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Sep 25 2020

INFORMATION SHEET

PRESIDING: Chair Mitchell, Presiding; Commissioners Brown-Bland, Gray, Clodfelter, Duffley, Hughes, McKissick
PLACE: Held Via Videoconference
DATE: Wednesday, September 16, 2020
TIME: 1:31 p.m. – 4:25 p.m.
DOCKET NOS.: E-7, Sub 1214; E-7, Sub 1213; E-7, Sub 1187
COMPANY: Duke Energy Carolinas, LLC; Duke Energy Progress, LLC
DESCRIPTION: E-7, Sub 1213, In the Matter of Petition of Duke Energy Carolinas, LLC, for Approval of Prepaid Advantage Program; E-7, Sub 1214, In the Matter of Application of Duke Energy Carolinas, LLC, for Adjustment of Rates and Charges Applicable to Electric Utility Service in North Carolina; E-7, Sub 1187, In the Matter of Application of Duke Energy Carolinas, LLC, for an Accounting Order to Defer Incremental Storm Damage Expenses Incurred as a Result of Hurricane Florence and Michael and Winter Storm Diego

VOLUME NUMBER: 26

APPEARANCES
(See attached.)

WITNESSES
(See attached.)

EXHIBITS
(See attached.)

COPIES ORDERED: Downey, Culpepper, Holt, Cummings, Edmondson, Grantmyre, Dodge, Jost, Little, Luhr, Force, Townsend, Robinson, Kells, Mehta, Lee, Cress, Ross, Ledford, Smith, Schauer, Heslin, Su, Crystal and Beverly
CONFIDENTIAL TRANSCRIPTS and EXHIBITS ORDERED: Robinson, Heslin, Somers, Kells, Jagannathan, Mehta, Lee, Cress, Ross, Jenkins, Beverly, Ledford, Smith, Crystal, Su, Force, Townsend, Downey, Schauer, Culpepper, Cummings, Dodge, Edmondson, Grantmyre, Holt, Jost, Little, and Luhr

REPORTED BY: Joann Bunze
TRANSCRIBED BY: Joann Bunze
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DATE: Wednesday, September 16, 2020

TIME: 1:31 P.M. - 4:25 P.M.

DOCKET NO.: E-7, Sub 1214

E-7, Sub 1213

E-7, Sub 1187

BEFORE: Chair Charlotte A. Mitchell, Presiding

Commissioner ToNola D. Brown-Bland

Commissioner Lyons Gray

Commissioner Daniel G. Clodfelter

Commissioner Kimberly W. Duffley

Commissioner Jeffrey A. Hughes

Commissioner Floyd B. McKissick, Jr.

IN THE MATTER OF:

DOCKET NO. E-7, SUB 1214

Application of Duke Energy Carolinas, LLC,

for Adjustment of Rates and Charges Applicable to

Electric Utility Service in North Carolina

Noteworthy
Reporting Services, LLC

DOCKET NO. E-7, SUB 1213

Petition of Duke Energy Carolinas, LLC,

for Approval of Prepaid Advantage Program

DOCKET NO. E-7, SUB 1187

Application of Duke Energy Carolinas, LLC,

for an Accounting Order to Defer Incremental Storm Damage Expenses Incurred as a Result of Hurricanes Florence and Michael and Winter Storm Diego

VOLUME 26

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Senior Management Committee
January 13, 2014

Ash Basin Closure Update

Jason Allen, Environmental, Health & Safety
David Fountain, Enterprise Legal Support & Litigation

DUKE ENERGY

[redacted]

Agenda

- Groundwater regulation overview and results
- Coal ash program examples
  - Asheville Station
  - Riverbend Station
  - Cayuga Station
- Receptor impacts / actions
- Ash pond closure status
- Coal ash dam overview
- Areas of focus and recommendations

DUKE ENERGY.

Coal Ash Program Overview

- A detailed program review was conducted
- We have ash / groundwater interfaces at almost all coal sites
  - 24 sites
  - 61 ponds
  - 58 structural/landfills
- Large number of experts have dedicated years to managing program
- Coal ash is impacting the environment
- Duke is in compliance with State and Federal standards
- Duke has a strong coal ash program and has opportunity to proactively become the industry leader

DUKE ENERGY.

3 [redacted]

Reviewed groundwater and coal ash conditions at all Duke power plants

Respective SME's for each region provided background and data

Duke experts have been working on coal ash issue for years, are very knowledgeable, and have program well underway

- Environmental scientist familiar with each region, regulatory SME's, Strategic Engineering group, Power Generation

- After a deep dive review I am very comfortable with the current status of our program

Need to be very clear that our coal ash is impacting the groundwater at all locations

This is not an overnight event, ash has been managed in this fashion for decades and it will take decades to close the ponds

All this said, we are compliant with all regulations and in many locations do far more that regulations require through our voluntary programs

I see our coal ash program as a huge opportunity to launch a public education program, invest considerable capital in our plants, and be an environmental leader when it comes to coal ash

[redacted]

Groundwater Regulation Overview and Results

- Retired station, decommissioning is underway, detailed ash pond characterization work will begin in the first quarter of 2014
- Expect considerable attention from environmental groups when we submit closure plan
- Also likely to have considerable media coverage due to proximity of City of Charlotte drinking water intakes about 5 miles downstream of site

Complexities of Groundwater Monitoring

- Requirements vary by State (See Appendix A for details)
  - Sampling frequency
  - Sampling parameters
  - Sampling locations
- Remedial actions vary by State
  - Minimal groundwater regulations in place currently
  - Federal EPA guidance (CCR, ELG) a minimum of 12 months away
- As a general rule, mitigation equates to removing the source and allowing natural attenuation to occur

DUKE ENERGY.

The question of compliance is a very difficult one

Groundwater standards are very different in each state we operate

- specific standards are different
- compliance location is different

Reporting and remediation requirements also vary drastically

In general we monitor for the federal 2L groundwater standards at all sites and then report to the regulatory agencies as required

[redacted]

Groundwater Monitoring Methodology

- Install monitoring wells
  - Upgradient (Background wells - 43)
  - Downgradient (Compliance Monitoring wells - 258)
- Sample and report results as required
- Remediate concern if results are verified
- Expand sample area as needed if results indicate potential impact on receptor
  - Primary standard indication at compliance well
  - Install additional monitoring well if possible
  - Receptor located downstream of compliance well indication
  - Perform additional testing at receptor location

DUKE ENERGY.

Regardless of state requirements Duke monitors groundwater around ash storage areas at all sites (all active ponds and ash storage started after 19??)

All sites have background wells upgradient of ash ponds to provide baseline information on groundwater conditions in the area

- this is very important because there are several locations where certain standards are above the 2L limit prior to being impacted by our coal ash

Downgradient compliance monitoring wells then monitor any impacts our coal ash is having on the GW flow and ensures we are not impacting any receptors

If a monitoring wells shows a GW exceedence and a receptor could be impacted based on expected GW flow we take action to remediate

- depending on site this could include installation of additional monitoring wells
- testing the receptor well
- moving receptor to an alternate water source

[redacted]

Based on best available knowledge we do not have any receptors at any of our sites that currently in danger of being impacted by GW above 2L standards

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Generating Station Ash Pond Groundwater Sampling Overview

Plant	2L Groundwater Standards Exceeded																			
	Antimony	Arsenic	Barium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Mn	Mercury	Nickel	Nitrate	Nitrite	Selenium	Silver	Sulfate	Thallium	Zinc	TDS	pH
Asheville				X		X	X		X	X	X			X		X		X	X		X	X
Sutton	X	X		X	X				X	X	X					X		X	X		X	X
Cape Fear	X	X		X	X				X		X					X		X			X	X
Dan River Steam Station	X	X		X					X		X							X			X	X
Gibson		X		X		X			X		X							X			X	X
Lee Plant (NC)		X		X			X		X	X	X										X	X
Buck Steam Station				X			X		X		X							X			X	X
Gallagher		X		X					X		X							X			X	X
Marshall Steam Station				X					X		X							X			X	X
Mayo					X		X		X		X								X		X	X
Miami Fort		X				X			X		X							X			X	X
Beckjord									X		X					X		X			X	X
Cliffside Steam Station							X		X		X							X			X	X
Roxboro							X		X		X							X			X	X
Allen Steam Station				X					X		X		X									X
Belews Creek							X		X		X								X			X
East Bend						X			X		X							X			X	
Robinson		X					X											X			X	X
Cayuga				X												X		X			X	
Riverbend	X								X		X											X
Weatherspoon									X		X								X			X
WS Lee Steam Station				X					X		X											X
Wabash River									X		X										X	
Crystal River		X																				
Edwardsport																						
Edwardsport IGCC																						
Zimmer																						

Table summarizes where we are exceeding the federal 2L GW standards at our plants

- At compliance boundary (500' in NC, or at state approved monitoring well location)
- may or may not have similar state guidelines
- many of the background wells show same exceededence (i.e. Fe and Mn) so likely naturally occurring issues

Primary standard violation are in downgradient wells that does not have a receptor between the well location and any drinking water receptors

All results are communicated as required to state agencies and no remedial actions are currently outstanding

Coal Ash Program Examples

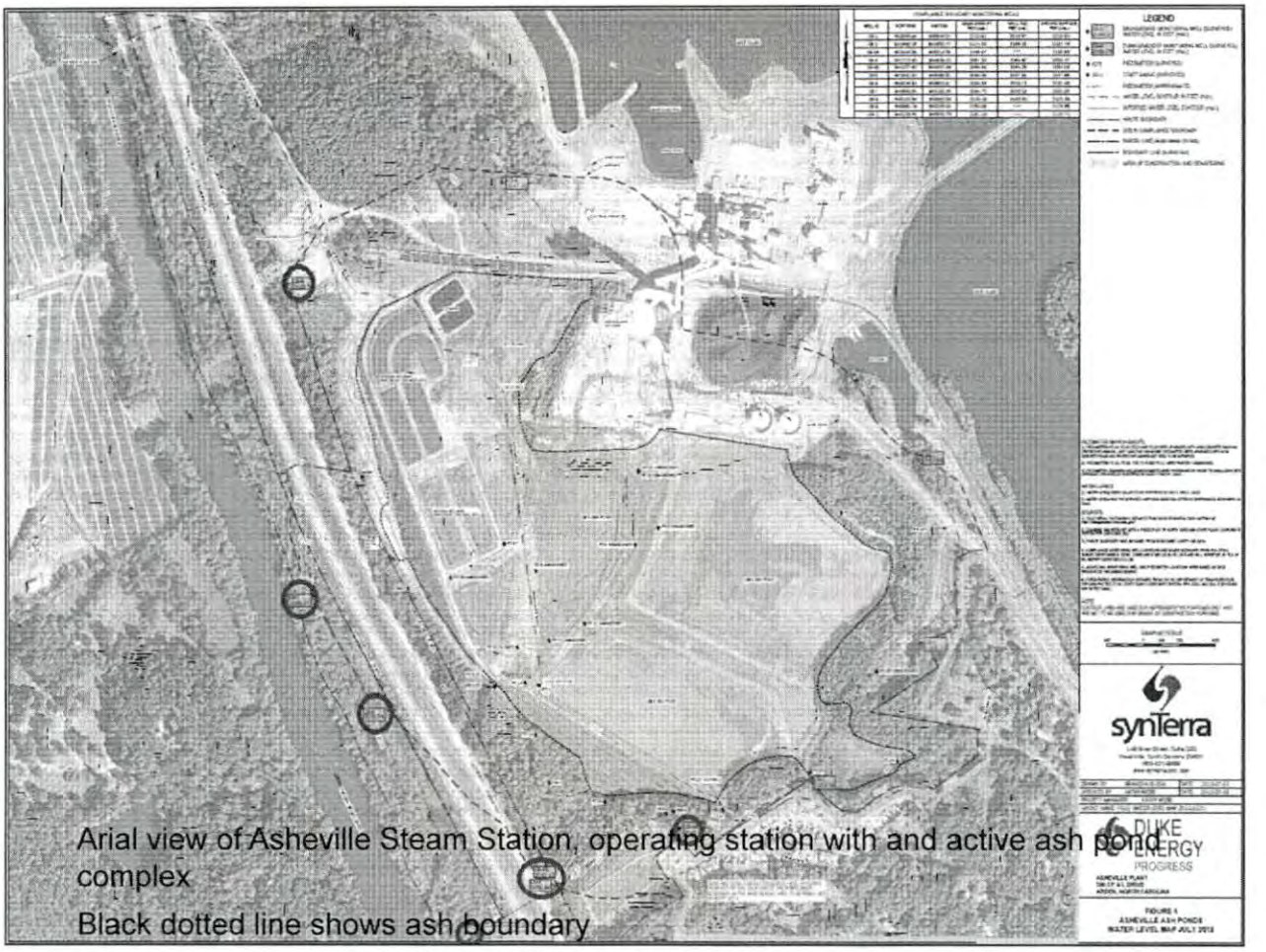
Asheville
Riverbend
Cayuga

(See Appendix B for additional information)

- Retired station, decommissioning is underway, detailed ash pond characterization work will begin in the first quarter of 2014
- Expect considerable attention from environmental groups when we submit closure plan
- Also likely to have considerable media coverage due to proximity of City of Charlotte drinking water intakes about 5 miles downstream of site

Asheville Station

Would now like to review three of our plants that show several key aspects of our groundwater and coal ash programs



Arial view of Asheville Steam Station, operating station with and active ash pond complex

Black dotted line shows ash boundary

Red line is compliance boundary (500' or property line whichever is closer)

Background (3 – yellow blocks) and compliance (8 – green blocks) well network is shown with groundwater flow contours (blue and green lines) (we will see in a couple slides how GW flow is determined)

Groundwater flow is toward the ash ponds and then toward the French Broad River

Boron and Thallium indication at Monitoring Well CB-3R (decreasing) (circled in red) side gradient of ash pond – near Bear Leah Trail receptors

Boron at monitoring well CB-4 CB-5 and CB-6 (decreasing) – no receptors between ahs pond and French Broad River

Boron and Selenium (decreasing) at Monitoring Well CB-7 and CB-8 down gradient of ash pond – no receptors between ahs pond and French Broad River

Levels of boron, selenium, and thallium have been decreasing since water level in pond decreased, dewatering key driver to improved results

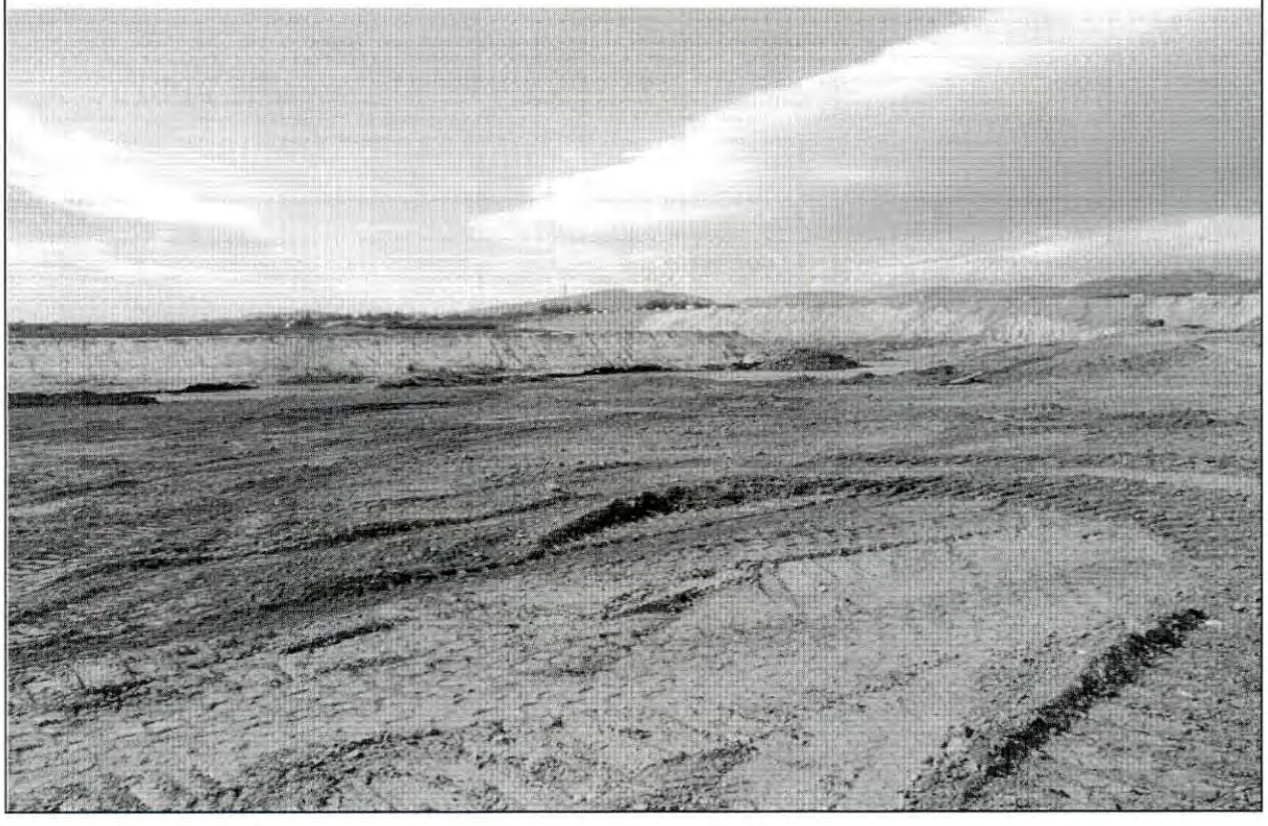
Boron is not linked to health issues, but is an early indicator for other heavy metals such as arsenic, selenium, etc

[redacted]

All receptors (approx 2500) in pink box and further South and are all upgradient of ash ponds and are on municipal water, GW flow makes it very difficult for us to impact these locations

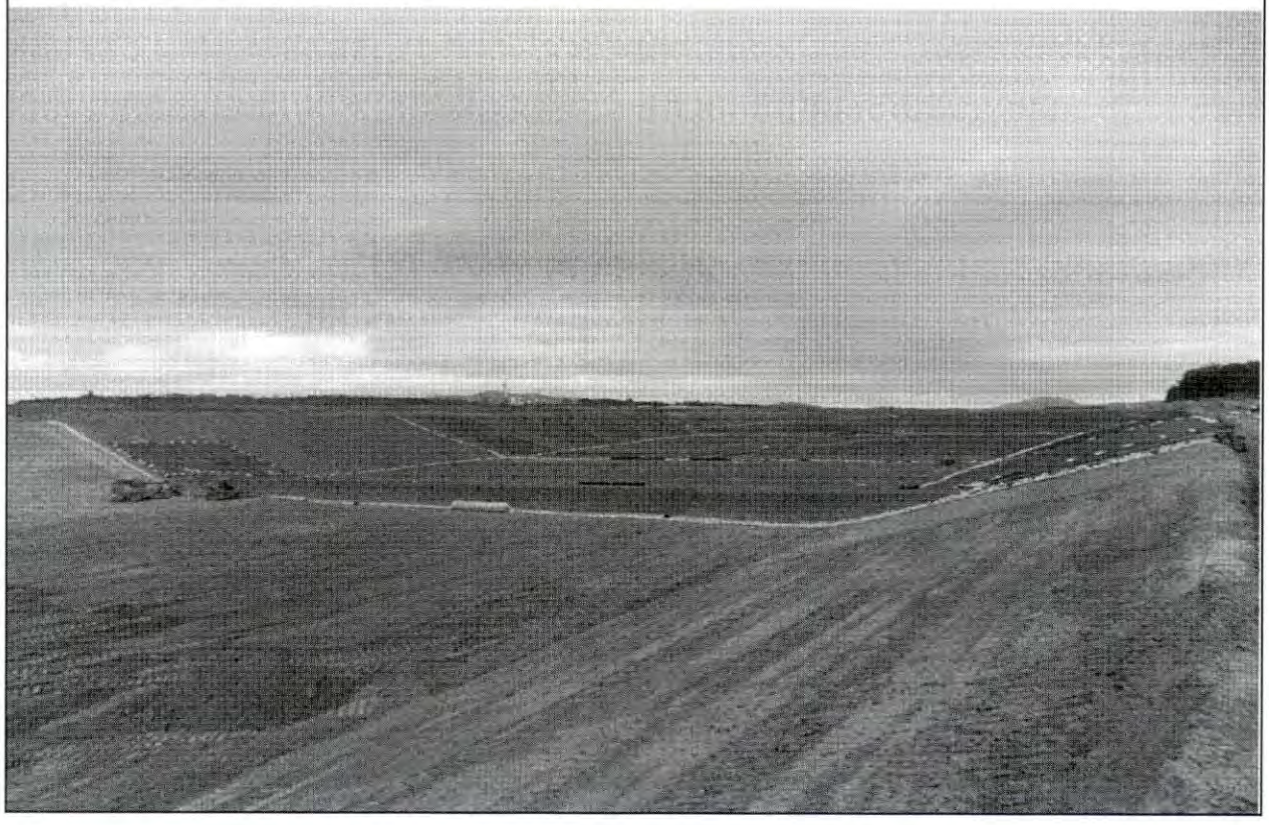
Asheville Ash Pond Excavation

Asheville Ash Pond Excavation



Asheville Airport Structural Fill

Asheville Airport Structural Fill

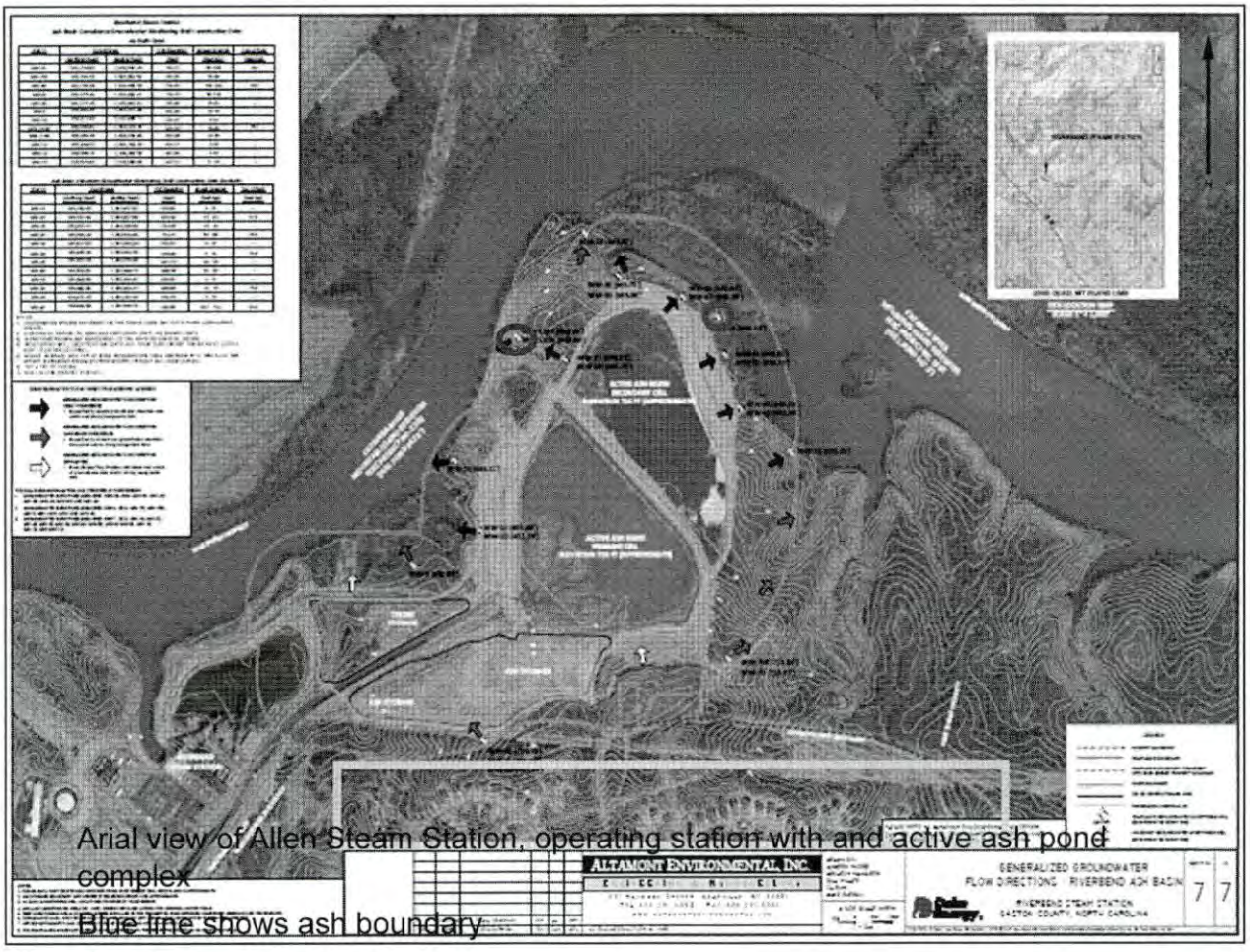


Riverbend Station

Retired station, decommissioning is underway, detailed ash pond characterization work will begin in the first quarter of 2014

Expect considerable attention from environmental groups when we submit closure plan

Also likely to have considerable media coverage due to proximity of City of Charlotte drinking water intakes about 5 miles downstream of site



Arial view of Allen Steam Station, operating station with and active ash pond complex

Blue line shows ash boundary

Red line is property boundary

Green line is compliance boundary (500' or property line whichever is closer)

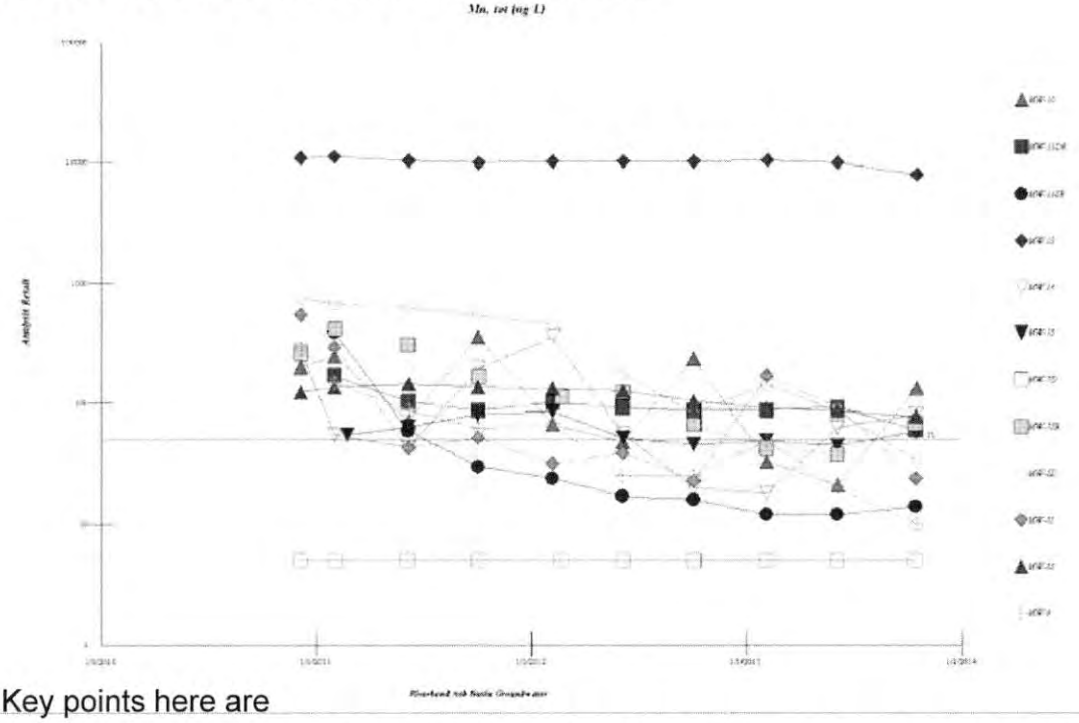
Background (2) and compliance (12) well network is shown with groundwater flow indications (we will see in a couple slides how GW flow is determined)

Groundwater flow is toward the Catawba River

Highest GW indications (Fe, Mn) are at well (MW- 13 - circled in red) Boron starting the show up in MW-11 downstream of ash pond just before GW enters Catawba River – no receptors

All receptors (approx 300) in pink box and are all upgradient of ash pond, GW flow makes it very difficult for us to impact these locations

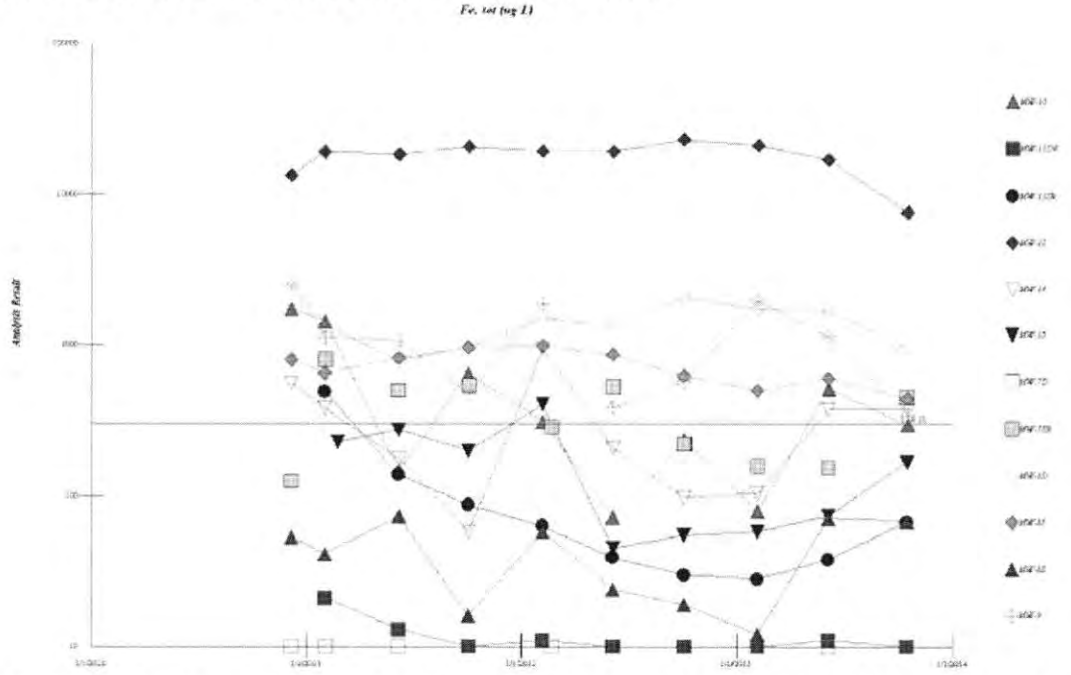
Riverbend Groundwater Exceedences



Key points here are

- most significantly impacted wells are downgradient of ash ponds
- no receptors
- Very early in the closure process, but with plant shut down flow from ash pond to GW is decreasing significantly, GW impacts are improving

Riverbend Groundwater Exceedences



With this said, to this point we have been focused on ensuring there were no receptors between the ash ponds and a large receiving body of water that acts as a GW sink

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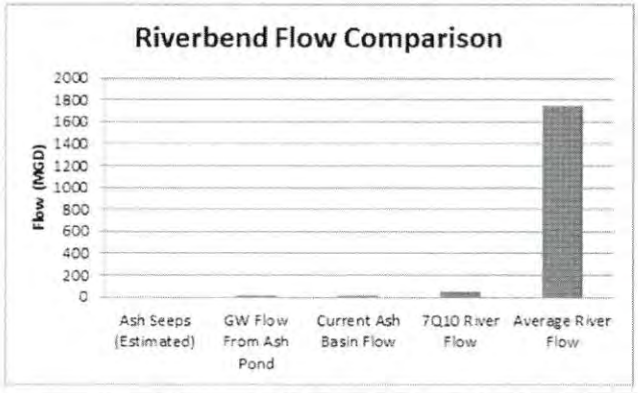
The primary concern raised at Riverbend Station is the impact on this body of water and the subsequent impact on municipal drinking water intakes

What is a Hydraulic Break?

- A large body of water
  - The relative low point for ground water flow
  - Significantly greater flow than groundwater contribution
  - Acts as a sink for all surrounding groundwater
  - Receptors located across a hydraulic break are unaffected, regardless of distance from ash pond



DUKE ENERGY.

