ENVIRONMENTAL REVIEW COMMISSION
February 17, 2014
Room 643 of the Legislative Office Building

The Environmental Review Commission met on Wednesday, February 17, 2014 at 10:00 AM. The meeting was held in Room 643 of the Legislative Office Building. Senator Brent Jackson presided.

Members present were: Senator Brent Jackson, Chair; Representative Mike Hager, Chair; Representative Ruth Samuelson, Chair; Senator Austin M. Allran; Senator Stan Bingham; Senator Andrew Brock; Senator Fletcher L. Hartsell, Jr.; Senator Gene McLaurin; Senator Ronald Rabin; Senator Michael P. Walters; Representative William D. Brisson; Representative Rick Catlin; Representative Jimmy Dixon; Representative Pricey Harrison; Representative Pat McElraft; Representative Chuck McGrady and Representative Chris Millis. Also present were the following: Dr. Jeff Warren, Senate Senior Policy Advisor; Emily Wilson, House Senior Policy Advisor; Mr. Jeff Hudson, Commission Counsel; Ms. Jennifer McGinnis, Commission Counsel; Mr. Jeff Cherry, Commission Counsel; Ms. Jennifer Mundt, Commission Analyst; Mrs. Mariah Matheson, Research Assistant; Tori Bragg, Lindsey Dowling, and Towers Mingledorff, Commission Clerks; and Sergeants-At-Arms Bill Bass, B.H. Powell, Anderson Meadows, Steve Wilson and Billy Fritcher.

Senator Brent Jackson convened the meeting at 10:08 AM and welcomed the attendees. He announced the Sergeants-At-Arms, thanked central staff and outlined the day's agenda.

Sen. Jackson asked the other chairmen if they had any announcements. Representative Ruth Samuelson reiterated that this meeting was about two separate issues. Representative Mike Hager thanked everyone for attending and hoped this meeting would lead to a proactive response from the legislature.

Sen. Jackson held a vote to approve the minutes from the November 13, 2013 meeting of the Commission. Sen. Bingham gave the motion and Rep. Brisson seconded. A vote in the affirmative to approve the minutes was taken at 10:12 AM.

Sen. Jackson invited Secretary John Skvarla, Department of Environment and Natural Resources (DENR) to give a report to the Commission.

Secretary Skvarla thanked the Chairman, introduced the DENR staff in attendance and gave a brief report on the lack of fairness in the media's reporting of the Dan River incident. Also, the Secretary briefly spoke about the initiation of the lawsuits against Duke Energy.

Sen. Jackson asked if there were any questions from the members.

With no questions, Sen. Jackson thanked the Secretary and invited Mr. Tom Reeder, Director, Division of Water Resources, DENR, to speak on the January 27, 2014 release of untreated sewage from the East Burlington Wastewater Treatment Plant (EBWWTP) into the Haw River.

Mr. Reeder discussed what happened with the Haw River release: At 6:20 pm on January 27, 2014 a 30inch force main at the EBWWTP failed and water went uphill to the treatment plant. Untreated wastewater backed up in the force main and overflowed from four manhole covers. The manholes were located 500 feet from the Haw River. The covers remained in place so only wastewater overflowed, not solids or trash. Overflowing wastewater ran into the Haw River. The extreme cold weather hindered repairs and the Governor declared a State of Emergency on January 28, 2014. Bypass pumps and pipes were put into service to reduce, but not completely eliminate, the spill of wastewater. The spill was eliminated at 3:40 pm on January 29, 2014. No negative impacts to the river were noted, including no fish kills and no impact to public drinking water supplies. There was a total release of approximately 3.5 million gallons. The flow of the Haw River during the spill was 178 to 194 million gallons per day (MGD).

Mr. Reeder discussed the reporting requirements for a sewage spill: Permit requirements are contained in the discharge permit and the city must notify the Division of Water Resources (DWR) within 24 hours of the spill. These statutory requirements are found in G.S. 143-215.1C. The owner/operator must issue a press release within 48 hours of any release if the owner/operator has determined that the discharge has reached the surface waters of the State.

Mr. Reeder gave a detailed timeline of events:

- January 27, 2014–6:20 pm: Failure of force main;
- January 27-7:00 pm: Burlington notifies DWR;
- January 27-9:00 pm: DENR notifies Pittsboro;
- January 27-11:00 pm: 8 inch bypass pumps and pipes deployed helping to substantially reduce the overflow, but not eliminate it;
- January 28: Governor declares State of Emergency in North Carolina;
- January 28-2:30 pm: 16 inch bypass pump and piping onsite;

- January 29-2:25 pm: bypass repairs completed;
- January 29-3:40 pm: overflow eliminated;
- January 30: repairs inspected by DWR personnel;
- January 30-5:37 pm: Burlington issues a press release of spill; and
- Feb 3: DENR issues a Notice of Violation.

Mr. Reeder explained the delay regarding the press release. It was a judgment call by the DWR onsite supervisor and was predicated on the following factors: the spill had already been eliminated and the decision allowed Burlington extra time to calculate the quantity of the spill so two press releases would not need to be issued and a single comprehensive press release would be issued in order to better to inform the public. There were no significant environmental impacts, no recreation in the river (occurred in the winter), and no impacts to public drinking water supplies.

Sen. Jackson thanked Mr. Reeder for his presentation and asked the members if there were any questions.

Representative Pricey Harrison asked if the statutory notice requirement is discretionary.

Mr. Jeff Hudson answered that it is not. It was the municipal wastewater treatment plant's obligation to provide public notice.

Rep. Harrison asked Mr. Reeder about the cuts to the Clean Water Management Trust Fund (CWMTF). Is DENR feeling the impacts of those cuts now?

Mr. Reeder stated that drinking water funding is still being funded by the Clean Water Revolving Trust Fund and the Drinking Water Trust Fund, as those programs are still running.

