



Chem-Nuclear Annual Update

Prepared for the Governor's Nuclear Advisory Council Meeting
January 8, 2015

South Carolina Department of Health and Environmental Control

Promoting and Protecting the Health of the Public and the Environment

Started
operating in
1971

Barnwell LLRW Disposal Facility

Trench Areas

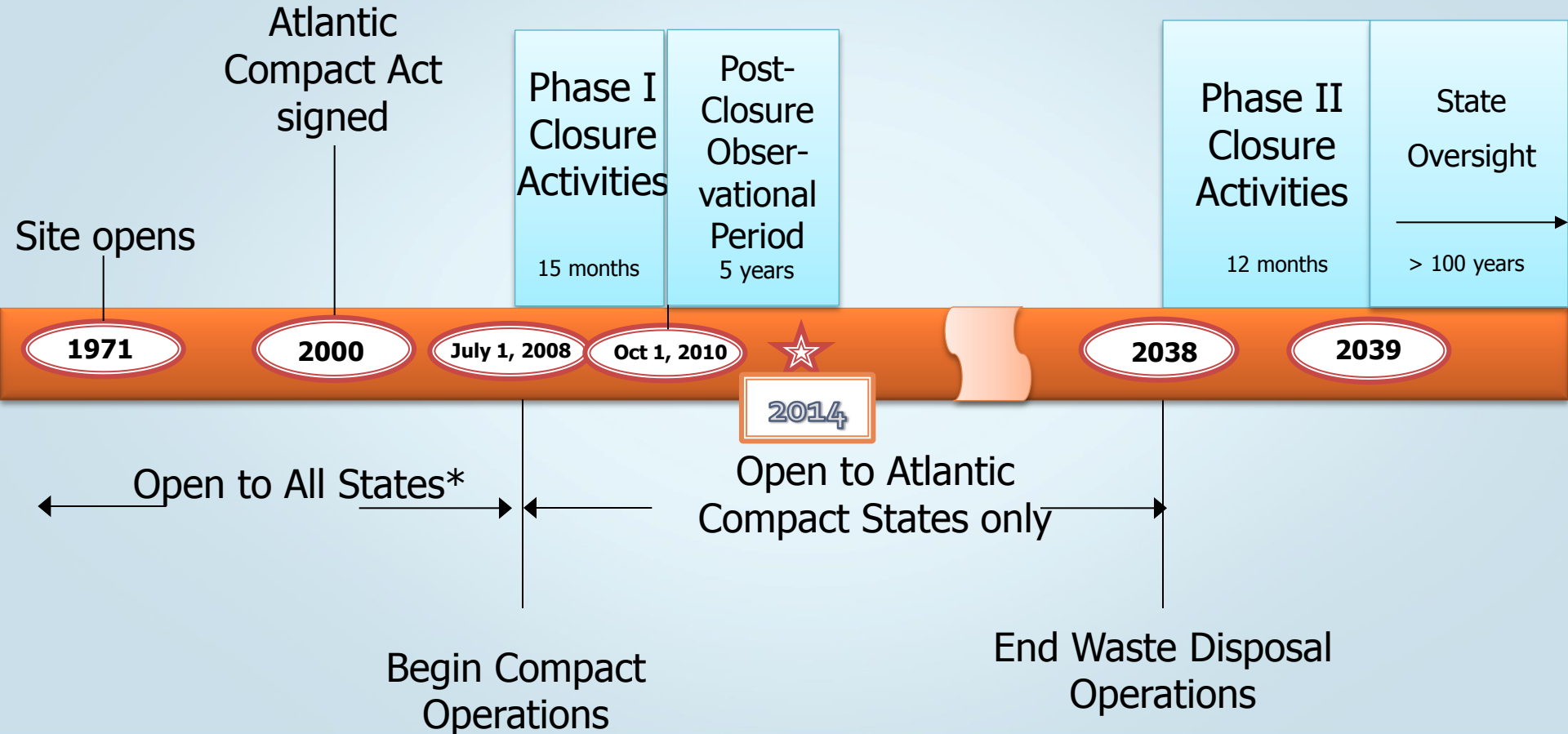
Site Buildings

120 acres capped

235 acres used for disposal and site buildings



Projected Timeline



*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

2nd
 Quarter
 2014

Highest
 Concentration

WM-0110

15,200,000 pCi/L

Oldest
 trenches

Headwaters of Creek

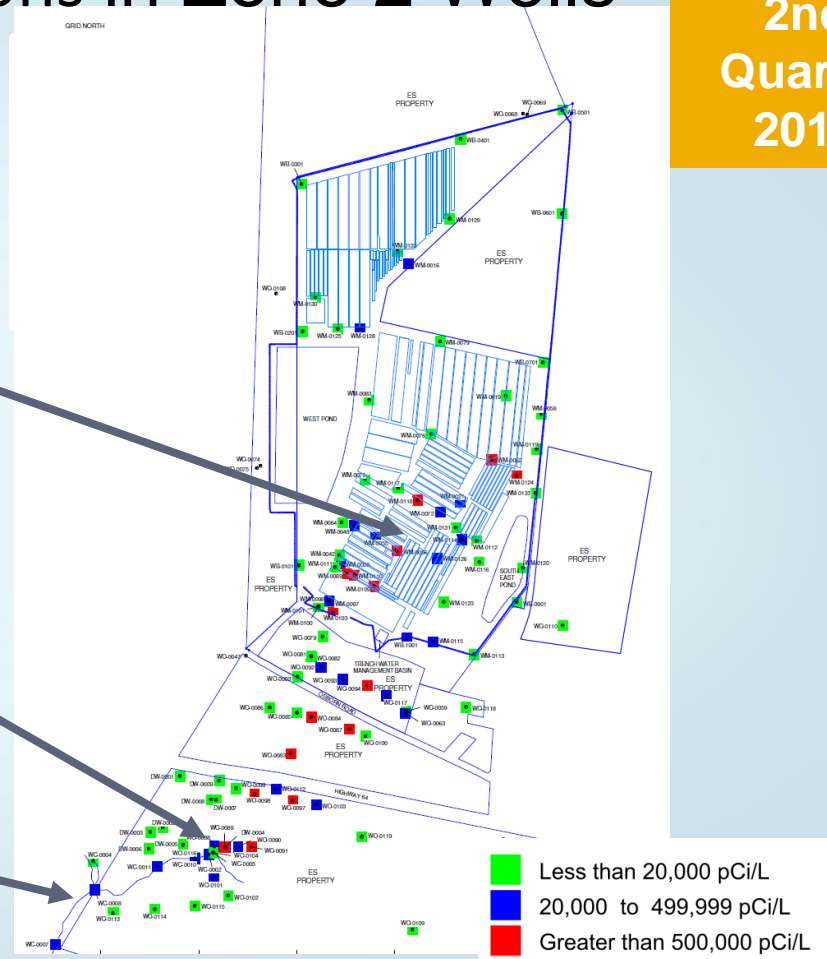
WC-0002

368,000 pCi/L

Compliance Point

WC-0008

121,000 pCi/L





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



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