The dilution factor when water reaches a large receiving body is generally overwhelming

	Belews Creek	Riverbend
Ash Seep flow estimate MGD	= 0.303409	0.001
GW Flow from ash ponds MGD	=0.9	0.5
Ash basin flow (NPDES Outfall) MGD	= 9	4.9
7Q10 river flow MGD	= 51.7	51.7
Current river flow MGD	= 371.0	1750

Additionally, GW standards are no longer in effect and surface water standards apply which are less strict for the majority of standards (NEED DETAILS HERE)

Riverbend ash basin flow is now at zero unless there is a significant rain event

Riverbend Station River Impact Monitoring

Upstream 278	As, (µg/L)	< Cd, (µg/L)	< Cr, (µg/L)	< Cu, (µg/L)	< Hg, USEP	< Pb, (µg/L)	< Se, (µg/L)	< TDS (mg/L
Riverbend SS	< 1.00	NA	NA	NA	NA	NA	< 1.00	NA
Riverbend SS	< 1.00	< 1.00	< 1.00	1.02	< 0.05	< 1.00	< 1.00	51.00
Riverbend SS	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05	< 1.00	< 1.00	52.00
Riverbend SS	< 1.00	< 1.00	< 1.00	1.22	< 0.05	< 1.00	< 1.00	42.00
Riverbend SS	< 1.00	< 1.00	< 1.00	1.25	< 0.05	< 1.00	< 1.00	51.00
Riverbend SS	< 1.00	< 1.00	< 1.00	1.66	< 0.05	< 1.00	< 1.00	< 25.00
Mean	1.00	1.00	1.00	1.23	0.05	1.00	1.00	44.20
Downstream 277.5								
Riverbend SS	< 1.00	< 1.00	< 1.00	1.38	< 0.05	< 1.00	< 1.00	47.00
Riverbend SS	1.12	< 1.00	< 1.00	1.42	< 0.05	< 1.00	< 1.00	54.00
Riverbend SS	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05	< 1.00	< 1.00	49.00
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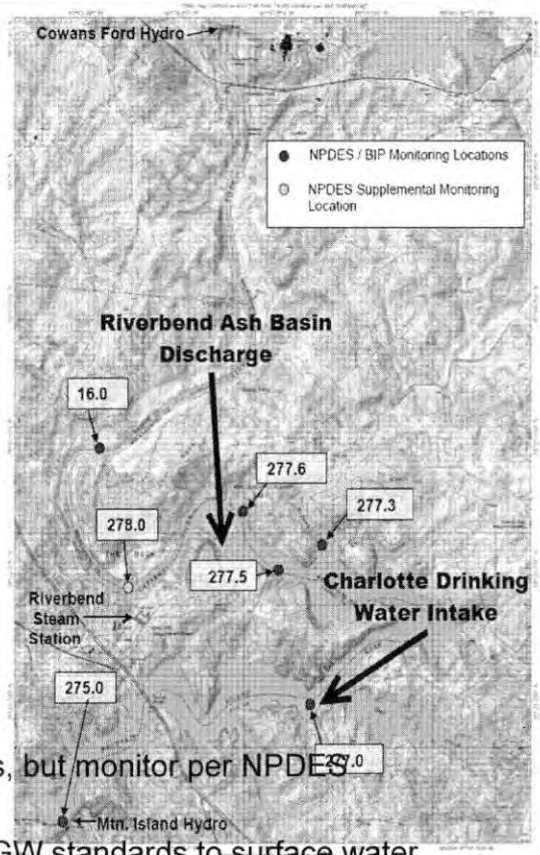
Riverbend SS	< 1.00	< 1.00	< 1.00	1.11	< 0.05	< 1.00	< 1.00	51.00
Riverbend SS	< 1.00	< 1.00	< 1.00	1.67	< 0.05	< 1.00	< 1.00	31.00
Mean	1.02	1.00	1.00	1.31	0.05	1.00	1.00	45.67
CLT DW Intake 277								
Riverbend SS	< 1.00	< 1.00	< 1.00	1.58	< 0.05	< 1.00	< 1.00	52.00
Riverbend SS	< 1.00	< 1.00	< 1.00	3.22	< 0.05	< 1.00	< 1.00	55.00
Riverbend SS	< 1.00	< 1.00	< 1.00	< 1.00	< 0.05	< 1.00	< 1.00	53.00
Riverbend SS	< 1.00	< 1.00	< 1.00	1.83	< 0.05	< 1.00	< 1.00	47.00
Riverbend SS	< 1.00	< 1.00	< 1.00	1.21	< 0.05	< 1.00	< 1.00	56.00
Riverbend SS	< 1.00	< 1.00	< 1.00	1.65	< 0.05	< 1.00	< 1.00	< 25.00
Mean	1.00	1.00	1.00	1.75	0.05	1.00	1.00	45.00



Duke monitors rivers and lakes around plants, but monitor per NPDES requirements or surface water standards

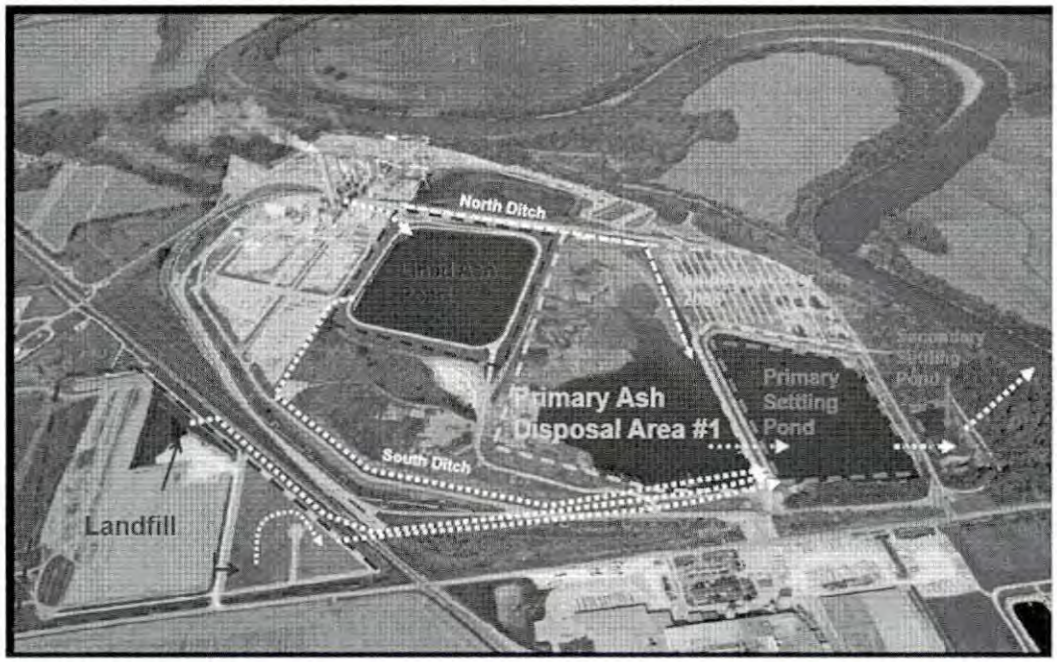
DUKE ENERGY

This often means we can't directly compare GW standards to surface water standards – we monitor different parameters

However, we do have comparable results for some stations

- Above the monitoring points around Riverbend are shown on the map on the right (upstream marker 278, Downstream of plant marker 277.5, at CLT drinking water intake marker 277)
- Results are essentially the same at all three locations over the past 3 years and all are below GW and surface water standards
- And impacts are reducing

Cayuga Station – Site Lay-out



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Finally, I would like to review the Cayuga site

We are going to flip through several slides quickly, but you will get a very good view of what impact remediation efforts are having and the benefits of a strong relationship with the state regulators

This site was selected based on the fact it is a very advanced coal ash remediation site that continues to operate as a coal plant and has significant impacts on GW

From this view you can see a new lined ash pond that is in service and was constructed in 2005. this is the only lined ash pond in the Duke fleet

The lined ash pond is built over an old existing ash pond and is acting as a synthetic cap for this pond

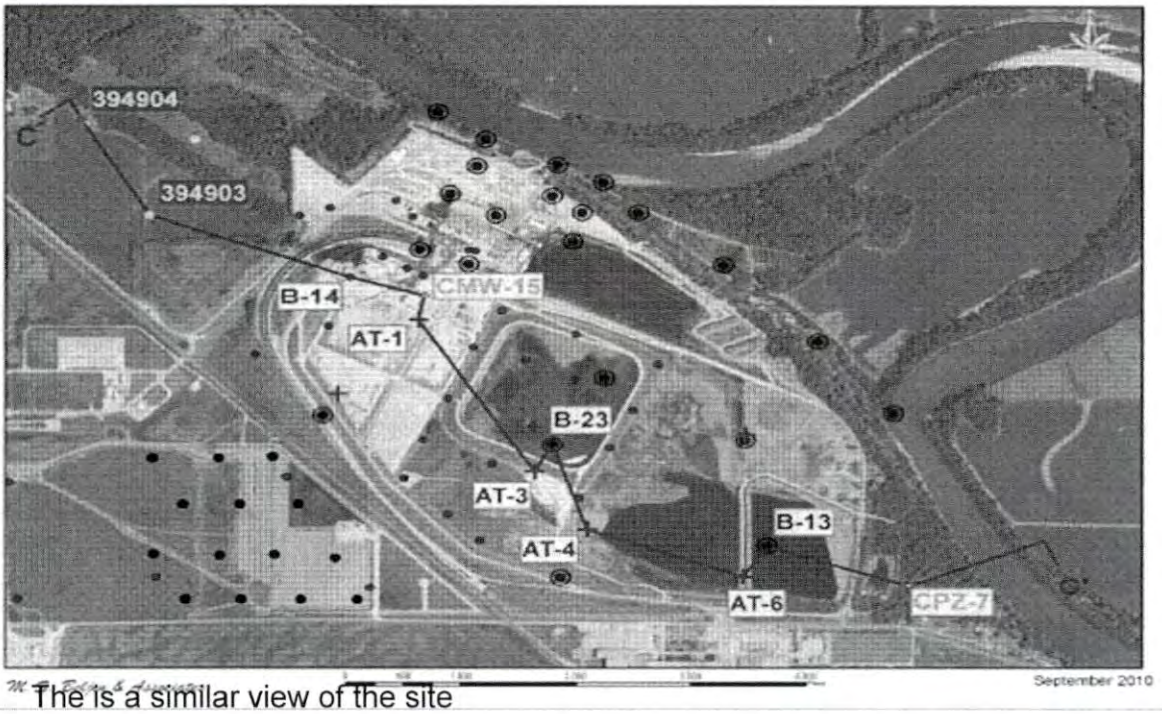
The primary ash disposal area #1 is in the process of being closed with the cap in place method

The Primary and secondary settling basins will remain in service

The site lined landfill is in the bottom left

The Wabash river is in the top right and is the direction of GW flow

Cayuga Station Cross Section – Areal View



- The is a similar view of the site
- Pay special attention to the red line shown on the photo as these wells and piezometers were used to map the soil conditions and water levels to make the cut-away view on the next slide

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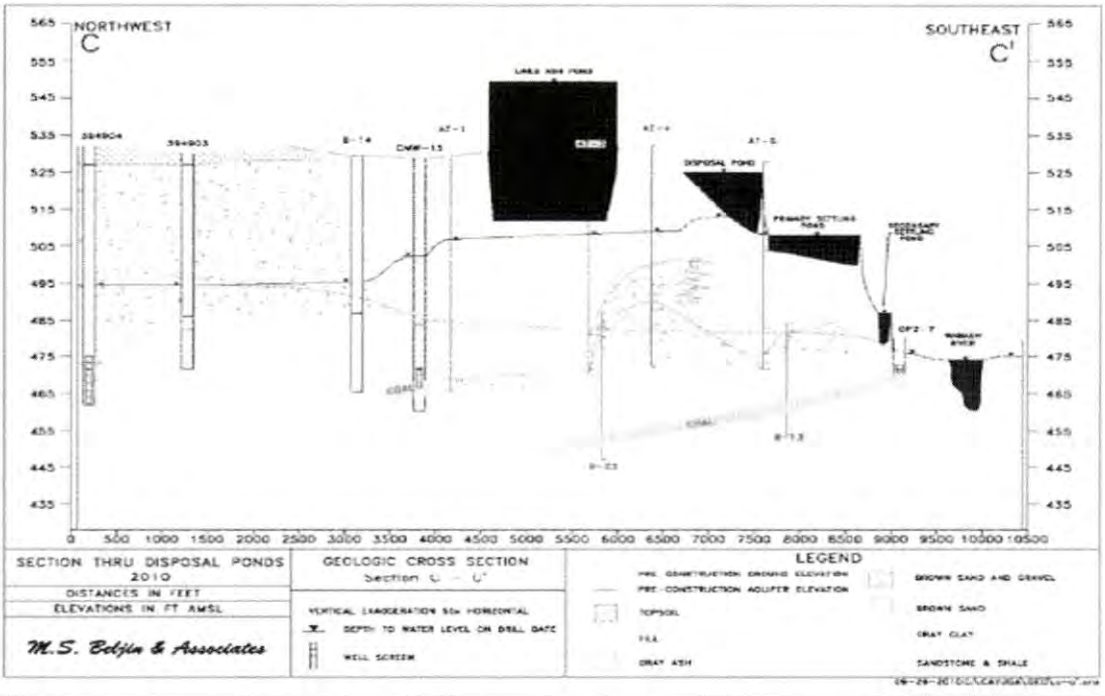
Cayuga Station Groundwater Cross Section



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This cut-away view the Cayuga site shows very porous soil condition immediately below the plant that is made up of sand and gravel and the old existing ash pond

Another unique feature is the shale sandstone base the exits the ground right at river level

Like water above ground, groundwater flows downhill and travels from higher GW levels to lower lever

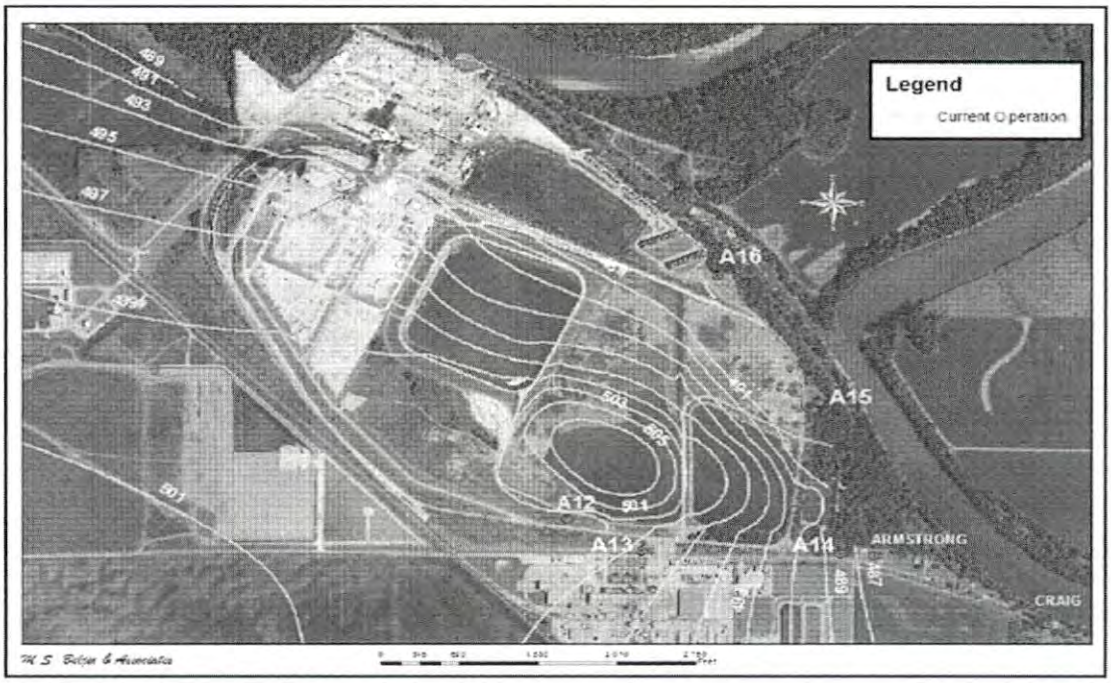
As you can see the Wabash River is the hydraulic break receiving body and is the low point, all GW flows to it

Our primary ash pond is the high point of ground water and influences the flow in the immediate area, with water flowing out in all directions

Due to the porous soil this site has some of the highest water loss of all sites (approx 6MGD into ash pond, 2MGD loss)

Seeps have been incorporated into the site NPDES permit during recent renewal process

Cayuga Station – Current Operations



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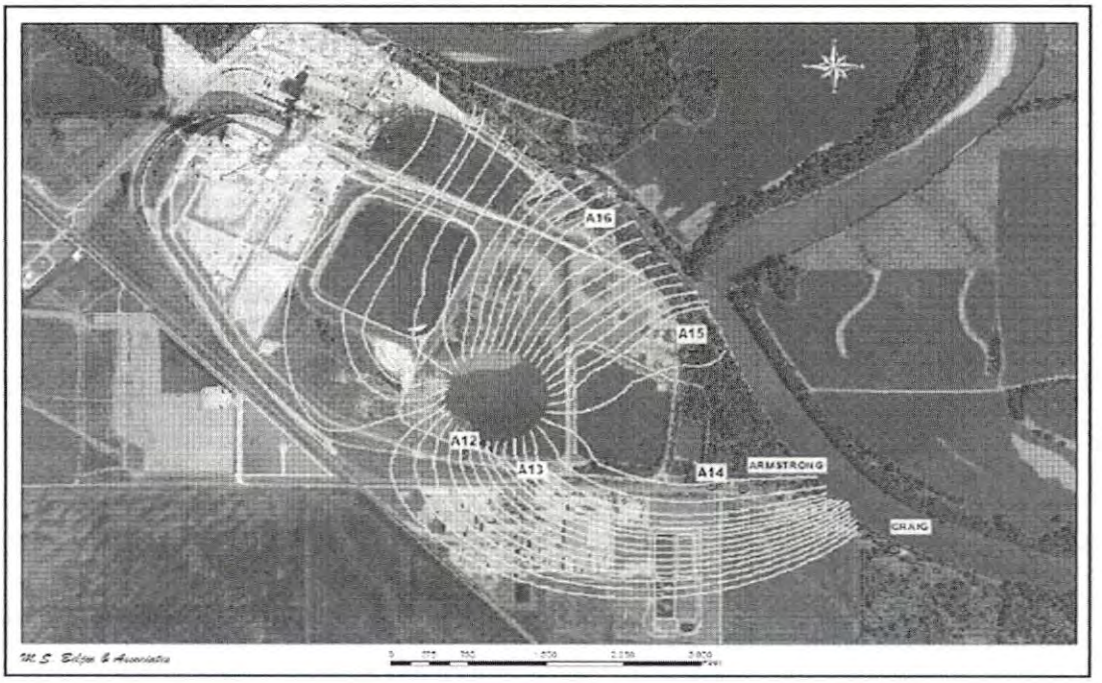
Here is a different view of the GW elevations

Generally the flow is toward the Wabash River as you saw on the cut away view

The primary ash pond influences this somewhat as water flows in all directions from this pond, but quickly turns back to the river

Note on the drawing that the lined ash pond has no impact on GW flow

Cayuga Station – Current Groundwater Flow



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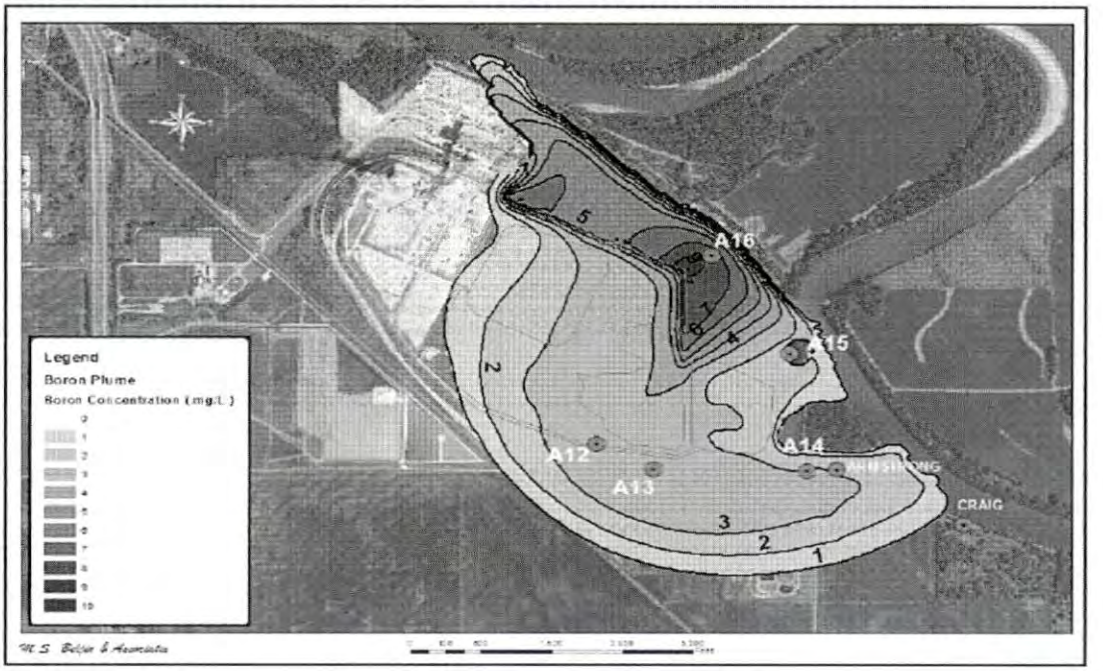
The drawing shows specific flow patterns from the primary ash pond to the Wabash River

Cayuga Station – Current Boron Plume



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A similar view showing the boron plume currently seen at the site

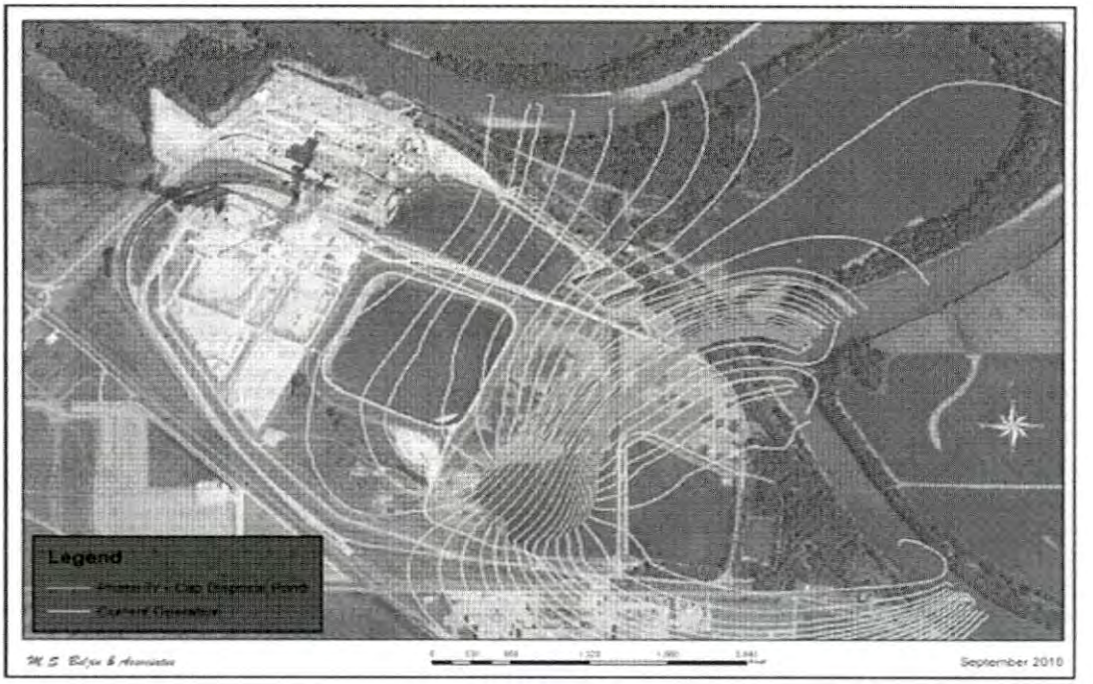
Remember that boron is only an early indicator of other elements and is not a health related standard

When this was first investigated there were 3 downgradient residences, one was purchased and demolished and two were moved to municipal water

Only 5 residences remain, all are upgradient away from the plume anfd on municipal water

[redacted]

Cayuga Station – Groundwater Flow After Ash Pond Close



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The primary ash pond is in the process of being closed with the cap in place method

Voluntary ash pond closure underway and was coordinated with the State

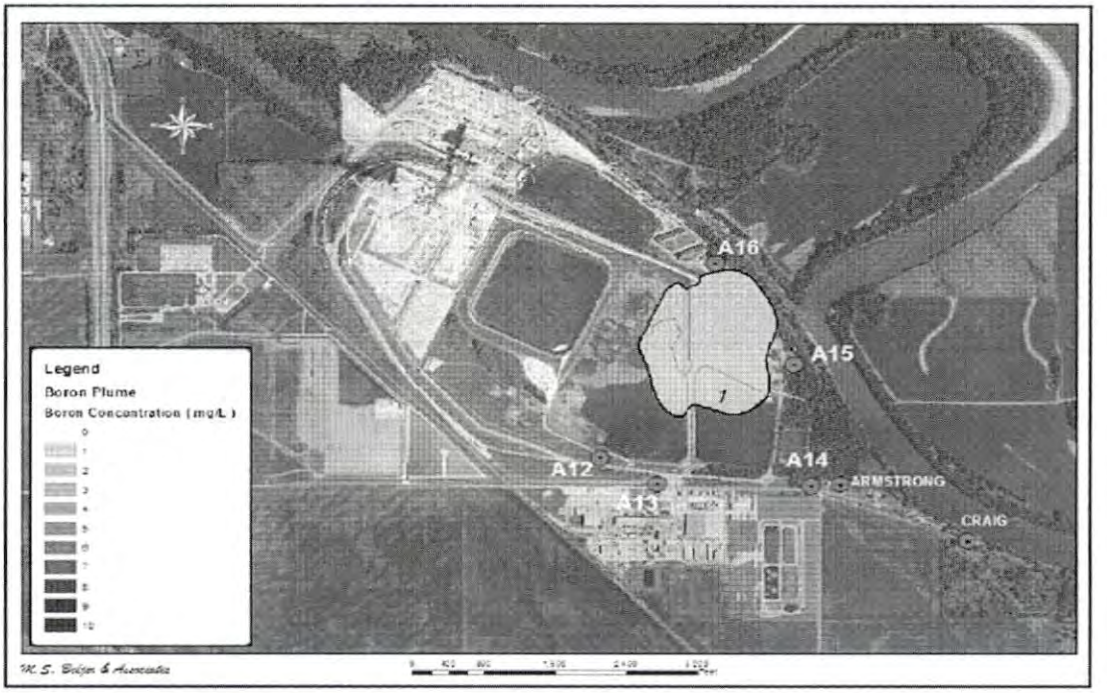
They are using plant ash and gypsum as fill as it is produced to create 5% grade, plan for 2025 completion, end with clay or synthetic cap

Could close faster if State did not allow us to use plant byproducts to close as they are produced

Minimal environmental impact and large cost savings

The blue lines show the new expected GW flow once the pond is capped

Cayuga Station – Forecasted Boron Plume 2022



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This graphic shows the expected remaining Boron plume in 2022 once the pond is dewatered and capped

There will likely be a minimal impact on GW from the coal ash based on the fact that the very bottom of the old existing ash pond will remain in the GW table

The State is aware of this and approved the closure plan based on the minimal impact and the high dilution rate

Again, this shows the dramatic effect that ash basin dewatering can have. Groundwater impacts decrease quickly

Capping the pond then prevents future impacts from surface water leaching through the ash

Receptor Impacts and Actions

Retired station, decommissioning is underway, detailed ash pond characterization work will begin in the first quarter of 2014

Expect considerable attention from environmental groups when we submit closure plan

Also likely to have considerable media coverage due to proximity of City of Charlotte drinking water intakes about 5 miles downstream of site

Receptors – Who is at Risk?

- Receptors are those in the path of groundwater flow – i.e., downgradient
- Where groundwater flows into a water body, it is a barrier to distant receptors
- Receptors are residential/industrial groundwater drinking water wells in the path of migrating groundwater
- Most drinking water is provided by municipal systems
- Individuals up-gradient are not at risk

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As discussed earlier, receptors are locations that use groundwater (via wells) and could be impacted by our coal ash

Significant work has been done to date to ensure we are not impacting receptors

Over the next few years we will be completing detailed receptor surveys at all locations to verify GW flow expectation and what receptor water sources are

Receptor Summary

Plant	Background Wells	Compliance Wells	Groundwater Standard Exceedences	Secondary Standard Exceedences	Residences Within 1/2 Mile	Down Gradient Receptors	Side Gradient Receptors	Up Gradient Receptors
Crystal River	1	6	2	5	~0	0	0	0
Cayuga	2	10	2	2	~10	0	0	5
Edwardsport	0	0	0	0	~100	0	0	0
Edwardsport IGCC	0	0	0	0	~100	0	0	0
Gallagher	0	2/7	2	5	~50	0	1	0
Gibson	4	58	2	6	~15	0	5	0
Wabash River	0	5	0	3	~10	0	0	0
Beckjord	2	18	1	5	~10*	0	8*	2
East Bend	1	6	0	4	~5	0	0	0
Miami Fort	1	5	1	6	~0	0	0	0
Zimmer	2	8	0	0	~0	0	0	0
Allen Steam Station	2	11	2	3	~250	0	0	250
Asheville	3	8	4	8	~2500	0	3	3
Belews Creek	2	7	2	3	~50	0	1	40
Buck Steam Station	2	12	2	5	~150	0	0	150
Cape Fear	2	11	4	6	~100	0	0	20
Cliffside Steam Station	2	7	1	5	~25	0	5	10
Dan River Steam Station	1	6	3	5	~50	0	0	1
Lee Plant (NC)	3	10	3	5	~100	0	0	10
WS Lee Steam Station	2	13	1	3	~75	0	25	50
Marshall Steam Station	2	10	1	5	~100	0	0	3
Mayo	2	8	3	4	~20	0	5	10
Riverbend	2	12	1	3	~300	0	0	5
Robinson	1	2	2	3	~250	0	25	100
Roxboro	1	7	1	5	~20	0	0	20
Sutton	2	15	7	5	~200	0	0*	0
Weatherspoon	1	3	1	3	~100	0	80	0
#total	43	258	48	107	~4500	0	150	678

*Indicate larger populations could be affected due to proximity of municipal wells

- This table shows receptor information for all sites
- Residences located within ½ mile of ash storage areas (include all locations regardless if on wells, cisterns, municipal water)
- Downgradient recpetors – note that all downgradient recepetors have been eliminated
- Side gradient and upgradient receptors
- Monitoring wells are in place to ensure that side and up gradient receptors are not being impacted

Potentially Impacted Receptors: Action Taken to Date

Station	Constituent	Response
Asheville	Iron, manganese, thallium	Provided alternate water supply; more investigation
Sutton	Boron	Agreement to provide municipal connection to CFPUA
Allen	No impacts identified	NCDENR sampled neighbor's wells; results showed no 2L impacts
Cayuga	Boron	Provided municipal water connection; closing ash basin
Gibson	Boron	Provided municipal water connection; closing ash basin
Beckjord	Sulfate	Installed "interceptor" well

See Appendix C for detailed list of receptor work by station

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Preemptive actions taken to date are shown on this table

These issues have been monitored for years and when issues were identified action was taken

Could have been more proactive in the recent Sutton and Asheville cases, but both situations were being monitored

It is important that we continue to monitor GW samples and take actions proactively if any indications are seen

No current concerns at any sites where specific receptor testing should be done - **VERIFY**

Sutton and Asheville remediation work is currently in progress

[redacted]

Ash Pond Closure Status

Retired station, decommissioning is underway, detailed ash pond characterization work will begin in the first quarter of 2014

Expect considerable attention from environmental groups when we submit closure plan

Also likely to have considerable media coverage due to proximity of City of Charlotte drinking water intakes about 5 miles downstream of site

Ash Pond Closure Methodology (See Appendix D for Ash Pond Closure Details)

- Have begun site characterization and conceptual closure design at several retired sites
- Closure process for operating sites will be considered when regulatory risk of CCR and Effluent Limitations Guidelines (ELG) rules is manageable
- Detailed engineering reviews ensure we understand all factors
- Default strategy is cap-in-place/hybrid
- Excavation and removal reviewed further if default strategy does not ensure groundwater quality
- Throughout process, reuse options will be evaluated considering prudent cost, time to close and other factors
- The selected closure plan will be implemented when cost effective reuse options do not exist (including other factors)

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Our current hybrid strategy v. excavation and removal is:

Protective of groundwater – more so if one considers timeliness

Faster – benefits flow much sooner – decades in most cases

More cost effective

Reduced impact to customers, responsible cost management and recovery issues

Flexible - could excavate and remove if needed at a specific site

Ash Pond Closure Methodology Continued

- Decommissioned Site – Perform Site Characterization
  - Identify ash locations
  - Identify ash depth
  - Map expected groundwater flow and level
  - Locate potential receptors
  - Develop State approved closure plan
- Operating Site – Active Ash Pond(s)
  - Capital upgrades
    - Dry flyash and dry bottom ash, redundancy
    - Waste water pond(s)
    - Additional water treatment
  - Site Characterization – same as above

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Pond closure work has been underway for some time

Work is accelerating due to the current decommissioning work at several sites

However, work has either been completed or is underway at 13 ash ponds

Our plan for properly closing the ash ponds at the decommissioned sites is well defined

If we decide to proceed, the work to close the ponds at the active sites is very similar to the decommissioned sites, but capital investments at the plant must be completed first

This work is estimated to cost about $**XX** over **X** years

This work will involve system upgrades, additional redundancy, and new equipment to handle waste water processing

[redacted]

Ash Pond Current Closure Plans

Plant	Excavation Complete	Excavation In Progress	Excavation Planned	Hybrid Cap in Place Complete	Hybrid Cap in Place In Progress	Hybrid Cap in Place Planned	Eco-Evaporation Planned	Unknown	Active Unlined - In Service	Active Lined - In Service
Crystal River	1								1	
Cayuga					1					
Edwardsport	2									
Gallagher					1	1				
Gibson					2				1	
Wabash River						3		1		1
Beckjord			2			2		5	1	
East Bend									1	
Miami Fort						2			1	
Zimmer										
Allen Steam Station					1	3			1	
Asheville		1				1			1	
Belews Creek						2			1	
Buck Steam Station						3		1		
Cape Fear						2	3			
Cliffside Steam Station			1			1			1	
Dan River Steam Station			2			2				
Lee Plant (NC)						1	2			
WS Lee Steam Station						4		1	1	
Marshall Steam Station					1	1			1	
Mayo						1			1	
Riverbend						4		1		
Robinson						2				
Roxboro				1	1	2			1	
Sutton			1			2				
Weatherspoon				1		1				
Total	3	1	6	2	7	40	5	9	13	1

This table shows the wide variety of work being done or planned for our ash ponds

The general preference is to use the hybrid cap in place methodology to close the ponds since it is the lowest cost and when done properly can provide the same amount of environmental protection as excavation

Based on the site specific information we have currently, all forms of pond closure are expected to be used

As detailed characterizations are completed, closure plans will be modified to address new details identified

Regardless of the best information and engineering review there will always be the possibility of follow-up closure work

As an example, GW levels may not receded to the levels expected keeping the lower levels of ash in the GW table

In this case we may need to come back in at a later date an install additional hydraulic breaks

[redacted]

Coal Ash Dam Overview

Retired station, decommissioning is underway, detailed ash pond characterization work will begin in the first quarter of 2014

Expect considerable attention from environmental groups when we submit closure plan

Also likely to have considerable media coverage due to proximity of City of Charlotte drinking water intakes about 5 miles downstream of site

[redacted]

Ash Dam Stability Review Process

- Initial dam construction based on detailed structural design plan
  - Soil conditions
  - Groundwater levels
  - Site conditions
  - Expected ash pond usage
- Routine inspection plan approved by State
- Perform routine inspects and report results as required
  - Vegetation management
  - Physical condition
  - Groundwater level
- Remediate all identified concerns

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All ash pond dams are inspected routinely based on plans approved by the state

This included vegetation management, physical condition, an GW levels

Any issues are noted, submitted to the state along with repair plans, review and completed once approved

[redacted]

Components of the Duke Energy Dam Management Program

Location	Dam Totals
DEC	29
DEP	29
Midwest	24*
DEF	0

- Dam Inspections (See Appendix E for detailed inspection results and recommendations)
  - Internal monthly visual inspections & annual document review
  - Inspected after unusual events (seismic activity or rain fall >2")
  - Regulatory or third-party engineering firm inspections every 2 – 5 years
- Operation and Maintenance Procedures
- Routine Engineering Studies
  - Slope Analysis, Hydraulic Analysis, Breach Analysis
- Emergency Action Plans

*Coal ash dams in Indiana are not regulated, 8 Midwest dams in Ohio and Kentucky are

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Dam inspections are both time and event based

Internal and external engineering SME's are used

External engineering studies completed every 2 – 5 years based on regulatory requirements

EAPs include communication methods (primary and backup), perform inundation studies, inundation maps, share internal and external, conduct drills

Areas of Focus and Recommendations

Retired station, decommissioning is underway, detailed ash pond characterization work will begin in the first quarter of 2014

Expect considerable attention from environmental groups when we submit closure plan

Also likely to have considerable media coverage due to proximity of City of Charlotte drinking water intakes about 5 miles downstream of site

Areas of Focus - Ash Basins and Dams

- General
  - Eco-evaporative closure method is going to be difficult to obtain approval
- Asheville
  - Need to provide alternate water supply to 3 residences on Bear Leah Drive
  - GW exceedences in downgradient monitoring wells improving with lower water levels
  - Very high profile ash remediation location, need to finalize long term plans for generation assets so that ash strategy can be finalized
  - This is first active ash pond that should be addressed
- Roxboro Ash Basin
  - Hyco Lake starting to trend up due to low turnover, likely need to move to ZLD like Mayo
  - Dry ash system needs additional redundancy before ash pond can be closed

Eco-evaporative closure method planned for 5 – 6 ponds currently, old ponds with significant cover growth

May cause more impact if we clear and install a synthetic cap

Geosyntech is the engineering firm performing the closure analysis and has used this method at other locations in the Northeast

Asheville

Working to mitigate GW impacts at three side gradient residences currently

Very high profile site

Need to finalize long term generation strategy before deciding on ash pond closure methodology

Roxboro

Hyco Lake has relatively low volume turnover, dry flayash system in place, still sluice bottom ash

May need to move to ZLD like Mayo due to scrubber waste water impact on lake

Would need more redundancy in dry ash system, currently sluicing to ash pond is emergency back-up system

[redacted]

Areas of Focus - Ash Basins and Dams Continued

- Beckjord Ash Basins
  - Relatively steep slopes on C ash pond with history of shallow slope failure
  - Implemented a monitor and repair program to promptly address these shallow failures
  - Regulatory agency approved this program with the understanding the basin will be decommissioned in the near future
  - Several unstable old ash storage areas near landfill (~$50M to excavate)
  - We provided land North of A ash pond for municipal wells – avoid at all locations in future
  - Ash basins located over high yield aquifer (~$50 - $300M to remediate)
- Robinson Ash Basin
  - Ahs pond may contain low level radioactive material
  - It will be very difficult to move ash
  - Conceptual closure engineering to begin in 2014

Beckjord Ash Basin C Pond

Relatively steep slopes and history of shallow slope failures.

