduction of aluminum in the sludge aids the DWPF process by improving the pour rate and quality of the glass. These improvements lead to fewer canisters being required. The supernate storage supports efforts to close the tanks more quickly by making available additional Type III tank storage space.

Under special condition 7 of the referenced permit, a tank that has experienced leakage in the past cannot be used for new waste storage without approval from SCDHEC. Tank 11H has exhibited leakage into the annulus in the past. Its lowest identified leak site is at the 189-inch level above the floor of the tank. Following recent waste removal activities, Tank 11H has material at approximately the 8-inch level (i.e., equating to an estimated 22,000 gallons). The proposed transfer into Tank 11H would raise the liquid level in the tank to a range of approximately 140 to 145 inches (approximately 380,000 gallons total). At no time would the proposed transfer and storage reach the 189-inch known leak site level.

We would appreciate your review and notification of approval no later than August 13, 2007 in order for us to prepare Tank 11H for receipt of the supernate as quickly as possible.

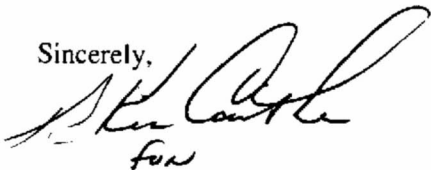
WASHINGTON SAVANNAH RIVER COMPANY

The WSRC Team: Washington Savannah River Company LLC • Bechtel Savannah River, Inc. • BNG America Savannah River Corporation • BWXT Savannah River Company • CH2 Savannah River Company

Mr. Barry S. Mullinax, P.E.
ESH-EPG-2007-00094
Page 2 of 3

Please contact me at (803) 952-7382 if you have any questions.

Sincerely,



for
Ronald M. Campbell
Environmental Services Section
Washington Savannah River Company LLC

rmc/r
Enc.

c: A. B. Gould, Jr., DOE-SR, 730-B
G. S. Hoover, 730-B
V. E. Millings III, SCDHEC – Region 5 EQC
R. T. Caldwell II, SCDHEC – Region 5 EQC



C. Earl Hunter, Commissioner

Promoting and protecting the health of the public and the environment

December 6, 2006


Mr. Ronald M. Campbell
Environmental Services Section
Bldg. 735-B
Washington Savannah River Company, LLC
Aiken, SC 29808

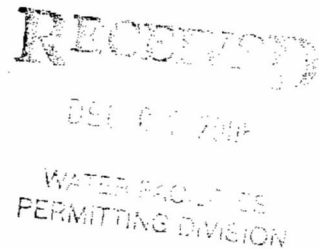
RE: Letter of Approval for the Building 241-96H Partial Closure Plan (Construction Permit No. 17,424-IW)
Letter from Barry S. Mullinax (SCDHEC) to Ronald M. Campbell (WSRC), July 19, 2006
Savannah River Site
Aiken County

Dear Mr. Campbell,

On December 4, 2006, Department personnel performed an inspection of the referenced 241-96H Stripper Building partial closure as outlined in the referenced partial closure approval letter. Principal equipment as identified in your December 4, 2006 request for inspection letter to me was removed. Based on this inspection, the facility is considered partially closed by the Department.

If you have any questions contact me at 641-7670.


Victor E. Millings, III
Regional Hydrogeologist
Aiken EQC Office



cc: Tabatha Corley, Aiken EQC Office
Barry Mullinax, PE, Industrial Wastewater Permitting Section

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

Region 5

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DEC 6 1999

Industrial, Agricultural &
Stormwater Permitting Division

Revised December 3, 1999

PARTIAL APPROVAL TO OPERATE

Issued To: Mr. Mike M. Dukes, Manager
CERCLA, Geological, and Permitting Section
Environmental Protection Department
Westinghouse Savannah River Company
P. O. Box 616
Aiken, SC 29802

for the operation of the following system in accordance with Construction Permit No. **17,424-IW** dated January 25, 1993.

Project Name: Replacement High Level Waste Evaporator (RHLWE, 242-25H)
County: Aiken

Project Description: See page two (2) of this partial approval to operate.

The wastewater generated at this facility will be sent to the F/H Effluent Treatment Facility (ETF).