Rep. Samuelson asked if DENR has put in place a formal system to prevent notification delays in the future?

Mr. Reeder stated that the sanitary sewer overflow (SSO) was stopped and eliminated just before the 48 hour time period. DENR a lot of discretion in enforcing the rules, but DENR doesn't have discretion to enforce the statute. DENR must enforce the statutes as written. Mr. Reeder reminded his staff not to use discretion on notification requirements in the future.

Rep. Samuelson asked if the source of the spill had been stopped before the notification?

Rep. Hager stated he was more interested in how do we keep it from happening again? Do we need a formal rule process in the statutes to have engineers review the process as to why pipes fail?

Mr. Reeder answered that we don't have anything like that at the State level; only at the local level.

Rep. Hager asked if we have anything to determine a high risk area because it's near a water source.

Mr. Reeder spoke about source water protection plans. There is a Geographic Information System (GIS) layer that shows where all our public water supplies are in North Carolina, including golf courses, above ground storage tanks, water treatment plants, and wastewater treatment plants. We have a voluntary program where we encourage water systems to develop a remedial action plan. That's a voluntary program and less than 10% are participating.

Rep. Hager asked that if there are areas that are higher risk, but are not required to develop a plan to respond to potential threats?

Mr. Reeder said that is correct.

Rep. Hager asked if a facility is 500 feet from a water supply, do they have additional requirements?

Mr. Reeder spoke about the Emergency Planning and Community Right-to-Know Act. Under State law, a facility 500 feet from a water supply would have the same reporting requirements as facilities not located near a water supply.

Representative Chris Millis asked what should be done with all of this old infrastructure?

Mr. Reeder responded that you can't fix all of these old wastewater treatment plans. You have to figure out where the old infrastructure is and where to get the money to replace it.

Rep. Millis stated that the failure happened between the pump and the facility, which is where the weak link was.

Mr. Reeder responded that the pipe was laying on rock.

Representative Rick Catlin asked if DENR charges fines for these releases?

Mr. Reeder responded that DENR is in the process of serving a fine on the City of Burlington right now.

Sen. Jackson thanked Mr. Reeder for his time and invited Mr. Harold Owen, City Manager, City of Burlington to give his presentation.

Mr. Owen gave a brief overview of Burlington and introduced Mr. Michael Layne, Stormwater Manager, Water Resources, City of Burlington.

Sen. Jackson thanked Mr. Owen and welcomed Mr. Layne to the podium.

Mr. Layne gave a summary of the EBWWTP: the facility was built in 1959, it has a capacity to treat 12 MGD with an average flow of 4-5 MGD. It serves Burlington, Elon, Gibsonville, Haw River and Green Level and received approximately $8 million in upgrade in 2013 to comply with the Jordan Lake Rules.

Mr. Layne gave a brief timeline of the recent overflow:

- Friday (1/24/2014) – 28,500 gallons
- Monday (1/27/2014) through Wednesday (1/30/14) – 3.5 million gallons. The timeline for this overflow is as follows:
    - Monday, 6:20 PM – pipe failure;
    - Monday, 6:35 PM – pump station shut down;
    - Monday, 7:20 PM – notified Emergency Management of SSO;
    - Monday, 11 PM – 8" pump activated;
    - Tuesday, 1 AM – 8" pump activated;
    - Tuesday, 11 AM- 3PM – 16" pump parts delivered due to the snow and ice);
    - Tuesday, Midnight – equipment failure and construction was delayed;
    - Wednesday, 2:25 PM – 16" pump activated;
    - Wednesday, 3:40 PM – SSO eliminated;
- Thursday, 10:30 AM – DENR staff visited the site;
- Thursday, 5:38 PM – press release was sent out; and
- Saturday, 5 PM – 30" force main repaired.

Mr. Layne gave an update of the environmental impacts: there have been no observed negative environmental impacts nor fish kills. The Pittsboro Water Treatment Plant (WTP) samples indicated no deviation from baseline sampling. Also, Mr. Layne gave a brief summary of the probable contributors to pipe failure: the pipe was laid directly on blue granite rock and there was unusually cold temperatures creating a freeze/thaw effect. Also there was increased pressure on the line due to the plant upgrade.

Mr. Layne explained the EBWWTP repair plan: replace roughly 1,200 feet of 30" force main and the delivery of the pipe was expected on February 24, 2014. The city will install bypass pumping until the new 30" force main is installed.

Sen. Jackson thanked Mr. Layne and asked the members if there were any questions.

Rep. Samuelson asked about the spill that happened on Friday, February 24, 2014. Did that spill have to be reported within the 48 hour period and was it?

Mr. Layne responded that it was. The difference was that this spill was an ongoing.

Rep. Samuelson asked about the pump bypass and the break in the force main. Was the whole line bypassed?

Mr. Layne responded that a pump station was installed, which will bypass the entire section.

Rep. Hager asked if the City of Burlington had engineers review these plans? If the facility had two breaks, it's not coincidental.

Mr. Layne responded that whenever there is a failure it is processed internally. The entire section of the pipe was replaced instead of performing a repair. There are fewer force mains in the collection system. It's not a formalized process outside of identifying what the cause was.

Senator Stan Bingham wanted confirmation that the treatment was three million gallons per day and capacity was 12 million per day.

Mr. Layne answered that those numbers are correct.

Sen. Bingham asked when it goes from three to 12, do you increase pressures?

Mr. Layne responded that you have multiple pumps increasing pressure.

Sen. Bingham stated that the system was put into service in 1959, which would indicate that the pump system would have to increase. What is the lifespan of these pipes?

Mr. Layne responded that there are a lot of variables for life expectancy. The type of soil or the pressure. This pipe is rated to withstand 150 psi. This pipe is only carrying about 40 or 1/3 of what it is designed to do. We have not experienced any failures on this pipe.