Slope stability analyses indicates continued failure without improving the dams.

If left unaddressed, shallow failures can be progressive and lead to a breach.

Geotechnical group has implemented a monitor and repair program to quickly address these shallow failures.

Regulatory agency has approved this plan despite the decommissioning of this pond in the near future.

The condition appears to be a medium risk.

All ash ponds are above high yield aquifer and no new ash storage project are approved in these locations even if lined

Robinson Ash Basin

Unit 1 and the associated ash basin are planned for decommissioning.

Experienced an event where ash may have been contaminated by materials from Unit 2. Due to incident where Unit 1 and Unit 2 shared a condensate storage tank

Tank drained and cleaned out into a waste water settling pond, this pond was

cleaned out and material put in ash pond

Will need to coordinate any closure plans with the nuclear group

At this time, unsure of the potential implications and unable to offer a degree of risk.

Areas of Focus - Ash Basins and Dams Continued

- Sutton Ash Basin
  - Small release of ash during Sept 2010 hurricane
  - Repairs were made, but additional ash placement has increased the pool height
  - The ash ponds are very full and some ash will need to be moved
  - Must complete municipal water connection to replace Cape Fear Municipal wells
  - Industrial wells are influencing GW flow and boron plume
  - Environmental groups focused on Sutton Lake which is not classified as waters of the State

Sutton Ash Basin

Had a release of ash caused by overtopping due to hurricane conditions.

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Repairs were made, but additional ash placement has increased the pool height, decreasing the freeboard (distance from pool level to dam crest).

Risk of additional overtopping during severe storm conditions.

Scheduled for decommission and it is expected this issue will be addressed through the decommissioning process.

Ash ponds very full, can't cap in place as is, need to move some ash. Interstate project needs a lot of fill, this would be great result if they use our ash (they are reluctant currently pending CCR ruling)

This condition appears to be a moderate risk.

Other Site Groundwater Concerns

- Future impacts are not completely solved by closing ash ponds
- Scrubber waste water next major issue, could be address as capital investments are made at operating sites to close ash ponds
- Groundwater conditions (level, spring) likely to change closure plans
- Gibson zero discharge pond
  - Water loss will continue after ash ponds closed
  - Impact to plant equipment as water cycles up
- Will face still opposition from environmental groups
- Zimmer has GW issues related to FGD runoff issues

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Expect vigorous SELC pushback when the plan is filed.

Scrutiny will only increase while reasonable efforts to close basins are not underway.

Concern over influence on judge in current consent decree and tie to recent Santee Cooper and SCANA decisions to excavate

Scrubber waste water is creating chloride, bromide, and TDs groundwater issues

[redacted]

Recommendations

- Internal
  - Aggressively pursue closure of ash ponds at all decommissioned sites
  - Ensure characterization work identifies all areas of concerns
  - Present all forms of closure methodologies to regulatory agencies to ensure there is alignment (hybrid, excavate, eco-evaporate)
  - Coordinate closure strategy with other utilities
  - Develop capital investment plan for coal plant upgrades – dry fly ash, dry bottom ash, redundancy, scrubber waste water (growth capital)
  - Close **all** active ash ponds (COR accounts)
- External
  - Launch a large scale stakeholder education program
  - Consider engaging environmental groups regarding closure plans

See Appendix F for capital and closure plan cost summaries

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Close ash ponds at decommissioned plants to establish a closure process with regulators and test acceptance of various closure methods

I would like to see Duke adopt the strategy if closing all ash ponds

Incorporate a capital investment program to allow for closure of active ponds and mitigate impacts of scrubber waste water

We should then launch a large media campaign to educate the public on the closure science and costs to gain support for this plan once vetted with regulatory agencies and other utilities

Is there a benefit to engaging environmental groups directly, they would likely want to be linked to a "close all ash ponds" announcement, but do we think it is possible for them to accept alternate closure methods to excavation?

Duke philosophy is to not create any new unprotected ash storage footprints

[redacted]

Appendix A - State groundwater regulation summary

Groundwater Standards by State

Show Federal standards – then individual states, clarify summaries

North Carolina	2L Groundwater Standards																						
	Parameter	Antimony	Arsenic	Barium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Nitrate	Nitrite	Selenium	Silver	Sulfate	Thallium	Zinc	TDS	pH
	Limit	1 µg/L	10 µg/L	700 µg/L	700 µg/L	2 µg/L	250 mg/l	10 µg/L	1 mg/l	300 µg/L	15 µg/L	50 µg/L	1 µg/L	100 µg/L	10 mg/l	1 mg/l	20 µg/L	20 µg/L	250 mg/l	0.2 µg/L	1 mg/l	500 mg/l	SU
South Carolina			Primary			Primary		Primary	Secondary										Secondary		Secondary	Secondary	
	Parameter	Antimony	Arsenic	Barium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Nitrate	Nitrite	Selenium	Silver	Sulfate	Thallium	Zinc	TDS	pH
	Limit		10 µg/L			5 µg/L		100 µg/L	1 mg/l										300 mg/l		5 mg/l	500 mg/l	
Indiana	Do not report results to State under voluntary plan																						
	Parameter	Antimony	Arsenic	Barium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Nitrate	Nitrite	Selenium	Silver	Sulfate	Thallium	Zinc	TDS	pH
	Limit																						
Ohio	2L Groundwater Standards - Voluntary																						
	Parameter	Antimony	Arsenic	Barium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Nitrate	Nitrite	Selenium	Silver	Sulfate	Thallium	Zinc	TDS	pH
	Limit	1 µg/L	10 µg/L	700 µg/L	700 µg/L	2 µg/L	250 mg/l	10 µg/L	1 mg/l	300 µg/L	15 µg/L	50 µg/L	1 µg/L	100 µg/L	10 mg/l	1 mg/l	20 µg/L	20 µg/L	250 mg/l	0.2 µg/L	1 mg/l	500 mg/l	SU
Kentucky	2L Groundwater Standards - Voluntary																						
	Parameter	Antimony	Arsenic	Barium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Nitrate	Nitrite	Selenium	Silver	Sulfate	Thallium	Zinc	TDS	pH
	Limit	1 µg/L	10 µg/L	700 µg/L	700 µg/L	2 µg/L	250 mg/l	10 µg/L	1 mg/l	300 µg/L	15 µg/L	50 µg/L	1 µg/L	100 µg/L	10 mg/l	1 mg/l	20 µg/L	20 µg/L	250 mg/l	0.2 µg/L	1 mg/l	500 mg/l	SU
Florida	Federal 2L Groundwater Standards - Secondary Standards Guidance Only																						
	Parameter	Antimony	Arsenic	Barium	Boron	Cadmium	Chloride	Chromium	Copper	Iron	Lead	Manganese	Mercury	Nickel	Nitrate	Nitrite	Selenium	Silver	Sulfate	Thallium	Zinc	TDS	pH
	Limit	1 µg/L	10 µg/L	700 µg/L	700 µg/L	2 µg/L	250 mg/l	10 µg/L	1 mg/l	300 µg/L	15 µg/L	50 µg/L	1 µg/L	100 µg/L	10 mg/l	1 mg/l	20 µg/L	20 µg/L	250 mg/l	0.2 µg/L	1 mg/l	500 mg/l	SU

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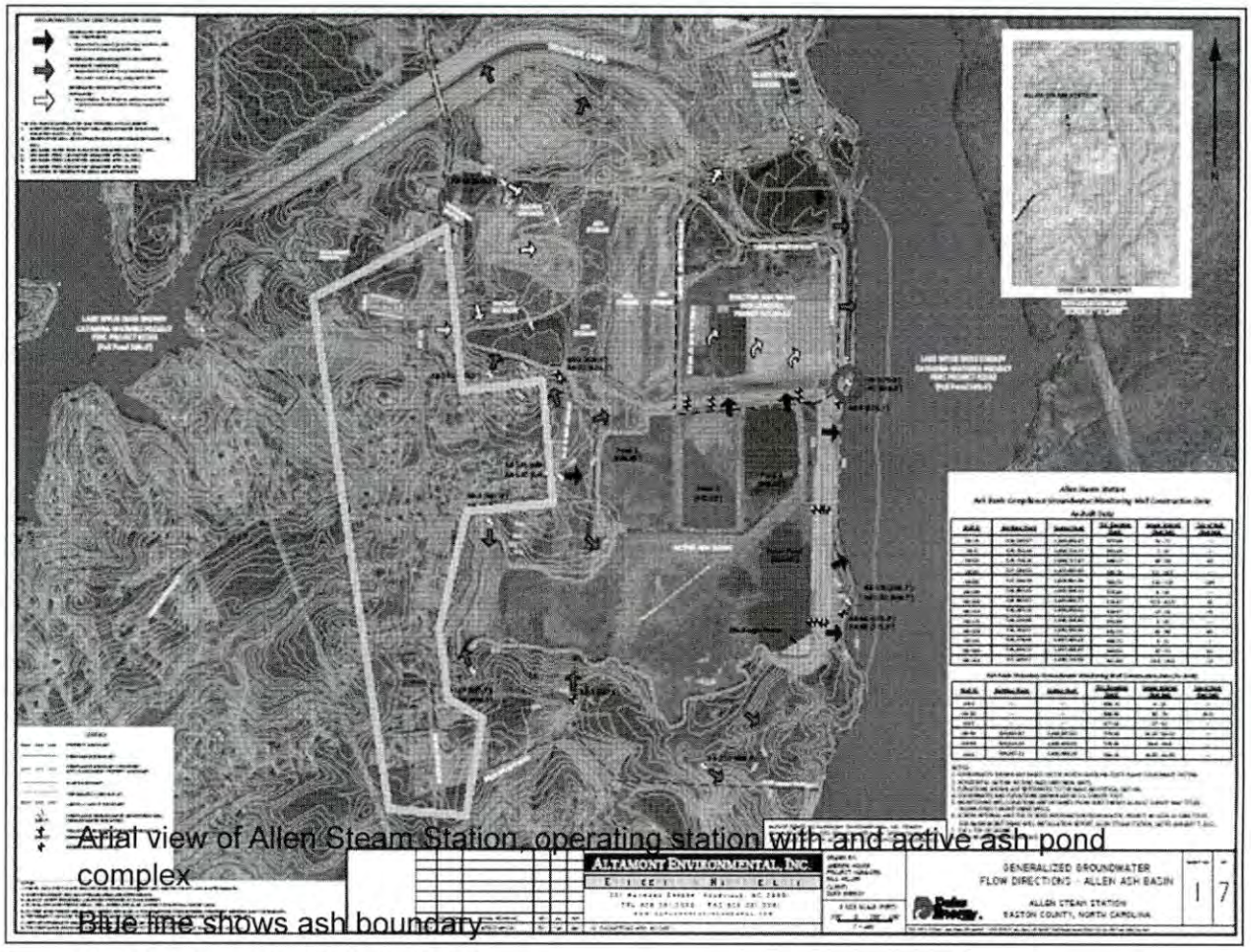
This chart shows the incredible variation state to state in groundwater monitoring standards

- Need to verify OH, KY, and FL standards

Appendix B - Additional GW monitoring examples

Allen Station

Would now like to review three of our plants that show several key aspects of our groundwater and coal ash programs



Arial view of Allen Steam Station, operating station with and active ash pond complex

Blue line shows ash boundary

Red line is property boundary

Green line is compliance boundary (500' or property line whichever is closer)

Background (2) and compliance (11) well network is shown with groundwater flow indications (we will see in a couple slides how GW flow is determined)

Groundwater flow is toward the ash ponds and then toward the Lake Wylie

Boron indication at Monitoring Well 4S (circled in red) downstream of ash pond just before GW enters Lake Wylie – no receptors

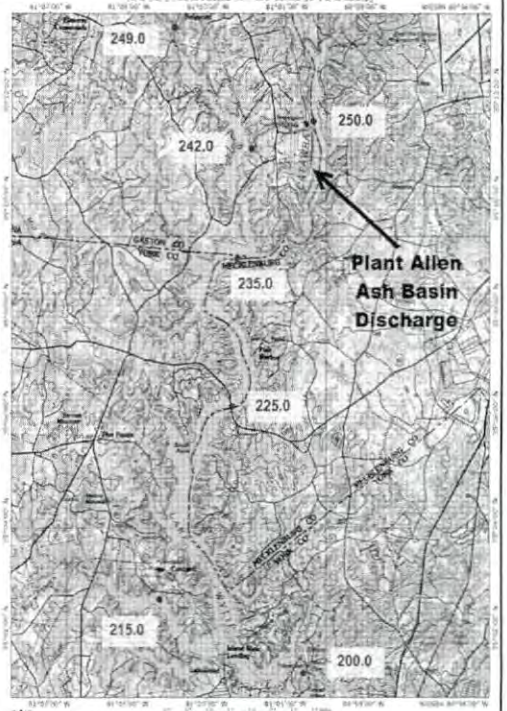
Boron is not linked to health issues, but is an early indicator for other heavy metals such as arsenic, selenium, etc

All receptors (approx 250) in pink box and are all upgradient of ash pond, GW flow makes it very difficult for us to impact these locations

State just sampled 4 wells in this area and the results showed no 2L standard exceedences

Allen Steam Station River Impact Monitoring

Location	As (µg/	< Cd (µg/	< Cr (µg/	< Cu (µg/	< Hg (µg/	< Pb (µg/	< Se (µg/	< Zn (µg/	TDS (mg/L)
250.0 (Upstream)	< 1.00	< 1.00	< 1.00	1.89	< 0.05	< 1.00	< 1.00	< 2.00	62
250.0 (Upstream)	< 1.00	< 1.00	< 1.00	2.57	< 0.05	< 1.00	< 1.00	2.10	56
250.0 (Upstream)	< 1.00	< 1.00	< 1.00	1.28	< 0.05	< 1.00	< 1.00	1.28	53
250.0 (Upstream)	< 1.00	< 1.00	< 1.00	2.23	< 0.05	< 1.00	< 1.00	< 1.00	51
250.0 (Upstream)	< 1.00	< 1.00	< 1.00	1.52	< 0.05	< 1.00	< 1.00	1.62	57
250.0 (Upstream)	< 1.00	< 1.00	< 1.00	1.92	< 0.05	< 1.00	< 1.00	1.28	29
Average- 100% RL	1.00	1.00	1.00	1.90	0.05	1.00	1.00	1.55	51
Average- 50% RL	0.50	0.50	0.50	1.90	0.03	0.50	0.50	1.30	51
235.0 (Downstream)	< 1.00	< 1.00	1.58	6.45	< 0.05	< 1.00	< 1.00	5.18	79
235.0 (Downstream)	< 1.00	< 1.00	< 1.00	6.62	< 0.05	< 1.00	< 1.00	2.53	71
235.0 (Downstream)	< 1.00	< 1.00	< 1.00	2.35	< 0.05	< 1.00	< 1.00	1.57	54
235.0 (Downstream)	< 1.00	< 1.00	< 1.00	6.03	< 0.05	< 1.00	< 1.00	1.82	54
235.0 (Downstream)	< 1.00	< 1.00	1.43	1.94	< 0.05	< 1.00	< 1.00	2.68	72
235.0 (Downstream)	< 1.00	< 1.00	< 1.00	6.37	< 0.05	< 1.00	< 1.00	1.92	44
Average- 100% RL	1.00	1.00	1.17	4.96	0.05	1.00	1.00	2.62	62
Average- 50% RL	0.50	0.50	0.84	4.96	0.03	0.50	0.50	2.62	62



Duke monitors rivers and lakes around plants, but monitor per NPDES requirements or surface water standards

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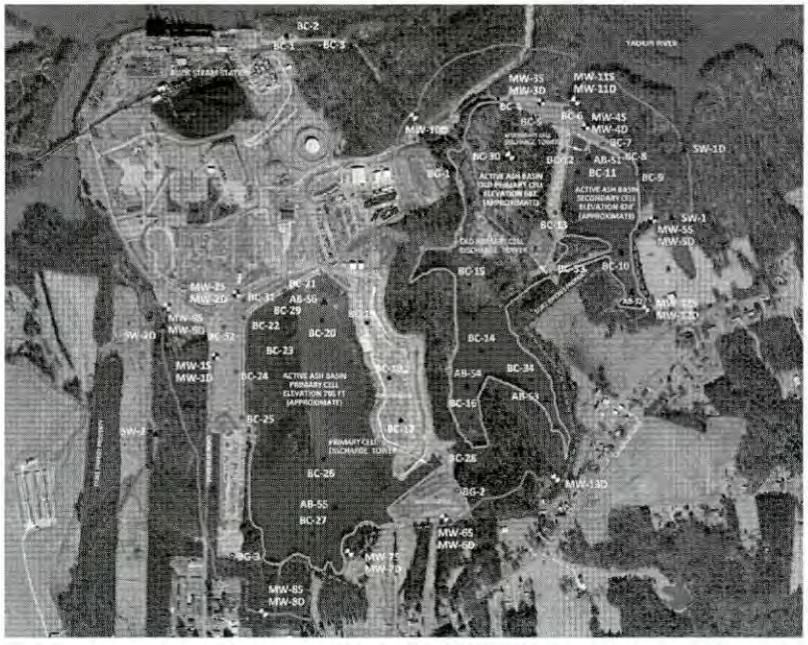
This often means we can't directly compare GW standards to surface water standards – we monitor different parameters

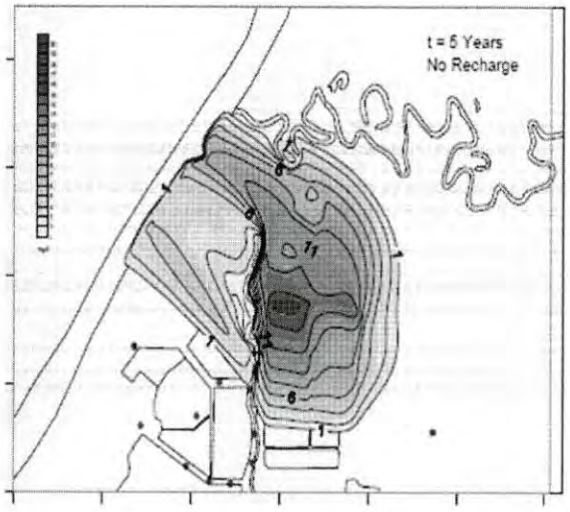
However, we do have comparable results for some stations

- Above the monitoring points around Riverbend are shown on the map on the right (upstream marker 278, Downstream of plant marker 277.5, at CLT drinking water intake marker 277)
- Results are essentially the same at all three locations over the past 3 years and all are below GW and surface water standards
- And impacts are reducing

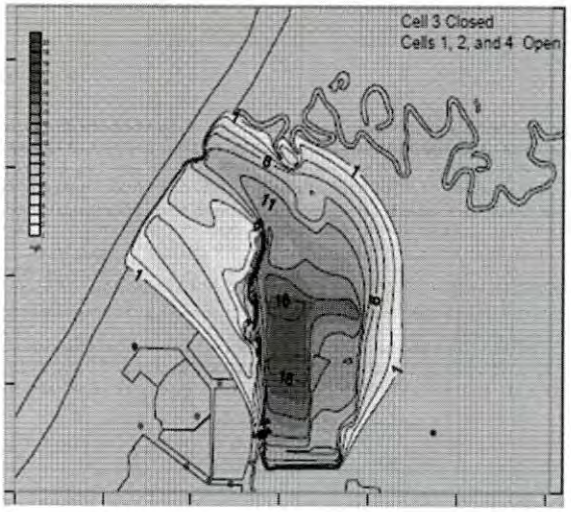
Example Investigation Plan – Buck Station



Gibson Station Boron Plume - 2012



Complete Shutdown



Phased Shutdown

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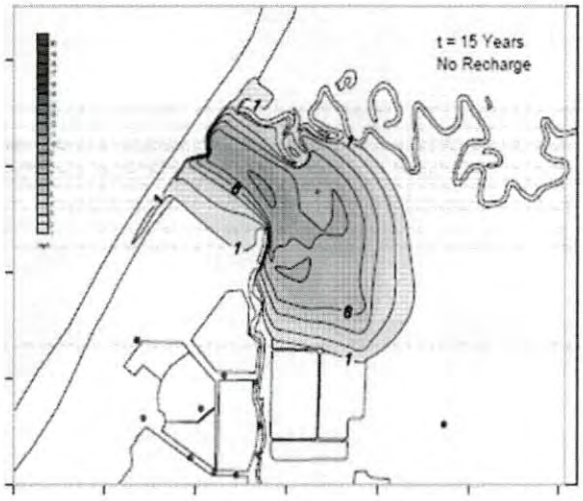
WP 1-3-1

WP 1-3-2

Gibson Station Boron Plume - 2027



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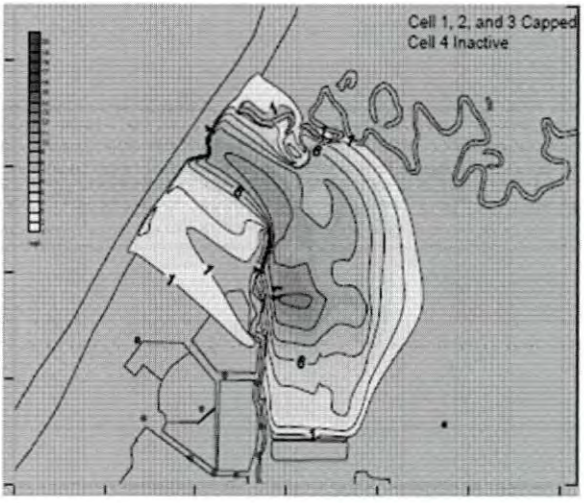

Phased Shutdown

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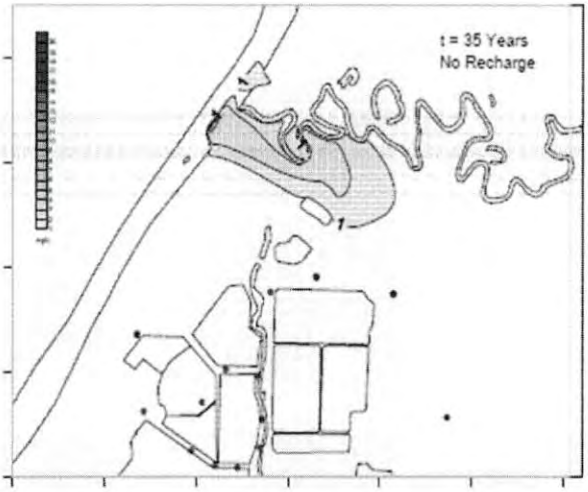
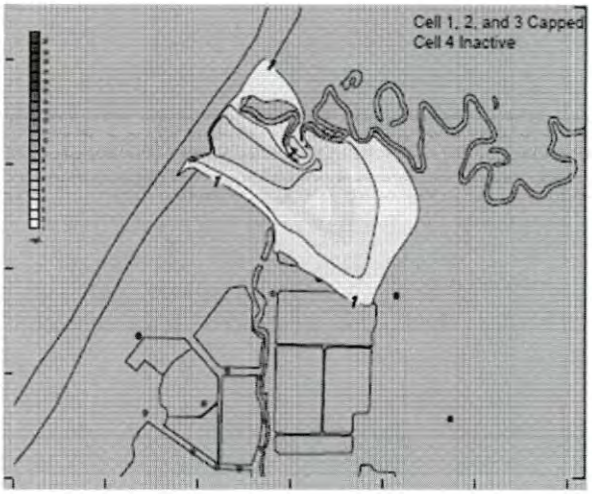
WP 1-3-1

WP 1-3-2

Gibson Station Boron Plume - 2047



Complete Shutdown



Phased Shutdown

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Appendix C – Receptor work summary

Potentially Impacted Receptors: Detailed Summary

Plant	Corrective Actions	Existing Concerns
Cayuga	One residence demolished, two residences moved to municipal water supply, industrial facility does not use for drinking water	None
Edwardsport	Legacy ash ponds cleaned out as part of IGCC conversion, linear installed and now used as water treatment pond for IGCC	None
Edwardsport IGCC	Likely need to fufill IDEM ash pond closure requirements for water treatment pond if IGCC stops using pond as water treatment location	None
Gallagher		None
Gibson	Residential receptors with elevated boron in wells were connected to municipal water supplies	None
Wabash River		None
Beckjord	Interceptor well installed North of A ash pond in the 80's to mitigate the sulfate indication that was found in neighboring public drinking water wells. All test post installation of the interceptor well have been below the sulfate limit	None
East Bend	One well has shown an upward trend for Chloride and sulfate, there are no potential receptors, but work is underway to address the trend	None
Miami Fort	The As indication in one well has been linked to a site condition and not the ash pond	None
Allen Steam Station	Potential receptors exist to the West of the ash ponds, but are upgradient and it is not believed they will see any impacts from the ash ponds. The State recently sampled several wells in this area, results are pending	None
Asheville	Five private wells are side-gradiant to the ash pond, two of these wells were put on bottled drinking water per the States request due Fe and Mn results. A groundwater receptor survey within 1/2 mile of the ash pond compliance boundary and a groundwater site conceptuall model have been completed and results submitted to NCDENR. Long term mitigation efforts are	Yes
Belews Creek		None
Buck Steam Station	Potential receptors exist to the southeast of the ash ponds, but are upgradient and it is not believed they will see any impacts from the ash ponds.	None
Cape Fear		None
Cliffside Steam Station		None
Dan River Steam Station		None
Lee	One well (CMW-6) consistently have high As readings, additional land was purchased to allow Duke to have a full 500' compliance boundary in this area. Another well was installed in this area further from the ash basis. As readings are lower, but still above the GW limits	None
WS Lee Steam Station		None
Marshall Steam Station		None
Mayo		None
Riverbend	There has only been one sample event where Antimony was detected. The reading was 1.04µg/L and the lab detection limit is 1.00 µg/L	None
Robinson	Chromium exceedence has only been observed in a background well	None
Roxboro		None
Sutton	Two Cape Fear Public Utility Auhority drinking water wells will be removed from service with future service coming from the Wilmington, NC drinking water system. Other industrial receptors utilize non-potable wells	Yes
Weatherspoon	Only Thallium exceedence was in a background well	None

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Appendix D - Ash pond closure cost and timeline summary

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Ash Basin Closure Plan Submittal

- Can take years to complete so beginning the process is important
  - Subject to state approval and likely litigation
- State requirements exist now and there is reasonable expectation that the federal rule will be based on Subtitle D
- Hastens natural attenuation to reduce constituents in groundwater
- Demonstrates effectiveness for other locations
- Weatherspoon Plan Ready for Submittal to NCDENR; Discussing Further

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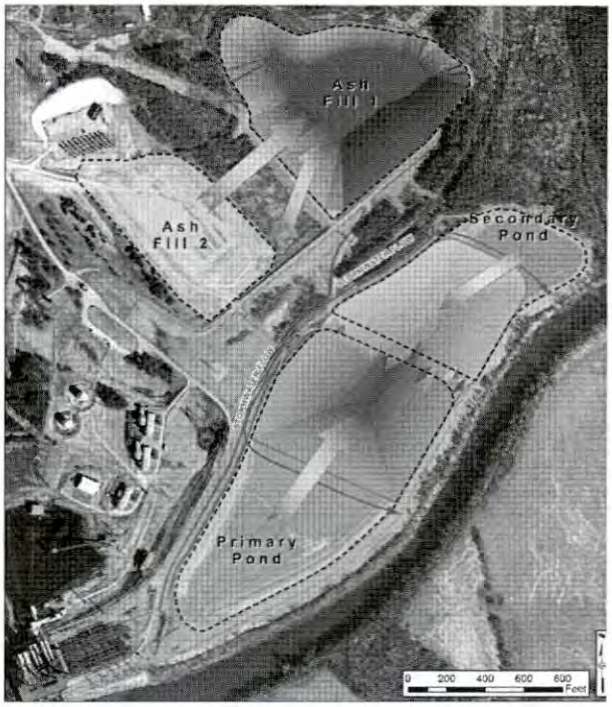
Expect vigorous SELC pushback when the plan is filed.

Scrutiny will only increase while reasonable efforts to close basins are not underway.

Concern over influence on judge in current consent decree and tie to recent Santee Cooper and SCANA decisions to excavate

Ash Basin Closure Conceptual Design



Current Characterization & Design Work		
Station	**Contractor**	**Complete**
Weatherspoon	S&ME	Completed
Dan River	AMEC	1/17/2014
Buck	HDR	2/28/2014
Lee (NC)	Geosyntec	1/1/2014
Cape Fear	Geosyntec	1/1/2014

Scheduled for 2014		
Station	**Start**	**Complete**
Riverbend	Feb.	Aug.
Sutton	Feb.	Aug.
Robinson	April	Oct.
Wabash River	April	Oct.
Beckjord (Budget)	May	Nov.

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Accelerate the timing of closure – very limited ability; Already falling behind original retired plant schedule and dependent on state agency approval

Hybrid Closure might be considered in order to minimize the surface area of an engineered cover system or to minimize the amount of borrow material from other sources.

Duke Energy Inventory of Unclosed Ash Ponds and Fills

	Ash Ponds (acres)	Total Fill (acres)	Total Acres	Ash Ponds (MM tons)	Total Fill (MM tons)	Total MM Tons
DEP	804	515	1,319	28.1	19.2	47.3
DEC	1,428	453	1,881	59.9	13.3	73.2
DEF	28	154	182	0.1	4.7	4.8
DEI	372	468	840	7.8	22.9	30.7
DEO & DEK	350	396	746	7.4	36.9	44.3
		Total Acres:	**4,969**		**Total Tons:**	**200,411,361**

- Total coal ash sites/structures- 24 sites/ 61 ponds; 58 structural/landfills
- Ash currently added to ponds- less than 1 million tons/year and decreasing
- Ponds serve multiple purposes (e.g., stormwater retention)

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Total Fill= Landfill is disposal while structural fill has a beneficial use (e.g., plant staging area, parking lot, warehouse, etc.)

New ash added to ponds is about 50/50 fly and bottom ash; most dry fly ash is being reused or disposed in lined landfills.

For example, MSS burns more than a unit train per day – a unit train is 120 cars, 10% ash

= 18,792 tons of coal/day and 1880 tons of ash/day

MSS 1-4 summer rating is 2087 MW (less than Belews Creek 1&2, Roxboro 1-4 and Crystal River 1, 2, 4, 5)

2014 estimate is about 4.5 MM tons produced with about 1 MM to ponds, 2.4 MM to landfills and 1.2 MM sold (rest is intra-station activity e.g., EBS and WHZ)

Ponds serve other functions – stormwater control, boiler chemical cleaning waste; other waste streams are treated and diluted in the ponds; ponds continue to operate after station is retired.

Ash Ponds and Fills Closure Costs

	Non-Hazardous Cap In Place	Non-Hazardous Excavation	Hazardous Excavation	Comments
Tons Excavated	27.4M	146.5M	189.5M	Additional 40M tons already lined and/or capped would require excavation under hazardous classification (e.g., 20M tons in Gibson East Ash Pond)
Rate to Excavate, Load, Haul & Place	$5.66 to $7.05/ton	$8.44/ton	$60 to $104/ton	Hazardous handling estimates derived from EPRI study. Increased cost for certified drivers/operators, double-lined trucks, hazmat suits, cleaning, spill management, etc. Hazardous reclassification requires all off-site landfills for certain stations.
Acres of Additional Landfill	0	1,174	1,516	
Acres Capped (ponds & landfills)	3,327	1,591	1,945	
10-year Capital	$1.5B	$3.3B	$11.5B	
Capital to Completion	$1.5B	$7.1B	$23.0B	Excavation options extend beyond 10 years. Excavating 750,000 tons/year/station assumed.

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Cap-in-place cost would not be lost if had to excavate & remove some (all) later since characterization studies, ash consolidation and other measures have value even for excavate and remove.

Typically look 10 years ahead for presentations. In previous presentation only the 10-year figure was provided. Total costs are over a 36-year period.

