

11.5 SOLID RADWASTE SYSTEM

The Solid Radwaste System collects, processes, packages, and provides temporary storage for radioactive solid wastes due for offsite shipment and permanent disposal.

11.5.1 Design Objectives

1. To provide a means of collecting spent demineralizer resins generated during plant operation.
2. To provide a means of packaging spent resins and expended filters in containers suitable for transfer from the plant site.
3. To provide a means of packaging low level contaminated solid wastes such as glassware and clothing.
4. To provide a means of processing spent resins and packaging for offsite shipment.

The design criteria for the Solid Radwaste Treatment System are as follows:

The facility design shall include those means necessary to maintain control over the plant radioactive solid waste. Appropriate storage capacity shall be provided for retention of solid wastes. In all cases, the design for radioactivity control shall be justified (a) on the basis of 10CFR20 requirements, for both normal operations and for any transient situation that might reasonably be anticipated to occur and (b) on the basis of 10CFR50.67 dosage level limits for potential reactor accidents of exceedingly low probability of occurrence.

The solid waste facility is designed so that offsite shipments are in accordance with applicable governmental regulations.

The spent resins from the demineralizers and filter cartridges are packaged and stored onsite until shipment offsite for disposal.

11.5.2 System Design

The solid processing portion of the Waste Disposal System is designed to package all solid wastes for removal to volume reduction or burial facilities. All packaging shall meet DOT/NRC approval as applicable depending upon contents. Packages for burial will additionally conform to burial site facility criteria.

The resins are transferred to appropriate shipping containers for processing as necessary prior to transport.

Dry Active Wastes (DAW) are shipped to an off-site volume reduction facility.

11.5.3 Equipment Description

The Solid Radwaste System consists of components and subsystems described below.

Waste Processing Facility

The resin processing equipment is operated remotely from a control station that operates a fill head on the appropriate shipping container. The processing is done within the Auxiliary Building to control the release of air and liquid to the environment. Activity levels of the contents are monitored to limit the doses during shipment.

Off Site Volume Reduction

DAW is collected in Sea-vans and then shipped off-site for volume reduction processing by a licensed contractor. The volume-reduced DAW is placed into packages that will meet DOT/NRC approval and then shipped for disposal at a licensed burial site.

11.5.4 Expected Volumes

See Section 11.5.7

11.5.5 Packaging

Packaging is done in DOT/NRC approved packages, as appropriate, depending upon contents.

11.5.6 Storage Facilities

The storage areas are shielded to protect personnel in accessible portions of the solid radwaste area. The shielding is designed to meet the requirements of 10CFR20.

Low-level radwaste can be stored in the Low-Level Radwaste Storage Facility (LLRSF) for up to 5 years if shipping to a Low-Level Radwaste Disposal Facility is denied. The LLRSF has been specifically designed in accordance with guidelines provided in Generic Letter 81-38.

11.5.7 Shipment

The average annual volumes of solid wastes (on a two unit basis) shipped from the Salem Generating Station are as follows:

Spent resins, filter sludges	25 cubic meters
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Dry compressible waste, contaminated equipment	100 cubic meters
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The Process Control Program (PCP) has been approved by the Nuclear Regulatory Commission (NRC) which outlines the in-plant measures and controls to assure the suitability of radioactive waste products for transportation and/or disposal at a licensed burial site.

11.5.8 Reference for Section 11.5

1. Public Service Electric and Gas Letter, Liden to Varga, November 28, 1983