Sen. Bingham stated that the pipes are running at minimal pressure. So if the pipe is meant to withstand a higher pressure, but broke at a lower pressure, how long is the pipe's lifespan? Are there pipes older than 50 years in place?

Mr. Layne answered in the affirmative. The treatment plant went into service in the early 1900s. In 1907 there was a treatment plant off of Little Alamance Creek. A new plant was installed in 1952. There was a collection system to that plant. There are not records on the age. There are certainly pipes nearing 100 years old.

Sen. Bingham stated that it would be sensible to have a plan in the high risk areas to look at the age of these pipes and evaluate an existing pipe and what conditions it would be in. Are these pipes cast iron?

Mr. Layne responded that the City is currently re-lining a sewer main. The City will look at the integrity of the pipe and decide either to reline or replace it. When the City identifies ones that need to be replaced they will replace them.

Sen. Bingham asked would it not be possible to shut these pumps down so you don't end up with three million gallons of water?

Sen. Jackson thanked Mr. Layne for his presentation and invited Ms. Elaine Chiosso, Haw Riverkeeper to give her presentation.

Mrs. Chiosso explained that the spill from the EBWWTP into the Haw River was the largest such spill in recent history in North Carolina. The fact that it occurred in winter is the only thing that kept this from being a major public health disaster. Cold water temperatures and dilution from winter river levels limit the growth of pathogens from human waste. A spill of this magnitude in the warm season would have resulted in major health threats to the large number of recreational users of the river including swimmers, paddlers, fishermen and anyone else in contact with the water. The Haw River is the Piedmont's most popular white water river and draws paddlers from across the State, in all but the coldest weather. In addition, this much untreated wastewater in the river in warmer temperatures would have certainly resulted in fish kills. There would also have been a much greater risk to Pittsboro's drinking water.

Mrs. Chiosso discussed her opinion on the future impacts: despite forgiving weather conditions, there is no way to remove this sewage pollution once it has entered the river. Downstream impacts on algae growth and threats to drinking water and aquatic life will need to be monitored for some time. The public and the State need to know the details, and they need to know them quickly. How much nutrient load was added to the already impaired Haw River arm of Jordan Lake? Has total untreated nitrogen and phosphorus in this 3.5 million gallon spill been

calculated? In addition, wastewater from a city such as Burlington, with significant industrial waste streams, contains many chemicals and heavy metals that poured into the river untreated. Specifically, which chemicals and metals were in the sewage spilled by the EBWWTP, and what impacts will these pollutants have?

Mrs. Chiosso discussed the issue of delayed notification: the public was not informed of the spill until Thursday (print media reports did not appear until Friday). Although the State and the Town of Pittsboro, which takes its drinking water from the Haw, were notified sooner, the public was not. Anyone who was boating, fishing, walking dogs along the river or otherwise had contact with the polluted water, despite the cold, was at great risk. We're told this was a decision made by DENR, not Burlington. This Commission should be asking "why?" Doesn't the State of North Carolina agree that we need to put public notification and safety first when it comes to water pollution events? Reports from the City of Burlington say that the spill from the EBWWTP broken force main reached the Haw River surface waters at 6:20 p.m. Monday, and didn't stop until 3:40 p.m. Wednesday. We are told that the delay was because DENR officials wanted to wait until the leak was stopped before it was disclosed. Public notice of the spill was not issued until Thursday, which was nearly four days after the leak was identified. State law requires wastewater utilities to report any spill of more than 1,000 gallons of untreated wastewater to media outlets in the affected area within 48 hours of sewage reaching a river, stream or lake. Is this not a violation of North Carolina's law?

Mrs. Chiosso gave a brief history of sewage spills: the 3.5 million gallon spill came from a broken 55 year-old force main leading into Burlington's wastewater treatment plant. This was not the first raw sewage spill in Burlington in January 2014, there were three in one month. A spill of 28,600 gallons occurred on Friday, January 24, 2014 from a broken pipe at EBWWTP, just three days earlier, at the same location as the massive 3.5 million gallon spill. 50,400 gallons of raw sewage spilled into Servis Creek, a tributary of the Haw, on Friday, January 11, 2014, and was blamed on inflow and infiltration. In addition, there were several spills into Servis Creek from Burlington's wastewater collection system in 2013 that totaled 211,988 gallons of untreated wastewater. These included the March 8, 2013 event where 133,825 gallons of raw sewage overflowed from the city's sanitary collection system and reached surface waters of a tributary to Servis Creek, near the 2000 block of Morningside Drive. A fish kill was reported as a result of this spill. On July 4, 2013, 71,250 gallons spilled into Servis Creek and reached surface waters, ending on Friday, July 5. It was caused by a failure of a 78 year-old pipe from Mayfair Mills Outlet.

Mrs. Chiosso discussed aging infrastructure: it is a statewide problem. This pattern of significant spills raises serious concerns about Burlington's aging infrastructure. Is it being inspected, repaired and replaced before any further disasters to our public waters occur? This question needs to be answered beyond Burlington, to address the safety of wastewater systems throughout

the State. Across North Carolina, local governments have fallen behind on upkeep of old water and sewer infrastructure. Where will the next massive spill be? The pattern of spills due to pipe breakage, and negligence resulting in infiltration and inflow (exchanges between leaky pipes and groundwater) that we are seeing in Burlington is occurring in other systems throughout the State. As long as we have aging infrastructure and insufficient inspections, repairs, and funding for replacement, we can expect the pollution of our waters by raw sewage to continue. Work must be done to assess the State of local wastewater collection infrastructures, prioritize risk, and prevent the next failure. The State needs to allocate adequate funds in the Clean Water State Revolving Fund, the Clean Water Management Trust Fund, and other funds to help local governments update their wastewater treatment and collection systems.