Assumptions & Risks:

Ash tonnages calculated using limited information. Due to age of the facilities, ash basin documentation is incomplete or does not exist, resulting in engineering estimates that are based upon some assumptions. Conceptual engineering studies will refine the ash tonnages.

Landfills were sited for each station and in many cases were offsite; selected by looking for open greenfields as close to the station as possible. No environmental, cultural, or public impacts were investigated; property values are unknown. If assumed locations are not available, costs will increase as the landfill location has to move outward, lengthening the haul distance.

Availability of qualified engineering firms to design, permit, and provide support during construction across the entire fleet during the same timeframe would be difficult and will increase costs. This is not factored into the estimates.

Availability and/or lack of qualified earthwork contractors and equipment to perform

construction activities across the entire fleet during the same timeframe would be difficult and will increase costs. This is not factored into the estimates.

Closure costs recovery for going beyond what is legally acceptable may be difficult.

Duke Energy Ash Pond Closure Cost Estimates

Region	Non-Hazardous Hybrid Cap (-10%,+20%)	Non-Hazardous Excavating (-10%,+40%)	Hazardous Excavating (-10%,+50%)
Duke Energy Carolinas	$ 610,545,479	$ 4,211,468,450	$ 6,869,441,014
Duke Energy Progress	$ 433,356,243	$ 1,721,410,726	$ 4,321,673,898
Duke Energy Florida	$ 33,186,482	$ 194,503,065	$ 343,961,931
Duke Energy Indiana	$ 283,024,953	$ 550,820,447	$ 10,270,442,047
Duke Energy Ohio	$ 51,273,242	$ 347,085,229	$ 761,260,518
Duke Energy Kentucky	$ 20,692,161	$ 47,588,086	$ 147,840,162

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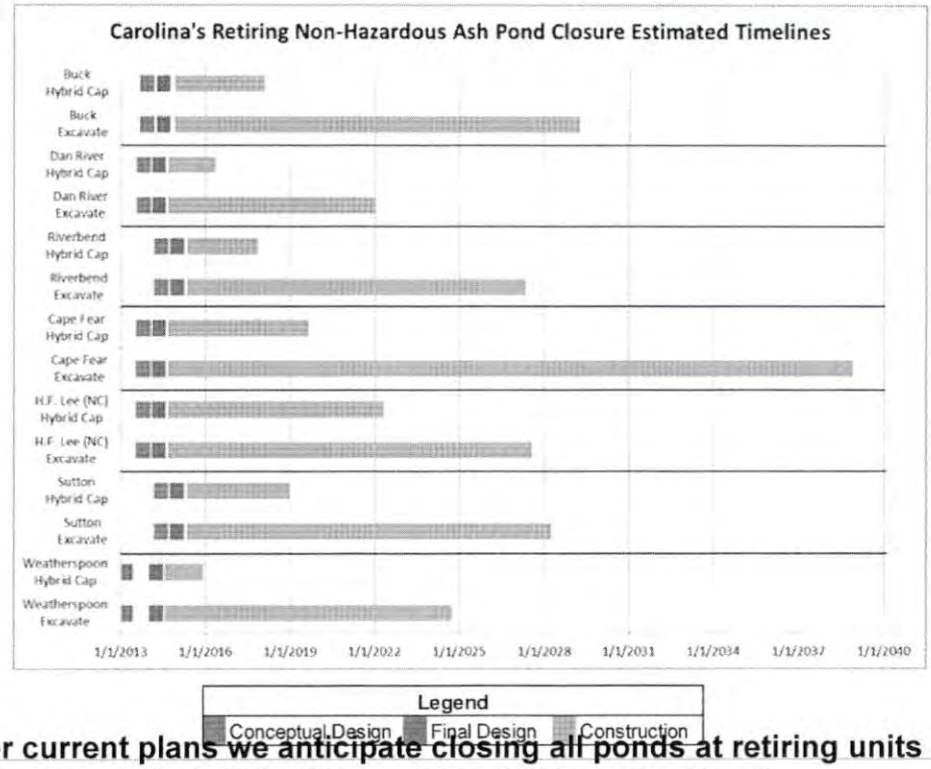


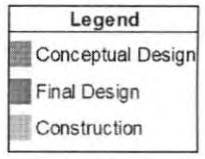
Under current plans we anticipate closing all ponds at retiring units using cap-in-place or hybrid by 2022 to 2023 (HF Lee; Beckjord)

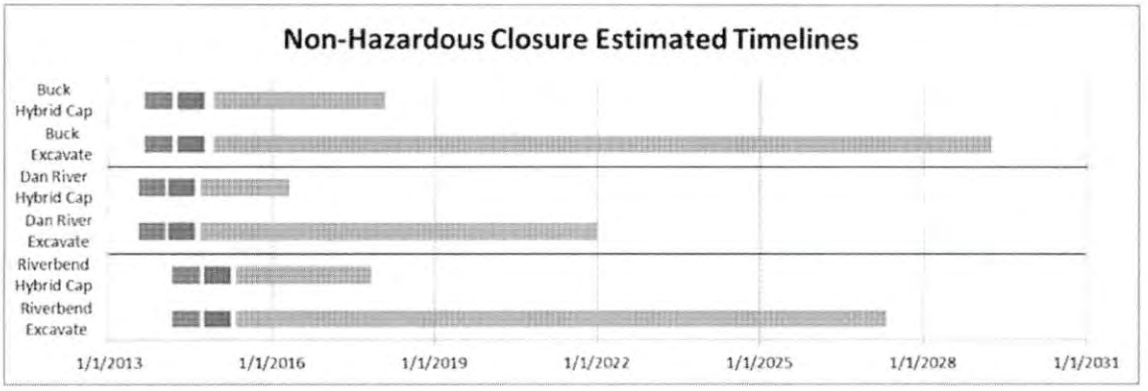
Litigation regarding the landfill permitting and construction could delay this schedule even longer.

Explain why Riverbend and Sutton not first in order and get date we plan to start study- 1st quarter next year – expectation is March. We will need to get out a RFQ in January so that the contractor could begin work around that time.

Landfill construction 5 to 7 years (additional 1 to 3 years if litigated)

Duke Energy Carolinas Retired Ash Ponds			
Station	Non-Hazardous Hybrid Cap (-10%,+20%)	Non-Hazardous Excavating (-10%,+40%)	Hazardous Excavating (-10%,+50%)
Buck	$ 41,160,030	$ 222,153,709	$ 520,247,681
Dan River	$ 21,680,223	$ 49,245,450	$ 74,136,450
Riverbend	$ 34,764,370	$ 180,110,921	$ 537,037,838





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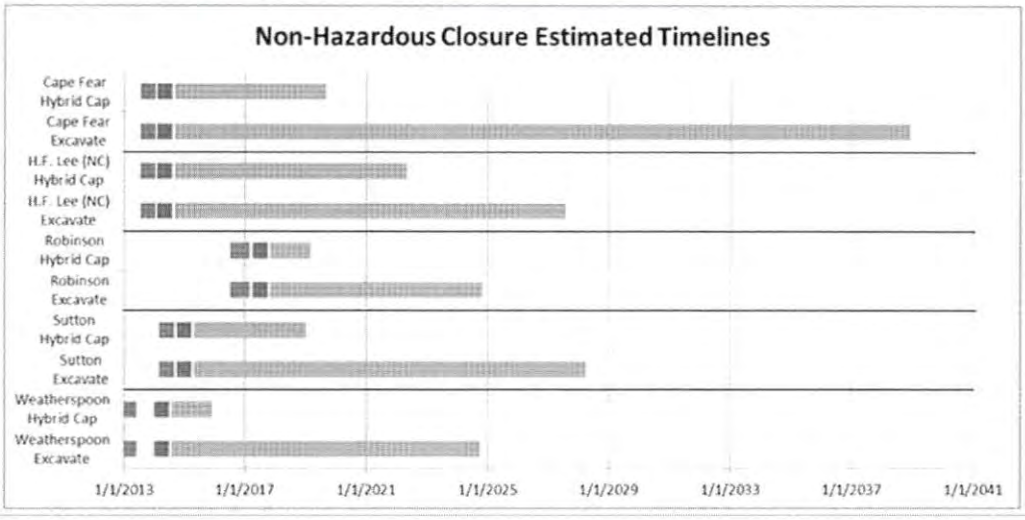
Duke Energy Progress Retired Ash Ponds

Station	Non-Hazardous Hybrid Cap (-10%,+20%)	Non-Hazardous Excavating (-10%,+40%)	Hazardous Excavating (-10%,+50%)
Cape Fear	$ 79,301,092	$ 557,413,424	$ 1,242,461,739
H.F. Lee (NC)	$ 64,791,241	$ 201,479,526	$ 475,915,193
Robinson	$ 30,062,445	$ 32,477,571	$ 55,332,632
Sutton	$ 59,452,176	$ 185,641,409	$ 476,781,193
Weatherspoon	$ 31,166,512	$ 111,809,658	$ 263,368,159



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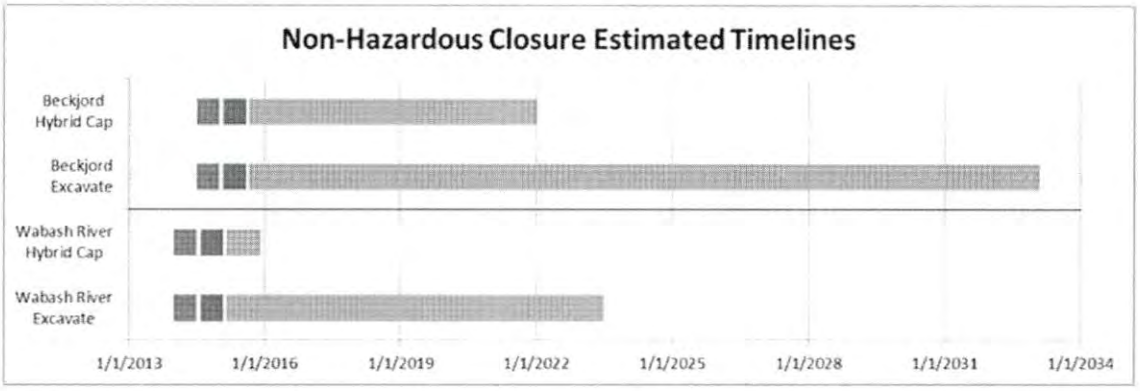
Duke Energy Ohio & Indiana Retired Ash Ponds			
Station	Non-Hazardous Hybrid Cap (-10%,+20%)	Non-Hazardous Excavating (-10%,+40%)	Hazardous Excavating (-10%,+50%)
Beckjord	$ 41,873,319	$ 317,288,305	$ 596,845,396
Wabash River	$ 48,004,780	$ 61,805,344	$ 440,338,625

Legend
- Conceptual Design
- Final Design
- Construction



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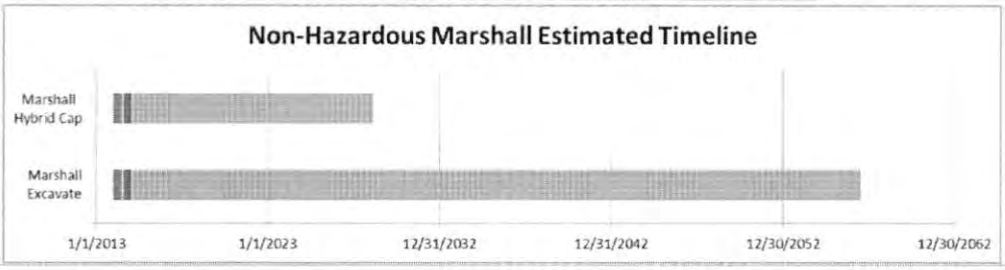
Duke Energy Operating Ash Ponds

Station	Non-Hazardous Hybrid Cap (-10%,+20%)	Non-Hazardous Excavating (-10%,+40%)	Hazardous Excavating (-10%,+50%)
Allen	$ 95,446,399	$ 497,485,022	$ 899,414,442
Asheville	$ 18,562,209	$ 60,987,762	$ 440,928,344
Belews Creek	$ 125,423,443	$ 564,761,515	$ 1,323,903,631
Cayuga	$ 52,444,779	$ 133,673,275	$ 648,318,307
Cliffside	$ 58,702,947	$ 228,776,058	$ 577,152,430
Crystal River	$ 33,186,482	$ 194,503,065	$ 343,961,931
East Bend	$ 17,252,091	$ 36,683,367	$ 116,673,722
Gallagher	$ 49,342,935	$ 165,216,969	$ 895,416,662
Gibson	$ 133,232,459	$ 190,124,858	$ 8,286,368,453
Lee (S.C.)	$ 29,801,516	$ 80,329,551	$ 205,768,454
Marshall	$ 203,566,551	$ 2,388,606,224	$ 2,731,780,088
Mayo	$ 63,406,161	$ 204,931,251	$ 579,539,991
Miami Fort	$ 12,839,993	$ 40,701,643	$ 195,581,562
Roxboro	$ 86,614,407	$ 366,670,125	$ 787,346,647

Legend
- Conceptual Design
- Final Design
- Construction



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Appendix E - Coal ash dam summary and inspection results

List of CCR Impoundments in the Dam Safety Program

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Station	Dam Name	Current Status	Hazard Classification	Last Regulatory Inspection	Hydraulic Height (ft)	Slope (#/1)	Impoundment Capacity (acre-ft)
Allen	Retired Ash Basin Dam	DRAINED	High	Dec-12	70	2	5,915
	Active Ash Basin Dam	ACTIVE	High	Dec-12	50	2	1,870
Belew's Creek	Ash Pond	ACTIVE	High	Apr-13	115	2.5	190,000
Buck	Main Dam	ACTIVE	High	Jan-13	80	3	12,564
	New (Additional Primary) Dam	ACTIVE	High	Jan-13	70	2.5	2,844
	Basin 1 to Basin 2 Dam	ACTIVE	High	Jan-13	80	2.5	N/A
	Basin 2 to Basin 3 Dam	ACTIVE	High	Jan-13	80	2.5	801
	Intermediate Dam	ACTIVE	High	Jan-13	14	2.5	N/A
Cliffside	Inactive Ash Basin #5 Main Dam	ACTIVE	High	Feb-13	97	2.5	685
	Inactive Ash Basin 1-4 Main Dam	ACTIVE	High	Feb-13	38	2.5	266
	Active Ash Basin Dam	ACTIVE	High	Feb-13	120	2.5	5,025
Dan River	Active Primary Ash Basin	ACTIVE	High	Jan-13	37	2	477
	Active Secondary Ash Basin	ACTIVE	High	Jan-13	27	2	187
Lee	Primary Ash Basin	ACTIVE	High	Jun-10	75	2	779
	Secondary Ash Basin	ACTIVE	High	Jun-10	75	2	391
Marshall	Active Ash Basin Dam	ACTIVE	High	Jan-13	90	2	6,885
Riverbend	Active Ash Basin Dam 1 (Primary)	ACTIVE	High	Dec-12	80	2.5	1,640
	Ash Basin Dam 2 (Secondary)	ACTIVE	High	Dec-12	70	2.5	987
	Ash Basin Intermediate Dam	ACTIVE	High	Dec-12	8	3	N/A

- Hazard Classification – Classification given by the state based on the possible effects of a dam failure
- Slope – (#) Horizontal : (1) Vertical

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List of CCR Impoundments in the Dam Safety Program

	Station	Dam Name	Current Status	Hazard Classification	Last Regulatory Inspection	Hydraulic Height (ft)	Slope (#/1)	Impoundment Capacity (acre-ft)
DUKE ENERGY PROGRESS & DUKE ENERGY FLORIDA	Asheville	1982 Ash Pond Dam	ACTIVE	High	Apr-13	95	2	1,400
		1964 Ash Pond Dam	ACTIVE	High	Apr-13	90	2.5	N/A
	Cape Fear	1956 Ash Pond Dam (Inactive)	DRAINED	High	Mar-10	20	1.1 - 1.5	N/A
		1963 Ash Pond Dam (Inactive)	DRAINED	High	Mar-10	22	1.5	N/A
		1970 Ash Pond Dam (Inactive)	DRAINED	High	Mar-10	27	2	N/A
		1978 Ash Pond Dam	ACTIVE	High	Mar-10	27	2	N/A
		1985 Ash Pond Dam	ACTIVE	High	Mar-10	28	2.0 - 4.0	1,764
	HF Lee	Active Ash Pond	ACTIVE	High	Jan-12	20	3.3	1,980
		Ash Pond 1 (Inactive)	EXEMPT	Low	Feb-10	7	2	231
		Ash Pond 2 (Inactive)	EXEMPT	Low	Feb-10	15	3	795
		Ash Pond 3 (Inactive)	EXEMPT	Low	Feb-10	10	2	850
	Mayo	Ash Pond Dam	ACTIVE	High	Mar-13	90	2.5	4,100
		FGD Settling Pond	ACTIVE	Low	Mar-13	20	3	103
		FGD Flush Pond	ACTIVE	Low	Mar-13	20	3	7
	Robinson	Ash Pond	ACTIVE	Low	Feb-11	20	2.5	410
	Roxboro	West Ash Pond Dam	ACTIVE	High	Mar-13	70	2	4,800
		West Ash Pond South Rock Filter	ACTIVE	Intermediate	Mar-13	51	1.3	4,800
		West FGD Settling Pond	DRAINED	High	Mar-13	36	2.75	442
		East FGD Settling Pond	ACTIVE	High	Mar-13	36	2.75	132
		FGD Forward Flush Pond	ACTIVE	High	Mar-13	36	2.75	51
		East Ash Pond	ACTIVE	Low	Mar-13	38	3	N/A
	Sutton	1972 Cooling Pond	ACTIVE	Low	Feb-12	12	2	6,900
		1971 Ash Pond	ACTIVE	Low	Feb-12	24	3	248
		1984 Ash Pond	ACTIVE	Low	Feb-13	32	2.5	1,364
	Weatherspoon	1979 Ash Pond	ACTIVE	Intermediate	Nov-12	28	1.5	425
	Crystal River	FGD Settling Pond 6	ACTIVE	No Ranking for Florida	Internal Jan-13	22	3	66
		FGD Settling Pond 7	ACTIVE		Internal Jan-13	16	3	16

Exempt - This dam is not under the jurisdictional authority of the regulatory agency due to size and/or hazard classification.

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List of CCR Impoundments in the Dam Safety Program

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Station	Dam Name	Current Status	Hazard Classification	Last Regulatory Inspection	Dam Height (ft)	Slope (#/1)	Impoundment Capacity (acre-ft)
Zimmer	Active Wastewater Pond	ACTIVE	Low	Exempt - No Dam	N/A	N/A	N/A
	Active Clearwater Pond	ACTIVE	Low	Exempt - No Dam			N/A
	Active Settling Basin D	ACTIVE	Low	Exempt - No Dam			N/A
Beckjord	Inactive Ash Pond A	RETIRED	Significant	Mar-12	20	2	N/A
	Active Ash Pond B	ACTIVE	Significant	Mar-12	20	3	280
	Active Ash Pond C	ACTIVE	Significant	Mar-12	50	1.5	1,400
	Active Ash Pond C Extension	ACTIVE	Significant	Mar-12	40	3	1,300
Edwardsport	Primary	CONVERTED to wastewater ponds	Significant	Mar-12	15	2	N/A
	Secondary		Significant	Mar-12	15	2	N/A
Gallagher	Ash Pond A	ACTIVE	Significant	Mar-12	29	2	936
	Secondary Pond	ACTIVE	Low	Mar-12	19	2	63
East Bend	Active Wastewater Pond	ACTIVE	Significant	Mar-12	60	2	1,844
Gibson	Inactive East Ash Pond 1	Closure underway	Low	Mar-12	20	3	1,733
	Inactive East Ash Pond 2	Closure underway	Low	Mar-12	20	3	1,733
	Inactive East Ash Pond 3	Closure underway	Low	Mar-12	20	3	3,325
	Active East Ash Pond Settling Basin	ACTIVE	Low	Mar-12	20	3	743
	Active North Ash Pond	ACTIVE	Low	Mar-12	20	3	350
	Active North Ash Pond Settling Basin	ACTIVE	Low	Mar-12	20	2	150
Wabash River	Active Primary Pond A	ACTIVE	Significant	Mar-12	19	2	1,350
	Active Primary Pond B	ACTIVE	Significant	Mar-12	19	2	538
	Active Secondary Pond A	ACTIVE	Significant	Mar-12	20	2	73
	Active Secondary Pond B	ACTIVE	Significant	Mar-12	20	2	N/A
	Active South Pond	ACTIVE	Significant	Mar-12	22	2	1,450
Miami Fort	Active Ash Pond A	ACTIVE	Significant	Mar-12	40	2	803
	Active Ash Pond B	ACTIVE	Significant	Mar-12	40	3	515
Cayuga	Active Lined Disposal Cell 1	ACTIVE	Significant	Mar-12	32	3	1,400
	Active Ash Disposal Area 1	ACTIVE	Significant	Mar-12	42	2	260
	Active Primary Settling Pond	ACTIVE	Significant	Mar-12	55	2	225
	Active Secondary Settling Pond	ACTIVE	Low	Mar-12	24	2	36
	Retired Ash Pond	RETIRED	Significant	Mar-12	40	2	N/A

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Appendix F – Capital investment and pond closure cost summary

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Cost Recovery Issues

$s in millions

	Total Cost of Removal Reserve (as of 6/30/13)	Steam Cost of Removal Reserve (as of 6/30/13)	Non-Hazardous Cap In Place	Non-Hazardous Excavation & Disposal	Hazardous Excavation & Disposal
DEC	$1,600	$224	$610	$1,300	$4,200
DEP	1,100	138	430	1,000	2,800
DEI	731	367	280	500	3,000
DEO	231	-	100	250	820
DEK	61	12	20	35	140
DEF	488	71	30	190	340
Total 10 year	$4,211	$812	~$1,500	~3,300	~11,500

- Total cost to completion for nonhazardous excavation is $7.1B and for hazardous excavation is $23.0B
- The company could potentially reallocate portions of the "total" COR to cover the cap-in-place ash pond costs
  - Regulatory approval likely to be required to do this

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This table shows the various 10 year scenarios and the COR reserve balances. The second column shows the portion reserved for the steam assets. Just because the "steam" reserve is lower than the planned costs does not mean we could not use some of the other "total" COR reserve to cover the ash pond costs.

There are different points of view as to what type of approval would be required to access the COR funds not specifically allocated to steam currently. One point of view is that no approval is needed and the other is that we would have to notify regulators of the usage. As mentioned earlier, the next depreciation study would likely show that you would need to replenish these reserves at the next rate case; especially anything beyond the steam COR.

Remaining Dry Ash Conversion Capital Project Cost Estimates (Non-Hazardous)

Project	Facility	Sum of 2013	Sum of 2014	Sum of 2015	Sum of 2016	Sum of 2017	Sum of 2018	Sum of 2019	TOTAL COSTS
Dry Flyash Collection	Asheville	$0	$0	$53,045	$79,568	$5,941,040	$9,335,920	$0	$15,409,573
	Cayuga	$11,386,085	$25,890,333	$6,973,736	$0	$0	$0	$0	$44,250,154
	Cliffside	$0	$0	$0	$2,377,075	$8,569,354	$13,365,744	$519,499	$24,831,672
	Killen	$0	$0	$0	$1,321,134	$4,762,687	$7,428,431	$288,728	$13,800,980
	Mayo	$335,346	$129,415	$307,010	$4,657,710	$0	$0	$0	$5,429,481
	Roxboro	$3,005,204	$16,298,109	$28,073,660	$1,465,458	$2,500,000	$0	$0	$51,342,431
	Stuart	$0	$0	$559,875	$3,171,692	$7,602,835	$8,259,174	$4,537,039	$24,130,615
	TOTAL	**$14,726,635**	**$42,317,857**	**$35,967,326**	**$13,072,638**	**$29,375,916**	**$38,389,269**	**$5,345,265**	**$179,194,906**
Dry Bottom Ash Collection	Allen	$0	$0	$0	$2,837,134	$11,688,995	$24,079,327	$21,701,495	$60,306,951
	Asheville	$0	$0	$625,912	$3,808,931	$9,747,014	$11,704,635	$268,849	$26,155,341
	Belews Creek	$0	$0	$0	$6,678,768	$25,223,481	$43,930,133	$18,001,907	$93,834,289
	Cayuga	$0	$0	$0	$3,277,056	$12,380,089	$21,575,892	$8,886,888	$46,119,925
	Cliffside	$0	$0	$0	$4,486,122	$16,172,471	$25,224,434	$980,421	$46,863,448
	Conesville	$0	$0	$0	$573,130	$2,361,294	$4,864,266	$4,383,920	$12,182,610
	East Bend	$0	$0	$0	$1,651,782	$6,846,540	$14,103,873	$12,711,116	$35,323,311
	Gallagher	$0	$0	$0	$1,036,588	$4,270,744	$8,797,730	$7,928,956	$22,034,018
	Gibson	$0	$0	$609,699	$10,128,637	$33,945,801	$54,793,619	$20,609,502	$120,087,258
	Killen	$0	$0	$0	$1,576,187	$5,682,155	$8,862,538	$344,469	$16,465,348
	Marshall	$0	$0	$0	$5,507,386	$21,171,342	$38,293,106	$20,208,672	$85,180,506
	Mayo	$6,706,400	$0	$0	$0	$0	$0	$0	$6,706,400
	Miami Fort	$0	$0	$1,230,463	$5,703,196	$11,487,503	$7,395,080	$276,979	$26,093,221
	Roxboro	$0	$0	$2,490,772	$12,717,206	$28,697,546	$28,331,717	$18,377,794	$90,615,034
	Stuart	$0	$0	$916,672	$5,192,949	$12,447,971	$13,522,581	$7,428,404	$39,508,578
	TOTAL	**$6,706,400**	**$0**	**$5,873,518**	**$65,185,071**	**$202,122,947**	**$305,478,932**	**$142,109,372**	**$727,476,239**
Dry Flyash Collection and Fixation	Gibson	$2,511,230	$103,885	$0	$0	$0	$0	$0	$2,615,115
	TOTAL	**$2,511,230**	**$103,885**	**$0**	**$0**	**$0**	**$0**	**$0**	**$2,615,115**
	GRAND TOTAL	**$23,944,265**	**$42,421,742**	**$41,840,843**	**$78,257,708**	**$231,498,863**	**$343,868,201**	**$147,454,637**	**$909,286,260**

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Duke Energy Steam Facility Data (As of 9/30/13)

Structure	Operating state	Jurisdiction	Steam unit facility	Owned capacity – summer rating (MW)	Fuel type	Current cooling method	Air Emissions controls	Ash handling (flyash; bottom ash)	Ash ponds on site (3)
Regulated	In Operation	DE Carolinas	Allen	1,127	Coal	Once-Through	Scrubber	Dry; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Carolinas	Belews Creek	2,220	Coal	Once-Through	Scrubber and SCR	Dry; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Carolinas	Cliffside 5	556	Coal	Closed Cycle	Scrubber and SCR	Wet Sluice; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Carolinas	Cliffside 6	825	Coal	Closed Cycle	Scrubber and SCR	Dry; Dry	
Regulated	In Operation (1)	DE Carolinas	Lee	370	Coal	Once-Through		Wet Sluice; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Carolinas	Marshall	2,078	Coal	Once-Through	658MW with Scrubber and SCR; 1420MW with Scrubber	Dry; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Carolinas	Buck CC	620	Gas	Closed Cycle	SCR		Inactive
Regulated	In Operation	DE Carolinas	Dan River CC	620	Gas	Closed Cycle	SCR		Inactive
Regulated	In Operation	DE Carolinas	Catawba	435	Nuclear	Closed Cycle			
Regulated	In Operation	DE Carolinas	McGuire	2,200	Nuclear	Once-Through			
Regulated	In Operation	DE Carolinas	Oconee	2,538	Nuclear	Once-Through			
Regulated	In Operation	DE Progress	Asheville	376	Coal	Once-Through	Scrubber and SCR	Wet Sluice; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Progress	Mayo	609	Coal	Cooling Lake	Scrubber and SCR	Dry; Dry	Inactive
Regulated	In Operation	DE Progress	Roxboro 1-4	2,327	Coal	Once-Through (1-3); Closed Cycle (4)	Scrubber and SCR	Dry; Wet Sluice	Active and Inactive
Regulated	In Operation (1)	DE Progress	Sutton 1-3	575	Coal	Cooling Lake		Wet Sluice; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Progress	Smith 4-5	1,122	Gas	Closed Cycle	SCR		
Regulated	In Operation	DE Progress	Wayne County CC	920	Gas	Closed Cycle	SCR		Inactive
Regulated	In Operation	DE Progress	Brunswick	1,517	Nuclear	Once-Through			
Regulated	In Operation	DE Progress	Harris	742	Nuclear	Cooling Lake			
Regulated	In Operation	DE Progress	Robinson	724	Nuclear	Once-Through			Inactive
Regulated	In Operation	DE Florida	Anclote	1,011	Gas	Once-Through			
Regulated	In Operation	DE Florida	Bartow CC	1,133	Gas	Once-Through	SCR		
Regulated	In Operation (2)	DE Florida	Crystal River 1-2	873	Coal	Once-Through		Dry; Dry	Active
Regulated	In Operation	DE Florida	Crystal River 4-5	1,422	Coal	Closed Cycle	Scrubber and SCR	Dry; Dry	
Regulated	In Operation	DE Florida	Hines CC	1,912	Gas	Cooling Lake	SCR		
Regulated	In Operation	DE Florida	Suwannee River	129	Gas/Oil	Once-Through			
Regulated	In Operation	DE Florida	Tiger Bay	205	Gas	Closed Cycle			

(1) Potential retirements include DEC Lee Units 1-2, Sutton Units 1-3, Wabash River Units 2-5, Miami Fort Unit 6, and Beckjord Units 4-6. Reflects already completed retirements of Edwardsport 6-8 (160 MW), Buck 3-6 (389 MW), Cliffside 1-4 (198 MW), Dan River 1-3 (276MW), Riverbend 4-7 (454MW), Gallagher 1,3 (280MW) per Consent Decree. Beckjord 1 (94MW), Weatherspoon 1-3 (177 MW), DEP Lee 1-3 (381 MW), Bartow 1-3 (440 MW), Robinson 1 (177 MW), Cape Fear 5-6 (316 MW), Crystal River 3 (783 MW) and Beckjord 2-3 (222MW) which retired 10/1/2013. Wabash River Unit 6 (320 MW) potential to be converted to gas or retired. DEC Lee Unit 3 (170MW) to be converted to gas

(2) Crystal River 1-2 (875 MW) potential to be retired. MATS compliance options are being reviewed

(3) "Inactive" means that the storage facility is not currently receiving ash

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Duke Energy Steam Facility Data, cont. (As of 9/30/13)

Structure	Operating state	Jurisdiction	Steam unit facility	Owned capacity – summer rating (MW)	Fuel type	Current cooling method	Air Emissions controls	Ash handling (fly ash; bottom ash)	Ash ponds on site (3,4)
Regulated	In Operation	DE Indiana	Cayuga	1,005	Coal	Once-Through	Scrubber; SCR Under Construction	Wet Sluice (Dry Under Construction); Wet Sluice	Active and Inactive
Regulated	In Operation	DE Indiana	Gibson	2,822	Coal	Cooling Lake, No NPDES Permit	Scrubber and SCR	Dry; Wet Sluice	Active and Inactive
Regulated	In Operation (1)	DE Indiana	Wabash River	668	Coal	Once-Through		318MW Dry; Wet 350MW Wet; Wet	Active and Inactive
Regulated	In Operation	DE Indiana	Gallagher 2&4	280	Coal	Once-Through	Baghouse	Dry; Wet Sluice	Active and Inactive
Regulated	In Operation	DE Indiana	Edwardsport IGCC	618	Coal	Closed Cycle - No Intake	Selexol and SCR	Dry Slag Handling	
Regulated	In Operation	DE Indiana	Noblesville CC	310	Gas	Closed Cycle			
Regulated	In Operation	DE Kentucky	East Bend	414	Coal	Closed Cycle	Scrubber and SCR	Dry; Wet Sluice	Active
Regulated	In Operation (1)	DE Kentucky	Miami Fort 6	163	Coal	Once-Through		Wet Sluice; Wet Sluice	Active
Non-Regulated	In Operation	DE Ohio	Conesville 4	312	Coal	Closed Cycle	Scrubber and SCR	Dry; Wet Sluice	Active
Non-Regulated	In Operation	DE Ohio	Stuart 1-3	675	Coal	Once-Through	Scrubber and SCR	Wet Sluice; Wet Sluice	Active
Non-Regulated	In Operation	DE Ohio	Stuart 4	225	Coal	Closed Cycle	Scrubber and SCR	Wet Sluice; Wet Sluice	
Non-Regulated	In Operation	DE Ohio	Killen	198	Coal	Closed Cycle	Scrubber and SCR	Wet Sluice; Wet Sluice	Active
Non-Regulated	In Operation (1)	DE Ohio	Beckjord	543	Coal	Once-Through		150 MW Dry; Wet 393MW Wet; Wet	Active and Inactive
Non-Regulated	In Operation	DE Ohio	Miami Fort 7-8	640	Coal	Closed Cycle	Scrubber and SCR	Dry; Wet Sluice	Active
Non-Regulated	In Operation	DE Ohio	Zimmer	605	Coal	Closed Cycle	Scrubber and SCR	Dry; Dry	
Non-Regulated	In Operation	Duke Energy	Fayette CC	633	Gas	Closed Cycle	SCR		
Non-Regulated	In Operation	Duke Energy	Hanging Rock CC	1,262	Gas	Closed Cycle	SCR		
Non-Regulated	In Operation	Duke Energy	Washington CC	639	Gas	Closed Cycle	SCR		
Regulated	Under Construction	DE Progress	Sutton CC	625	Gas	Closed Cycle	SCR		

(1) Potential retirements include DEC Lee Units 1-2, Sutton Units 1-3, Wabash River Units 2-5, Miami Fort Unit 6, and Beckjord Units 4-6. Reflects already completed retirements of Edwardsport 6-8 (150 MW), Buck 3-6 (389 MW), Cliffside 1-4 (198 MW), Dan River 1-3 (276MW), Riverbend 4-7 (454MW), Gallagher 1-3 (280MW) per Consent Decree; Beckjord 1 (94MW); Weatherspoon 1-3 (177 MW); DEP Lee 1-3 (301 MW); Bartow 1-3 (440 MW); Robinson 1 (177 MW); Cape Fear 5-6 (316 MW); Crystal River 3 (789 MW) - and Beckjord 2-3 (222MW) which retired 10/1/2013. Wabash River Unit 6 (320 MW) potential to be converted to gas or retired. DEC Lee Unit 3 (170MW) to be converted to gas.

