Barnwell LLRW Disposal Facility

Started operating in 1971

- Trench Areas
- Site Buildings

- 120 acres capped
- 235 acres used for disposal and site buildings
Projected Timeline

- **Atlantic Compact Act signed**
- **Site opens**
- **Phase I Closure Activities**: 15 months
- **Post-Closure Observational Period**: 5 years
- **Phase II Closure Activities**: 12 months
- **State Oversight**: > 100 years

**Timeline Events**:
- **1971**: Open to All States*
- **2000**: Begin Compact Operations
- **July 1, 2008**: Open to Atlantic Compact States only
- **Oct 1, 2010**: End Waste Disposal Operations
- **2038**: Begin Compact Operations
- **2039**: End Waste Disposal Operations

*NC was banned in 1995
Status of Chem-Nuclear Site

- Atlantic Compact Operations only
- Phase I closure activities are complete
- 86% of site is in 5-year postclosure observation period
- Extensive documentation showing 16 performance objectives listed in the license have been met
License Appeal Update

• March 2004 - DHEC renewed the Chem-Nuclear Systems’ (CNS) License

• April 2004 - DHEC’s Decision was appealed by Sierra Club and Environmentalists, Inc.

• The Administrative Law Court (ALC) dismissed Environmentalists, Inc. based on lack of standing
License Appeal Update (cont.)

- October 2005 - The Administrative Law Court issued its order affirming the license renewal.
- March 2010 - The SC Court of Appeals issued its order affirming in part and remanding in part to the Administrative Law Court with instructions to make specific findings and conclusions on whether Chem-Nuclear is in compliance with Sections 7.10.5 - 10; 7.11, and 7.23.6.
License Appeal Update (cont.)

- May 2010 - Motion for rehearing denied by Court of Appeals
- July 2011 - Petition for Certiorari denied by the SC Supreme Court
- July 2012 - The Administrative Law Court issued its order on remand affirming that Chem-Nuclear was in compliance with the remanded portions of the regulation, Section 7.10.5 - 10, 7.11, and 7.23.6
License Appeal Update (cont.)

- August 2012 - Sierra Club appealed the Administrative Law Court's order (7-20-12 order) to the SC Court of Appeals
- February 5, 2014 - Scheduled hearing date before the Court of Appeals
Groundwater and Surface Water Monitoring the Tritium Plume

- Chem-Nuclear samples 178 monitoring locations
  - On-site wells
  - Off-site wells
  - Creek
- Sampling performed 4 times per year
- DHEC samples at least 21 of those locations
- DHEC splits samples with Chem-Nuclear
Tritium Concentrations in Zone 2 Wells

**Highest Concentration**
- WM-0110
- 18,600,000 pCi/L

**Headwaters of Creek**
- WC-0002
- 311,000 pCi/L

**Compliance Point**
- WC-0008
- 81,200 pCi/L

2nd Quarter 2013

Oldest trenches
Annual Trending Report

- Monitors plume movement
- Looks at data for last 5 years
- 27 locations
- Statistical analysis
- 6 – upward trend
- 11 – downward trend
- 10 – no trend

Tritium levels are closely monitored at the compliance point to be sure they do not exceed regulatory limits.

Tritium levels are stable at compliance point.

The plume is well defined.

There are no receptors of the water.
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