Sen. Jackson thanked Mrs. Chiosso for her presentation and asked the members if there were any questions.

Rep. Harrison stated that it does eventually go into Jordan Lake, which is on the impaired list. Think about this in the summer, you would want people off of that river.

Sen. Jackson thanked the presenters and asked the public if they had any comments regarding the January 27, 2014 release of untreated sewage from the East Burlington Wastewater Treatment Plant into the Haw River.

Mrs. Martha Girolami expressed concern about the Haw River and the lack of oversight and recourse.

Senator Jackson announced that the Commission was now going to hear reports on the February 2, 2014 release of coal ash from the Duke Energy Dan River Station into the Dan River. He invited Dr. George Everett, Director of Environmental and Legislative Affairs, Duke Energy, to give his presentation and welcomed Chairman Edward Finley, Utilities Commission to the meeting.

Dr. Everett discussed what happened, why the failure happened, and how to make sure it never happens again. He discussed Duke Energy's long history of positive environmental work, including the Clean Smoke Stacks Act, that helped with air quality emissions; efficiently demolishing old coal ash plants; and work on legislation to promote renewable energy in North Carolina.

Dr. Everett apologized for the incident and reiterated that Duke Energy is responsible for what happened. He spoke about the number of people and man hours that have been dedicated to cleaning up the coal ash spill. Dr. Everett also introduced Duke Energy personnel who have been involved in the cleanup.

Dr. Everett discussed the locations of all the coal ash sites in North Carolina: Asheville, Riverbend, Cliffside, Lee, Allen, Buck, Marshall, Belews Creek, Dan River, Roxboro, Mayo, Cape Fear, Robinson, Lee, Weatherspoon and Sutton.

Dr. Everett used photographs of the site to show how the site has changed as plants have closed down and the differences of where the pipes are now located. He showed a picture of the two basins: the primary and secondary basins and gave a brief history of the site. In the late 1940s, the site was first constructed and the first pipe was installed in 1950. The second pipe was added in 1955 and the pond hasn't always been there because the ash was discharged at a different location. As technology improved, and before environmental regulations, Duke Energy thought it was better to put the coal ash in a pond, so a series of ponds were built, but none of them covered the pipe. As the plant expanded, the primary basin covered the pipe in 1968. He explained that the original pipe did not empty into the river.

Dr. Everett explained that the dikes did not fail, but a break in the pipe is what failed. Duke Energy's dikes have been inspected by inspectors, third party audits, and internally every year, not every two years like most businesses. He discussed the 2005 coal ash disaster in Tennessee and how that caused the 2009 United States Environmental Protection Agency (U.S. EPA) inspection. The 2005 Tennessee incident also caused the North Carolina General Assembly to exempt these dikes from the dam safety laws to make sure they received additional inspections.

Dr. Everett discussed the last inspection with U.S. EPA and the five recommendations they made. Duke Energy followed all five. He also spoke to the timeline of events and the measures taken to relieve the break in the pipe.

Dr. Everett spoke to the remediation efforts and how Duke Energy has begun filling the broken pipe, working in segments back to the break. A camera has been put into the other pipe because it is the only other stormwater pipe under a pond.

Dr. Everett spoke about the long term plan to close the coal ash ponds at retired plants because Duke Energy no longer needs them. There are seven plants that are retired and a decommissioning team has been tasked to close the sites and eventually the ponds. He spoke about the time constraints due to permitting and consolation with both federal and State agencies.

Dr. Everett closed by reiterating Duke Energy's commitment to customers and the communities they serve and how sorry they are for the incident.

Sen. Jackson told members that questions would wait until the end for time management purposes. He thanked Dr. Everett for his presentation and invited Mr. Reeder back to the podium

to present on the February 2, 2014 release of coal ash from the Duke Energy facility into the Dan River.

Mr. Reeder gave an overview of coal ash ponds and requirements in North Carolina. He started with a brief overview: raw coal is brought in by rail and stored on-site. The raw coal is conveyed into the power plant and burned to boil water that drives turbines, thereby creating electricity. After being burned, the ash from the coal is sluiced with water from the plant into ponds where the solids settle out. After the solids settle out in the ponds, the water in the pond is then discharged to surface water. Some coal ash that settles out in the ponds gets dredged out and stored in piles or on-site landfills. This ash can also be applied in other applications for beneficial reuse, such as structural fill and in building materials.

Mr. Reeder discussed the regulation of coal ash: there are no federal requirements governing coal combustion residuals (coal ash), but federal regulations are expected in December 2014. DWR has regulatory responsibility for ponds that hold fly and bottom ash. Coal ash facilities are regulated through the federal National Pollutant Discharge Elimination System (NPDES). NPDES permits are issued to allow the discharge of treated wastewater to surface waters.

NPDES permits require that the effluent discharged must adhere to permit limits. Discharges must comply with the State and federal water quality standards.

Mr. Reeder commented on the monitoring and reporting requirements: each facility is inspected once every two years by DWR and is also routinely inspected by the Division of Energy, Mineral, and Land Resources (DEMLR) Dam Safety Program. Each facility's permit describes the parameters regarding monitoring and the monitoring frequency. The NPDES permit "end of the pipe" monitoring addresses the chemical constituents of effluent discharged directly to surface waters. Reports are sent to DWR each month. Chemical monitoring is required both up-stream and downstream of the discharge area. Biological monitoring is required for the aquatic life found above and below the effluent outfall. Fish are collected and tissue is analyzed for the presence of pollutants. Groundwater standards are applicable to groundwater resources surrounding the permitted ash ponds. Each of the 14 facilities is currently monitoring groundwater in accordance with an approved plan. Groundwater monitoring requirements from the plan are added to each of the NPDES permits as the facility comes up for permit renewal (every five years).