(2) Crystal River 1-2 (875 MW) potential to be retired, MATS compliance options are being reviewed

(3) "Inactive" means that the storage facility is not currently receiving ash

(4) Other locations with inactive ash ponds include the retired Riverbend, Cape Fear, and Weatherspoon Stations.

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CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing *List of Redirect Exhibits* as filed in Docket No. E-7, Sub 1214A were served via electronic delivery or mailed, first-class, postage prepaid, upon all parties of record.

This, the 17th day of September, 2020.

/s/Mary Lynne Grigg

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Attorney for Duke Energy Carolinas, LLC

Public Staff 56

I/A

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF NORTH CAROLINA

UNITED STATES OF AMERICA	)	
	)	**CASE NOS:**
	)	
V.	)	**5:15-CR-67-H-2**
	)	**5:15-CR-68-H-2**
	)	**5:15-CR-62, 67 & 68**
DUKE ENERGY CAROLINAS, LLC;	)	
DUKE ENERGY PROGRESS, LLC; AND	)	
DUKE ENERGY BUSINESS SERVICES, LLC	)	

SEMI-ANNUAL REPORT ON CLOSURE AND EXCAVATION ASHEVILLE, DAN RIVER, RIVERBEND, AND SUTTON

JULY 31, 2019

Semi-Annual Report on Closure and Excavation
Asheville, Dan River, Riverbend, Sutton
July 31, 2019

In compliance with the plea agreements for Duke Energy Carolinas, LLC ("DEC"), Duke Energy Progress, LLC ("DEP"), and Duke Energy Business Services, LLC ("DEBS"), this report provides the Court Appointed Monitor ("CAM") a detailed description of Duke Energy's efforts to facilitate the excavation of coal ash and the closure of all of the impoundments at the Asheville, Dan River, Riverbend, and Sutton sites. Duke Energy submitted an initial excavation plan to the North Carolina Department of Environmental Quality ("NCDEQ") on November 13, 2014, which detailed the first 12–18 months of projected ash basin excavation activities. Each year, Duke Energy provides an updated plan that highlights the completed milestones and provides the status of necessary permits. The most recent Excavation Plans were submitted to NCDEQ on December 11, 2018. This report serves as a progress report for those critical milestones set forth in the Excavation Plans and provides in-depth information on the processes implemented at each site.

The prior Semi-Annual Excavation Report was submitted to the CAM on January 31, 2019. This Excavation Report provides an update of the sites' activities up to June 30, 2019.

I. Asheville Steam Electric Generating Plant

The Asheville Steam Electric Generating Plant is located in Arden, NC, approximately eight miles south of Asheville, NC. The Plant's Unit 1 was constructed in 1964 with a second coal- burning unit (Unit 2) added in 1971. Current generation capacity of the Plant is 376 megawatts (MW) from the two coal-fired units. In 1999 and 2000, two natural gas and oil combustion turbines with an additional output of 324 MW were added.

The Plant had two ash basins. The first basin was created in 1964 when the Plant began operation and is currently being excavated (1964 Ash Basin). In 1982, a second basin (1982 Ash Basin) was constructed directly adjacent to the 1964 Ash Basin's south retention dam. The 1982 Ash Basin was excavated, verified clean, and turned over for construction of the natural gas combined-cycle plant in September 2016. Decommissioning of the 1982 Ash Basin Dam (BUNCO-89) was completed in January 2018.

Duke Energy's Coal Combustion Residuals Removal Verification Procedure (Removal Verification Procedure) was used to verify that primary source ash was removed from the 1982 Ash Basin. Subsequent to removal of the ash pursuant to the Removal Verification Procedure, Duke Energy implemented its Excavation Soil Sampling Plan ("ESSP"), which was developed for meeting the applicable performance standard. Although not required under the Coal Ash Management Act of 2014 ("CAMA"), in November 2016, NCDEQ sent Coal Combustion Residuals Surface Impoundment Closure Guidelines for Protection of Groundwater to Duke Energy instructing the Company to submit the ESSP to NCDEQ as part of the site's excavation plan.

The 1964 Ash Basin Dam (BUNCO-097) was constructed in 1964 to serve as a wastewater treatment facility for the treatment of ash sluice water. The surface area of the basin is approximately 45 acres. The basin does not retain a permanent pool with the exception of a three-acre unlined retention pond known as the "Duck Pond" and the lined Center Pond that is part of the rim ditch system described below.

Production ash is sluiced to a concrete rim ditch system that is located within the footprint of the 1964 Ash Basin. The rim ditch system also receives plant stormwater drainage and low volume wastewater from the Duck Pond. Coal Combustion Residuals ("CCR") are dredged from the rim ditch, dewatered, and transported off-site. Asheville ash is a non-hazardous material.

The wastewater is treated in the rim ditch system and then pumped through the Center Pond filters (constructed at the end of the rim ditch) to a settling pond outside of the 1964 Ash Basin. The settling pond serves as the monitoring point for Outfall 001 of the Plant's National Pollutant Discharge Elimination System ("NPDES") permit NC0000396.
Treated wastewater discharged from this settling pond is routed to the French Broad River in accordance with the terms and conditions of the NPDES permit.

During the period January 1, 2019 – June 30, 2019, approximately 396,598 tons of ash have been excavated and transported off-site. As of June 30, 2019, approximately 6,612,061 million tons of ash have been excavated from the Asheville site. Dewatering of the ash basins and the removal of ash from the site continues to be performed within project phases. The project has completed Phase I and has been planning and implementing Phase II.

The following items in Phase I have been completed:

1. Excavation and closure of the 1982 Ash Basin.
2. Design and construction of alternate treatment methods for FGD process water to replace engineered wetlands process.
3. Decommissioning, excavation, and transportation of the FGD engineered wetlands in the 1964 Ash Basin to an approved RCRA Subtitle D landfill.
4. 1982 Ash Basin dam decommissioning and grading material into former 1982 Ash Basin footprint to facilitate the construction of the natural gas-fired plant.
5. Initiation of the 1964 Ash Basin ash excavation and transportation.

Phase II Scope

1. Submit and obtain permits for Phase II activities.
2. Excavate and transport approximately 2 million tons of ash from the 1964 Ash Basin, including newly generated ash.
3. Evaluate, design, and construct the wastewater treatment system and water equalization basin for utilization after plant and rim ditch retirement.
4. Maintain lowered water state of the Duck Pond and implement 1964 Ash Basin dewatering plan.
5. Continue to validate production rates to meet project requirements and

increase efficiency.

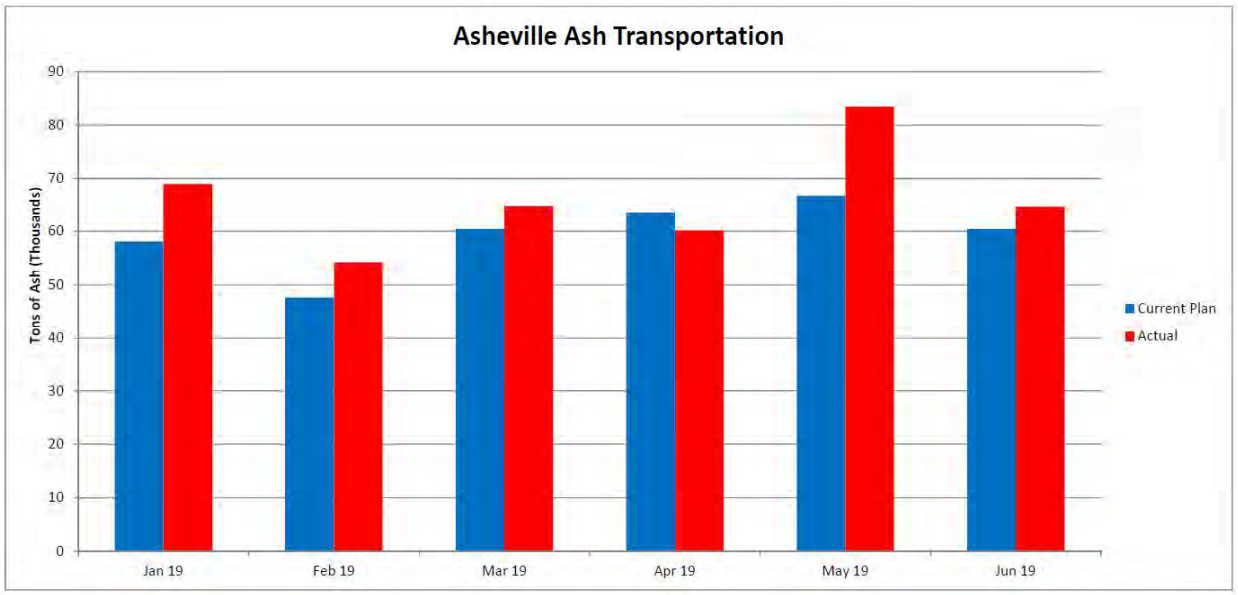
6. Gain knowledge and opportunities for program improvement that can be applied to the subsequent phase(s).
7. Plan activities for Phase III.

Phase III Scope

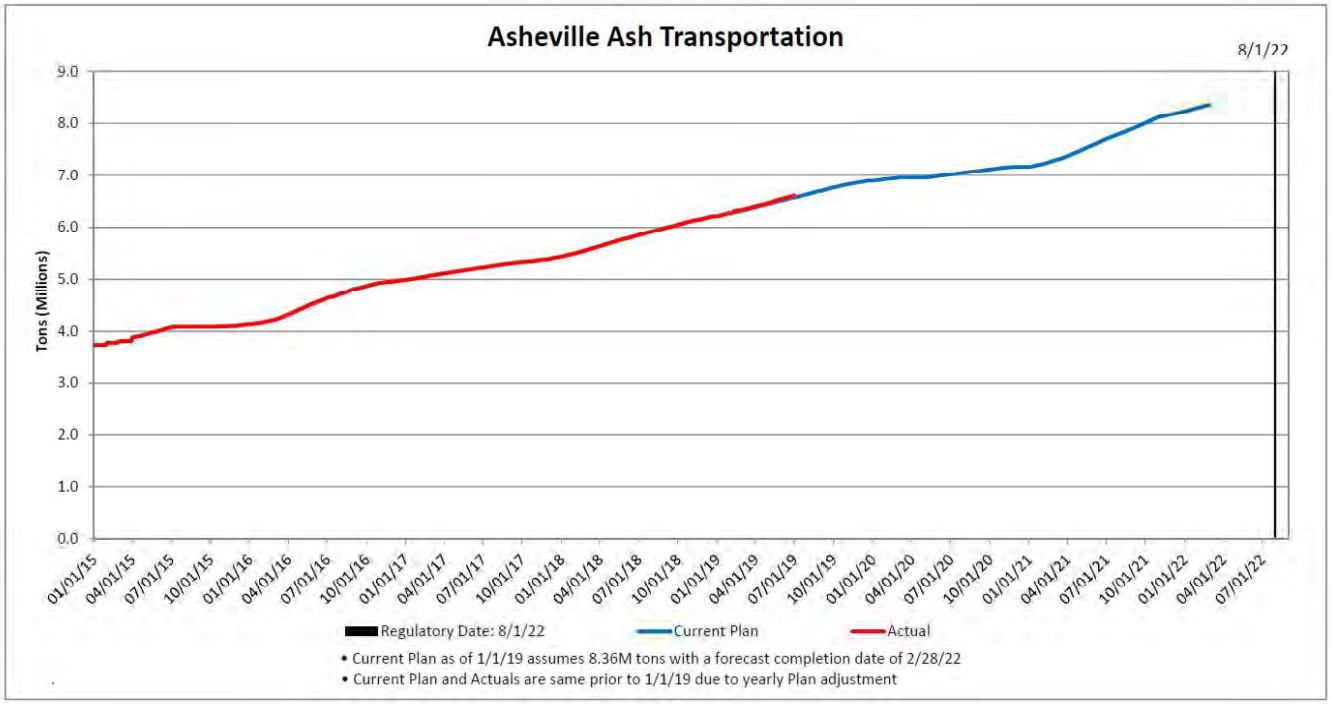
1. Prepare remaining required permit applications for subsequent phase(s) of ash removal activities (if applicable).
2. Decommission and remove the 1964 Ash Basin rim ditch.
3. Continue to manage wastewater with the on-site wastewater treatment system.
4. Excavate and transport the remaining ash from the 1964 Ash Basin to an approved landfill or structural fill location.
5. Initiate 1964 Ash Basin dam decommissioning to remove ash commingled material in the dam.
6. Complete closure activities for the 1964 Ash Basin.

The charts below track the tonnage of ash transported from January 1, 2019 to June 30, 2019 and from January 2015 to completion.

Ash Transported Off Site in Thousands of Tons | January 1, 2019 to June 30, 2019



Ash Transported Off Site in Millions of Tons | January 2015 to February 2022



Critical Milestones within the Plan are summarized in the table below.

MILESTONES	NO LATER THAN DATE	STATUS
Submit Excavation Plan to NCDEQ	November 15, 2014	Completed November 13, 2014
Complete Comprehensive Engineering Review	November 30, 2014	Completed November 30, 2014
Receive Dam Safety Permit to excavate 1982 Ash Basin dam face	December 12, 2014	Received approval June 25, 2015
Excavation Plan acknowledgment from NCDEQ	February 17, 2015	Received February 2, 2015
Receive updated Distribution of Residual Solids Permit	February 28, 2015	Received Final Permit September 2, 2015
Decommission engineered wetlands and commission alternate FGD wastewater treatment system	November 3, 2015	Completed FGD wastewater conveyance to sewer October 28, 2015
Submit Updated Excavation Plan to NCDEQ	November 15, 2015	Completed November 13, 2015
Dewater and remove engineered wetlands	March 2, 2016	Completed on May 13, 2016 with no impact on final completion schedule
Complete removal of ash from 1982 Ash Basin (except interim storage of production ash)	July 31, 2016	Completed September 30, 2016
Submit Updated Excavation Plan to NCDEQ	December 31, 2016	Completed December 21, 2016
Submit Updated Excavation Plan to NCDEQ	December 31, 2017	Completed December 1, 2017

Submit Updated Excavation Plan to NCDEQ	December 31, 2018	Completed December 11, 2018
Cease Operation of coal-fired units at the Asheville Plant	January 31, 2020*	On Track
Impoundments closed pursuant to Part II, Sections 3(b) and 3(c) of CAMA	August 1, 2022*	On Track
Submit Updated Excavation Plan to NCDEQ	December 31, Annually	On Track

* Pursuant to the North Carolina Mountain Energy Act of 2015

Erosion and Sediment Control Plan

Asheville Plant permits allow for the excavation and transportation of ash on existing paved roads and within the ash basins during excavation. Any new construction supporting ash basin closure will be in compliance with applicable erosion and sediment control permits.

Dewatering Plan

The 1964 Ash Basin is currently void of free-standing water, except for the Duck Pond and for the lined Center Pond (part of the rim ditch system). Stormwater and process water flows into the Duck Pond are captured and pumped to the head of the rim ditch wastewater treatment system within the footprint of the 1964 Ash Basin. The treated wastewater continues to flow to the permitted NPDES Outfall 001. In July 2018, the site commenced interstitial dewatering of the 1964 Ash Basin. At the time, the site was operating under an administratively extended NPDES Wastewater Permit and, at the direction of NCDEQ, was required to pretreat interstitial wastewater prior to discharging it into the rim ditch system. This additional pretreatment is not required under the new NPDES Wastewater Permit, which went into effect on December 1, 2018. After the coal plant and rim ditch retirement, a water equalization basin and a new wastewater treatment system will be required to complete dewatering of the 1964 Ash Basin.

Location(s) for Removed Ash

Ash removed from the site will be transported by the contractor to permitted facilities. The ash disposal location(s) will be managed and maintained to ensure environmental compliance with all applicable rules and regulations. Ash from the 1964 Ash Basin is currently being transported to a permitted ash monofill at the R&B Landfill in Homer, Georgia. Plans for ash disposal during Phase III are currently being evaluated and will be finalized in 2019. The on-site landfill at Duke Energy's Rogers Energy Complex remains an option. Discussion and evaluation of the construction of an on-site landfill at the Asheville Plant is ongoing with NCDEQ.

Transportation Plan

Ash is currently being transported from the site via highway trucks to the R&B Landfill in Homer, Georgia. Truck loading operations are conducted with a crew working typically 12 hours per day, five days per week. Transportation is conducted by approved transporters and meets Department of Transportation ("DOT") and other applicable federal, state, and local regulations.

Environmental and Dam Safety Permitting Plan

Excavation of ash creates potential for stormwater impacts. The site is operating under an NPDES Industrial Stormwater Permit ("ISW") issued on May 24, 2016. As required by the ISW, the site has an active Stormwater Pollution Prevention Plan ("SPPP") implemented November 2016 and updated August 2017. Throughout most of 2018, the facility operated under an administratively extended NPDES Wastewater Permit. The facility was issued a new NPDES Wastewater Permit in Q4 2018, which included modifications to facilitate the closure of the 1964 Ash Basin. The new NPDES Wastewater Permit went into effect on December 1, 2018.

If the Company constructs any treatment basins or conducts grading related to construction activities within the 1964 Ash Basin footprint, an approved Erosion and Sediment Control Plan and a Buncombe County Post-Construction Stormwater Permit may be required. There are no jurisdictional wetlands/streams associated with the removal of ash in the 1964 Ash Basin in Phase II.

All necessary Dam Safety approvals have been or will be obtained to cover activities on or around jurisdictional dikes. Any impacted monitoring wells or piezometers will be abandoned in accordance with NCDEQ requirements. Fugitive dust will be managed to mitigate impacts to neighboring areas. Additional site-specific or local requirements will be secured, as needed.

Permit Matrix

MEDIA	PERMIT	RECEIVED DATE (R) TARGET DATE (T)	COMMENTS
Water	NPDES Industrial Stormwater Permit	May 24, 2016 (R)	The site has two active SPPP.
	NPDES Wastewater Permit Renewal	Q4 2018 (R)	Became effective December 1, 2018.
	Jurisdictional Wetland and Stream Impacts / 404 Permitting and 401 WQC	N/A	No impacts to jurisdictional wetlands and streams have been identified at this time.
	Erosion and Sediment Control Plan	April 1, 2020 (T), if needed	Permit may be required for grading activities.
	Buncombe County Post-Construction Stormwater Permit	April 1, 2020 (T), if needed	Permit may be required for any basin construction or grading activities.

Dam Safety	Dam Decommissioning Request Approval	Complete June 25, 2015 (R) and July 1, 2016 (R) Q4 2019 (T) for 1964 Ash Basin dam decommissioning	Dam Safety Permits to excavate ash from the interior face of the 1982 Ash Basin dam and the 1964 Separator Dike were received on June 25, 2015 and July 1, 2016, respectively. A permit for decommissioning of the 1964 Ash Basin dam will be required and has been submitted to NCDEQ.
Other Requirements	Site-Specific Nuisance/Noise/ Odor/Other Requirements, including DOT	October 28, 2015 (R)	During Phase I, the Company received an Industrial User Permit on June 13, 2015 to discharge the FGD wastewater into the Metropolitan Sewerage District system. As noted above, this activity was completed on October 28, 2015.

Site Progression of the Excavation Process at the Asheville Steam Electric Generating Plant

1982 Basin in February 2015 When Project Began

Finalization of 1982 Basin Excavation in September 2016

Aerial View February 2015

Aerial View September 2016

Aerial View November 2018

Asheville – June 2019

II. Dan River Steam Station

The Dan River Steam Station is located in Rockingham County near Eden, NC. The Plant operated from 1949 until retirement of the coal-fired units in 2012. Upon retirement of the coal-fired units, a new 620 MW gas-fired unit began operation.

The Primary Ash Basin was constructed in 1956, with an embankment crest elevation of 523.5 feet mean sea level (msl). In 1968, the basin embankment crests were raised to elevation 530 feet msl and extended in length approximately 1,200 feet east along the Dan River. An intermediate dike was constructed in 1976, resulting in two basins, with the Primary Ash Basin dam crest being raised to elevation 540 feet msl. The east side of the basin was designated the Secondary Ash Basin. The Primary Ash Basin was periodically dredged and the material dry-stacked on higher terrain north of the basins (referred to as dry ash stacks). The dam numbers for the ash basins are (ROCKI-237) and (ROCKI-238). The dry ash stacks have been capped with soil.

Duke Energy's Coal Combustion Residuals Removal Verification Procedure (Removal Verification Procedure) was used to verify that primary source ash has been removed from the basin. Subsequent to removal of the ash pursuant to the Removal Verification Procedure, Duke Energy implemented its Excavation Soil Sampling Plan, which was developed for the purpose of meeting the applicable performance standard. Dan River ash is a non-hazardous material.

The Primary Ash Basin at Dan River consists of a composite dam made up of local borrow materials, including silty sands and sandy silts with some clay. Portions of the dam may have been built on, or contain, ash materials. The eastern face of the embankment is armored with rock up to elevation 512 feet msl. A rock fill berm was constructed alongside the river, up to elevation 503 feet msl. An intermediate bench was constructed at approximate elevation of 530 feet msl. The Primary Ash Basin has an approximate footprint of 39 acres with a surface water area of 18 acres. Previously, the Primary Ash Basin received sluiced ash from pipes in the southwest corner and outlets into the Secondary Ash Basin through a decant structure located near the northeast corner of the Primary Ash Basin. Initially, the Primary Ash Basin contained approximately 1,215,000 tons of CCR material. In September 2018, the CCR inventory of the Primary Basin was increased by 552,000 tons due to quantifying CCR material under vertical expansion embankment soil, incorporating revised bottom of ash floor grades, and including estimated soil waste.

The intermediate dike was constructed in 1976, bisecting the basin into Primary and Secondary Ash Basins. The dike was constructed on existing ash deposits, with an upper crest elevation of 540 feet msl adjacent to the Primary Ash Basin and a lower crest elevation of 530 feet msl adjacent to the Secondary Ash Basin. The dike had a surface road at the 540 feet msl level. It had a vegetated slope adjacent to the road, which extends to a 530 feet msl elevation shelf adjacent to the Secondary Ash Basin. A rock buttress was constructed below the elevation 530 feet msl crest. The width of the intermediate dike was approximately 100 feet.

The Secondary Ash Basin embankments, including the intermediate dike forming the southwest boundary, had a crest elevation of 530 feet msl and are constructed of the same local materials as the Primary Ash Basin. The eastern face of the embankment is armored with rock up to elevation 512 feet msl. A rock fill berm was constructed alongside the river, up to elevation 503 feet msl. The basin received decanted flow from the Primary Ash Basin in the northwestern corner, and flows exit the basin through a decant structure near the southeastern corner. Flow from the Secondary Ash Basin was regulated by NPDES Permit No. NC 0003468. The pool level was controlled by the decant riser using concrete stop-logs and conveys to the outlet through a 36-inch diameter reinforced concrete pipe constructed through the embankment dike. Initially, the Secondary Ash Basin contained approximately 390,000 tons of CCR material. The outfall was grouted and abandoned on September 6, 2018.

North Carolina state law requires that ash from the basins at the Dan River site be excavated and relocated to a lined facility, with the ash basins closed by August 1, 2019. This requirement was completed on May 20, 2019. Soil sampling data from the excavated basins is currently being compiled for submission to NCDEQ.

The dry ash stacks were located to the north of the Primary and Secondary Ash Basins. These ash stacks consisted of CCR material dredged from the Primary Ash Basin. Initially, Ash Stack 1 and Ash Stack 2 contained approximately 950,000 tons and 415,000 tons of CCR material, respectively. Stormwater run-off from the ash stacks flowed to a temporary water storage area. The excavation of all CCR from Ash Stack 1 was completed on July 27, 2017. Although not required by North Carolina state law, excavation of Ash Stack 2 is expected to be completed by December 31, 2019.

During the period January 1, 2019 – June 30, 2019, approximately 881,773 tons of ash have been excavated. Of this amount, approximately 20,805 tons were sent to the Roanoke Cement Company for beneficial use and the remainder to an on-site landfill. As of the CAMA excavation completion date of May 20, 2019, approximately 3,530,502 million tons of ash have been excavated from the Dan River site. Dewatering of the ash basins and the removal of ash from the site will be performed in project phases.

The project has completed Phase I and is now implementing Phase II. The following items in Phase I have been completed or initiated:

1. Developed and installed approved erosion and sediment control measures.
2. Obtained applicable permits for work in Phase I.
3. Developed and constructed the infrastructure to remove and transport the ash.
4. Completed rail load out spur for rail transportation.
5. Began bulk dewatering of the Secondary Ash Basin.
6. Initiated and completed the removal of the first 1 million tons of ash from

the Dan River site.

7. Obtained a Permit to Construct the new on-site landfill on October 27, 2016, following resolution of the environmental justice review.
8. Commenced construction of an on-site landfill.
9. Completed a plan to reroute and eliminate inflows to the ash basins.
10. Validated production rates to meet project requirements.
11. Planned activities for subsequent phase(s), including development of option(s) for beneficial use or proposed ash disposal location(s).

The Dan River NPDES wastewater permit was issued and became effective on December 1, 2016. The removal of bulk free water of the Secondary Basin was completed when the basin water level was lowered to elevation 515 feet msl in 2016. Interstitial dewatering commenced in 2018 to support excavation in the Primary and Secondary Basins and was completed May 20, 2019 with the completion of basin ash excavation. All leachate and contact stormwater wastewater treatment is performed by the City of Eden's Publicly Owned Treatment Works (POTW) in accordance with the Industrial User Pre-treatment Permit issued to Duke Energy by the City of Eden. To provide additional wastewater treatment capability, an on-site treatment system was installed, which sent treated water to the discharge point of Outfall 002. The Secondary Basin riser structure and the pipe leading to Outfall 002 were plugged with grout on September 6, 2018.

The excavation of Ash Stack 1 began on October 13, 2015, following acknowledgement of this Plan by NCDEQ and the receipt of final permits. Phase I was completed on March 23, 2017. Phase II includes completion of the on-site landfill and excavation of the basins to the on-site landfill. Construction of an on-site landfill began on October 31, 2016 and was completed on April 18, 2018.

In accordance with the project plan, during Phase I, the Company removed ash to an off-site location while simultaneously developing an on-site landfill, which was needed in order to meet the closure requirements mandated under CAMA. The Company received a Permit-to-Operate (PTO) for the first landfill cell on May 30, 2017, and promptly began transporting ash to the on- site landfill. The PTO for the second landfill cell was received on October 2, 2017, and the final remaining PTO for the third landfill cell was received on April 18, 2018.

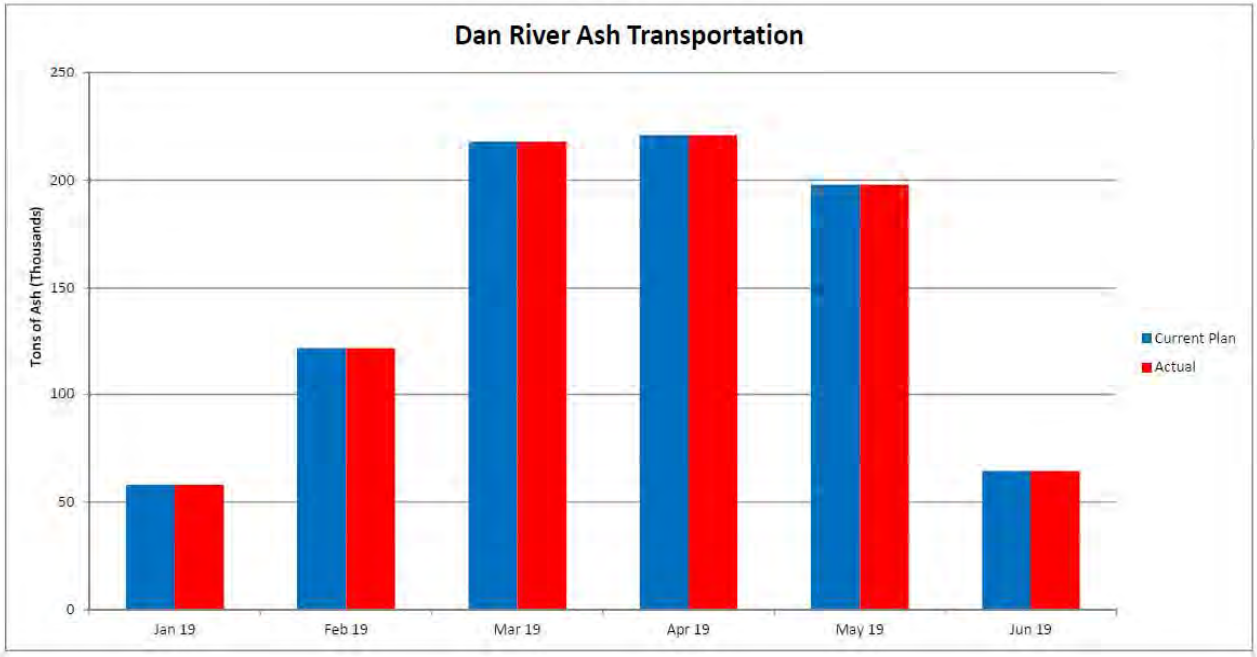
<u>Phase II Scope</u>

1. Submit and obtain applicable permits.
2. Complete construction of the on-site landfill. Cells 1, 2, and 3 are complete.
3. Receive PTOs for the on-site landfill cells. PTOs received for Cells 1, 2, and 3.
4. Excavate and transport the remaining ash from the Dan River Station to the on-site landfill or for off-site reuse options.
5. Continue dewatering of the Primary and Secondary Ash Basins.

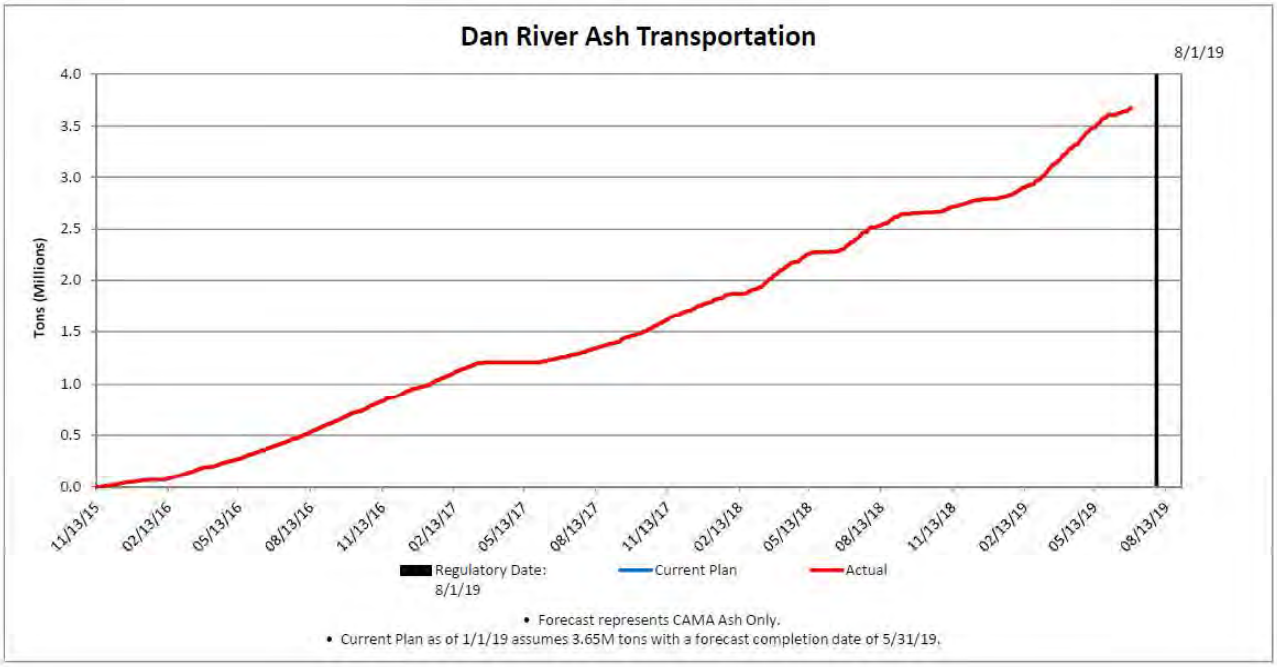
6. Complete closure activities.
7. Operate and close cells for the on-site landfill.

The charts below track the tonnage of ash transported from January 1, 2019 to June 30, 2019 and from November 2015 to completion.

Ash Transported in Thousands of Tons | January 1, 2019 to June 30, 2019



Ash Transported in Millions of Tons | November 2015 to May 2019



In October 2018, the CCP Project Team decided to change the ash excavation contractor at Dan River due to concerns with excavation performance. To ensure completion of basin ash excavation with sufficient margin to the August 1, 2019 deadline, the project implemented several recovery actions. Beginning in January 2019, the project utilized lime to moisture condition the CCR and CCR laden soil to achieve landfill specifications. From February 18 through May 10, 2019, the project worked 24 hours per day, seven days per week. These recovery actions enabled the project to complete ash excavation of the Primary and Secondary Ash Basins on May 20, 2019, as validated by third party sampling performed on May 23, 2019. Soil sampling data from the excavated basins is currently being compiled for submission to NCDEQ during Q3 2019. Although not required by North Carolina law, excavation of Ash Stack 2 is expected to be completed by December 31, 2019.

Critical Milestones within the Plan are summarized in the table below.

MILESTONES	NO LATER THAN DATE	STATUS
Submit Excavation Plan to NCDEQ	November 15, 2014	Completed November 13, 2014
Complete Comprehensive Engineering Review	November 30, 2014	Completed November 30, 2014
Excavation Plan acknowledgement from NCDEQ	February 17, 2015	Completed February 2, 2015
Receive Industrial Stormwater (ISW) Permit	March 18, 2015	Completed October 1, 2015
Commence Work – Ash Removal (including ash stack soil overburden)	Final permit approval + 60 days	Completed October 13, 2015
Submit Updated Excavation Plan to NCDEQ	November 15, 2015	Completed November 13, 2015
Receive Permit-to-Construct On-Site Landfill	March 31, 2016	Delayed due to NCDEQ environmental justice review; completed October 27, 2016
Submit Updated Excavation Plan to NCDEQ	December 31, 2016	Completed December 21, 2016
Submit Updated Excavation Plan to NCDEQ	December 31, 2017	Completed December 1, 2017
Eliminate stormwater discharge into impoundments	December 31, 2018	Completed June 26, 2018
Submit Final Excavation Plan to NCDEQ	December 31, 2018	Completed December 11, 2018
Impoundments closed pursuant to Part II, Sections 3(b) and 3(c) of CAMA	August 1, 2019	Completed May 20, 2019

Erosion and Sediment Control Plan

The Erosion and Sediment Control ("E&SC") Plan for the excavation of the Ash Stack and related site activities have been approved. The approval of this plan by NCDEQ meets the requirement outlined in the referenced NCDEQ letter. Modifications from E&SC plans for subsequent phase(s) will be approved by NCDEQ prior to installation and initiation of subsequent phase work. The approved contractor will install the E&SC measures indicated in the plan. All control measures will be maintained throughout the project in accordance with the E&SC plans. When possible, portions of the E&SC plan will be closed out at the approval of NCDEQ as areas become stabilized.

