WASTE STORAGE & WATER CONTAMINATION WEBINAR

LESSONS FROM WEST VIRGINIA AND NORTH CAROLINA

Thursday, Oct. 30 | 1–2 p.m. EDT
Presented by CSG South
Senate Bill 373
The Legislative Response

Senator John R Unger II
Majority Leader
West Virginia State Senate
SB 373 LEGISLATIVE PROCESS

- Introduced in Senate
- Bipartisan
- Unanimous
SB 373  WATER MANAGEMENT

- Quantity
- Quality
SB 373 WATER UTILITIES

• Source Water Protection Plans
• Review spill response
• Identify potential hazards
• Alternate sources
SB 373 ASTs

- Inventory
- Standards
- Penalties
SB 373 COORDINATION

- **Water utilities**
  - Public water utility submit source water protection plan by July 1, 2016

- **State Agencies**
  - Bureau for Public Health assure public water systems meet federal safe drinking water standards;
  - BPH continue Wellhead and Source Water Protection Grant Program: prioritize by highest probability of contamination
  - BPH work with CDC and others for long term medical study
SB 373 COORDINATION CONT...

- DHHR, DEP, PSC, Homeland Security and Emergency Management and local health departments cooperate to ensure successful planning and implementation
SB 373 OVERSIGHT

• Public Water System Supply Study Commission
  ▫ Reports back to State Water Resource Management Commission by December 2014

• Legislative Rule-Making Review Committee
  ▫ Agency proposes rules to implement bill but must bring back to LRMRC and then go through full legislative process for approval

• Joint Legislative Oversight Commission on State Water Resources
  ▫ Oversight of DEP survey of consumptive water use and development of State Water Resources Management Plan
  ▫ DEP reports annually on effectiveness of AST program and regulation and any needed legislation
THANK YOU
Representative Chuck McGrady
North Carolina General Assembly
Overview

- Context of this Presentation -- Bird’s Eye View of Recently Enacted Legislation
- Coal Ash 101
- Coal Ash in North Carolina – The Big Picture
- The Impetus for the Legislation, the Dan River Spill
- Key Facets of the Legislation in More Detail
- Outstanding Issues
Establishes a comprehensive regulatory framework for the management of coal ash

Requires remediation of groundwater at all coal ash ponds owned by public utilities, and implementation of measures to protect nearby surface waters

Requires closure of 4 named ponds by 2019

Requires closure of all remaining ponds, and establishes a staggered schedule for closure based on risk of the individual ponds:

- High-risk by 2019
- Intermediate-risk by 2024
- Low-risk by 2029
Coal Ash 101

- Coal ash is the byproduct left behind when coal is burned to generate electricity.
- Coal ash contains numerous toxic substances, including arsenic, selenium, chromium, thallium, mercury, and lead.
- Although it does contain toxic contaminants associated with cancer and various other serious health effects, coal ash itself is currently considered an exempt waste under an amendment to RCRA, the Resource Conservation and Recovery Act.
- As a liquid, coal ash is stored in ponds and, as a solid, it is disposed of in landfills.
There are no federal regulations governing coal ash
Federal regulations are, however, expected in December 2014 (more on this at the end of this presentation)
Historically, North Carolina’s Division of Water Resources (DWR) had primary regulatory responsibility for coal ash ponds
Discharge of treated wastewater from coal ash ponds to surface waters was regulated through National Pollutant Discharge Elimination System (NPDES) permits
In addition, the coal ash ponds were inspected by DWR once every 2 years and were also periodically inspected under the State Dam Safety Program
33 ash ponds at 14 power plants (active and retired) in North Carolina

All ponds together house a total of more than 107 million tons of coal ash

The largest of these ponds, located at the Marshall Steam Plant, houses more than 22,000,000 tons of ash

Because power plants are typically located by significant surface waters, such as lakes and rivers, these coal ash ponds often sit in very close proximity to some of the State’s major waterways
Sunday, February 2\textsuperscript{nd}, 2014, a corrugated metal portion of stormwater pipe under the primary 27 acre coal ash pond fails at Duke Energy’s Dan River Steam Station located in Eden, Rockingham County, NC. There was also a partial collapse of the interior pond berm.

As a result, approximately 38,000 tons of coal ash and 27 million gallons of ash pond water were released into the adjacent Dan River.