Mr. Reeder spoke to the coal ash release on Sunday, February 2, 2014:

- Coal ash ponds at Dan River Station were retired in 2012.
- On the afternoon of February 2 (Sunday) a stormwater pipe under the primary 27-acre coal ash pond failed.

- The corrugated metal portion of the pipe fails and that failure of pipe under the pond allows the release of coal ash and water to the adjacent Dan River.
- There was a partial collapse of interior pond berm.
- Duke Energy notifies Eden/Danville/Rockingham County and then Duke Energy calls the Division of Emergency Management hotline Sunday evening.
- DENR Regional Office personnel were notified and DENR staff traveled immediately to the power plant, including both water quality and dam safety personnel.
- The release of coal ash continues through the failed pipe and Duke Energy mobilizes to try and stop the release, including attempts to stop flow with air bladders in the pipe.
- DWR ensures all downstream water supplies are notified.
- Duke Energy and DENR issue separate press releases in the afternoon.
- DWR begins collecting water quality samples and DENR notifies U.S. EPA.
- The U.S. EPA representatives are on site before midnight.

Mr. Reeder explained the timeline for Tuesday, Feb 4, 2014:

- Secretary Skvarla visits the site and receives a detailed briefing.
- The Secretary discusses the situation with U.S. EPA Region 4 Administrator and Director of Virginia Department of Environmental Quality.
- By this point, United States Fish & Wildlife Service is on site and initial samples are delivered to the DWR chemical lab for analysis.
- Danville is able to treat water and provide safe drinking water.
- Duke Energy continues their repair work.
- Duke Energy commences re-routing all discharges away from the ash pond. The pipe failure was located and excavation begins.
- A video camera was inserted 120 feet into the pipe from the beginning of the pond failure. The release is reduced, but not eliminated.
- Sampling and monitoring efforts continue through duration.

Mr. Reeder discussed the actions on Wednesday, February 5, 2014:

- The earthen platform that was created at the pipe failure collapses and the platform material collapses into a crater, but plugs the pipe.
- At this time, the discharge is almost completely eliminated. The discharge will remain very slight for duration.
- DWR issues an emergency discharge permit which allows Duke Energy to cease all discharges into the ash pond.
- Coal ash residue was spotted on at nearby river banks.
- Dewatering of failure area commences and the video was completed of 760 feet of pipe from river end.

Mr. Reeder discussed the actions on Thursday, February 6, 2014:

- Governor McCrory and Secretary Skvarla visited the site.
- Governor McCrory discusses the situation with Virginia Governor McAuliffe.
- Efforts continue at excavation of pipe failure area. A need to create a working platform at failure was completed and then a lower trench box was finished at the failure site.
- The plan is to fill pipe with grout/concrete to seal and a sandbag dam was inserted into the river end of pipe.
- A sump pump was placed behind the dam.
- The discharge collected at sandbags was pumped into the tank.
- Discharge was eliminated at 7:00 pm and DWR publishes initial sampling results from Monday.

Mr. Reeder explained the timeline for Friday, February 7, 2014:

- DWR begins the assessment of the sediment deposition and development of a long term monitoring plan.
- No discharge was found due to the sandbag dam and pump.
- A bulkhead was constructed for the grout sealing operation.
- A wooden bulkhead is to be inserted into the pipe from the river opening of the pipe.
- Grout will be pumped into the pipe all the way to the bulkhead and then the pipe will be sealed with a concrete cap.
- Virginia Department of Environmental Quality (DEQ) was now on site.
- Completed sampling results for Monday and Tuesday were published.

Mr. Reeder explained the timeline for Saturday, February 8, 2014:

- At 1:00 AM the bulkhead and end cap are set into place and the bulkhead was set approximately 27 feet into the pipe from the river opening.
- At 3:00 am the grout and concrete pumping begins.
- At 4:30 AM the grout and concrete pumping was completed. A 27 foot plug was established in the river end of the pipe. The remaining length of pipe is to be filled with a grout and concrete mixture.

Mr. Reeder explained the timeline for Sunday, February 9, 2014:

- The excavation of the pipe near the original failure continued to allow for grouting and concreting of the remaining pipe.
- Plans were developed to remove a mound of approximately 300 cubic yards of ash discovered at the discharge point.
- DENR is now coordinating with the Army Corps, US Fish and Wildlife, and the U.S. EPA.

Mr. Reeder discussed the actions of Wednesday, February 10 – 12, 2014:

- The Army Corps and DENR approved plans to remove the ash deposit in the river.
- Ash deposit removal begins on February 11.
- The pipe failure site is located and excavated.
- Plans are developed to grout and concrete the remainder of the pipe (approximately 800 feet) in five stages.
- U.S. EPA hosts a public meeting in Danville on Feb 11.

Mr. Reeder explained the reporting requirements for the coal ash release: permit requirements contained in the discharge permit was a Notify Division permit within 24 hours of the spill. The statutory requirements are contained in G.S. 143-215.1C. The owner and operator must issue a press release within 48 hours of a release to Waters of the State.

Mr. Reeder discussed the coal ash release reporting timeline for Sunday, February 2, 2014:

- From 2:00 to 4:00 PM: Duke Energy notices a problem in their coal ash pond.
- At 5:30 PM: Duke Energy alerts Eden, Danville and Rockingham Counties.
- At 6:00 PM: Duke Energy calls the DWR Regional Office but does not speak to anyone because no one is there; and does not leave a voice mail).
- At 6:53 PM: Duke Energy calls the Division of Emergency Management via the Environmental Emergency hotline and the call is not relayed to DENR.

Mr. Reeder discussed the coal ash release reporting timeline for Monday, February 3, 2014:

- At 8:00 AM: Duke Energy contacts the DWR Regional Office.
- At 9:00 AM: DWR personnel leave for the site and DWR verifies that downstream public water supplies have been notified.
- At 4:00 PM: Duke Energy issues a press release.
- At 5:32 PM: DENR issues its own press release and DWR staff begins sampling efforts at the site.