Dewatering Plan

The Dan River ash basins were dewatered to facilitate the removal of ash and to mitigate risk. Interstitial dewatering of the Primary Ash Basin commenced in March 2018. Interstitial dewatering of the Secondary Ash Basin commenced in June 2018. Interstitial dewatering was completed on May 20, 2019 with the completion of basin ash excavation. Leachate from the on-site landfill, interstitial waste water, and contact stormwater are being treated by the City of Eden's POTW in accordance with the Industrial User Pre-Treatment Permit issued to Duke Energy by the City of Eden. In addition, and to provide additional treatment capacity beyond what the City of Eden could accommodate, the facility installed an on-site wastewater treatment system in Q3 2018 to treat interstitial wastewater for discharge to Outfall 002 in compliance with the facility's NPDES Wastewater Permit.

Locations for Removed Ash

Ash removed from the site will be transported by the contractor to permitted facilities. The ash disposal location(s) will be managed and maintained to ensure environmental compliance with all applicable rules and regulations.

Maplewood Landfill

The Maplewood Landfill is located near Jetersville, Virginia and is where 1.2 million tons of ash where shipped by rail during Phase I. The final rail shipment of ash to the Maplewood Landfill from Dan River occurred on March 23, 2017.

Dan River On-Site Landfill

Transportation of ash to the on-site landfill began on May 31, 2017. The project team utilized lessons learned from Phase I in developing and constructing the on-site landfill, which provides the improvements below:

- Provide a reliable, long-term, cost-effective, solution for ash designated for removal
- Support development of a diverse supplier program to drive innovation and competition

- Establish performance baselines and a system to optimize excavation, transportation, and disposal of ash

Transportation Plan

Ash is currently being transported from the Ash Stack 2 via off-road articulated dump truck to the on- site landfill. Truck loading operations are conducted with a crew working typically 12 hours per day, five to six days per week. From February 18 through May 10, 2019 the project worked 24 hours per day, seven days per week. Ash transportation to Roanoke Cement Company for beneficiation was by on-road truck. The site completed shipping ash to Roanoke Cement for beneficial reuse on May 17, 2019. Transportation off-site was conducted by approved transporters and met DOT and other applicable federal, state, and local regulations.

Environmental and Dam Safety Permitting Plan

Excavation of ash creates potential for stormwater impacts. The facility holds an approved E&SC plan and associated Construction Stormwater Permit approval for ash stack removal and dam decommissioning. Also, NCDEQ indicated that an NPDES ISP is required to excavate ash. The Company has received the NPDES ISP to support ash removal at the site. Pursuant to the requirements of the NPDES ISP, a SPPP incorporating best management practices has been created and is currently being implemented. Future modifications to the permit/plan will be managed as necessary. On October 27, 2016, Duke Energy received a modified NPDES Wastewater Permit, which included provisions for dewatering activities.

The area between Ash Stack 1 and Ash Stack 2 was determined to be a jurisdictional wetland and an Individual Permit ("IP") was required to remediate this area and complete stormwater diversion prior to basin closure. Wetlands/stream impacts related to the rail improvements were managed through the United States Army Corps of Engineers ("ACOE") with particular attention paid to the difference between jurisdictional wetlands/streams under Section 404 and those arising from Section 401 waters. The Company received approvals from ACOE and NCDEQ for wetlands/stream impacts related to the rail. The Company received approvals from ACOE and NCDEQ for wetlands/stream impacts related to stormwater diversion in Q4 2017. The Company also received approvals from ACOE and NCDEQ for wetlands/stream impacts related to dam decommissioning in Q2 2019.

In order to facilitate on-site landfill construction and operation, NCDEQ's Solid Waste Section issued a Landfill Permit-to-Construct on October 27, 2016. Following construction of each cell of the on-site landfill, Construction Quality Assurance Reports were submitted to obtain the corresponding PTO. NCDEQ's Solid Waste Section issued a Landfill PTO for Cell 1 on May 30, 2017, a Landfill PTO for Cell 2 on October 2, 2017, and a Landfill PTO for Cell 3 on April 18, 2018.

Dam Decommissioning Plan Sequence 'A' was approved by NCDEQ Dam Safety on February 20, 2018. Dam Decommissions Plan Sequence 'B' was approved on July 16, 2018 and Decommissioning Plan Sequence 'C' was approved on May 10, 2019. Any impacted wells or piezometers will be properly abandoned in accordance with NCDEQ requirements. Fugitive dust will be managed to mitigate impacts to neighboring areas.

Other than the agreement with the City of Eden regarding development of the on-site landfill, there are no additional site-specific or local requirements identified.

Permit Matrix

MEDIA	PERMIT	RECEIVED DATE (R) TARGET DATE (T)	COMMENTS
Water	NPDES Industrial Stormwater Permit	October 1, 2015 (R)	SPPP implementation was completed March 31, 2016.
	NPDES Wastewater Permit – Major Modification	October 27, 2016 (R)	Effective December 1, 2016.
	City of Eden – Industrial User Permit	June 3, 2016 (R)	Revised permit issued March 1, 2019 with increased flow limit of 600,000 gpd.
	Jurisdictional Wetland and Stream Impacts / 404 Permitting and 401 WQC	September 14, 2015 (R)	Two stream crossings for rail upgrade.
	Jurisdictional Wetland and Stream Impacts / 404 Permitting and 401 WQC	401 Permit October 9, 2017 (R) 404 Permit October 24, 2017 (R)	Area between Ash Stack 1 and Ash Stack 2 Permits updated in Q2 2019 to include installation of four stormwater outfalls on Dan River for Dam Decommissioning.
Dam Safety	Dam Decommissioning Request Approval	Sequence 'A' February 20, 2018 (R) Sequence 'B' July 20, 2018 (R) Sequence 'C' March 31, 2019 (T)	Sequence 'A' approved February 20, 2018. Sequence 'B' approved July 16, 2018. Sequence 'C' approved May 10, 2019.

Waste	Site Suitability Report	August 28, 2015 (R)	None.
	Permit-to-Construct Landfill	October 27, 2016 (R)	Target Date was March 31, 2016. Delay was due to NCDEQ's environmental justice review.
	Permit-to-Operate Landfill	Cell 1 May 30, 2017 (R) Cell 2 October 2, 2017 (R) Cell 3 April 18, 2018 (R)	Cell 1: Target Date was March 31, 2017. Delay was due to NCDEQ's environmental justice review.
Other Requirements	Site-Specific Nuisance/Noise/ Odor/Other Requirements, including DOT	July 21, 2015 (R)	Eden City Council adopted zoning amendment on July 21, 2015, which allows construction of Dan River on-site landfill.

Site Progression of the Excavation Process at the Dan River Steam Station

April 2016 Aerial View Primary Basin

Cell 1 Lining & Initial Dirt Work on Cell 2

First CCR Train Leaves Dan River November 2016

Last CCR Train Loaded & Ready for Pickup March 2017

Aerial View September 2018

Dan River May 2019

III. Riverbend Steam Station

Riverbend is located off of Horseshoe Bend Beach Road near the town of Mount Holly in Gaston County, NC on the south bank of the Catawba River. The seven-unit Station began commercial operation in 1929 with two units and then expanded to seven by 1954. At its peak, the generating facility had a capacity of 454 megawatts. As of April 1, 2013, all of the coal-fired units were retired. Demolition was completed in June 2018.

Riverbend ash is a non-hazardous material. The discharge from the ash basin system was permitted through Outfall #002 to the Catawba River under NPDES Permit No. NC0004961. Riverbend has been decommissioned, and no active ash placement or sluicing is occurring within the ash basin system.

Duke Energy's Coal Combustion Residuals Removal Verification Procedure was used to verify that primary source ash has been removed from the basin. Subsequent to removal of the ash pursuant to the Removal Verification Procedure, Duke Energy implemented its Excavation Soil Sampling Plan, which was developed for the purpose of meeting the applicable performance standard. The ash basin system was an integral part of the Station's NPDES-permitted wastewater treatment system, which predominantly received inflows from the ash removal system, station yard drain sump, and stormwater flows. During Station operations, inflows to the ash basin were highly variable due to the cyclical nature of Station operations. The ash basin system consisted of a Primary Ash Basin and a Secondary Ash Basin, which were separated by an Intermediate Dam. The Primary Ash Basin and the Secondary Ash Basin are no longer separated since the decommissioning of the Intermediate Dam. For the purpose of stormwater management, the Ash Stack was also within the ash basin system.

The ash basin system was located approximately 2,400 feet to the northeast of the power plant, adjacent to the Catawba River. The Primary Ash Basin is impounded by an earthen embankment dam, referred to as Primary Dam (GASTO-97), located on the west side of the Primary Ash Basin. The Secondary Ash Basin is impounded by an earthen embankment dam, referred to as Secondary Dam (GASTO-98), located along the northeast side of the Secondary Ash Basin. Both the Primary and Secondary Dams are currently being decommissioned.

Originally, the ash basin at Riverbend consisted of a single basin commissioned in 1957. In 1979, the original single basin was divided by constructing a divider dam (Intermediate Dam (GASTO- 99)) to form two separate basins (Primary Ash Basin and Secondary Ash Basin). This modification improved the original basin's overall ability for suspended solids removal. The Primary Dam was raised, and the Intermediate Dam was built over sluiced ash to a crest of 730 feet mean sea level (msl). At the same time, the Secondary Dam crest elevation remained at 720 feet msl. As part of the Excavation Project, the Intermediate Dam was removed in February 2017. Prior to excavation, the Primary Ash Basin and the Secondary Ash Basin were estimated to contain a total of approximately 3.6 million tons of CCR.

The inflows from the ash removal system and the Station yard drain sump were directed through sluice lines into the Primary Ash Basin. The discharge from the Primary Ash Basin to the Secondary Ash Basin was through a concrete discharge tower located near the divider dam. The surface area of the combined Ash Basin is approximately 69 acres with an approximate maximum basin elevation of 714 feet msl. The full basin elevation of Mountain Island Lake is approximately 647 feet msl.

Prior to the Station being retired, stormwater and wastewater effluent from other non-ash related Station flows to the ash basin were discharged in compliance with the Station's NPDES permit to the Catawba River through a concrete discharge tower located in the Secondary Ash Basin. The concrete discharge tower drained through a 30-inch diameter corrugated metal pipe into a concrete-lined channel. The channel extended from the Secondary Ash Basin to NPDES Outfall #002, which discharged to the Catawba River. This discharge pipe has been grouted closed.

An ash fill deposit, known as the "Ash Stack," was constructed from ash removed from the Primary and Secondary Ash Basins during basin clean-out projects. The Ash Stack was utilized for periodic ash basin clean-outs to prolong the life of the ash basins. The Ash Stack is a 29-acre area located south of the Primary Ash Basin. The Ash Stack was constructed during two ash basin clean-outs; the last recorded ash basin clean-out project was in 2007. Prior to Phase I excavation, the Ash Stack had 1.5 to 2 feet of soil cover and vegetation that was maintained following the last deposit in this area. For the purpose of water management, the stormwater run-off from the Ash Stack area was routed to the ash basin system. As of March 16, 2019, CCR excavation was complete with approximately 1.55 million tons of CCR material removed from the Ash Stack, in total.

Prior to construction of the ash basin, bottom ash (cinders) was deposited in a primarily dry condition in the "Cinder Pit" and other areas near the cinder pit and coal pile. The Cinder Pit was approximately 13 acres and was located in a triangular area northeast of the coal pile and northwest of the rail spur. This area was utilized for storage of ash material at the Station prior to the installation of precipitators and a wet sluicing system. The Cinder Pit contained predominantly dry cinders. As of March 16, 2019, CCR excavation was complete with approximately 300 thousand tons of CCR material removed from the Cinder Pit area, in total.

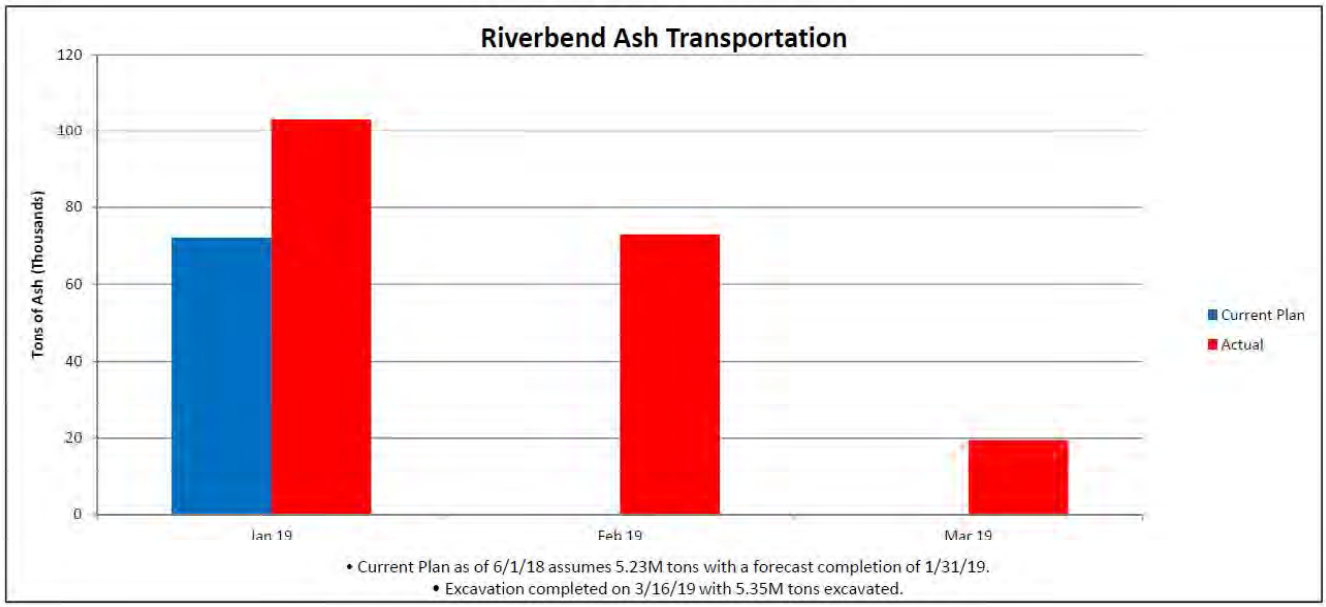
During the period January 1, 2019 – March 16, 2019, approximately 195,530 tons of ash were excavated and transported off-site. As of March 16, 2019, CCR excavation was complete and approximately 5,351,309 million tons of ash have been excavated from the Riverbend site.

The Riverbend NPDES wastewater permit was issued and became effective on March 1, 2016. Decanting of bulk water began soon thereafter and continued until halted in June 2016. In July 2016, NCDEQ imposed a new requirement to install a physical-chemical treatment facility. Following installation of a water treatment facility, bulk dewatering commenced in the fall of 2016 and was completed on January 31, 2017. With CCR excavation complete, there is no contact water. Treatment and discharge of water through the NPDES Outfall #002 has stopped. As of June 1, 2019, NCDEQ deemed the wastewater outfall as decommissioned and changed the

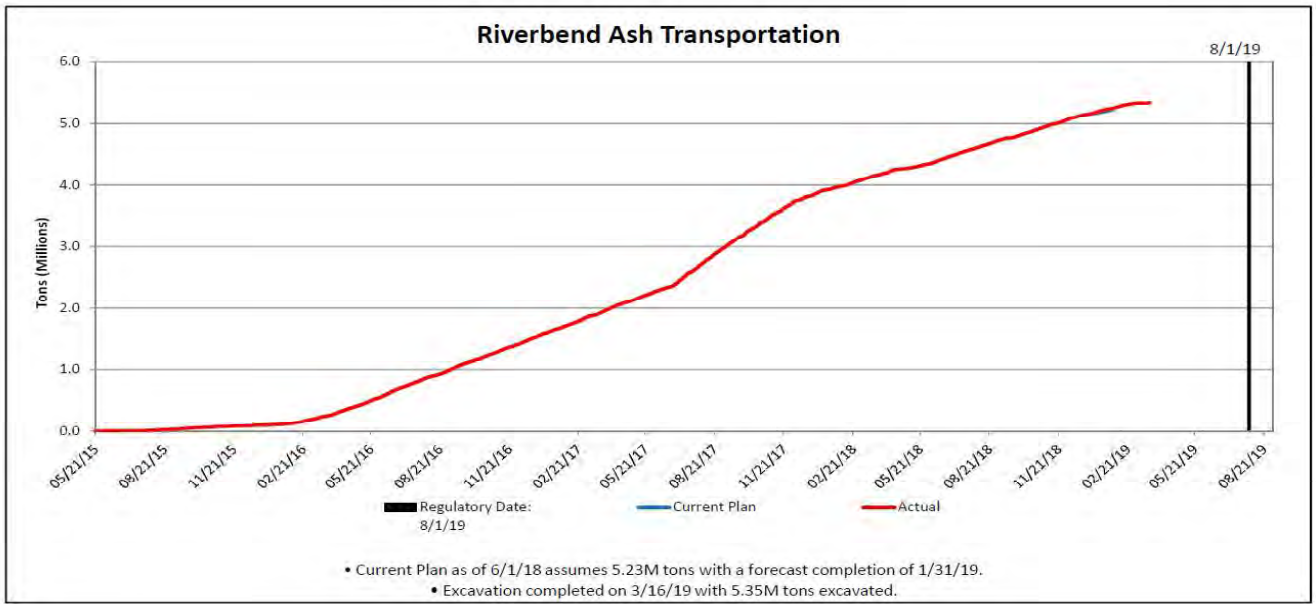
classification to “Physical Chemical Water Pollution Control Treatment System (PCNC – Not Classified).”

The charts below track the tonnage of ash transported from January 1, 2019 to March 16, 2019 and from May 2015 to completion.

Ash Transported Off Site in Thousands of Tons | January 1, 2019 to March 16, 2019



Ash Transported Off Site in Millions of Tons | May 2015 to March 2019



Critical Milestones within the Plan are summarized in the table below.

MILESTONE	NO LATER THAN DATE	STATUS
Submit Excavation Plan to NCDEQ	November 15, 2014	Completed November 13, 2014
Complete Comprehensive Engineering review	November 30, 2014	Completed November 30, 2014
Excavation Plan Acknowledgement from NCDEQ	February 17, 2015	Completed February 2, 2015
Receive Industrial Stormwater (ISW) Permit	March 5, 2015	Completed May 15, 2015
Commence Work – Ash Removal	Final permit approval + 60 Days	Completed May 21, 2015 After Receipt of ISW Permit
Submit Updated Excavation Plan to NCDEQ	November 15, 2015	Completed November 13, 2015
Submit Updated Excavation Plan to NCDEQ	December 31, 2016	Completed December 21, 2016
Submit Updated Excavation Plan to NCDEQ	December 31, 2017	Completed December 1, 2017
Submit Final Excavation Plan to NCDEQ	December 31, 2018	Completed December 11, 2018
Eliminate Stormwater Discharge into Impoundments	December 31, 2018	Completed December 14, 2018
Impoundments Closed per Part II, Sections 3(b) and 3(c) of CAMA	August 1, 2019	Completed March 16, 2019

Erosion and Sediment Control Plan

The E&SC plans for the excavation of the Ash Stack, construction of the rail infrastructure, and haul roads were developed, submitted to NCDEQ, and approved. All control measures were maintained through the project in accordance with the E&SC plans. These E&SC plans have been closed out at the approval of NCDEQ.

Dewatering Plan

The Riverbend ash basins were dewatered to facilitate the removal of ash and to mitigate risk. An engineered dewatering plan for Riverbend was developed, and bulk dewatering was completed on January 31, 2017. Interstitial dewatering and stormwater removal continue through the required water treatment components noted in the previous phase of this Ash Plan.

During excavation, contact water was controlled and diverted through ditches and pumps into sumps located within the area of the Basin. As water was collected in the sump(s), it was pumped into one of the two lined holding ponds, which were constructed to store water prior to treatment. Water from the holding pond(s) was pumped to the wastewater treatment facility

onsite, treated, and discharged to the Catawba River, in accordance with the NPDES permit. The holding ponds and the wastewater treatment facility will be decommissioned.

Location(s) for Removed Ash

A total of approximately 5.35 million tons of ash from the Ash Stack, ash basin system, and Cinder Pit have been excavated and removed from the Riverbend site. Ash removed from the site was transported by the contractor to permitted facilities.

A pilot program for ash removal began on May 21, 2015, to transport ash by truck to the R&B Landfill in Homer, Georgia. Ash transport to the landfills located at the Marshall Steam Station in Sherrills Ford, North Carolina began on July 27, 2015. Initial ash shipments by truck from Riverbend to the Brickhaven Structural Fill began on October 23, 2015. Ash transportation to the R&B Landfill was terminated in September 2015, and ash transportation to the Marshall Landfill was terminated in Q1 2016. Early in Q1 2016, rail transport of the remaining ash commenced to the Brickhaven Structural Fill.

R&B Landfill

A total of approximately 16,000 tons of ash were removed from the site and transported to the R&B landfill in Homer, Georgia, which is a permitted facility.

Marshall FGD and Industrial Landfills

The FGD and industrial landfills are located at the Duke Energy Marshall Steam Station facility in Sherrills Ford, North Carolina. Both are permitted facilities, and 88,745 tons of CCR material were relocated there.

Brickhaven Structural Fill

The Brickhaven Structural Fill is located at the Brickhaven Mine near the City of Moncure in Chatham County, North Carolina. It resides on approximately 299 acres. Ash transported there is beneficially used as structural fill material at the reclaimed mine. A total of approximately 5.23 million tons were relocated to the Brickhaven Structural Fill.

Transportation Plan

The majority of Ash was transported off-site via rail car. As previously noted above, a pilot program for ash removal began with the transportation of ash by truck to the R&B Landfill in Homer, Georgia, Marshall Steam Station landfills, and the Brickhaven Structural Fill. Truck transportation has ceased and was replaced by rail transportation.

Environmental and Dam Safety Permitting Plan

Excavation of ash creates potential for stormwater impacts. The facility holds approved E&SC plans and associated Construction Stormwater Permits for ash removal. Also, NCDEQ indicated

that an NPDES ISP is required to transport ash. The Company received the ISP to support ash removal at the site. Pursuant to the requirements of the ISP, a stormwater pollution prevention plan SPPP incorporating best management practices was created and is currently being implemented. Future modifications to the permit/plan will be managed as necessary.

On February 12, 2016, NCDEQ issued NPDES Permit NC0004961 for operation of the wastewater treatment works at Riverbend and for discharging treated wastewater to the Catawba River (Mountain Island Lake) and associated tributaries and wetlands. Certain effluent limits (pH and total hardness) in the permit were subsequently modified under that certain Special Order by Consent ("SOC") (EMC SOC WQ S16-005) dated November 10, 2016.

There are no jurisdictional wetlands/streams associated with the removal of the Ash Stack or Primary or Secondary Ash basins in Phase I. Future wetland/stream impacts and jurisdictional determinations will be managed through the ACOE with attention paid to the difference between jurisdictional wetlands/streams under Section 404 and those arising from Section 401 waters.

All necessary Dam Safety approvals have been obtained to cover activities on or around jurisdictional dams. Dam decommissioning plans for the Primary and Secondary Dams have been submitted and approved by NCDEQ Dam Safety. Any impacted wells or piezometers will be abandoned in accordance with NCDEQ requirements. Fugitive dust will be managed to mitigate impacts to neighboring areas. Additional site-specific or local requirements will be secured, as needed.

Permit Matrix

MEDIA	PERMIT	RECEIVED DATE (R) TARGET DATE (T)	COMMENTS
Water	NPDES Industrial Stormwater (ISW) Permit	May 15, 2015 (R)	NCDEQ issued the ISW permit May 15, 2015. SPPP implementation date was November 15, 2015.
	NPDES Wastewater Permit – Major Modification	Q1 2016 (R) (Modified by SOC in Q4 2016)	Permit became effective December 1, 2016.
	Jurisdictional Wetland and Stream Impacts / 404 Permitting and 401 WQC	N/A	There are no identified jurisdictional wetland/stream impacts.
	Intermediate Dam Decommissioning Request Approval	June 16, 2016 (R)	Submitted May 31, 2016. Received approval June 16, 2016. Decommissioning completed March 13, 2017.

Dam Safety	Primary Dam Modification Request Approval	August 3, 2017 (R)	Submitted May 8, 2017. Received approval August 3, 2017. Modification completed March 3, 2018.
	Primary and Secondary Dam Decommissioning Request Approval	June 7, 2018 (R)	Resubmitted May 29, 2018. Received approval June 7, 2018.
Waste	Individual Structural Fill Permit	October 15, 2015 (R) (Permit to Operate)	Mine Reclamation Owner/Operator obtained an Individual Structural Fill Permit Pursuant to G.S. § 130A-309.219 of CAMA.
Duke Energy Lake Services	Water Conveyance Permit	August 2, 2016 (R)	Original permit received April 7, 2016. Amended permit for revised quantities received August 2, 2016.
Other Requirements	Site-Specific Nuisance/Noise/ Odor/Other Requirements, including DOT	N/A	None identified

Site Progression of the Excavation Process at the Riverbend Steam Station

2015 Dry Stack

2018 Dry Stack

Ash Basin 2015

Ash Basin 2017

Ash Basin 2019

Ash Basin March 2019

IV. L.V. Sutton Electric Plant

Sutton is located in New Hanover County near Wilmington, North Carolina, situated between the Cape Fear River to the west and the Northeast Cape Fear River to the east. Sutton was a three-unit, 575-megawatt (MW) coal-fired power plant. The Plant operated from 1954 until retirement of the coal-fired units in November 2013. Upon retirement of the coal-fired units, a new 625 MW gas-fired unit began operations.

There were two CCR basins—the 1971 and 1984 Basins—containing fly ash, bottom ash, boiler slag, stormwater, ash sluice water, coal pile runoff, and low volume wastewater. One other area that contains CCR material is the Lay of Land Area ("LOLA"). The LOLA consists mostly of bottom ash and soil. The Sutton facility also includes a cooling lake (also known as Sutton Lake), which is not part of the CCR management system. Sutton Lake is accessible to the general public and is used for recreational purposes. Sutton Lake was classified as Waters of the State on November 5, 2014.

Duke Energy's Coal Combustion Residuals Removal Verification Procedure (Removal Verification Procedure) will be used to verify that primary source ash has been removed from the basin. Subsequent to removal of the ash pursuant to the Removal Verification Procedure, Duke Energy will implement its Excavation Soil Sampling Plan (ESSP). For the Sutton site, two separate ESSPs were developed. The ESSP for the 1971 Ash Basin provides a standardized method for confirming ash removal, where ash extends underwater or below the water table and visual confirmation of the removal may not be possible. The ESSP for the 1984 Ash Basin and LOLA provides a standardized method for collecting soil samples at ash basins that are to be closed via excavation and following all visible ash removal. Although not required under CAMA, in November 2016, NCDEQ sent Coal Combustion Residuals Surface Impoundment Closure Guidelines for Protection of Groundwater to Duke Energy instructing the Company to submit the ESSP to NCDEQ as part of the site's excavation plan. Sutton ash is a non-hazardous material.

1971 Ash Basin

The 1971 Basin was operated from 1971 to 1985. It was opened again in 2011 for temporary use during repair work and ash removal activities. The 1971 Basin is unlined and was initially constructed with a crest elevation of 18 feet mean sea level (msl), which was raised in 1983 to 26 msl. The 1971 Basin initially contained approximately 3.8 million tons of CCR material. The southern basin dikes of the 1971 Basin contain ash and will be excavated as part of final closure.

1984 Ash Basin

The 1984 Basin was operated from 1984 to 2013. The 1984 Basin was constructed with a 12-inch thick clay liner at the basin bottom, which extends along the side slopes where it is protected by a 2-foot thick sand layer. The 1984 Basin crest elevation is 34 feet msl. In 2006, an Interior

Containment Area ("ICA") was constructed within the 1984 Basin with a crest elevation of 42 feet msl. The 1984 Ash Basin initially contained approximately 2.8 million tons of CCR material.

The LOLA is located between the discharge canal and the coal pile. It is believed that the presence of CCR in this area may have been due to plant operations between approximately 1954 and 1972. A small portion adjacent to the coal pile storage area was used to locate fuel oil storage tanks. This area contains approximately 686,000 tons of CCR and soil mixture at depths of 0 to 15 feet.

Sutton Variance

On November 16, 2018, Duke Energy submitted to the North Carolina Department of Environmental Quality an application for a variance to extend by six months (until February 1, 2020) the CAMA closure deadline applicable to the 1971 and 1984 Ash Basins at Sutton. Based on NCDEQ's analysis of the information submitted by Duke Energy, NCDEQ partially granted the variance extending the closure date for Sutton by four months to December 1, 2019.

However, the Sutton site has completed excavation required under CAMA without having to use the Variance extension. The excavation production quantities have been better than planned this reporting period. Good weather has been the major contributor for the results. The Wilmington area experienced below normal rainfall levels during the first six months of this year.

Current Operating Permit Details

The Cooling Basin, 1971 Basin, and 1984 Basin are operated under NPDES Permit No. NC0001422 to regulate effluent discharges to the Cape Fear River. Additionally, the dams of the Cooling Basin, 1971 Basin, and 1984 Basin are listed under the NCDEQ Dam Safety Program. The dam identification numbers for the Cooling Basin, 1971 Basin, and 1984 Basin are NEWHA-003, NEWHA-004, and NEWHA-005, respectively. The dam inventory lists the Cooling Basin and 1971 Dam as exempt. The 1984 Dam is listed as impounding, hence regulated. In 2014, these dams were re-rated as high hazard by NCDEQ. The 2006 ICA constructed within the 1984 Basin was permitted and used as a "basin within a basin," where an interior dam was constructed on top of the CCR within the basin; sluiced CCR was excavated from rim ditches, placed within the interior basin, and compacted to heights that are above the exterior basin dams. This operation was discontinued before reaching the permitted final grades when the Plant was shut down in November 2013.

During the period January 1, 2019 – June 30, 2019, approximately 1,924,428 tons of ash have been excavated. In total, 6,789,347 tons were excavated from the Sutton ash basins. Dewatering of the ash basins and the removal of ash from the site is being performed in project phases. The project has completed Phase I and is now implementing Phase II.

The following items in Phase I and Phase II have been completed:

1. Developed and installed approved erosion and sediment control measures.
2. Developed and constructed the infrastructure to remove and transport the ash from the basins.
3. Completed the installation of a wastewater treatment system to support dewatering of the ash basins.
4. Began on-site treatment of wastewater from the ash basins and landfill leachate using the on-site wastewater treatment facility.
5. Initiated and completed the removal of the first 2 million tons of ash from the Sutton site.
6. Completed the construction of 4600 feet of sheet pile wall to support future dike and berm removal.
7. Commenced the excavation of CCR and the removal of the 1971 Basin southern dike.
8. Received NCDEQ permits to decommission the 1971 and 1984 Basin dikes and outfall structure(s).
9. Designed, permitted, and constructed the on-site landfill.
10. Commenced operation of all on-site landfill cells. Cell 7 was placed in-service on January 10, 2019 and Cell 8 was place in-service on April 1, 2019.
11. Commenced final closure construction and capping for Cells 3 and 4 on April 3, 2019.
12. Continued the excavation and transport of Phase II ash to the on-site landfill.
13. Completed the installation of the on-site extraction well system and completed the relocation of several miles of outfall discharge piping to support operation of the extraction well system and future dike excavation.
14. Submitted and obtained all necessary permits for Phase II activities.
15. Completed dewatering of the 1984 and 1971 Basins.
16. Continued to excavate and transport material from the 1971 and 1984 Ash Basins to an approved on-site landfill.
17. Completed the excavation of CCR of the 1971 Basin southern dike.
18. Completed the excavation and dredging of material from the 1971 and 1984 Ash Basins on June 24, 2019.

The Sutton NPDES wastewater permit was issued to Duke Energy in December 2015 to allow for removal of bulk free water. The removal of the bulk free water was completed on January 28, 2016. After the required wastewater treatment facility was installed and operational, removal and treatment of the basin interstitial water commenced in June 2016. Based on revisions to the NPDES permit, the stormwater from the fossil plant has been rerouted and no longer discharges into the basins. Therefore, rainwater is the only inflow into the basins. Basin dewatering was then implemented on an as-needed basis to maintain the basins' clear water ponds as low as reasonably possible.

Under this Plan, the Company began removing ash to an off-site location while simultaneously developing an on-site landfill to meet the closure requirement mandated in CAMA. The Sutton on-site landfill construction permit was received on September 22, 2016. This date was significantly later than originally planned, resulting from delays with NCDEQ's environmental justice review.

The construction of the on-site landfill commenced early in Q4 2016. The first Permit-to-Operate for a completed landfill cell was obtained on July 6, 2017 from the NC Division of Waste Management. Phase I CCR excavation and transport off-site completed on June 27, 2017, and the Phase II CCR excavation and placement in the on-site landfill commenced on July 7, 2017. Landfill construction was completed March 26, 2018. Currently, all cells are in operation. The closure of two of the operating cells commenced in April 2019.