Special Conditions: The special conditions applicable to the Replacement High Level Waste Evaporator (RHLWE, 242-25H) are located on page three (3) of this partial approval.

This operational approval is based on a final inspection conducted by personnel of this Department on November 9, 1999, and the Engineer's letter of certification signed by Joseph Carroll, P.E., S.C. Registration No.: 14028.

Brian L. Tripp
District Engineer Associate
Lower Savannah EQC District

Date Issued: December 3, 1999

cc: Joseph Carroll, P.E., Bechtel Savannah River, Inc.
Gene Laska, Westinghouse Savannah River Company
Bill Botts, FEP Section, Bureau of Water
Marion Sadler, Water Facilities Permitting Division
David Caddell, Lower Savannah EQC
David Angle, Environmental Health

Project Description

The Replacement High Level Waste Evaporator (242-25H) project which consists of the following:

1) An Evaporator System

The evaporator system consists of an evaporator vessel which is a vertical cylindrical tank with a conical bottom and a dished head top cover. The volume of the vessel is approximately 9,150 gallons at normal liquid level and 19,000 when completely filled. The evaporator is sized to provide for adequate de-entrainment, decontamination factor, and tube bundle geometry requirements.

2) The Cells, Enclosure, and Service Building

The Cells, Enclosure and Service Building houses the evaporator, the condenser, the Gravity Drain Lines (GDLs), and overheads tank cells; the evaporator vessel, the overheads receiver tanks, the condenser unit, and mercury collection tanks; and the support systems and equipment for the evaporator.

3) The Evaporator Feed System

The evaporator feed system consists of the feed pump, feed piping (including a leak detection box and drain line) and flush water and test vent connections, feed jumpers, a pump support platform, Tank 32 (1.3 gallon capacity Type III) as the feed tank, and all other necessary pumps, piping, and appurtenances.

4) A Concentrate Return System

The concentrate return system consists of two (3) three-inch steam lift nozzles, a separator pot, and all necessary piping, pumps, and appurtenances. The concentrate is removed from the evaporator vessel by steam lift to a separator pot. The separator pot is provided to prevent siphoning from the evaporator and to remove any entrained steam within the concentrate. The steam is vented from the separator pot back to Tank 29. The concentrate is routed to Tank 30.

5) An Overheads System

The overheads system consists of de-entrainment column and demister, the overheads condenser, a mercury removal tank / mercury collection station, two (2) overheads receiver tanks, two (2) receiver tank pumps, an overheads sampling station, leak detection boxes, and all necessary piping, pumps, and appurtenances. The overhead system transfers the vapors (overheads) produced during the high level waste evaporation process to the Effluent Treatment Facility (ETF). If the radioactivity of the overheads exceeds limits, the overheads are recycled back to the feed tank (Tank 32) via a jacketed return line using an overheads transfer pump. The leak detection boxes provide a collection and detection mechanism for the overheads transfer to ETF and overheads return to Tank 32.

Special Conditions

1. The permittee shall maintain at each permitted facility a complete Operations and Maintenance Manual for the waste treatment system. The manual shall be made available for on-site review during normal working hours. The manual shall contain operation and maintenance instructions for all equipment and appurtenances associated the waste treatment system. The manual shall contain a general description of the treatment process(es) operating characteristics that will produce maximum treatment efficiency and corrective action to be taken should operating difficulties be encountered.
2. The permittee shall provide for the performance of routine daily treatment system inspections. The inspections shall include, but are not limited to, areas which require a visual operation to determine efficient operations and for which immediate corrective measures can be taken using the O & M manual as a guide. All inspections shall be recorded and shall include the date, time, and name of the person making the inspection, corrective measures taken, and routine equipment maintenance, repair, or replacement performed. The permittee shall maintain all records of inspections at the permitted facility and the records shall be made available for on-site review during normal working hours.
3. The permittee shall develop and maintain a Best Management Practice (BMP) Plan to identify and control the discharge of significant amounts of oils and the hazardous and toxic substances listed in 40 CFR, Part 117 and Tables II and III of Appendix D to 40 CFR, Part 122. The plan shall contain a listing of all potential sources of spills or leaks of these materials, a method of containment, a description of training, inspection and security procedures, and emergency response measures to be taken in the event of a discharge to surface water or plans and/or procedures which constitute an equivalent BMP. Sources of such discharges may include materials storage areas; in-plant transfer, process, and materials handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas. The BMP plan shall be developed, and updated as necessary, in accordance with good engineering practices, shall be documented in narrative form, and shall include any necessary plot plans, drawings, or maps. The BMP Plan shall be developed no later than six months after the issuance of the Final Approval (or modification) and implemented no later than one year after issuance of the Final Approval (or modification). A spill Prevention Control and Countermeasure (SPCC) plan may be used in lieu of a BMP plan if BMP requirements are satisfied. The BMP Plan or its equivalent shall be maintained at the plant site and shall be available for inspection by the EPA and Department personnel.
10. This approval is being issued after review and approval of a construction permit application submitted to the State of South Carolina pursuant to the requirements of a Federal Facilities Agreement (FFA) entered into by the United States Department of Energy (the permittee), the United States Environmental Protection Agency, and the States of South Carolina on January 15, 1993. In addition to the conditions specifically stated in this permit, the permittee shall be subject to all applicable requirements of Section IX, including referenced appendices, of the FFA.