Mr. Reeder spoke about DENR public outreach: 10 press releases were issued since February 3, 2014 and Public Information Officers were dispatched to the site. There was a public meeting in Danville on February 7 and 11 with good attendance. DENR created a webpage with updates, timelines, water quality sampling results, and news releases; and established a public information command post to field inquiries from local media, NY Times, CNN, LA Times, Newsweek, Wall Street Journal, the AP, NPR, Al Jazeera, Christian Science Monitor, etc.

Mr. Reeder discussed the path forward will include long term monitoring and assessment; remediation of the Dan River; appropriate enforcement action; and the creation of a multi-disciplinary coal ash task force.

Sen. Jackson thanked Mr. Reeder for his presentation and invited Mr. Rick Gaskins, Executive Director, Catawba Riverkeeper Foundation to give his presentation.

Mr. Gaskins gave an overview of coal spills: spills are major problems in the Catawba basin but my focus will be on coal ash. Catastrophic failures such as the Dan River and Kingston are inevitable and if ash is left in unlined pits beside waterways significant long-term risk from ongoing discharges and leakage are expected. The existing law is inadequate. There are major health and economic impacts if ignoring the problem continues. Regarding coal ash waste, the U.S. EPA identified 45 coal ash ponds as High Hazard Potential, seven are in North Carolina and four of these 45 are along the Catawba River.

Mr. Gaskins spoke about additional inactive waste ponds on the Catawba Riverbend in Mount Holly, NC. The plant was built in the 1920s and the waste pond at the current location was installed in 1950. Two unlined ponds cover 71 acres and the crest is 80 feet above the surface of Mountain Island Lake. The lake is also a drinking water reservoir for 860,000 people in Charlotte-Mecklenburg, Gastonia, Mount Holly, Matthews, Mint Hill and other municipalities. Power generation ceased as of April 1, 2013, but the ponds remain active.

Mr. Gaskins described the regulations regarding NPDES (National Pollution Discharge Elimination System) and the Clean Water Act (1972). Both targeted contaminants but testing frequencies vary site-to-site, and they are as infrequent as quarterly. Many metals are not tested and coal ash is not regulated as waste, yet household trash is more regulated under Subtitle D (non-hazardous solid wastes). Some repurposing is allowed, such as drywall and concrete but there is inadequate demand.

Mr. Gaskins spoke about coal ash and leachate from coal ash that contains toxic metals and other hazardous substances. Duke Energy likes to point out that the metals and other toxic elements in coal are naturally occurring, which is true, but burning coal increases the concentration of these elements in the ash. What else goes into ash ponds? It is not just ash. Virtually all wastes are permitted to go into the coal ash ponds. Even the current permit allows wastes such as boiler wash down, other boiler cleaning wastes, biocides, metal cleaning wastes, laboratory wastes, vehicle wash water, coal pile runoff, sump discharges and domestic waste to be dumped, untreated, into the ash ponds. The wastes are diluted, but not really treated.

Mr. Gaskins described the five types of discharges from the ash ponds: direct permitted discharge of water from ash ponds; unpermitted, illegal seepages of ash waste through and under the earthen dams; leakage of contaminants from the unlined ponds into the groundwater; migration of contaminated groundwater into the river; and potential for catastrophic release.

Mr. Gaskins spoke about permitted discharges: Duke Energy states that it is in compliance with its permit, but the permit contains no limits for the contaminants of most concern: arsenic, selenium and mercury. Thus, to say that the permitted discharge point is in compliance, says very little.

Where do contaminants go? They do not simply pass through or flush out with surface water; the transition from the dissolved to the particulate phase is it settles out on bottom of the lake or river. The groundwater contamination in the 2008 Tennessee Valley Authority (TVA) Spill created an approximately $2 billion clean-up cost. TVA was ruled liable and the lawsuits are still in the courts. These happened in small, rural areas; but a similar spill in an urban area would have a greater impact.

Mr. Gaskins discussed what needs to be done in the future, including the cleanup site. Live by the notion of 'Leave it as you found it' and place the material in lined landfills. Use the SCE&G Energy and SCANA precedent because groundwater contamination seeps, and there is a potential for failure. There is a water supply threat, and maximum contamination will peak decades from now.

Mr. Gaskins talked about legislative issues and how the legislature should set deadlines for removal of ash from unlined facilities beside rivers, streams and drinking water reservoirs, including closed facilities. The General Assembly should provide language that bans unlined waste pits. Wastes should be put in lined landfills away from water and DENR needs adequate funding. The laws need to be enforced, not selectively enforced.

Sen. Jackson thanked Mr. Gaskins for his presentation and invited Dr. George Everett, Duke Energy, Director, Environmental and Legislative Affairs, Government Affairs, to discuss water quality issues regarding the Dan River.

Dr. Everett briefly spoke about the fact Duke Energy has been sampling the river since Monday of the spill, including all four drinking water sites. These samples are taken every six hours since the spill happened. Not a single sample has exceeded drinking water levels. Duke Energy received a permit from the agency to analyze water samples and there are not enough metals in the water to be a problem.

Dr. Everett talked about the fish tissue samples and other samples from animals and plants in the river that had been taken. The water in the pond that is leaking is the same water that has to meet the standards and isn't a problem. If you measure discharge before mixing with river water, there will always be a higher level of toxins, you must sample after it mixes.

Sen. Jackson thanked Dr. Everett for his presentation and invited Mr. Tom Reeder to present further information on the water quality in the Dan River.

Mr. Reeder spoke about the water quality sampling results. Sampling commenced on Monday, February 3, 2014 and continues through the present. Sampling was coordinated with the U.S. EPA, U.S. Fish and Wildlife and the Virginia DEQ. First results were published Thursday, February 6, 2014. The field parameters were as follows: temperature, pH, dissolved oxygen, conductivity; and all were within normal ranges. No fish kills were noted and there were no noted impacts to public water supplies.

