



Environmental Update: Barnwell LLRW Disposal Facility

Prepared for the Governor's Nuclear Advisory Council Meeting
April 13, 2017

South Carolina Department of Health and Environmental Control
Healthy People. Healthy Communities.

Started
operating in
1971

Barnwell LLRW Disposal Facility

Trench Areas

Site Buildings

120 acres capped

235 acres used for disposal and site buildings



Groundwater and Surface Water: Monitoring the Tritium Plume

- Chem-Nuclear samples 180 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
 2016

Highest
 Concentration

WM-0110

2,900,000 pCi/L

Oldest
 trenches

Headwaters of Creek

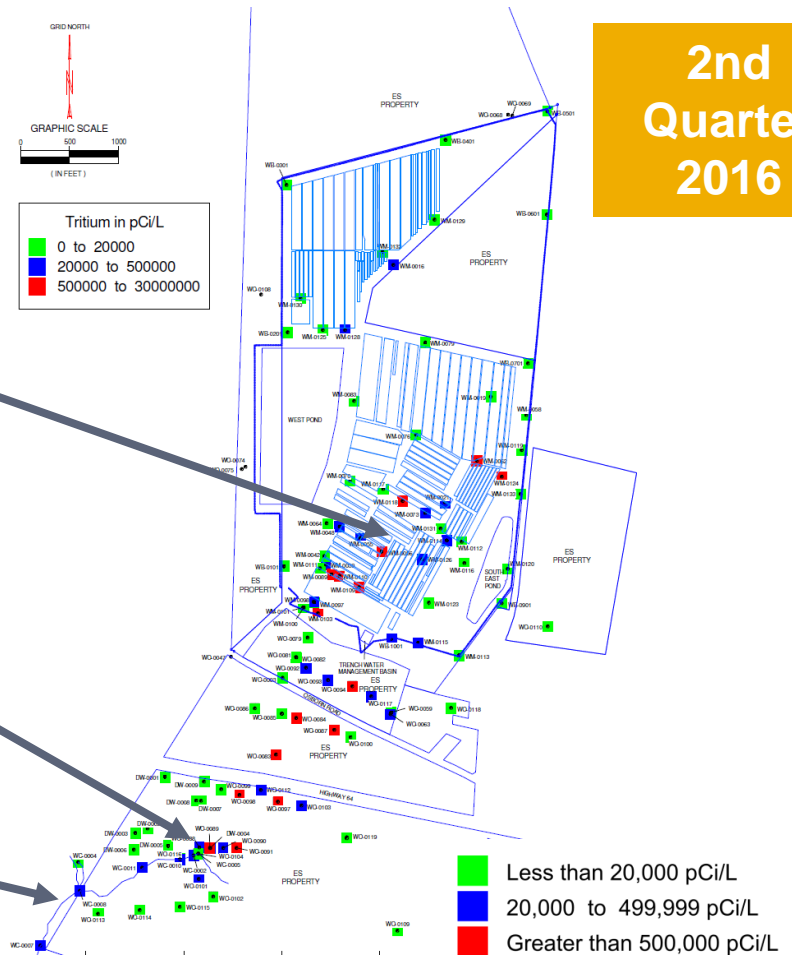
WC-0002

168,000 pCi/L

Compliance Point

WC-0008

42,700 pCi/L



Annual Trending Report

- Monitors plume movement
- Looks at data for last 5 years
- 27 locations
- Statistical analysis
- 3 – upward trend
- 18 – downward trend
- 6 – 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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