South Carolina Department of Health
and Environmental Control

Lower Savannah Environmental Quality Control District
George P. Nelson Building, 206 Beaufort Street NE
Aiken, SC 29801
803-641-7670 Fax 803-641-7675

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PARTIAL APPROVAL TO OPERATE

Issued To: Mr. Mike M. Dukes, Manager
CERCLA, Geological, and Permitting Section
Environmental Protection Department
Westinghouse Savannah River Company
P. O. Box 616
Aiken, SC 29802

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NOV 24 1999

Industrial, Agricultural &
Stormwater Permitting Division

for the operation of the following system in accordance with Construction Permit No. 17,424-IW dated January 25, 1993.

Project Name: Replacement High Level Waste Evaporator (RHLWE, 242-25H)
County: Aiken

Project Description: See page two (2) of this partial approval to operate.

The wastewater generated at this facility will be sent to the F/H Effluent Treatment Facility (ETF).

Treatment System Classification: Group IV-PC.

Special Conditions: The special conditions applicable to the Replacement High Level Waste Evaporator (RHLWE, 242-25H) are located on page three (3) of this partial approval to operate.

This operational approval is based on a final inspection conducted by personnel of this Department on November 9, 1999, and the Engineer's letter of certification signed by Joseph Carroll, P.E., S.C. Registration No.: 14028.

Date Issued: November 23, 1999

Brian L. Tripp
Environmental Engineer Associate
Lower Savannah EQC District

cc: Joseph Carroll, P.E., Bechtel Savannah River, Inc.
Gene Laska, Westinghouse Savannah River Company
Bill Botts, FEP Section, Bureau of Water
Marion Sadler, Water Facilities Permitting Division
David Caddell, Lower Savannah EQC
David Angle, Environmental Health

Project Description

The Replacement High Level Waste Evaporator (242-25H) project which consists of the following:

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2) The Cells, Enclosure, and Service Building

The Cells, Enclosure and Service Building houses the evaporator, the condenser, the Gravity Drain Lines (GDLs), and overheads tank cells; the evaporator vessel, the overheads receiver tanks, the condenser unit, and mercury collection tanks; and the support systems and equipment for the evaporator.

