



Chem-Nuclear Low-Level Radioactive Waste Disposal Facility Update

Bureau of Land and Waste Management

December 8, 2011

Topics

- License Appeal
- Phase I Closure: Activities and Status
- Ground and Surface Water Update

License Appeal Update

- March 2004 - DHEC renewed the Chem-Nuclear System's (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
- October 2005 - ALC found the Sierra Club failed to present evidence warranting the reversal of the License and denied motion for reconsideration

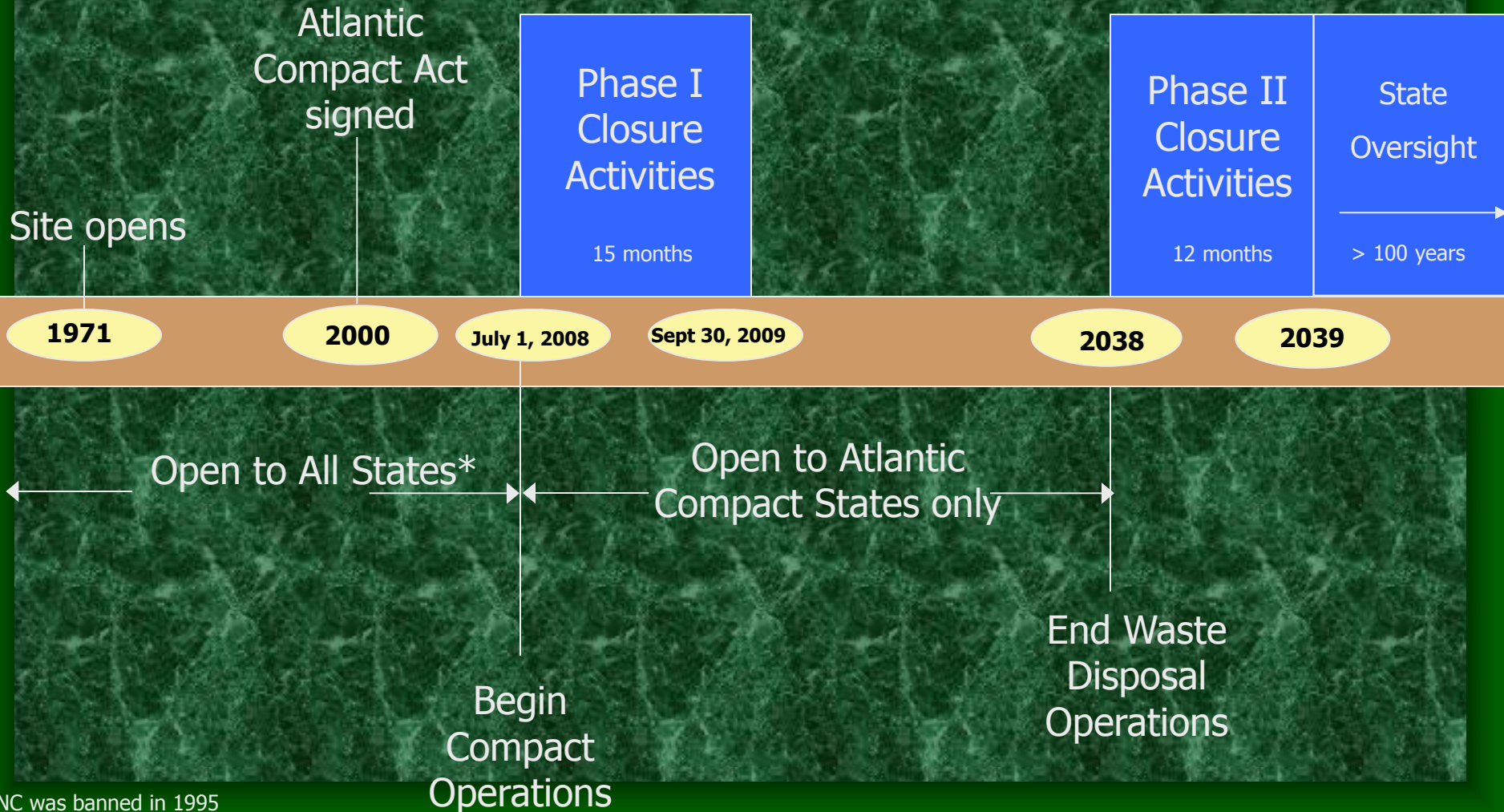
License Appeal Update (cont.)

- Sierra Club appealed the ALC decision to the SC Court of Appeals
- Court of Appeals remanded the case back to the ALC for a ruling on whether CNS is in compliance with certain Sections of R.61-63
- DHEC filed a Petition for Rehearing on the grounds that Sierra Club had not properly preserved issues related to these Sections
- May 3, 2010 - Rehearing denied

SC Supreme Court

- June 2010 - A Petition for Writ of Certiorari was filed by CNS to the SC Supreme Court asking them to review the decision of the lower court
- July 21, 2011 - Petition was denied
- July 22, 2011 - The Remittitur was filed with the Administrative Law Court
- The case is assigned to the Honorable Ralph King Anderson, III, Chief Administrative Law Judge.
- A hearing date has not been set at this time.