Phase II Scope

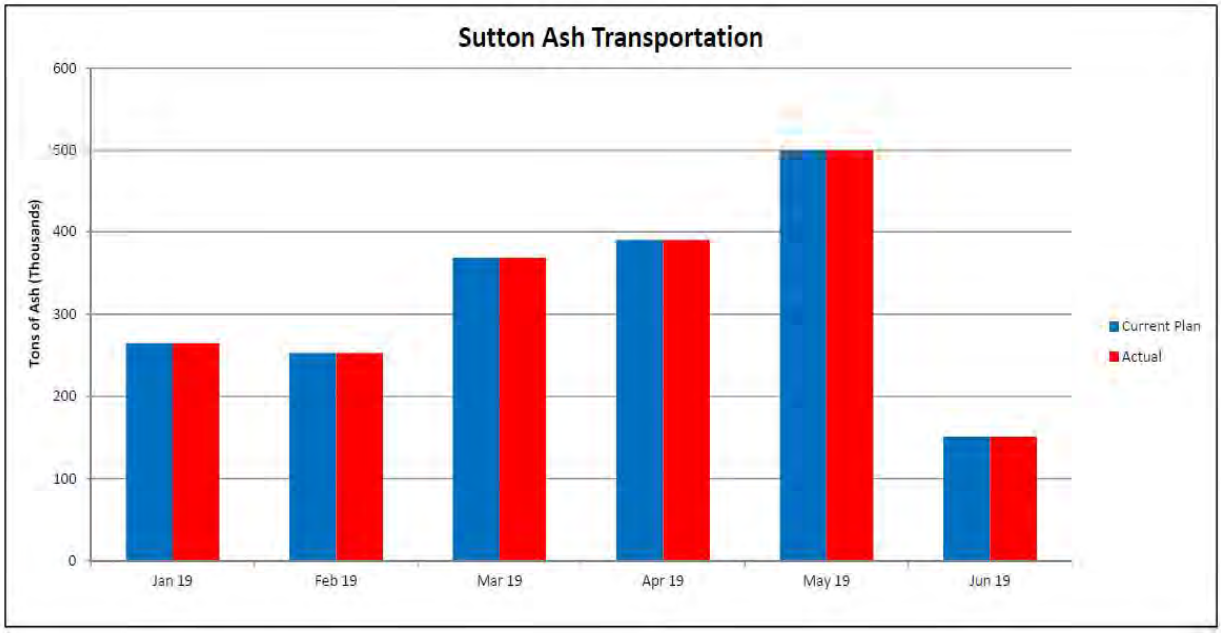
1. Construct, operate, and close cells for the on-site landfill. Cell 5 closure is scheduled to commence during Q3 2019.
2. Install and maintain required site haul roads.
3. Continue to treat landfill leachate water using the on-site wastewater treatment facility.
4. Continue infrastructure activities that are required to support the future excavation of the basins and the LOLA.
5. Complete closure activities for the 1971 and 1984 Ash Basins.

Inactive Ash Areas Scope

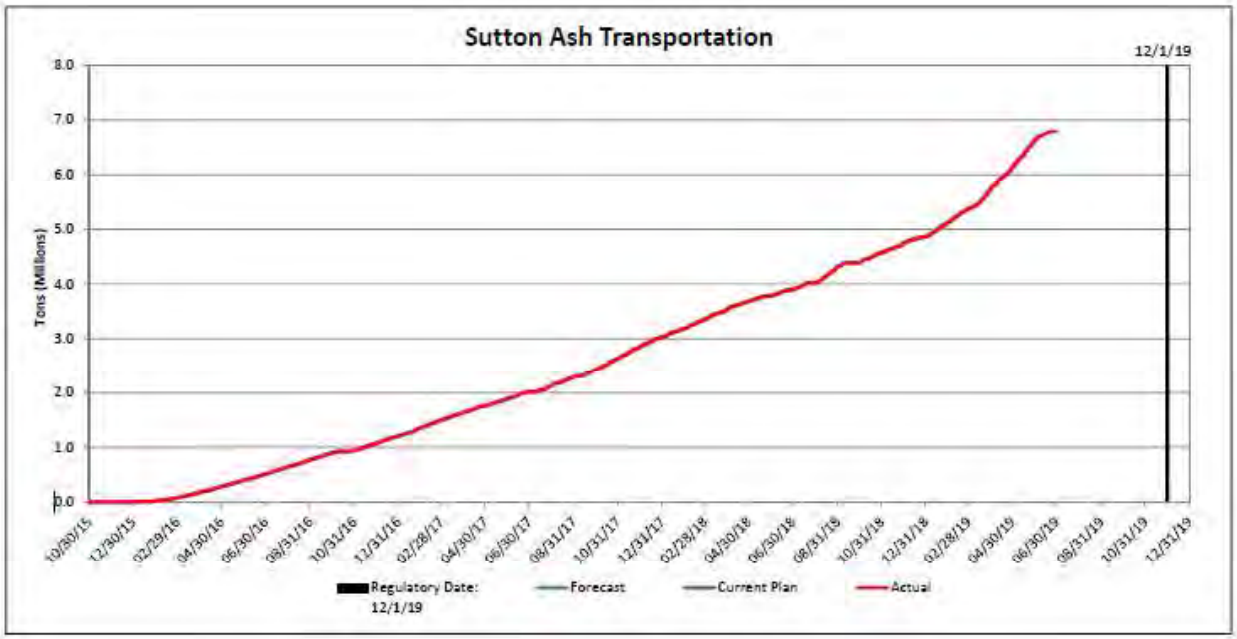
1. Submit and obtain any necessary permits for activities.
2. Excavate and transport approximately 684,600 tons of material from the LOLA to the on-site landfill.
3. Reinforce the LOLA western dike.
4. The LOLA will be closed as part of overall site closure, but is not subject to Part II, Sections 3(b) and 3(c) of CAMA.
5. Operate and close the remaining cells for the on-site landfill.

The charts below track the tonnage of ash transported from January 1, 2019 to June 30, 2019 and from October 2015 to completion.

Ash Transported Off Site in Thousands of Tons | January 1, 2019 to June 30, 2019



Ash Transported On-Site in Millions of Tons | October 2015 to June 2019



Critical milestones within the Plan are summarized in the table below.

MILESTONES	NO LATER THAN DATE	STATUS
Submit Excavation Plan to NCDEQ	November 15, 2014	Completed November 13, 2014
Complete Comprehensive Engineering Review	November 30, 2014	Completed November 30, 2014
Excavation Plan Acknowledgement from NCDEQ	February 17, 2015	Completed February 2, 2015
Submit Updated Excavation Plan to NCDEQ	November 15, 2015	Completed November 13, 2015
Commence Work – Ash Removal	Final Permit Approval + 14 days	Completed October 30, 2015
Receive NPDES Wastewater Permit	December 11, 2015	Completed December 2015
Receive Permit-to-Construct On-Site Landfill	February 29, 2016	Completed September 22, 2016
Submit Updated Excavation Plan to NCDEQ	December 31, 2016	Completed December 21, 2016
Receive Permit for Basin Dam Decommissioning	August 1, 2017	Completed December 7, 2017
Receive Permit-to-Operate On-Site Landfill, Cell 3	August 31, 2017	Completed July 6, 2017
Submit Updated Excavation Plan to NCDEQ	December 31, 2017	Completed December 1, 2018
Eliminate Stormwater Discharge into Impoundments	December 31, 2018	Completed July 2016
Submit Final Excavation Plan to NCDEQ	December 31, 2018	Completed December 11, 2018
1971 and 1984 Basins Closed Pursuant to Part II, Sections 3.(b) and 3.(c) of CAMA and Variance approved	December 1, 2019	Completed June 24, 2019
Excavate CCR from the Lay of the Land Area (LOLA)	June 20, 2020	On Track

Erosion and Sediment Control Plan

The project currently has one active E&SC plan: Site Wide Clearing Activities (NEWHA-2016-025). Additional applications are expected to be submitted during this phase as the project planning develops. Modifications from E&SC plans for subsequent phase(s) will be approved by NCDEQ prior to installation and initiation of subsequent phase work. The approved contractor will install the E&SC measures indicated in the plan. All control measures will be maintained throughout the project in accordance with the E&SC plans and permits. When possible, portions of the E&SC plan will be closed out at the approval of NCDEQ as areas become stabilized.

Dewatering Plan

The Sutton ash basins were dewatered to facilitate the removal of ash and to mitigate risk. Engineering analysis had shown that lowering the water below the level of ash within each basin did not improve the factor of safety against failure of the associated dam; therefore, removal of entrapped water was not required.

An engineered Dewatering Plan for Sutton was developed, and dewatering has been in progress since October 2015. Interstitial basin dewatering continued throughout the life of the project. Pumping was managed to control the water level as low as reasonably possible.

The plan called for the removal of ash from the 1971 Basin through different methods than from the 1984 Basin and the LOLA. Heavy equipment operation directly on top of the ash in the basin had been deemed impractical due to high groundwater recharge rates. Therefore, removal of the ash from the 1971 Basin incorporated hydraulic dredging and dewatering of the resulting dredged material. The water generated during ash removal was directed back to the 1971 Basin.

Interstitial dewatering and landfill leachate wastewater treatment will be performed by the on-site wastewater treatment facility in accordance with the NPDES permit.

Location(s) for Removed Ash

Ash removed from the site was transported by the contractor to permitted facilities. The ash storage location has been managed and maintained to ensure environmental compliance with applicable rules and regulations.

Brickhaven Structural Fill was the primary disposal location for the first two million tons of CCR material that was excavated at Sutton, and the on-site landfill located at Sutton is the primary disposal location for the remaining CCR material.

Brickhaven Structural Fill

The Brickhaven Structural Fill is located at the Brickhaven Mine near the City of Moncure in Chatham County, NC. It resides on approximately 299 acres. Ash was transported and beneficially used as fill material for a structural fill project at the reclaimed mine. The final rail shipment of ash to the Brickhaven Structural Fill from Sutton occurred on June 27, 2017.

Sutton On-Site Landfill

Ash excavated from the basins and LOLA will be disposed of in the on-site CCR landfill. The project includes the installation of a liner and leachate collection system for the landfill.

Transportation Plan

Ash was transported from the basins via off-road articulated dump truck to the on-site landfill. Ash from the LOLA via off road articulated truck to the on-site landfill is scheduled to commence in July 2019.

Environmental and Dam Safety Permitting Plan

Excavation of ash creates potential for stormwater impacts. Since Sutton has no point source discharges consisting solely of industrial stormwater, NCDEQ determined that an individual industrial stormwater permit is not necessary. Instead, NCDEQ has included internal stormwater outfalls and the requirement to develop a stormwater pollution prevention plan as a requirement of the NPDES wastewater permit.

NCDEQ has determined that removal of dry ash from the Sutton ash basins can be regulated via the Construction Stormwater General Permit. Ash removal activities were originally permitted when NC DEMLR approved erosion control plan NEWHA-2016-023. These activities are now encompassed in NEWHA-2016-025.

NCDEQ determined that dewatering activities, including free water removal, required an NPDES wastewater permit modification. Based on this requirement, the Company applied for a permit modification to specifically allow decanting of free water and dewatering of interstitial water. Application was made in January 2015. The Company received the modified NPDES permit in December 2015 for a term of one year. On October 1, 2017, the permit was re-issued and included the authorization to treat and discharge landfill leachate through the on-site wastewater treatment plant.

There are no jurisdictional wetlands/streams associated with the removal of ash from the 1984 and 1971 Ash Basins during Phase I and II. Wetlands stream impacts were permitted for the construction of the on-site landfill.

All necessary Dam Safety approvals will be or have been obtained to cover activities on or around jurisdictional dams. Breaching of the dams will require Dam Safety approval. Any impacted wells or piezometers will be properly abandoned in accordance with NCDEQ requirements. Fugitive dust will be managed to mitigate impacts to neighboring areas.

Permit Matrix

MEDIA	PERMIT	RECEIVED DATE (R) TARGET DATE (T)	COMMENTS
Water	NPDES Wastewater Permit – Major Modification	Major Modification to allow basin dewatering: December 2015 (R)	None
		Major Modification to allow the discharge of landfill leachate: October 1, 2017 (R)	An NPDES permit revision was required to authorize the treatment and discharge of landfill leachate. The target date was originally January 2017, but was affected by shifts in Agency priorities. The draft permit was posted for public comment in June 2017 and again in August 2017. The approved NPDES modification was received and went into effect on October 1, 2017.
	Jurisdictional Wetland and Stream Impacts/ 404 Permitting and 401 WQC	September 2016 (R)	Four cells in the new Sutton landfill have identified jurisdictional wetland/stream impacts in Phase I. Wetland permits have been received. No impacts to jurisdictional wetlands requiring additional permitting have been identified for Phase II.
Dam Safety	Dam Decommissioning Request Approval	February 7, 2018 (R)	Original target date was March 2017. Permit is required to support excavation plan.
Waste	Site Suitability Report	July 2, 2015 (R)	Site Suitability obtained for Sutton landfill. Previous date was March 31, 2015. Change was related to additional requirements to complete the report prior to submittal.
	Permit-to-Construct Landfill	September 2016 (R)	The original target date was February 23, 2016.
	Permit-to-Operate Landfill	Cell 3: July 6, 2017 (R) Cell 4: Aug. 25, 2017 (R) Cell 5: Dec. 7,2017 (R) Cell 6: Feb. 7, 2018 (R)	The original project target date for Cell 3 was November 23, 2016. Delay was due to NCDEQ's

		Cells 7 & 8: May 16, 2018 (R)	environmental justice review process.
Other Requirements	Site-Specific Nuisance/Noise/ Odor/Other Requirements, including DOT Requirements	N/A	None identified

Site Progression of the Excavation Process at the L.V. Sutton Electric Plant

Aerial View 2015

Aerial View June 2016

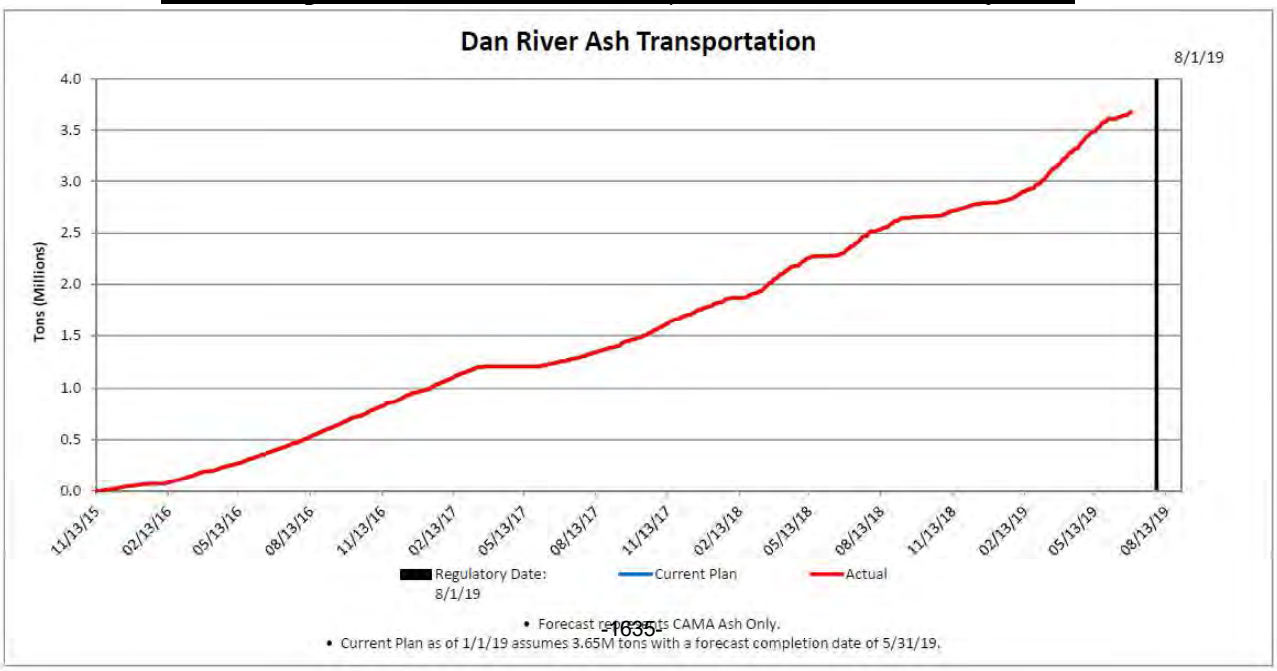
Aerial View June 2017

Aerial View August 2018

Aerial View January 2019

Aerial View June 2019

Ash Transported in Millions of Tons | November 2015 to May 2019



	Extrapolate Points From Graph Tons	Average between Points Tons							
				Date	Actual CY	Actual Tons	Planned Tons	Planned CY	8.1 Milestones CY
6/13/2017	1.20E+06	33,333		Jun-17	27,778	33,333	30,000	25,000	25,000
		33,333		Jul-17	55,556	66,667	63,600	53,000	28,000
	1.30E+06	33,333		Aug-17	83,333	100,000	97,200	81,000	28,000
		100,000		Sep-17	166,667	200,000	130,800	109,000	28,000
		100,000		Oct-17	250,000	300,000	164,400	137,000	28,000
	1.60E+06	100,000		Nov-17	333,333	400,000	198,000	165,000	28,000
		66,667		Dec-17	388,889	466,667	318,000	265,000	100,000
		66,667		Jan-18	444,444	533,333	438,000	365,000	100,000
	1.80E+06	66,667		Feb-18	500,000	600,000	558,000	465,000	100,000
		133,333		Mar-18	611,111	733,333	678,000	565,000	100,000
		133,333		Apr-18	722,222	866,667	798,000	665,000	100,000
	2.20E+06	133,333		May-18	833,333	1,000,000	996,000	830,000	165,000
		116,667		Jun-18	930,556	1,116,667	1,194,000	995,000	165,000
		116,667		Jul-18	1,027,778	1,233,333	1,392,000	1,160,000	165,000
	2.55E+06	116,667		Aug-18	1,125,000	1,350,000	1,590,000	1,325,000	165,000
	Average Tons	90,000							1,325,000
	Average CY	75,000		Behind as of Aug 31st	200,000	CY			
				ADD ASH Moved From Ash Stack 2	168,000				
					368,000				
				Amount in White paper	352,368				

Complete Sequence 1 & 2 September 2018

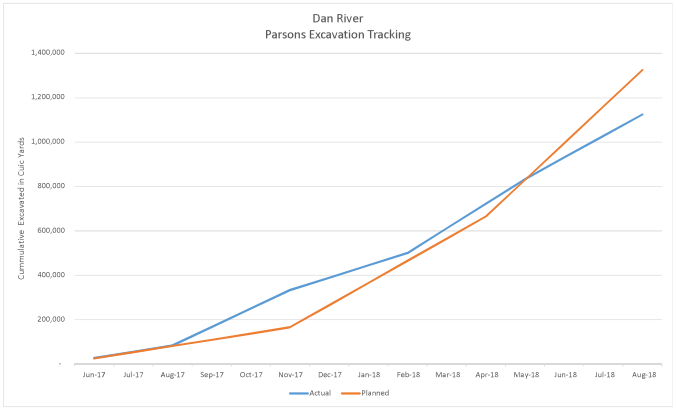


Exhibit C	Sequence 1	1,235,000	
	Sequence 2	105,500	
		1,340,500	
	INCREASE	460,000	CY
		34%	

Public Staff 49

I/A

Duke Energy Carolinas
Response to
North Carolina Public Staff Data Request
Data Request No. NCPS 231

Docket No. E-7, Sub 1214

Date of Request: **March 9, 2020**
Date of Response: **March 11, 2020**

☐ **CONFIDENTIAL**

☒ **NOT CONFIDENTIAL**

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to North Carolina Public Staff Data Request No. 231-8, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to North Carolina Public Staff under my supervision.

Camal O. Robinson
Associate General Counsel
Duke Energy Carolinas

Request:

8. On page 20, line 22 through page 21, line 2 of her rebuttal testimony, witness Bednarcik states, "Through this process and by implementing lessons learned from other excavation projects, including how to accurately assess bottom of ash floor grades and estimated soil waste, the Company's estimate increased by at least 552,000 tons over the course of the project."
a. Please provide the date that borings were first performed at the Dan River site to assess bottom of ash grades.
b. Please provide an explanation of how long Duke Energy anticipated it would take to excavate this additional ash.
c. Please provide a timeline of the increases in the total ash estimate netting an additional 552,000 tons, including each date the estimate changed and the estimate as of each date.

Response:

a. The first date of borings/wells for conceptual closure was 6/3/2013 as provided in the "Data Report – Ash Basin Closure – Conceptual Design" (amec, 9/20/2013). An excerpt from the data report summary tables is attached as back-up.

PS DR 231-8a First Borings and Wells.p

b. As set forth in Purchase Order Number 5067043 Exhibit B Section 8.1 Key Milestones, the production rate for Sequences 1, 2 & 3 beginning in May 2018 was 165,000 CY (198,000 tons) per month. As such, the estimated time to excavate the additional 552,000 tons was 2.8 months. The Purchase Order was provided in the response to PS DR 2-9.

c. See attached spreadsheet 'PS DR 231-8c Dan River CCR quantity history.xlsx'

PS DR 231-8c Dan River CCR quantity h

History of CCR Quantity Estimates at Duke Energy's Dan River Steam Station[1]					
CCR Estimate Iteration	CCR Quantity[2]				Notes
	Primary and Secondary Ash Basin (tons)	Ash Fill 1[3] (tons)	Ash Fill 2[3] (tons)	Total	
1	1,802,887	not calculated	not calculated	N/A	1/22/2014, AMEC, conceptual closure design
2	1,603,366	954,487	414,588	2,972,441	7/14/2017, Amec Foster Wheeler, Dam Decommissioning Sequence A
3	2,152,614	1,342,460	580,006	4,075,080	9/7/2018, Wood, "Estimated Material Quantities for Closure of On-Site CCR Units - CCR Volume and Landfill Airspace"
4	2,152,614	1,342,460	580,006	4,075,080	10/10/2018, Wood, "Estimated Material Quantities for Closure of On-Site CCR Units - CCR Volume and Landfill Airspace - Revision 1"
5	2,176,626	1,342,460	580,006	4,099,092	1/14/2019, Wood, "Estimated Material Quantities for Closure of On-Site CCR Units - CCR Volume and Landfill Airspace - Revision 2"
6	2,116,120	1,339,204	634,224	4,089,547	1/31/2020, Wood, "Estimated Quantities of CCR Disposal at Duke Energy's Dan River Station"

Notes:

1. This table summarizes quantity estimates available to the author at the time of summary and may not be an exhaustive list of calculations developed for this site.
2. Assumes CCR unit weight of 1.2 tons/cy.
3. Ash Fill 1 and 2 quantities may include cover soil and soil spoil piles that were placed within the ash fill footprints.

unit weight	1.2	tons/cy

Public Staff 52

I/A

Duke Energy Progress
Response to
NC Public Staff Data Request
Data Request No. NCPS 181

Docket No. E-2, Sub 1219

Date of Request: **May 6, 2020**
Date of Response: **May 13, 2020**

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Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to NC Public Staff Data Request No.181-2, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to NC Public Staff under my supervision.

Camal. O. Robinson
Associate General Counsel
Duke Energy Progress

Request:

2. On page 11, lines 9-14 of her rebuttal testimony, witness Bednarcik states, "Charah incurred significant capital expenditures to acquire the Brickhaven and Sanford Clay Mines – which could accommodate 12 million tons of ash and 8 million tons of ash, respectively – and upfit them to safely accommodate ash disposal, including by installing railway to physically access the Brickhaven mine and preparing the sites to store the transported CCR."
Please provide the page and section numbers or excerpts from the Charah Master Contract that required Charah to completely develop the Brickhaven and Sanford Clay Mines for ash disposal.

Response:

The Master Contract does not state that Charah was to "completely develop the Brickhaven and Sanford Clay Mines for ash disposal" (emphasis added), but rather Section 7.3 of Exhibit B in the contract states: "Contractor agrees that Contractor will develop the Brickhaven and Sanford Clay Mines only as reasonably necessary to accommodate the phased volumes of Ash to be loaded, transported and placed at the Mines under the applicable Purchase Orders and as reasonably necessary to comply with the permits in effect at such Mines." This language was retained in Revision 1 to the Master Contract in Section 7.3(b). Pursuant to this language, Charah, in fact, developed each site as "reasonably necessary" to accommodate ash to be excavated under issued Purchase Orders. Some access improvements were implemented at Sanford, as shown in the response to PS DR 181-9. As shown in the response to DEC PS DR 112-20, the actual development costs identified by Charah were different between Brickhaven and Sanford sites, showing that they were developed to a different extent to meet the requirements of Section 7.3 of the Master Contract. And, as shown in "Bednarcik Rebuttal Exhibit 3", the "Development/Acquisition" actual costs for Brickhaven were $76,295,517 compared to $5,113,934 for Sanford – again, showing that they were developed to a different extent.

Duke Energy Progress
Response to
NC Public Staff Data Request
Data Request No. NCPS 181

Docket No. E-2, Sub 1219

Date of Request: **May 6, 2020**
Date of Response: **May 13, 2020**

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The attached response to NC Public Staff Data Request No.181-4, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to NC Public Staff under my supervision.

Camal. O. Robinson
Associate General Counsel
Duke Energy Progress

Request:

4. Please indicate whether witness Bednarcik is asserting on page 14, line 8 of her testimony that, at the time it entered into Contract 8323, Duke knew the pricing for some of the costs of development (synthetic and clay liners, temporary caps, anchor trenches, and temporary and final seeding), but the remaining cost (e.g., purchasing the properties, construction of the leachate management system, infrastructure construction, and rail construction, and obtain all permits) were unknown.

Response:

Known pricing for certain items are identified in Master Contract 8323, dated November 12,2014 and are contained in Exhibit E; Alternative pricing is contained in Exhibit F and Exhibit G. Unknown costs were not included in the Master Contract.

Duke Energy Progress
Response to
NC Public Staff Data Request
Data Request No. NCPS 181

Docket No. E-2, Sub 1219

Date of Request: **May 6, 2020**
Date of Response: **May 13, 2020**

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The attached response to NC Public Staff Data Request No.181-5, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to NC Public Staff under my supervision.

Camal. O. Robinson
Associate General Counsel
Duke Energy Progress

Request:

5. On page 14 of her rebuttal testimony, witness Bednarcik states, "The development costs that were included in the per ton price of the purchase orders were markedly different from the development costs intended to be captured by the fulfillment fee." Please explain how Charah would have been compensated for the "costs intended to be captured by the fulfillment fee" had Duke delivered 20 million tons of coal ash for disposal at the Brickhaven and Sanford mines.

Response:

There is initial development and ongoing development that make up development costs. The "**Prorated Cost**" is the contractual mechanism that determines termination costs and uses a "**Prorated Percentage**" to determine that value. The definition of "**Prorated Percentage**" is defined in Contract 8323, Exhibit B, Section 1 Definitions, Rules of Construction, Order of Precedence, Section 1.1 and is shown below:

"**Prorated Percentage**" means with respect to the Brickhaven and Sanford Clay Mines, as of any date of determination, the amount of such land acquisition, development, closure, post-closure monitoring, and leachate collection and disposal costs not recovered by Contractor through the payment by Duke Energy of the "Unloading/Development/Placement" portion of the applicable Per Ton Prices for the total tonnage of Ash transported to the Brickhaven and Sanford Clay Mines as of such date, which the parties agree shall be equal to one (1) less the percentage determined by dividing (a) the total tonnage of Ash transported to the Brickhaven and/or Sanford Clay Mines under the Agreement as of such date by (b) twenty million tons of Ash (20,000,000) less any Tons of Third Party Ash placed in the Brickhaven and/or Sanford Clay Mines as of such date. *(underline added for emphasis)*

The "**Prorated Percentage**" by contract definition is [1 - (7,342,409 tons / 20,000,000 tons)] and is approximately 63.288% and is nothing more than a percent calculation by Contract.

The definition of "**Prorated Cost**" is defined in Contract 8323, Amendment 1, dated January 7, 2015, 1., Amendment to Section 1.1 of Exhibit B and is shown below:

"**Prorated Cost**" means, with respect to the Brickhaven and Sanford Clay Mines, as of any date of determination, an amount equal to (a) the actual cost incurred by Contractor for land acquisition and development and expected to be incurred by Contractor for closure, post-closure monitoring, and leachate collection and disposal for and at the Brickhaven and Sanford Clay Mines as of such date multiplied by (b) the Prorated Percentage, as such amount may be modified or adjusted by the parties pursuant to the process described in Section 7.3. The parties agree that in no event following the Prorated Cost Triggering Event will the Prorated Costs exceed (i) at any time prior to Contractor commencing rail installation and cell preparation Services at the Brickhaven or Sanford Clay Mines, $25,000,000, (ii) at any time following the commencement by Contractor of rail installation

and cell preparation Services at the Brickhaven or Sanford Clay Mines, but prior to the placement of any Ash at the Brickhaven or Sanford Clay Mines, $35,000,000 and (iii) at any time following the placement of Ash at the Brickhaven or Sanford Clay Mines, $90,000,000.

So, the "**Prorated Cost**" is simply what was spent by the Contractor at Brickhaven and Sanford Clay Mines multiplied by the "**Prorated Percentage**" (a percentage defined by Contract defintion) and the "**Prorated Cost**" is limited to $90,000,000 after placement of any Ash at the Brickhaven and Sanford Clay Mines.

If Duke Energy had delivered 20 million tons of coal ash to the Brickhaven and Sanford mines, the cost per ton for subsequent purchase orders would have been adjusted to account for all the costs incurred by Charah, including those that were included in the negotiated fulfillment fee. When looking at the price per ton actually recovered in the purchase orders that were issued for Riverbend and Sutton versus the overall costs that were identified in the "prorated costs" definition provided above, the price per ton collected for the ash actually sent to Brickhaven did not adequately cover all costs. And as no purchase orders were issued for Sanford, all costs incurred were included in the negotiated fulfillment fee.

Duke Energy Progress
Response to
NC Public Staff Data Request
Data Request No. NCPS 181

Docket No. E-2, Sub 1219

Date of Request: **May 6, 2020**
Date of Response: **May 13, 2020**

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The attached response to NC Public Staff Data Request No.181-8, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to NC Public Staff under my supervision.

Camal. O. Robinson
Associate General Counsel
Duke Energy Progress

Request:

8. On page 15, lines 8-11, of her rebuttal testimony, witness Bednarcik states, "Charah actually incurred development costs for the Sanford site to receive the planned-for ash, including, but not limited to, capital expenses to purchase the property, as well as anticipated Site Closure and Post Closure costs required for compliance with the Mine Reclamation Permit."
a. Please provide the page and section numbers or excerpts from the Charah Master Contract that led Charah to believe it had to purchase the Sanford site.
b. Please explain if Charah incurred the anticipated Site Closure and Post Closure costs at the Sanford site in the amounts of $8,927,540 and $1,212,500 as shown on witness Bednarcik's Confidential Rebuttal Exhibit 3.

Response:

a. As shown in the "CONFIDENTIAL Phase 1 Excavation Package Executive Summary 11112014" document provided in response to the DEP PS DR 5-8 in the 2017 DEP Case, at the time of award "Charah's expected price is based on utilizing a clay reclamation mine that Charah has not permitted. There is a high probability Charah will be successful in purchasing and permitting the clay reclamation mine." Charah also provided alternative pricing and locations if they were not able to obtain and/or permit the Brickhaven and Sanford mines. Since the Master Contract included the 20,000,000 ton number, as discussed throughout the Rebuttal Testimony, and the Brickhaven mine had a fill capacity of 12 million tons and the Sanford mine had a fill capacity of 8 million tons, the commitment was that Charah would be able to manage 20 million tons. This is further confirmed by the following provisions: - In Exhibit B of the Master Contract, o the definition of "fill site(s)" states "Fill site(s) means, if applicable, the site(s) owned by Contractor that is/are identified in the Purchase Order for the placement and beneficial reuse of the Ash as beneficial structural fill." (Emphasis added)_. The word "owned" means that Charah purchases and owns the sites. (note, this definition was changed in revision 2 to include "any site(s) that are owned by Contractor's third party customer." o Section 7.3: "In connection with such determination, at Duke Energy's request and in Duke Energy's sole discretion, Contractor will transfer such Mines to Duke Energy…" – how could they transfer it to us if they did not own it? o Throughout the original contract, there are references to the fact that if the "Contractor [should] be unable to transport the Ash to the Brickhaven Clay Mine for any reason approved by Duke Energy or any restriction under and Environmental Law, Seller has identified the Sanford Mine… as its first alternative location." There was another alternative location identified if Brickhaven and Sanford were not available – the Anson County Landfill in Polkton, NC (this was identified in Exhibit G of the Master Contract.) - In the Master, Amendment 1 o Section 1.1 (a) definition of "deemed terminated" includes a provision of termination when "Duke Energy does not make available Ash to be placed at either the Brickhaven or Sanford Clay Mines as the primary placement Site or Seller is prohibited from placing Ash at Brickhaven and Sanford Clay Mines due to a change in applicable Environmental Law following the occurrence of the Prorated Cost Triggering Event…" o Section 1.1 (b) definition of "prorated costs" has as a base the "actual cost incurred by Contractor for land acquisition

and development and expected to be incurred by Contractor for closure, post-closure monitoring, and leachate collection and disposal for and at the Brickhaven and Sanford Clay Mines…" (emphasis added) Also, there a minimum of $25,000,000 payment – that was if there was NO development. Therefore, that shows the purchase of the property occurred just for Duke. b. The Company has not undertaken to confirm whether or not Charah has yet incurred the $8,927,540 and $1,212,500 costs for Site Closure and Post Closure, respectively, at the Sanford site. Regardless of whether such costs have already been incurred, however, they are costs that Charah will eventually occur and, therefore, were rolled into negotiations for the fulfillment fee.

Duke Energy Progress
Response to
NC Public Staff Data Request
Data Request No. NCPS 181

Docket No. E-2, Sub 1219

Date of Request: **May 6, 2020**
Date of Response: **May 13, 2020**

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The attached response to NC Public Staff Data Request No.181-9, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to NC Public Staff under my supervision.

Camal. O. Robinson
Associate General Counsel
Duke Energy Progress

Request:

9. On page 17, lines 14-17 of her rebuttal testimony, witness Bednarcik states, "In addition, Amendment 1, Section 7.3(c) provides that "[t]he parties acknowledge and agree that the actual Prorated Costs will depend to a significant degree upon the amount of Ash placed at the Site(s) and the status of the Site(s) at the time of termination." Please provide a detailed description of the Sites at the time of termination.

Response:
As stated in the response to PS DR 181-7 and shown in "Bednarcik CONFIDENTIAL Rebuttal Exhibit 4, question 4, no ash was placed at the Sanford Clay Mine Site. At the Brickhaven Mine Site, 7,342,409 tons of ash was placed. The definition of "Site(s)" is defined in Contract 8323, Exhibit B, Section 1 Definitions, Rules of Construction, Order of Precedence, Section 1.1 and is shown below:

"Site(s)" means, as applicable, the Fill Site or Permitted Landfill.

Further, the definition of "Fill Site" is defined in Contract 8323, Exhibit B, Section 1 Definitions, Rules of Construction, Order of Precedence, Section 1.1 and is shown below:

"Fill Site(s)" means, if applicable, the site(s) owned by Contractor that is/are identified in the Purchase Order for the placement and beneficial reuse of the Ash as beneficial structural fill.