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2. The permittee shall provide for the performance of routine daily treatment system inspections by a certified operator of the appropriate grade. The inspections shall include, but are not limited to, areas which require a visual operation to determine efficient operations and for which immediate corrective measures can be taken using the O & M manual as a guide. All inspections shall be recorded and shall include the date, time, and name of the person making the inspection, corrective measures taken, and routine equipment maintenance, repair, or replacement performed. The permittee shall maintain all records of inspections at the permitted facility and the records shall be made available for on-site review during normal working hours.
3. The permittee shall develop and maintain a Best Management Practice (BMP) Plan to identify and control the discharge of significant amounts of oils and the hazardous and toxic substances listed in 40 CFR, Part 117 and Tables II and III of Appendix D to 40 CFR, Part 122. The plan shall contain a listing of all potential sources of spills or leaks of these materials, a method of containment, a description of training, inspection and security procedures, and emergency response measures to be taken in the event of a discharge to surface water or plans and/or procedures which constitute an equivalent BMP. Sources of such discharges may include materials storage areas; in-plant transfer, process, and materials handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas. The BMP plan shall be developed, and updated as necessary, in accordance with good engineering practices, shall be documented in narrative form, and shall include any necessary plot plans, drawings, or maps. The BMP Plan shall be developed no later than six months after the issuance of the Final Approval (or modification) and implemented no later than one year after issuance of the Final Approval (or modification). A spill Prevention Control and Countermeasure (SPCC) plan may be used in lieu of a BMP plan if BMP requirements are satisfied. The BMP Plan or its equivalent shall be maintained at the plant site and shall be available for inspection by the EPA and Department personnel.
10. This approval is being issued after review and approval of a construction permit application submitted to the State of South Carolina pursuant to the requirements of a Federal Facilities Agreement (FFA) entered into by the United States Department of Energy (the permittee), the United States Environmental Protection Agency, and the States of South Carolina on January 15, 1993. In addition to the conditions specifically stated in this permit, the permittee shall be subject to all applicable requirements of Section IX, including referenced appendices, of the FFA.

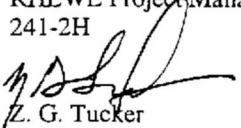
WESTINGHOUSE SAVANNAH RIVER COMPANY
INTEROFFICE MEMORANDUM



CES-ZGT-99-0001

November 1, 1999

To: D. T. O'Rear
RHLWE Project Manager
241-2H

From: 
Z. G. Tucker
Manager, Construction Engineering Services - Pipe
704-N


**INTEGRITY CERTIFICATION FOR REPLACEMENT HIGH LEVEL WASTE EVAPORATOR (RHLWE)
FACILITY (SCDHEC CONSTRUCTION PERMIT #17,424-IW)**

BSRI and its Subcontractors have constructed the RHLWE facility's piping systems in accordance with the design documents, referenced construction permit, and subsequent modification approved by SCDHEC on 6/14/95. Work is complete with exception of installations that isolate waste from the facility and maintenance punchlist items that do not affect operability of the facility. Pipe leak testing examinations for these systems were performed in accordance with the applicable Codes, and Standards. All tests were controlled and documented as directed by Site programs.

The subject systems have been demonstrated to be leak tight.

This Integrity Certification is based upon performance of qualified personnel who were responsible to gather and evaluate the required information. The information submitted is, to the best of my knowledge, true, accurate, and complete.

Please contact me if you have any questions or comments. I can be reached at (803) 557-4224.


TGR/BGB/ADM/JD/jc

cc: M. D. Buxton, 241-2H
J. Carroll, 704-N
W. T. Davis, 707-H
R. A. Delcastilho, 241-2H
C. R. Hayes, 703-H
G. W. Hendry, 241-2H
C. J. Johnson, 241-162H
C. G. Kelly, 241-2H
S. D. Kirker, 704-N
G. H. Laska, 742-A
D. J. Martin, 241-162H
C. F. Milliner, 730-20B, Rm 12
P. W. Schuetz, 703-H
R. D. Steigerwalt, 704-N

Bechtel

Savannah River Site Construction
Building No. 704-N
Aiken, SC 29808
Fax: (803) 557-4075

CES-JC-99-0002

November 1, 1999

Lower Savannah District
Environmental Quality Control
South Carolina Department of Health and
Environmental Control
218 Beaufort Street, NE
Aiken, SC 29801

PROFESSIONAL ENGINEER'S CERTIFICATION OF SCDHEC CONSTRUCTION PERMIT #17,424-IW, REPLACEMENT HIGH LEVEL WASTE EVAPORATOR FACILITY, 242-25H (U)

I have inspected the construction of the Replacement High Level Waste Evaporator (RHLWE) project as described in SCDHEC Construction Permit #17,424-IW and subsequent modification approved by SCDHEC on 6/14/95. Attached are the as-built drawings of the facility, integrity certification, and the SRS Federal Facility Agreement Assessment Report for the RHLWE, 99-HTF-001. The facility was found to be built in accordance with the approved documents, with exception to the following items which will be completed prior to hot tie-ins:

Installation of Feed Pump and tie-in of associated support systems

Removal of isolation block connectors

Restore system configuration for changes required for Simulant testing

Maintenance punchlist items. The punchlist includes ongoing maintenance items, SMI-51 (General Site) items, and minor Construction completion items which do not affect the operability of the facility.