Facility Closure Projected Timeline



*NC was banned in 1995

Phase I Closure

- Building Decontamination and Dismantling
- Removal of Equipment and Tools
- Enhanced Cap Installation
- Site Grading
- Soil Sampling
- Trench Marker Installation

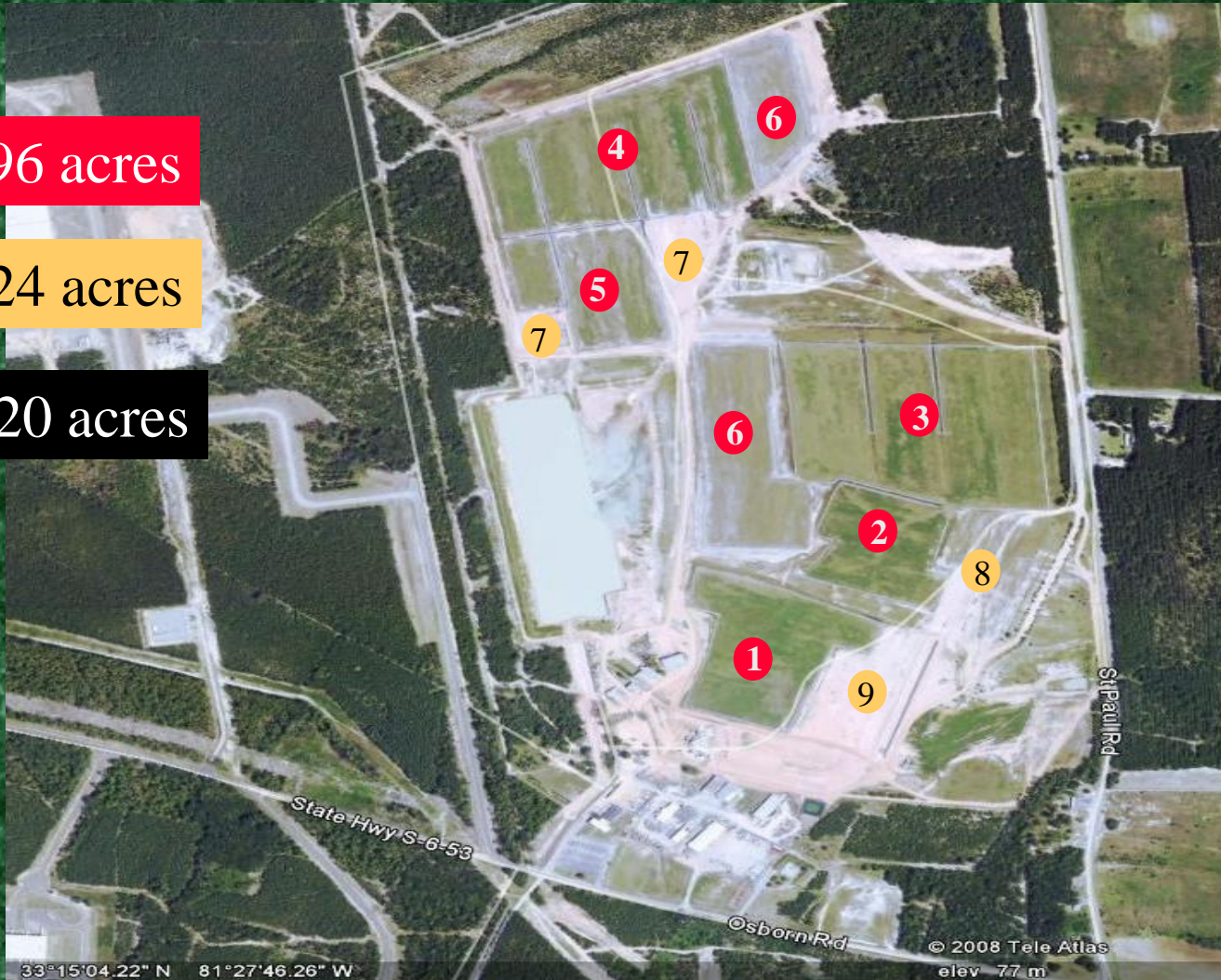


Aerial View of Enhanced Caps

96 acres

+ 24 acres

~ 120 acres



Phase I Closure: Performance Objectives Assessment

- 16 Objectives A through P are found in Condition 98 of the Disposal Facility License
- Some objectives have not been completed; however, Phase I Decommissioning is an interim closure phase.
- Majority of objectives are complete

