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

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Promoting Health, Protecting the Environment

PARTIAL PERMIT TO OPERATE

March 3, 1993

Westinghouse Savannah River Company
P. O. Box 616
Aiken, South Carolina 29802

Re: Project: F and H Area High Level Radioactive Waste Tank Farms
Construction Permit No.: 17,424-IW
County: Aiken and Barnwell

Dear Sirs:

Based on a final construction inspection conducted by Jeff Chapman on 2-26-93, this office does hereby authorize the F/H Area High-Level Radioactive Tank Farm to be placed into operation (the description of the F/H Area High-Level Radioactive Tank Farm is located on page 2 of this Permit to Operate).

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

If there are any questions concerning this project, please contact this office at 641-7670.

Yours truly,

Jeff W. Chapman
District Engineer
Lower Savannah District
Environmental Quality Control

JWC:chp

cc: Danny Dunaway, Westinghouse
A. B. Gould, DOE
Industrial Wastewater Division, SCDHEC

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.

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. Two evaporator systems (242-H and 242-16H) 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.

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.

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 it's 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.