Mr. Reeder discussed the other areas of concern: sulfates and nutrients (Nitrogen and Phosphorus). Also, the total suspended solids like heavy metals, including detailed sampling results. Most parameters within surface water quality standards and exceedance were noted for Copper, Iron, Aluminum and Arsenic.

Mr. Reeder discussed the sedimentation impacts and deposition of coal ash on the river bottom remains the primary environmental concern. Heavy metals and other constituents of coal ash remain in sediments and can be re-suspended in the water column. Heavy deposits have been located along the bank next to the discharge point. DENR will need to determine the extent of the deposition throughout the river basin for the cleanup.

Mr. Reeder discussed the long term monitoring and assessment that includes coordination with U.S. EPA, Virginia DEQ and U.S. Fish and Wildlife. The surface water quality sampling and analysis included determining ash distribution, sediment sampling and analysis and commenced on Friday, February 7, 2014; also, further monitoring of any effects on aquatic life, including fish tissue and Benthic (bug) sampling. DENR coordinated with Virginia DEQ for sampling of headwaters of Kerr Lake and the protection of drinking water supplies.

Sen. Jackson thanked the presenters for their comments and opened the floor to members to ask questions.

Rep. Samuelson asked if the Commission could invite Mr. Gaskin back to speak on coal ash ponds?

Dr. Everett added that we have been sampling the river since the release of the Dan River site since the week of the spill. All four drinking water supplies every six hours since the spill happened.

Sen. Austin Allran asked how much this event is going to cost and who assumes the cost of it?

Dr. Everett answered that we have paid no attention to cost at this point. We have paid attention to remediation. Our customers pay our costs of operations. It will be up to the Utilities Commission how those costs will be distributed to the customers.

Mr. Gaskins stated TVA paid for $2 billion, some of which have been paid by customers and some of which to the users of the area.

Sen. Allran asked if the State is paying that?

Mr. Reeder answered no; we need to restore the area to before the release.

Sen. Allran stated that putting coal ash ponds anywhere and not having liners in them is not very smart, considering we put liners in trash dumps. Why would you have extended a coal ash pond over a pipe without putting a camera in there? Corrugated pipes break all the time. It's not a question of how, it's a question of when.

Dr. Everett stated that this was not a dike that failed, but a pipe under the pond. In Tennessee, there was more ash.

Sen. Allran stated that if you were going to extend coal ash ponds over a pipe and a pipe takes water to the river and these pipes break, why didn't you put a camera in there to check it out?

Dr. Everett stated that the coal ash pond was expanded in the 1960s. As time went on the pipe was still there.

Sen. Allran stated that if it was corrugated then it should have been known. Why didn't you periodically check the pipe?

Dr. Everett answered that it's easy in hindsight to say that. The pipe was good when it was put in. Our inspection and U.S. EPA's inspection of the pipe, if there is anything happening in the pipe, there will be material leaking in the pipe. So we did monthly inspections.

Rep. Harrison said that she hopes that we talk about the appropriateness of coal ash. Can Dr. Everett talk about the plans of the closures? Just capping coal ash ponds is a problem.

Dr. Everett answered that the issue causing these concerns is water. It's the mixture of water and ash. The first thing we committed to do is dry out the pond. We are trying to determine how quickly each of these sites will dry out. There is an opportunity and a cost to move these.

Rep. Harrison stated that she hopes not too much of the cost will be borne by the ratepayers, but by the shareholders. I respectively disagree that there is not a water quality issue.

Mr. Gaskins stated that there has been testing by independent groups like the waterkeepers. There have been contaminants in fish in Wilmington. This idea of mixing zones is strange. Metals do dissolve in water and get above actionable levels. As conditions change it will go back out of the sediment and into the water supply again. And yes, we are seeing problems around the State in the ambient water near coal ash ponds.

Sen. Bingham asked if there is a presence of pollutants in fish above edible levels what happens then?

Mr. Reeder answered that we have those things in the permit. We require Duke Energy to collect fish tissue samples. We want to get an idea of the long term natural environment. If we see these anomalies we would adjust their permit when it came up for renewal.

Sen. Bingham stated that if we see fish levels exceed, we notify the local county health departments.

Representative William Brisson asked what the purpose of the environmental emergency hotline is and who operates it?

Mr. Reeder answered that the Department of Public Safety, Division of Emergency Management (DEM) operates it. That call from Duke Energy to DEM was not passed on to DWR.

Rep. Brisson stated that DEM has a human person manning that line 24 hours a day, seven days a week.

Mr. Reeder stated that they did not notify DWR.

Rep. Brisson asked is DENR has contacted them as to why they didn't direct it?

Mr. Reeder answered in the negative.

Senator Mike Woodard asked about the impact of well users. There are a lot of well users, including the town of Milton that draws all of its water from wells.

Mr. Reeder stated that the fact that they are on the wells is a good thing. You're much better off using ground water versus using surface water downstream. We are trying to assess how much material made it downstream. The Dan River has a lot of curves and the velocity of the river

changes and the velocity settles materials out. I would suspect a lot of materials settled out. Even if it didn't, it would settle in the sediments. It would be unusual for leeching to occur into the ground water. I would not expect a large volume to make it down the river.

Sen. Woodard asked what is the current status of fishing and recreational use of the river?

Mr. Reeder answered that the local Health Department (HD) listed an advisory about eating fish from the river.

Sen. Woodard asked if DENR can tell us what is Duke Energy's position on some of the dredging? Speak a little about dredging and a return on the investment to mitigate the damage? Would dredging cause further damage to the environment?