Duke immediately mobilized to stop the release, which was fully eliminated after several days.

The site is less than 10 river miles from Virginia, and the United States Fish and Wildlife Service (FWS) reconnaissance documented ash or ash-like material co-mingled with native sediment as far as 70 river miles downstream in the days immediately following the release.

Cleanup activities began immediately with the involvement of a host of regulatory agencies including the United States Environmental Protection Agency (USEPA), North Carolina Department of Natural Resources (NCDENR), Virginia Department of Environmental Quality (VADEQ), North Carolina Department of Public Health (NC DPH), Virginia Department of Health (VDH), United States Fish and Wildlife Service (FWS) and Army Corp of Engineers (ACOE) along with county and local partners along the Dan River and Kerr Reservoir.

On May 22, 2014, USEPA entered into an agreement with Duke to perform a comprehensive assessment, determine the location of coal ash deposits and to remove deposits along the Dan River as deemed appropriate by USEPA in consultation with FWS. Under the Administrative Order and Agreement on Consent, entered into under the Superfund law, USEPA will oversee the cleanup and Duke will reimburse USEPA for its oversight costs.
The Dan River Spill brought into stark relief the precarious nature of coal ash storage in North Carolina

Senate Bill 729/S.L. 2014-122 (Coal Ash Management Act of 2014) was born…

The bill in its entirety is 50+ pages. I will only be hitting the highlights for you
As I noted at the outset, the legislation establishes a comprehensive regulatory framework for the management of coal ash, including standards and deadlines for closure and remediation of all coal ash ponds located in the State.
Cost Recovery

- Prohibits the State’s Utilities Commission from allowing an electric public utility to recover from the retail electric customers of the State costs related to unlawful discharges to waters of the State from ash ponds, unless the discharge is determined to be due to an event of force majeure. The section applies to discharges occurring on or after 1/1/14 (thus it prohibits cost recovery related to cleanup of the Dan River spill).

- Establishes a moratorium on orders of the State’s Utilities Commission to grant an increase in base rates of an electric public utility for costs related to ponds prior to 1/15/15, in order to allow the State to study the disposition of ponds including any final rules adopted by USEPA on management of coal ash.
New Oversight Commission

Creates the Coal Ash Management Commission (Commission), located within the State’s Division of Emergency Management, to review and approve prioritization classifications and closure plans for ash ponds, and otherwise study and make recommendations on laws governing management of coal ash.
Requires the assessment of groundwater and implementation of corrective action for the restoration of groundwater quality at all ponds

Requires a pond owner to: (i) survey drinking water supply wells located within ½ mile of a pond and (ii) provide an alternate water source if drinking water supplies are found to be contaminated with constituents associated with the presence of a pond

Requires the identification, assessment, and correction of unpermitted discharges from ponds to protect surface waters
Requires DENR to prioritize, by December 31, 2015, all ponds for the purpose of closure and remediation based on these sites' risks to public health, safety, and welfare, the environment, and natural resources

- Low-risk, intermediate-risk, or high-risk
- DENR prioritization subject to Commission approval
Prioritization

Prioritization to be based on consideration of a host of factors, including:

- Any hazards to public health, safety, or welfare resulting from the pond
- Structural condition and hazard potential of the pond
- The proximity of surface waters to the pond, and whether any surface waters are contaminated or threatened by contamination as a result of the pond
- Information concerning the horizontal and vertical extent of soil and groundwater contamination for all contaminants confirmed to be present in groundwater in exceedance of groundwater quality standards and all significant factors affecting contaminant transport
- The location and nature of all receptors and significant exposure pathways
- The geological and hydrogeological features influencing the movement, chemical, and physical character of the contaminants.
- The amount and characteristics of ash in the pond
- Whether the pond is located within an area subject to a 100-year flood.
- Any other factor DENR deems relevant to establishment of risk
High-risk ponds must close no later than 12/31/19. At a minimum, these ponds must be dewatered to the maximum extent practicable, and the owner must either: (i) convert the pond to an industrial landfill that complies with the requirements of the applicable statutes and rules for such landfills; or (ii) remove all ash from the pond, return it to a non-erosive and stable condition, and transfer the ash for disposal in certain landfills or use the ash in a structural fill or other beneficial use.

Intermediate-risk ponds must close no later than 12/31/24, and close in the same manner as provided for high-risk ponds.