Reviews in Process

- **A – Certify that burial of waste in accordance with requirements of the license:** Requested CNS to provide trench table and waste burial certification – CNS report is in progress
- **E – Compliance with annual dose limit:** Groundwater Model – CNS working on comment response
- **M- Site stabilization and minimization of monitoring:** Closure Environmental Monitoring Plan will be submitted after the Groundwater Model is finalized
- **O – Eliminate the need for active water management in trenches:** Reviewing information regarding active water management in closed trenches –DHEC provided 2nd set of comments

Groundwater and Surface Water Monitoring the Tritium Plume

- Chem-Nuclear samples 179 monitoring locations
 - On-site wells
 - Off-site wells
 - Creek
- Sampling performed 4 times per year
- DHEC samples at 31 of those locations
- DHEC splits samples with Chem-Nuclear



Tritium Concentrations in Zone 2 Wells

Highest
Concentration

WM-0110

29,800,000 pCi/L

Headwaters of Creek

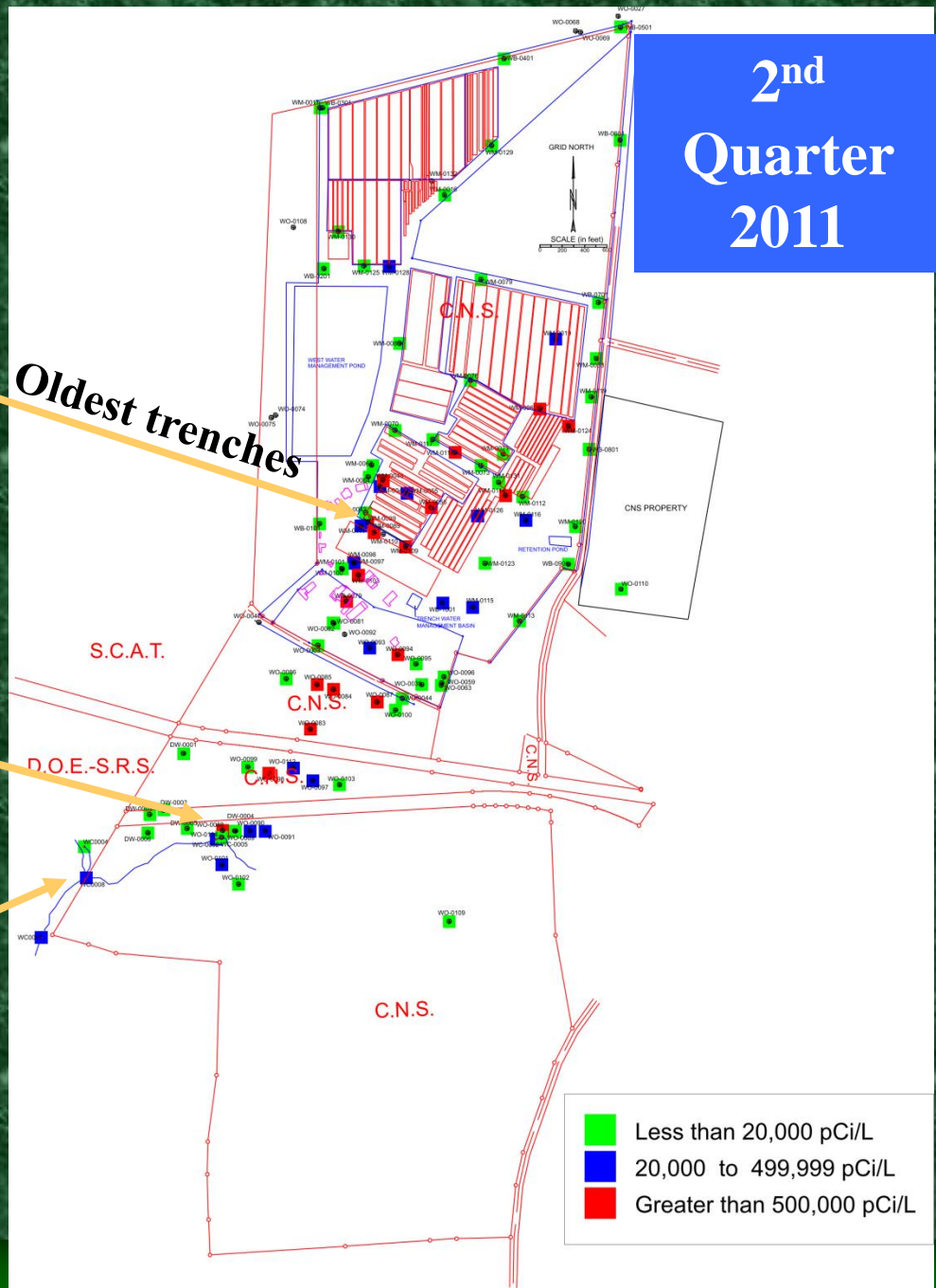
WC-0002

438,000 pCi/L

Compliance Point

WC-0008

96,300 pCi/L



Annual Trending Report

- Monitors plume movement
- Looks at data for last 5 years
- 27 locations
- Statistical analysis
- 7 – upward trend
- 11 – downward trend
- 9 - 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