Dr. Everett stated that samplings have been ongoing. The issue now is where that material is and is it having an impact downstream on plant material in the river. We will consult with U.S. Fish and Wildlife and they will tell us what to do. We will monitor what is going on so we know what's happening.

Representative Chuck McGrady stated that in the press there are a lot of references to a second spill or release.

Mr. Reeder responded that Duke Energy had to reroute and had yard waste. We worked with them to reroute so there is no more water going into that pond. There was an effluent pipe that did not have a backflow preventer.

Rep. McGrady asked about the compliance boundary being in the lake itself. Is that in anyway legislation relating to compliance boundaries?

Mr. Reeder referred to House Bill 74 (Regulatory Reform Act of 2013). The important thing to remember about compliance boundaries is that that those are for ground water. That is where we are looking for incidents for ground water.

Rep. Harrison asked how many ponds are covered under NPDES?

Mr. Reeder answered that we are not sure, but we will email that to Commission Counsel Jeff Hudson.

Rep. Harrison asked if those are being tested?

Mr. Reeder stated that DENR is sampling everything that we have standards for.

Sen. Allran talked about things we will do differently to prevent coal ash ponds. Does Duke Energy have a plan in action or a time table to get this done? So we can depend on it instead of just being hopeful.

Dr. Everett stated that Duke Energy has a decommissioning team looking site by site. Over the last two years we have worked with the water quality and dam safety folks. We will have the first one of those plans done by an engineering firm that we are ready to submit to the agency. Based on this incident, we have formed a team to say "time out" so we can take a second look.

Senator Andrew Brock is looking for reports on the news for testing requirements, of all the different agencies that have been testing; one of them was U.S. Fish and Wildlife.

Mr. Reeder responded that U.S. Fish and Wildlife is on site. They are trying to determine damage to natural resources, larvae and bugs. U.S. EPA is sampling along with us. Duke Energy has been sampling. We have been sampling the ambient water, settlement, cross sections of the river, and fish tissue sampling.

Senator Gene McLaurin asked if we are looking at what other states are requiring for removal of coal ash ponds, and are we setting deadlines?

Mr. Reeder stated that that will be a decision made at the Secretary's level.

Sen. Jackson thanked the members and the presenters and asked if there were any public comments.

Frank Holliman – Each of the coal ash ponds is a disaster waiting to happen. On the Dan River, Duke Energy's coal ash is stored in big holes in the ground; this ash contains toxic heavy metals. These toxics leak into the ground water. The coal ash is held back by leaking earthen dikes and they dump it into the drinking water reservoirs. Duke Energy's coal ash ponds illegally pollute and they are dangerous. Duke Energy's pollution is a serious threat to public health and welfare. These dikes are at risk of failure. Duke Energy has had failures, at Shelby, Lake Wiley and Wilmington. It was not due to weather. It was about inadequate design. Recklessness. Line coal ash ponds. Duke Energy is the only utilities in Carolina that uses this method. Duke Energy told us they were complying with all of the laws. Not true. Duke Energy said their facilities are harmless. Not true. Well maintained. Not true. That they are made of reinforced concrete. Not true. Duke Energy is responding to a federal grand jury for a suspected felony. DENR said a second pipe is failing and Duke Energy didn't know about it. DENR has attempted to take credit, but they only did it when the citizens forced them to.

Jenny Edwards, the Dan River Basin Association – This area was robust with wildlife and it changed on February 2nd. We saw ducks swimming through coal ash. We saw a bald eagle over coal ash. Dan River is the only place kids can go swim. We have two river outfitters who rely on the health of that river. The Dan River draws about 50 – 70 paddlers. We have a bass fishery there. We want that site to be secure and have no second failure. We look forward to seeing what Duke Energy will do to remediate.

Kemp Berdette, Cape Fear River Keeper – The Cape Fear is North Carolina's largest water shed and includes ancient cypress and wildlife and large tourist attractions. We rely on two sources for drinking water, ground water and wells. A spill would threaten six drinking water intakes. The risk of another spill is significant. The ponds were breached in 2010 from a heavy rainfall. The spill was relatively small. There are 700 million pounds of coal ash behind earthen berms.

Martin Hyman, Apex – Coal ash and sewage should not be taken as separate issues, because they are closely intertwined and are both handled by DENR. There was a lack of risk analysis and a lack of knowledge regarding notifications. It takes a very small concentration of heavy metals to have an effect on human health and wildlife. We need stricter oversight and regulation. We need to be considerate of rate payers and tax payers.

Sen. Jackson thanked the public speakers for their comments and asked the other co-chairmen if they had additional comments.

Rep. Samuelson asked if the Secretary could address the question of what other states are doing, and are you aware of other states in Duke Energy's territory?

Secretary Skvarla stated that DENR has assembled a task force to look at this. South Carolina has a decommissioning plan for Cooper.

Rep. Hager stated that DENR is not moving until you are prompted by other environmental groups.

Secretary Skvarla stated that the last time the body addressed coal ash was in 2008. DENR only took action after they were prompted to by the Riverkeeper alliance. I got a notice to sue that was dated January 23, 2013. I received notice 17 days after I walked through the door. DENR stepped into its responsibility and brought four separate actions against coal ash plants. The Clean Water Act has delegated the authority to enforce to DENR. We have not blocked anything. The SELC (Southern Environmental Law Center) can bring a lawsuit anytime it likes, but they can only bring a case if DENR has been found to take no action. We have been accused of blocking the federal lawsuit. How long does it take four federal lawsuits on 14 coal ash ponds? We were scrambling to make the deadline.

Sen. Jackson asked the members if there were any more comments before we adjourn. He thanked everyone for their time, participation and patience and announced the next meeting would be March 12, 2014.

There being no further business, the meeting adjourned at 1:57 PM.

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Senator Brent Jackson, Presiding

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Towers Mingledorff, Committee Clerk