Low-risk ponds must close no later than 12/31/29. At a minimum, these ponds must be dewatered to the maximum extent practicable. The owner could close such a pond in any manner allowed for high- and intermediate-risk ponds. These ponds could also close through compliance with the closure and post-closure requirements applicable to landfills in the State (also known as “cap-in-place”), but only if a closure plan for this approach includes design measures to prevent post-closure exceedences of groundwater quality standards beyond, essentially, facility boundaries.

All closure plans must be preliminarily approved by DENR, and receive final approval by the Commission.
Requires closure of 4 named plants by 2019
- Dan River Steam Station (Rockingham County)
- Riverbend Steam Station (Gaston County)
- Asheville Steam Electric Generating Plant (Buncombe County)
- Sutton Plant (New Hanover County)

These ponds must be dewatered, and all ash removed and transferred for: (i) disposal in appropriate landfills; or (ii) use in a structural fill, or other beneficial use as allowed by law.

Where groundwater quality is degraded as a result of the a pond, corrective action is required to restore groundwater quality.
Opportunities for public input and appeal at multiple steps in the process (both prioritization classification, and closure methods)

Deadlines are firm with limited variance authority
Establishes minimum statutory requirements for structural fill projects using coal ash. Particularly, adds a number of new requirements for large structural fill projects (those involving the placement of 8,000 or more tons of ash per acre or 80,000 or more tons of ash in total per project), including:

- Requires individual permits
- Requires an encapsulation liner system constructed on and around the structural fill to efficiently contain, collect, and remove leachate generated by the ash, as well as separate the ash from any exposure to surrounding environs
- Requires setbacks to surface waters, drinking water sources, property boundaries, etc.
- Requires groundwater monitoring system through construction and the post-closure care period. In addition, a constructor or operator would be required to initiate corrective action measures if exceedances of groundwater standards are detected through monitoring
- Requires financial assurance to ensure that sufficient funds are available for facility closure, post-closure maintenance and monitoring, any corrective action that may be required, and to satisfy any potential liability for sudden and nonsudden accidental occurrence
- Requires submission of closure and post-closure plans and conduct of post-closure care for 30 years

Places a moratorium on certain projects using ash as structural fill until 8/1/15, and requires a study of the adequacy of current law governing use of ash as structural fill and for beneficial use
Miscellaneous Key Provisions

- Prohibits construction of new or expansion of existing ash ponds effective 10/1/2014
- Prohibits the disposal of ash into ponds at coal-fired generating units that are no longer producing coal ash effective 10/1/14
- Prohibits disposal of stormwater to ponds at an electric generating facility where the coal-fired generating units are no longer producing ash effective December 31, 2018; prohibits disposal of stormwater to ponds at facilities actively producing coal ash effective 12/31/19
- Requires all electric generating facilities to convert to generation of dry fly ash on or before 12/31/18, and convert to dry bottom ash on or before 12/31/19, or retire
- Prohibits local government regulation of management of coal ash
Residual Issues

- Federal Rules expected in December
  - 2 approaches, regulation under Subtitle C (governing hazardous waste) or Subtitle D (governing solid waste) of RCRA, are possible
  - Detail on the differences between these 2 approaches is available at: http://www.epa.gov/wastes/nonhaz/industrial/special/fossil/ccr-rule/ccr-table.htm

- Lack of “clean closure” for all sites (some sites will not require removal of ash, but will be allowed to “cap in place”)

- Cost of cleanup and how that cost is allocated
On the latter two items from the previous slide, the issues of cost and extent of cleanup, which are necessarily intertwined, I want to leave you with several images.
Solutions take time

1 TRUCK | EVERY 3 MINUTES | 12 HOURS A DAY | 6 DAYS A WEEK

- DAN RIVER: 1.2 MILLION TONS OF ASH
- MARSHALL: 22 MILLION TONS OF ASH

Time: 2 years, 5 years, 10 years, 15 years, 20 years, 25 years, 30 years
Notes: Assumes non-hazardous designation by the U.S. EPA
All costs expressed are rough order of magnitude estimates. These are subject to detailed engineering studies and do not include financing, inflation and increased operations and maintenance costs.
Basin Two and Heron Rookery
Questions?

Representative Chuck McGrady
919-733-5956
Chuck.McGrady@ncleg.net