Please note that the as-built drawings include changes to the Overheads Waste transfer line and reconfiguration of the Gravity Drain Lines (GDLs).

I certify that this document was prepared subsequent to a system utilized to assure that qualified personnel gather and evaluate the required information. Based upon my inspections and inquiries of the persons who manage the system, and those persons responsible for gathering the information, the information submitted is, to the best of my knowledge, true, accurate, and complete.

Please contact me if you have any questions or comments. I can be reached at (803) 557-4363.

Sincerely,


Joseph Carroll, PE
South Carolina # 14028

11-1-99

cc: W. T. Davis, 707-H
R. A. Delcastilho, 241-161H
C. R. Hayes, 703-H
G. H. Laska, 742-A
D. J. Martin, 241-162H
D. T. O'Rear, 241-2H
P. W. Schuetz, 704-82H



Savannah River, Inc.



2600 Bull Street
Columbia, SC 29201-1708

May 15, 1997

Mr. J.W. Cook
CERCLA, Geological and Permitting Section
Environmental Protection Department
Westinghouse Savannah River Company
P.O. Box 616
Aiken, SC 29802

Re: SRS/F&H Area HLW Tank Modification
Construction Permit #17,424-IW
Aiken County

Dear Mr. Cook:

This Office has reviewed your May 6, 1997 submittal for the modification of Construction Permit #17,424-IW for the F/H Area High Level Waste Tank Farm. A stainless steel valve box will be constructed west of Tank 50 to serve as a diversion mechanism for flow originating at the F/H Effluent Treatment Facility and for ITP filtrate. Approximately 300 linear feet of 2, 3 and 4 inch diameter core piping, and 6 inch diameter jacket piping, associated piping, valves and appurtenances will be installed to reroute the flows. The addition of this equipment is hereby approved. This letter shall serve as a modification to Construction Permit #17,424-IW.

If you should have any questions feel free to call me at (803) 734-4393.

Sincerely,

Christina Hackett
Environmental Engineer Associate
Industrial, Agricultural, and Storm Water
Permitting Division

cc: Lower Savannah EQC District



Westinghouse
Savannah River Company

P.O. Box 816
Aiken, SC 29802

ESH-CGP-96-0079

February 12, 1996

Ms. M. C. Reece, Director
Lower Savannah District EQC
South Carolina Department of
Health and Environmental Control
218 Beaufort Street NE
Aiken, South Carolina 29801

Dear Ms. Reece:

**AS-BUILT DRAWINGS FOR IN-TANK PRECIPITATION (ITP)
FACILITY (U)**

Ref.: Letter, Dunaway to Richardson, 8/16/93

Per the referenced letter, SRS was to provide your office with modified drawings resulting in changes to the ITP facility since the permit to operate was issued on 3/3/93. The majority of facility modifications since 3/93 have been very minor in nature. As a result, no drawings that were provided to SCDHEC during the permitting process were in need of revision. Therefore, no as-built drawings will be submitted to your office for the ITP project.

For your information, the ITP facility initiated radioactive startup on October 18, 1995.

This matter has been discussed with Betsy Malpass of your Office. Please contact Chuck Hayes (725-8838) should you have any questions.

Very truly yours,

A handwritten signature in black ink, appearing to read 'W. D. Dunaway'.

W. D. Dunaway, Senior Technical Leader
CERCLA, Geological and Permitting Section
Environmental Protection Department

CRH:aco

cc: A. B. Gould, 703-47A

South Carolina
DHEC

Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

Interim Commissioner: Thomas E. Brown, Jr.

