Barnwell LLRW Disposal Facility

- Started operating in 1971
- 235 acres used for disposal and site buildings
- 120 acres capped
Projected Timeline

- **Atlantic Compact Act signed**: 1971
- **Site opens**: 2000
- **Begin Compact Operations**: July 1, 2008
- **Open to All States**: Oct 1, 2010
- **Post-Closure Observational Period**: 5 years
  - **End Waste Disposal Operations**: 2038
  - **State Oversight**: > 100 years
- **Open to Atlantic Compact States only**: 2039
- ***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
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**: 15,200,000 pCi/L

**Headwaters of Creek**
- **WC-0002**: 368,000 pCi/L

**Compliance Point**
- **WC-0008**: 121,000 pCi/L

*2nd Quarter 2014*
Annual Trending Report

- Monitors plume movement
- Looks at data for last 5 years
- 27 locations
- Statistical analysis
- 4 – upward trend
- 13 – 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.
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 - Hearing before the Court of Appeals
License Appeal Update (cont.)

• July 30, 2014 - Court issued an opinion that confirmed in part and reversed in part DHEC’s decision to renew the license
  ▪ Court ordered DHEC and Chem-Nuclear to prepare a plan for compliance with three subsections of the regulation concerning rainfall onto and out of the disposal trenches

• August 2014 - Both Chem-Nuclear and DHEC filed Petitions for Rehearing; and Chem-Nuclear filed a Motion for a Stay of the order’s requirements which was approved