Board: John H. Burriss, Chairman
Richard E. Jabbour, DDS, Vice Chairman
Robert J. Stripling, Jr. Secretary

William E. Applegate, III,
Toney Graham, Jr., MD
Sandra J. Molander
John B. Pate, MD

Promoting Health, Protecting the Environment

April 30, 1993

Mr. W.D. Dunaway, Manager
Permitting Field Support Group
Environmental Protection Department
Westinghouse Savannah River Co.
P.O. Box 616
Aiken, SC 29802

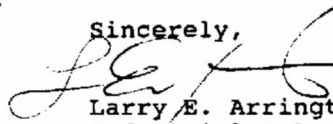
Re: Construction Permit 17424-IW Modification
SRS F/H-Area
Aiken County

Dear Mr. Dunaway:

This office has completed its review of your March 12, 1992 Engineering Report supporting a modification to construction permit 17424-IW. The modification is for the addition of approximately 1100 feet of new three (3) inch core piping and associated containment jacketing to the existing H-S Interarea Transfer Line for the purpose of bypassing the existing Auxiliary Pump Pit (APP) in order to accommodate the future implementation of the "Latewash" Facility. Based on our review, we approve this addition.

If you should have any questions please call.

Sincerely,



Larry E. Arrington
Industrial & Agricultural
Wastewater Division

cc: Lower Savannah EQC

South Carolina
DHEC
Department of Health and Environmental Control
2600 Bull Street, Columbia, SC 29201

Interim Commissioner: Thomas E. Brown, Jr.

Board: John H. Burriss, Chairman
Richard E. Jabbour, DDS, Vice Chairman
Robert J. Stripling, Jr. Secretary

William E. Applegate, III,
Toney Graham, Jr., MD
Sandra J. Molander
John B. Pate, MD

Promoting Health, Protecting the Environment

3 ~~BSM-5~~
January 25, 1997

Tank Farm

Mr. W.D. Dunaway, Manager
Permitting Field Support Group
Environmental Protection Department
Westinghouse Savannah River Co.
P.O. Box 616
Aiken, SC

Re: Construction Permit #17,424-IW
SRS F/H-Area
Aiken and Barnwell County

Dear Sir:

Enclosed is a State Construction Permit for the above-referenced wastewater treatment facility. The conditions of the permit are explicitly stated: construction is to be performed in accordance with this permit and the supporting engineering report, plans and specifications approved by this Office.

Your EQC District contact from this Department is Myra Reece (address below). She should be notified when construction has begun and when the facility is ready for operation. A permit to operate must be issued before the permitted facility is placed in operation. At the time you request an operating permit you must submit a letter to our District Office from the Registered Engineer who signed Item X on the Application for Permit to Construct. The Engineer should certify that the construction has been completed in accordance with the approved plans and specifications. At the discretion of the Department, a final inspection may be required prior to operating permit issuance.

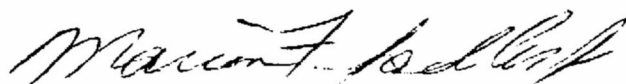
In accordance with State Law, your facility will be required to have an operator-in-charge who has been certified by the SC Environmental Certification Board. Your facility has been classified in Group IV-P/C, necessitating an operator holding a Grade A-P/C or higher certificate. You will not be given permission to operate your facility until a properly qualified operator(s) has been obtained. Questions in this matter should be directed to William R. Moore, SC Environmental Certification Board, 2221 Devine Street, Suite 320, Columbia, SC 29205.

Address of District Contact:
218 Beaufort Street, NE
Aiken, S.C. 29801

MFS/LEA

cc: Myra Reece, Lower Savannah EQC

Sincerely,



Marion F. Sadler, Jr., Acting Director
Industrial & Agricultural
Wastewater Division

Bureau of Water Pollution Control Permit To Construct

F/H-Area

Permission is hereby granted to: Westinghouse Savannah River Co.
P.O. Box 616
Aiken, S.C.

for the construction of a wastewater treatment system in accordance with the construction plans, specifications, engineering report and Construction Permit Application signed by Richard L. Stegen, Ihor John Nyszczot, Richard Kowalski and John William Nelson, Registered Professional Engineers, S. C. Registration Numbers: 12633, 10901, 14077, and 4448 respectively.

Project Name: F and H-Area High-Level Radioactive Waste Tank Farms County: Aiken & Barnwell

Project Description: The description of the F/H Area High-Level Radioactive Tank Farm is located on page 2 of this permit.

The wastewater generated at this facility will be sent to the F/H ETF, precipitate slurry and sludge will be sent to the DWPF, and decontaminated salt solution will be sent to the Z-Area Saltstone Manufacturing and Disposal Facility.

There is no direct discharge from this facility.

The effluent concentrations of those constituents the wastewater treatment system is designed to remove or reduce are as required by the receiving facilities.

Treatment System Classification: Group IV-PC.

Special Conditions: The special conditions applicable to the F/H Area High-Level Radioactive Tank Farm are located on page 3 and 4 of this permit.

Permit Number: 17,424-IW Date of Issue: January 25, 1993

Expiration Dates: Unless construction begins prior to January 25, 1994
and construction is completed prior to January 1, 1998
this permit will expire.

In accepting this permit, the owner agrees to the admission of properly authorized persons at all reasonable hours for the purpose of sampling and inspection.

THIS IS A PERMIT FOR CONSTRUCTION ONLY AND DOES NOT CONSTITUTE STATE DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL APPROVAL, TEMPORARY OR OTHERWISE, TO PLACE THIS SYSTEM IN OPERATION.


Bureau of Water Pollution Control

Project Description

The construction of two wastewater storage and treatment facilities and associated transfer systems, one in F-Area the other in H-Area, designed to treat wastewater generated at the F-Area Separations Facility, H-Area Separations Facility, Equipment Decontamination/Repair Facility, F/H Effluent Treatment Facility, Defense Waste Processing Facility, Receiving Basin for Offsite Fuels and Resin Regeneration Facility, and SRL Laboratory. The treatment facilities will also receive reactor filter backwash, incidental wastes, and process chemicals.

The F-Area facility consists of the following equipment:

1. 22 tanks, eight (8) of which are 750,000 gal Type I tanks (numbers 1-8), ten (10) 1,300,000 gal Type III/IIIA tanks (numbers 25-28, 33-34, and 44-47), and four (4) 1,300,000 gal Type IV tanks (numbers 17-20).
2. Two evaporator systems (242-F and 242-16F) each of which consists of an evaporator, condenser, mercury collection tank, cesium removal pump tank and column, overheads hold tanks, and overheads diverting tank (242-F only). The 242-F evaporator system also contains a waste concentrate transfer system.
3. Six (6) diversion boxes (FDB1, FDB2, FDB3, FDB4, FDB5, FDB6)
4. Three (3) pump pits (FPP1, FPP2, FPP3)
5. Associated tanks, pumps, and piping.

*Tank #16 and #50 are
not included in this
CP. BSM 1-22-08*

The H-Area facility consists of the following equipment:

1. 27 tanks, four (4) of which are 750,000 gal Type I tanks (numbers 9-12), three (3) are 1,030,000 gal Type II tanks (numbers 13-15), sixteen (16) 1,300,000 gal Type III/IIIA tanks (numbers 29-32, 35-43, 48, 49, and 51), and four (4) 1,300,000 gal Type IV tanks (numbers 21-24).
2. Three (3) evaporator systems (242-H, 242-16H, and 242-25H) each of which consists of an evaporator, condenser, mercury collection tank, cesium removal pump tank and column, and overheads hold tanks. The 242-H evaporator system also contains a waste concentrate transfer system.
3. Eight (8) diversion boxes (HDB1, HDB2, HDB3, HDB4, HDB5, HDB6, HDB7, HDB8)
4. Ten (10) pump pits (HPP1, HPP2, HPP3, HPP4, HPP5, HPP6, HPP7, HPP8, HPP9, HPP10)
5. In-Tank Precipitation Process consisting of:
 - a. Two (2) Cross flow filters
 - b. One (1) precipitate stripper column
 - c. One (1) wash stripper column
 - d. Two (2) hold tanks
6. Associated tanks, pumps, and piping.

This permit also includes the transfer line between the F-Area and H-Area facilities, the line between the H-Area facility and the DWPF, and the pump pits (APP and LPPP) associated with the line from H-Area to the DWPF including all associated pumps and tanks.

SPECIAL CONDITIONS

1. The permittee shall maintain at each permitted facility a complete Operations and Maintenance Manual for the waste treatment system. The manual shall be made available for on-site review during normal working hours. The manual shall contain operation and maintenance instructions for all equipment and appurtenances associated with the waste treatment system. The manual shall contain a general description of the treatment process(es), operating characteristics that will produce maximum treatment efficiency and corrective action to be taken should operating difficulties be encountered.
2. The permittee shall provide for the performance of routine daily treatment plant inspections by a certified operator of the appropriate grade. The inspections shall include, but are not limited to, areas which require a visual observation to determine efficient operations and for which immediate corrective measures can be taken using the O & M manual as a guide. All inspections shall be recorded and shall include the date, time and name of person making the inspection, corrective measures taken, and routine equipment maintenance, repair, or replacement performed. The permittee shall maintain all records of inspections at the permitted facility and the records shall be made available for on-site review during normal working hours.
3. The permittee shall develop and implement a Best Management Practices (BMP) plan to identify and control the discharge of significant amounts of oils and the hazardous and toxic substances listed in 40 CFR Part 117 and Tables II and III of Appendix D to 40 CFR Part 122. The plan shall include a listing of all potential sources of spills or leaks of these materials, a method for containment, a description of training, inspection and security procedures, and emergency response measures to be taken in the event of a discharge to surface waters or plans and/or procedures which constitute an equivalent BMP. Sources of such discharges may include materials storage areas; in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas. The BMP plan shall be developed, and updated as necessary, in accordance with good engineering practices, shall be documented in narrative form, and shall include any necessary plot plans, drawings, or maps. The BMP plan shall be developed no later than six months after issuance of the final permit (or modification), shall be implemented no later than one year after issuance of the final permit (or modification). A Spill Prevention Control and Countermeasure (SPCC) plan may be used in lieu of a BMP plan if BMP requirements are satisfied. The BMP plan or its equivalent shall be maintained at the plant site and shall be available for inspection by EPA and Department personnel.
4. No chemicals (process or otherwise) shall be added to the waste tanks which will alter the composition of the F/H ETF effluent from that which was evaluated for the NPDES permit.
5. The addition (not replacement) of new piping and chemical feed systems, even though related to the F/H Tank Farm process, shall not be considered normal operation if the piping and/or feed systems are to be located outside the tank farm boundary.

Je 4
SRS CP #17,424-IW
F/H Area Tank Farm

6. Once waste removal begins on a tank with a leak or crack and the waste is removed to a level below the lowest known leak or crack, that level shall become the maximum operating level of the tank and shall not be exceeded unless the exceedance is a temporary result of the waste removal process.
7. No tank that leaks or has leaked shall be used for waste receipt without prior approval from this Department. This condition does not apply to the necessary addition of waste for waste removal purposes. Also, this condition does not apply to the use of tank 13, the 242-H evaporator feed tank, provided the construction and utilization of the replacement evaporator, 242-25H, and its associated feed tank do not deviate significantly from the State approved schedule. Any schedule changes must be approved by this office.
8. Within 60 days from the effective date of this permit the Permittee shall submit to this office a report containing the QA/QC procedures followed during the installation of the liner extension within the ITP hold tank area.
9. The Permittee shall maintain contingency plans or emergency procedures in place to respond to any known emergency situation with the potential to negatively impact human health or the environment. The plans and/or procedures shall be updated as necessary to include new information or changing conditions.
10. On June 30, 1987 the permittee submitted a revised RCRA Part A permit application which included the high-level radioactive waste tank system(s) contained in this permit. After this office issues the wastewater construction and operating permits for this facility, the permittee should amend its RCRA Part A permit to delete the tank system(s).
11. Based on a review of the Tank Assessment Report, submitted as a requirement of the Federal Facilities Agreement (FFA), Section IX, this office has determined that the Type I tanks identified as tanks 2-8 are approvable as equivalent devices for secondary containment. The Type I tanks, however, should only be used for waste receipt when there is no suitably available volume in an approved Type III tank. Furthermore, if any Type I tank develops a leak which exceeds the capacity of the 5-foot deep secondary containment pan, this approval shall be rescinded and no additional waste shall be directed to these Type I tanks.
12. This permit is being issued after review and approval of a construction permit application submitted to the State of South Carolina pursuant to the requirements of a Federal Facilities Agreement (FFA) entered into by the United States Department of Energy (the permittee), the United States Environmental Protection Agency, and The State of South Carolina on January 15, 1993. In addition to the conditions specifically stated in this permit, the permittee shall be subject to all applicable requirements of Section IX, including referenced appendices, of the FFA.