To the best of the Company's recollection, at the time of termination:
- The Sanford Site had some access road improvements, and some land clearing activities had occurred. Surveying and geotechnical investigations had been conducted but no construction activities had occurred related to cell development.
- The Brickhaven Site had the following featured constructed on-site to support the receipt, unloading and placement of ash:
• A two mile rail spur from the main CSX line was constructed to support receipt of ash by train. The rail included one track approximately one mile in length off the main line and four tracks of sufficient length to accept two loaded trains of 85 cars, one track for storage of emptied cars and one run-around track for egress by CSX locomotives. The rail spur included construction of two bridges to allow crossing streams and wetlands. The rail unloading area was constructed to allow rail cars to be unloaded into haul trucks that transported the ash to the structural fill. Haul roads were constructed to support hauling ash from the unloading area to the active placement areas of the facility.
• The structural fill had been lined with a water proof barrier consisting of layers of clay, geo-composite material and HDPE liner. The clay had been mined from the Brickhaven site. A leachate collection system had been constructed to support collection of leachate which was being pumped to storage tanks and then into haul trucks for transport to offsite treatment facilities.
• The coal ash that was transported to the site had been placed in the structural fill and had been covered with temporary cover. The placement of the final cover system was in progress.

Duke Energy Progress
Response to
NC Public Staff Data Request
Data Request No. NCPS 181

Docket No. E-2, Sub 1219

Date of Request: **May 6, 2020**
Date of Response: **May 13, 2020**

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The attached response to NC Public Staff Data Request No.181-11, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to NC Public Staff under my supervision.

Camal. O. Robinson
Associate General Counsel
Duke Energy Progress

Request:

11. On page 23, line 20 through page 24, line 5, of her rebuttal testimony, witness Bednarcik states in part, "Mr. Garrett's contention that the Company did not incur any closure or post-closure costs at the Sanford Clay Mine is incorrect" and "These expenses are described in the Company's Responses. . . attached hereto as Bednarcik Rebuttal Exhibit 4." Regarding these statements, admit that Bednarcik Rebuttal Exhibit 4 describes estimated closure and post closure costs at the Sanford/Colon site and not actual costs incurred.

Response:

DEP admits that Bednarcik Rebuttal Exhibit 4 describes estimated closure and post closure costs at the Sanford/Colon site and not actual costs incurred.

I/A

Docket No. E-7, Subs 1187A, 1213A, and 1214A

Confidential Public Staff Bednarcik Rebuttal Cross-examination Exhibit No. 4

I/A

Docket No. E-7, Subs 1187A, 1213A, and 1214A

Confidential Public Staff Bednarcik Rebuttal Cross-examination Exhibit No. 5

DOCKET NO. E-7, SUB 1214 **PUBLIC STAFF EXHIBIT**

STOCK PRICE CLOSE

	Duke Energy Corporation	S&P 500 Index
February 21, 2020	$101.43	3,338
February 24 [1]	102.30	3,226
February 25	99.25	3,128
February 26	98.94	3,116
February 27	94.99	2,979
February 28	91.70	2,954
March 2	96.67	3,090
March 3	95.61	3,003
March 4	101.65	3,130
March 5	100.13	3,024
March 6	99.05	2,972
March 9	94.58	2,747
March 10	95.05	2,882
March 11	90.94	2,741
March 12	80.48	2,481
March 13	85.75	2,711
March 16	76.58	2,386
March 17	86.00	2,529
March 18	79.28	2,398
March 19	75.05	2,409
March 20	68.40	2,305

[1] Issuance of Commission February 24, 2020 Dominion Energy North Carolina order in Docket No. E-22, Sub 562.

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
w/ inflation

	Total Project Costs (2015+)	Total Actuals 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020
DEC											
Operating											
Allen	$ 1,129,842,383	$ 63,009,708	$ 1,066,832,675	$ 13,233,460	$ 19,430,295	$ 8,306,467	$ 15,235,608	$ 6,401,046	$ 4,718,161	$ 402,833	$ 13,226,420
Belews Creek	$ 793,021,333	$ 64,373,399	$ 728,647,935	9,861,194	26,479,748	9,534,640	7,943,584	10,422,799	992,061	131,433	16,830,598
Cliffside	$ 573,094,197	$ 76,583,184	$ 496,511,013	25,869,494	21,351,036	13,088,717	9,506,805	6,251,948	6,463,294	515,184	18,590,449
Marshall	$ 1,019,113,175	$ 75,565,350	$ 943,547,825	13,212,194	18,159,819	6,540,243	11,770,092	24,991,793	1,875,676	891,209	12,026,911
Total Operating Plants	**3,515,071,089**	**279,531,641**	**3,235,539,447**	**62,176,342**	**85,420,898**	**37,470,067**	**44,456,089**	**48,067,587**	**14,049,193**	**1,940,659**	**60,674,378**
Retired											
Buck	$ 474,977,562	$ 215,480,209	$ 259,497,354	10,035,189	9,821,833	18,828,443	63,670,317	106,039,713	13,674,461	7,084,713	75,974,958
Dan River	$ 280,737,665	$ 224,413,016	$ 56,324,649	38,612,244	70,263,998	40,266,734	29,523,279	44,797,524	5,692,968	949,237	12,888,681
Riverbend	$ 445,966,471	$ 415,377,502	$ 30,588,969	39,667,308	86,404,316	134,089,437	84,304,849	70,839,092	4,345,164	72,499	1,517,060
WS Lee (SC)	$ 272,240,561	$ 109,820,235	$ 162,420,326	19,687,325	35,344,738	37,577,688	8,498,729	8,372,434	892,413	339,322	8,311,007
Total Retired Plants	**1,473,922,259**	**965,090,962**	**508,831,297**	**108,002,066**	**201,834,885**	**230,762,303**	**185,997,174**	**230,048,762**	**24,605,005**	**8,445,772**	**98,691,706**
Total Duke Energy Carolinas	**4,988,993,348**	**1,244,622,603**	**3,744,370,744**	**$ 170,178,407**	**$ 287,255,783**	**$ 268,232,370**	**$ 230,453,263**	**$ 278,116,349**	**$ 38,654,198**	**$ 10,386,430**	**$ 159,366,084**

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried fo
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the as

	Total Project Costs (2015+)	Total Actuals 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020
Factor - MWHs at Generation - Energy Factor				**67.36%**	**67.42%**	**66.62%**	**65.98%**	**65.88%**	**66.84%**	**65.88%**	**66.84%**
DEC Estimated NC Retail											
Operating											
Allen				$ 8,914,601	$ 13,099,652	$ 5,534,134	$ 10,051,826	$ 4,217,215	$ 3,153,798	265,399	8,841,041
Belews Creek				6,642,905	17,852,302	6,352,397	5,240,850	6,866,875	663,131	86,592	11,250,210
Cliffside				17,426,752	14,394,591	8,720,279	6,272,198	4,118,984	4,320,311	339,420	12,426,561
Marshall				8,900,276	12,243,114	4,357,398	7,765,422	16,465,396	1,253,773	587,157	8,039,243
Total Operating Plants				**41,884,533**	**57,589,659**	**24,964,207**	**29,330,296**	**31,668,471**	**9,391,013**	**1,278,568**	**40,557,055**
Retired											
Buck				6,760,115	6,621,752	12,544,337	42,007,052	69,862,370	9,140,528	4,667,637	50,784,543
Dan River				26,010,791	47,371,074	26,827,470	19,478,243	29,514,048	3,805,395	625,388	8,615,283
Riverbend				26,721,525	58,252,667	89,336,283	55,620,866	46,671,070	2,904,472	47,765	1,014,060
WS Lee (SC)				13,262,189	23,828,963	25,035,909	5,607,111	5,516,028	596,522	223,556	5,555,392
Total Retired Plants				**72,754,620**	**136,074,456**	**153,744,000**	**122,713,272**	**151,563,517**	**16,446,919**	**5,564,346**	**65,969,279**
Total Duke Energy Carolinas				**$ 114,639,153**	**$ 193,664,115**	**$ 178,708,207**	**$ 152,043,568**	**$ 183,231,988**	**$ 25,837,932**	**6,842,914**	**106,526,334**
McManeus Exhibits Docket E-7 Sub 1146 NC-1800 and Sub 1214 NC-1100				E-7 Sub 1146	E-7 Sub 1146	E-7 Sub 1146	E-7 Sub 1214	E-7 Sub 1214		E-7 Sub 1214	
System spend [1]				170,110,828	286,663,443	266,092,717	228,908,568	277,923,903		10,386,430	
NC Retail Only Spend [2]				114,593,628	193,264,767	177,282,676	151,606,295	183,208,966		6,842,914	
Variance to McManeus Exhibits				45,525	399,348	1,425,531	437,272	23,021		0	

[1] Adjustments made to system spend for rate making purposes to adjust for items such as bottled water, and Dan River beneficial reuse.
[2] In E-7 Sub 1214 Allocation factors are updated in June each year to align with the timing of the Cost of Service Study filing.

Duke Energy Carolinas												
Ash Management ARO Cash Flows Summary												
Estimates as of Q1-2020- March 31, 2020												
Actuals As of 01/31/2020												
w/ inflation												
	Actuals & Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
DEC												
Operating												
Allen	$ 13,629,253	$ 13,719,029	$ 35,261,395	$ 40,477,300	$ 47,819,745	$ 53,692,640	$ 56,570,892	$ 60,324,164	$ 60,970,839	$ 62,144,233	$ 63,451,388	$ 64,786,104
Belews Creek	16,962,031	27,214,324	40,996,751	43,344,583	42,170,164	47,893,691	53,137,665	51,152,132	52,572,638	51,439,550	51,849,336	46,744,510
Cliffside	19,105,632	30,849,307	49,902,847	47,369,410	51,878,622	52,867,627	41,308,876	23,519,014	13,452,516	10,195,095	4,046,117	4,131,086
Marshall	12,918,120	35,240,185	60,529,836	63,308,720	66,760,569	61,444,120	62,424,666	56,738,737	57,787,724	58,971,347	66,366,556	67,791,525
Total Operating Plants	**62,615,037**	**107,022,845**	**186,690,829**	**194,500,013**	**208,629,101**	**215,898,079**	**213,442,099**	**191,734,046**	**184,783,717**	**182,750,225**	**185,713,398**	**183,453,225**
Retired												
Buck	83,059,671	16,924,901	6,587,322	4,226,764	4,679,141	9,160,249	9,353,442	9,444,945	8,996,471	6,887,101	6,578,388	6,731,198
Dan River	13,837,918	3,659,138	1,107,042	1,291,576	1,065,163	990,090	1,010,882	1,032,110	1,053,699	1,054,667	1,076,815	1,099,428
Riverbend	1,589,559	3,190,908	764,256	902,041	656,848	605,279	617,990	630,968	644,175	636,573	649,942	663,590
WS Lee (SC)	8,650,329	36,951,092	17,238,805	24,410,773	29,350,085	22,391,589	2,507,650	575,605	587,637	578,838	590,994	603,405
Total Retired Plants	**107,137,477**	**60,726,039**	**25,697,425**	**30,831,154**	**35,751,236**	**33,147,207**	**13,489,963**	**11,683,628**	**11,281,982**	**9,157,180**	**8,896,139**	**9,097,622**
Total Duke Energy Carolinas	**$ 169,752,514**	**$ 167,748,884**	**$ 212,388,254**	**$ 225,331,167**	**$ 244,380,337**	**$ 249,045,286**	**$ 226,932,062**	**$ 203,417,674**	**$ 196,065,699**	**$ 191,907,405**	**$ 194,609,537**	**$ 192,550,847**
Column called "Remaining Forecast to be allo	***rward into future cash flow years in Q3-2020 Annual ARO remeasurement cycle.***											
Item Labeled NCDEQ Settlement impact is the	***sumption that a variance will be granted by NCDEQ to extend beneficaiton activities until 2035.***											
Factor - MWHs at Generation - Energy Factor	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**
	Actuals & Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**
DEC Estimated NC Retail												
Operating												
Allen	9,106,440	9,170,319	23,570,054	27,056,563	31,964,531	35,890,197	37,814,130	40,322,959	40,755,221	41,539,562	42,413,314	43,305,489
Belews Creek	11,336,803	18,191,086	27,403,783	28,973,163	28,188,137	32,013,960	35,519,231	34,192,025	35,141,545	34,384,146	34,658,063	31,245,804
Cliffside	12,765,981	20,620,847	33,356,955	31,663,510	34,677,638	35,338,727	27,612,419	15,721,001	8,992,172	6,814,788	2,704,578	2,761,374
Marshall	8,626,400	23,555,876	40,460,438	42,317,949	44,625,297	41,071,580	41,727,014	37,926,323	38,627,507	39,418,685	44,361,923	45,314,426
Total Operating Plants	**41,835,624**	**71,538,128**	**124,791,230**	**130,011,185**	**139,455,603**	**144,314,464**	**142,672,794**	**128,162,308**	**123,516,445**	**122,157,181**	**124,137,878**	**122,627,093**
Retired												
Buck	55,452,180	11,313,246	4,403,216	2,825,330	3,127,715	6,123,058	6,252,195	6,313,359	6,013,582	4,603,599	4,397,244	4,499,388
Dan River	9,240,671	2,445,906	739,989	863,338	711,995	661,814	675,712	689,902	704,332	704,980	719,784	734,900
Riverbend	1,061,825	2,132,924	510,858	602,958	439,062	404,591	413,088	421,763	430,591	425,510	434,446	443,569
WS Lee (SC)	5,778,949	24,699,511	11,523,071	16,317,086	19,618,710	14,967,387	1,676,208	384,756	392,799	386,918	395,043	403,339
Total Retired Plants	**71,533,625**	**40,591,587**	**17,177,133**	**20,608,713**	**23,897,482**	**22,156,850**	**9,017,203**	**7,809,780**	**7,541,304**	**6,121,006**	**5,946,517**	**6,081,196**
Total Duke Energy Carolinas	**113,369,248**	**112,129,716**	**141,968,364**	**150,619,898**	**163,353,085**	**166,471,314**	**151,689,997**	**135,972,088**	**131,057,749**	**128,278,188**	**130,084,395**	**128,708,289**
McManeus Exhibits Docket E-7 Sub 1146 NC-												
System spend [1]												
NC Retail Only Spend [2]												
Variance to McManeus Exhibits												
[1] Adjustments made to system spend for rat												
[2] In E-7 Sub 1214 Allocation factors are upda												

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
w/ inflation													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2032	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
DEC													
Operating													
Allen	$ 60,304,219	$ 60,103,265	$ 63,584,540	$ 68,402,867	$ 67,987,668	$ 38,026,730	$ 20,236,175	$ 7,814,248	$ 3,988,920	$ 4,076,388	$ 4,165,531	$ 4,499,025	$ 4,350,806
Belews Creek	35,455,325	22,431,068	8,088,142	3,084,148	3,148,915	3,215,042	3,282,558	21,287,984	21,133,712	3,493,732	3,567,101	3,642,010	3,718,492
Cliffside	4,218,146	4,306,727	4,397,396	4,412,966	4,505,151	4,599,760	4,695,803	4,793,384	4,972,214	4,997,591	5,101,949	5,209,090	5,318,698
Marshall	68,522,731	52,669,301	41,045,299	2,726,188	2,783,437	2,841,890	11,994,337	12,246,218	3,024,715	3,088,234	3,153,087	3,219,302	3,286,907
Total Operating Plants	**168,500,421**	**139,510,362**	**117,115,376**	**78,626,169**	**78,425,172**	**48,683,421**	**40,208,874**	**46,141,834**	**33,119,561**	**15,655,945**	**15,987,667**	**16,569,426**	**16,674,903**
Retired													
Buck	6,591,631	11,971,997	10,117,854	9,649,096	1,168,476	1,194,453	1,220,876	1,247,778	1,275,896	1,304,451	1,333,508	1,436,036	1,394,148
Dan River	1,122,633	1,146,208	1,170,365	1,164,986	1,189,266	1,214,241	1,239,531	1,265,170	1,292,025	1,319,158	1,346,636	1,374,915	1,403,871
Riverbend	677,584	691,813	706,384	702,549	717,212	732,273	747,547	763,053	779,218	795,582	812,178	829,234	846,689
WS Lee (SC)	616,153	629,092	642,360	622,451	635,404	648,748	662,238	675,895	690,272	704,768	719,425	734,533	750,010
Total Retired Plants	**9,008,002**	**14,439,111**	**12,636,963**	**12,139,082**	**3,710,357**	**3,789,715**	**3,870,192**	**3,951,897**	**4,037,412**	**4,123,958**	**4,211,746**	**4,374,718**	**4,394,719**
Total Duke Energy Carolinas	**$ 177,508,423**	**$ 153,949,473**	**$ 129,752,340**	**$ 90,765,251**	**$ 82,135,529**	**$ 52,473,136**	**$ 44,079,065**	**$ 50,093,730**	**$ 37,156,973**	**$ 19,779,903**	**$ 20,199,413**	**$ 20,944,144**	**$ 21,069,622**
Column called "Remaining Forecast to be allo													
Item Labeled NCDEQ Settlement impact is the													
Factor - MWHs at Generation - Energy Factor	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2032	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**
DEC Estimated NC Retail													
Operating													
Allen	40,309,627	40,175,302	42,502,318	45,723,071	45,445,536	25,418,509	13,526,627	5,223,340	2,666,345	2,724,812	2,784,399	3,007,319	2,908,244
Belews Creek	23,699,684	14,993,777	5,406,421	2,061,561	2,104,854	2,149,056	2,194,186	14,229,696	14,126,575	2,335,343	2,384,385	2,434,457	2,485,581
Cliffside	2,819,569	2,878,780	2,939,386	2,949,794	3,011,414	3,074,654	3,138,853	3,204,079	3,323,616	3,340,580	3,410,336	3,481,953	3,555,220
Marshall	45,803,192	35,206,158	27,436,234	1,822,287	1,860,555	1,899,627	8,017,470	8,185,837	2,021,834	2,064,293	2,107,643	2,151,903	2,197,093
Total Operating Plants	**112,632,072**	**93,254,017**	**78,284,359**	**52,556,713**	**52,422,359**	**32,541,845**	**26,877,136**	**30,842,952**	**22,138,371**	**10,465,027**	**10,686,763**	**11,075,633**	**11,146,138**
Retired													
Buck	4,406,096	8,002,537	6,763,157	6,449,822	781,053	798,418	816,080	834,062	852,857	871,944	891,367	959,901	931,902
Dan River	750,411	766,169	782,316	778,721	794,951	811,645	828,550	845,688	863,639	881,775	900,142	919,045	938,401
Riverbend	452,923	462,434	472,174	469,611	479,411	489,479	499,689	510,053	520,859	531,797	542,891	554,291	565,959
WS Lee (SC)	411,860	420,509	429,378	416,070	424,728	433,648	442,665	451,794	461,404	471,094	480,891	490,989	501,335
Total Retired Plants	**6,021,290**	**9,651,650**	**8,447,026**	**8,114,223**	**2,480,144**	**2,533,189**	**2,586,983**	**2,641,598**	**2,698,759**	**2,756,610**	**2,815,291**	**2,924,227**	**2,937,597**
Total Duke Energy Carolinas	**118,653,362**	**102,905,667**	**86,731,385**	**60,670,936**	**54,902,503**	**35,075,034**	**29,464,119**	**33,484,549**	**24,837,130**	**13,221,637**	**13,502,054**	**13,999,860**	**14,083,734**
McManeus Exhibits Docket E-7 Sub 1146 NC-													
System spend [1]													
NC Retail Only Spend [2]													
Variance to McManeus Exhibits													
[1] Adjustments made to system spend for rat													
[2] In E-7 Sub 1214 Allocation factors are upda													

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
w/ inflation													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2045	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**
DEC													
Operating													
Allen	$ 4,446,695	$ 4,544,831	$ 4,645,273	$ 4,748,124	$ 4,861,657	$ 3,621,588	$ 3,706,107	$ 3,793,166	$ 3,889,000	$ 3,988,500	$ 4,114,132	$ 4,266,092	$ 2,582,537
Belews Creek	3,796,580	3,876,308	3,957,711	4,040,823	4,125,680	2,920,467	2,981,797	3,044,414	3,108,347	3,173,622	3,240,268	3,308,314	3,377,789
Cliffside	5,430,391	5,544,429	5,660,862	20,405,397	5,970,163	4,024,484	4,112,784	4,203,662	4,307,102	4,414,818	4,562,936	2,116,912	2,175,986
Marshall	3,355,932	3,426,407	3,498,361	3,571,827	3,646,835	2,536,339	2,589,603	2,643,984	2,699,508	2,756,198	2,814,078	2,873,173	2,933,510
Total Operating Plants	**17,029,598**	**17,391,975**	**17,762,207**	**32,766,171**	**18,604,336**	**13,102,878**	**13,390,290**	**13,685,226**	**14,003,957**	**14,333,137**	**14,731,414**	**12,564,491**	**11,069,822**
Retired													
Buck	1,425,577	1,457,777	1,490,770	1,524,601	1,563,673	1,610,372	1,648,477	1,590,095	1,631,606	1,674,833	1,731,468	1,801,607	1,918,798
Dan River	1,433,352	1,463,453	1,494,185	1,525,589	684,321	126,042	33,330	34,030	34,745	35,474	36,219	36,980	37,756
Riverbend	864,469	882,623	901,158	920,095	942,029	126,042	33,330	34,030	34,745	35,474	36,219	36,980	37,756
WS Lee (SC)	765,761	781,842	798,260	815,041	835,526	861,523	880,663	900,405	923,513	947,688	36,219	36,980	37,756
Total Retired Plants	**4,489,159**	**4,585,694**	**4,684,373**	**4,785,326**	**4,025,549**	**2,723,979**	**2,595,800**	**2,558,560**	**2,624,608**	**2,693,470**	**1,840,126**	**1,912,547**	**2,032,067**
Total Duke Energy Carolinas	**$ 21,518,757**	**$ 21,977,669**	**$ 22,446,581**	**$ 37,551,497**	**$ 22,629,885**	**$ 15,826,857**	**$ 15,986,090**	**$ 16,243,787**	**$ 16,628,565**	**$ 17,026,607**	**$ 16,571,540**	**$ 14,477,038**	**$ 13,101,889**
Column called "Remaining Forecast to be allo													
Item Labeled NCDEQ Settlement impact is the													
Factor - MWHs at Generation - Energy Factor	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2045	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**
DEC Estimated NC Retail													
Operating													
Allen	2,972,339	3,037,937	3,105,077	3,173,826	3,249,716	2,420,807	2,477,302	2,535,496	2,599,555	2,666,065	2,750,042	2,851,618	1,726,266
Belews Creek	2,537,778	2,591,072	2,645,484	2,701,039	2,757,761	1,952,151	1,993,146	2,035,002	2,077,737	2,121,370	2,165,918	2,211,403	2,257,842
Cliffside	3,629,879	3,706,107	3,783,935	13,639,741	3,990,684	2,690,118	2,749,141	2,809,887	2,879,031	2,951,031	3,050,039	1,415,024	1,454,512
Marshall	2,243,232	2,290,340	2,338,437	2,387,544	2,437,683	1,695,385	1,730,989	1,767,339	1,804,453	1,842,347	1,881,036	1,920,538	1,960,869
Total Operating Plants	**11,383,229**	**11,625,456**	**11,872,933**	**21,902,151**	**12,435,844**	**8,758,461**	**8,950,578**	**9,147,724**	**9,360,776**	**9,580,812**	**9,847,036**	**8,398,582**	**7,399,489**
Retired													
Buck	952,910	974,433	996,487	1,019,101	1,045,218	1,076,434	1,101,904	1,062,880	1,090,627	1,119,522	1,157,379	1,204,263	1,282,597
Dan River	958,107	978,227	998,770	1,019,762	457,426	84,251	22,279	22,747	23,225	23,712	24,210	24,719	25,238
Riverbend	577,844	589,979	602,368	615,027	629,688	84,251	22,279	22,747	23,225	23,712	24,210	24,719	25,238
WS Lee (SC)	511,864	522,613	533,588	544,804	558,498	575,875	588,669	601,865	617,311	633,470	24,210	24,719	25,238
Total Retired Plants	**3,000,724**	**3,065,252**	**3,131,213**	**3,198,693**	**2,690,829**	**1,820,811**	**1,735,131**	**1,710,239**	**1,754,387**	**1,800,417**	**1,230,010**	**1,278,419**	**1,358,311**
Total Duke Energy Carolinas	**14,383,953**	**14,690,708**	**15,004,146**	**25,100,845**	**15,126,673**	**10,579,271**	**10,685,708**	**10,857,963**	**11,115,163**	**11,381,230**	**11,077,046**	**9,677,001**	**8,757,799**
McManeus Exhibits Docket E-7 Sub 1146 NC-													
System spend [1]													
NC Retail Only Spend [2]													
Variance to McManeus Exhibits													
[1] Adjustments made to system spend for rat													
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Duke Energy Carolinas															
Ash Management ARO Cash Flows Summary															
Estimates as of Q1-2020- March 31, 2020															
Actuals As of 01/31/2020															
w/ inflation															
	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072
DEC															
Operating															
Allen	$ 2,645,471	$ 2,710,175	$ 2,406,174	$ 2,456,703	$ 2,508,294	$ 2,560,968	$ 2,614,749	$ 2,669,658	$ 2,725,721	$ 2,782,961	$ 2,841,404	$ -	$ -	$ -	$ -
Belews Creek	3,448,722	3,521,145	3,595,089	3,670,586	3,747,669	3,826,370	-	-	-	-	-	-	-	-	-
Cliffside	380,037	424,004	297,958	304,215	310,604	317,127	323,786	330,586	337,528	344,616	351,853	359,242	366,786	374,489	382,353
Marshall	2,995,114	3,058,011	3,122,229	3,187,796	3,254,740	3,323,089	3,392,874	-	-	-	-	-	-	-	-
Total Operating Plants	**9,469,344**	**9,713,335**	**9,421,451**	**9,619,301**	**9,821,307**	**10,027,554**	**6,331,409**	**3,000,244**	**3,063,249**	**3,127,578**	**3,193,257**	**359,242**	**366,786**	**374,489**	**382,353**
Retired															
Buck	2,033,852	2,266,561	790,920	807,529	824,487	841,801	859,479	877,528	-	-	-	-	-	-	-
Dan River	38,549	39,359	-	-	-	-	-	-	-	-	-	-	-	-	-
Riverbend	38,549	39,359	-	-	-	-	-	-	-	-	-	-	-	-	-
WS Lee (SC)	38,549	39,359	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Retired Plants	**2,149,500**	**2,384,637**	**790,920**	**807,529**	**824,487**	**841,801**	**859,479**	**877,528**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Duke Energy Carolinas	**$ 11,618,844**	**$ 12,097,972**	**$ 10,212,371**	**$ 10,426,830**	**$ 10,645,794**	**$ 10,869,355**	**$ 7,190,888**	**$ 3,877,773**	**$ 3,063,249**	**$ 3,127,578**	**$ 3,193,257**	**$ 359,242**	**$ 366,786**	**$ 374,489**	**$ 382,353**
Column called "Remaining Forecast to be allo															
Item Labeled NCDEQ Settlement impact is the															
Factor - MWHs at Generation - Energy Factor	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**
	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072
DEC Estimated NC Retail															
Operating															
Allen	1,768,333	1,811,584	1,608,378	1,642,154	1,676,639	1,711,848	1,747,797	1,784,501	1,821,975	1,860,237	1,899,302	-	-	-	-
Belews Creek	2,305,257	2,353,667	2,403,094	2,453,559	2,505,084	2,557,691	-	-	-	-	-	-	-	-	-
Cliffside	254,031	283,420	199,167	203,349	207,620	211,980	216,431	220,976	225,617	230,355	235,192	240,131	245,174	250,322	255,579
Marshall	2,002,048	2,044,091	2,087,016	2,130,844	2,175,592	2,221,279	2,267,926	-	-	-	-	-	-	-	-
Total Operating Plants	**6,329,669**	**6,492,762**	**6,297,655**	**6,429,906**	**6,564,934**	**6,702,797**	**4,232,154**	**2,005,477**	**2,047,592**	**2,090,592**	**2,134,494**	**240,131**	**245,174**	**250,322**	**255,579**
Retired															
Buck	1,359,504	1,515,055	528,681	539,783	551,119	562,692	574,509	586,573	-	-	-	-	-	-	-
Dan River	25,768	26,309	-	-	-	-	-	-	-	-	-	-	-	-	-
Riverbend	25,768	26,309	-	-	-	-	-	-	-	-	-	-	-	-	-
WS Lee (SC)	25,768	26,309	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Retired Plants	**1,436,807**	**1,593,982**	**528,681**	**539,783**	**551,119**	**562,692**	**574,509**	**586,573**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Duke Energy Carolinas	**7,766,476**	**8,086,743**	**6,826,336**	**6,969,689**	**7,116,052**	**7,265,489**	**4,806,663**	**2,592,050**	**2,047,592**	**2,090,592**	**2,134,494**	**240,131**	**245,174**	**250,322**	**255,579**
McManeus Exhibits Docket E-7 Sub 1146 NC-															
System spend [1]															
NC Retail Only Spend [2]															
Variance to McManeus Exhibits															
[1] Adjustments made to system spend for rat															
[2] In E-7 Sub 1214 Allocation factors are upda															

Duke Energy Carolinas							
Ash Management ARO Cash Flows Summary							
Estimates as of Q1-2020- March 31, 2020							
Actuals As of 01/31/2020							
w/ inflation							
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2073	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
DEC							
Operating							
Allen	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Belews Creek	-	-	-	-	-	-	-
Cliffside	390,382	398,580	406,951	415,497	424,222	237,135	-
Marshall	-	-	-	-	-	-	-
Total Operating Plants	**390,382**	**398,580**	**406,951**	**415,497**	**424,222**	**237,135**	**-**
Retired							
Buck	-	-	-	-	-	-	-
Dan River	-	-	-	-	-	-	-
Riverbend	-	-	-	-	-	-	-
WS Lee (SC)	-	-	-	-	-	-	-
Total Retired Plants	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Duke Energy Carolinas	**$ 390,382**	**$ 398,580**	**$ 406,951**	**$ 415,497**	**$ 424,222**	**$ 237,135**	**$ -**
Column called "Remaining Forecast to be allo							
Item Labeled NCDEQ Settlement impact is the							
Factor - MWHs at Generation - Energy Factor	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**	**66.84%**
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
	2073	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
DEC Estimated NC Retail							
Operating							
Allen	-	-	-	-	-	-	-
Belews Creek	-	-	-	-	-	-	-
Cliffside	260,946	266,426	272,021	277,734	283,566	158,510	-
Marshall	-	-	-	-	-	-	-
Total Operating Plants	**260,946**	**266,426**	**272,021**	**277,734**	**283,566**	**158,510**	**-**
Retired							
Buck	-	-	-	-	-	-	-
Dan River	-	-	-	-	-	-	-
Riverbend	-	-	-	-	-	-	-
WS Lee (SC)	-	-	-	-	-	-	-
Total Retired Plants	**-**	**-**	**-**	**-**	**-**	**-**	**-**
Total Duke Energy Carolinas	**260,946**	**266,426**	**272,021**	**277,734**	**283,566**	**158,510**	**-**
McManeus Exhibits Docket E-7 Sub 1146 NC-							
System spend [1]							
NC Retail Only Spend [2]							
Variance to McManeus Exhibits							
[1] Adjustments made to system spend for rat							
[2] In E-7 Sub 1214 Allocation factors are upda							

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Allen

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020	Forecast 2021
Basin Closure:														
2.1.01 - Design & Permitting	$ -		$ -	$ -										
2.1.02 - Mobilization, Demobilization & Site Preparation	*$ 3,012,442*		$ -	*$ 3,012,442*									$ -	$ -
2.1.03 - Site Infrastructure	*$ 7,305,172*		$ -	*$ 7,305,172*									$ 150,622	$ 150,622
2.1.04 - Water Management & Treatment	*$ 58,441,379*		$ -	*$ 58,441,379*									$ 1,204,977	$ 4,217,419
2.1.05 - Ash Excavation & Processing	*$ 361,493,064*		$ -	*$ 361,493,064*										
2.1.06 - Landfill Construction & Landfill Capping	*$ 136,564,046*		$ -	*$ 136,564,046*									$ -	$ -
2.1.07 - Site Restoration	*$ 19,580,874*		$ -	*$ 19,580,874*									$ -	$ -
2.1.11 - Capex - Equipment & Facility Cost	$ -		$ -	$ -										
2.1.12 - Contract Cost	$ -		$ -	$ -										
2.1.12 - Revenue	$ -		$ -	$ -										
3.1 - Duke External Engineering	*$ 16,869,676*		$ -	*$ 16,869,676*									$ 2,108,710	$ 1,054,355
3.1 - Duke Labor and Indirects	*$ 42,455,352*		$ -	*$ 42,455,352*									$ 3,373,935	$ 2,917,048
4.1 - Contingency - Risk EMV	*$ 78,256,018*		$ -	*$ 78,256,018*									$ 395,232	$ 790,465
Fulfillment Fee	$ -		$ -	$ -										
CCP - BASIN CLOSURE- Actuals	*$ 6,777,685*		*$ 6,777,685*	$ -	$ 1,571,687	$ 2,224,485	$ 405,092	$ 441,625	$ 2,021,122		$ 113,673			
Remaining Current Year Forecast	*$ 12,571,964*		$ -	*$ 12,571,964*						$ 5,452,161		*$ 7,119,804*		
Total Basin Closure:	***$ 743,327,673***	*a*	***$ 6,777,685***	***$ 736,549,989***	**$ 1,571,687**	**$ 2,224,485**	**$ 405,092**	**$ 441,625**	**$ 2,021,122**	**$ 5,452,161**	**$ 113,673**	**$ 7,119,804**	**$ 7,233,476**	**$ 9,129,909**
Post Closure Maintenance (Basin only)	*$ 31,435,368*	*d*	$ -	*$ 31,435,368*								*$ -*	$ -	$ -
Landfill Capping	$ -	*e*	$ -	$ -								*$ -*	$ -	$ -
Landfill Contingency	$ -	*e*	$ -	$ -								*$ -*	$ -	$ -
Landfill Post Closure Maintenance	$ -	*e*	$ -	$ -								*$ -*	$ -	$ -
CCP - ALTERNATE SPILLWAY	*$ 3,860,720*		*$ 3,860,720*	$ -	$ 485,944	$ 3,377,589	$ (2,814)					*$ -*		
CCP - ARO ROUTINE MAINTENANCE	*$ 15,810,207*	*b*	*$ 2,654,123*	*$ 13,156,084*	$ 43,665	$ 573,200	$ 614,924	$ 712,518	$ 676,096	$ 17,199	$ 33,721	*$ 659,574*	693,295	$ 693,295
CCP - ASW WELLS	*$ 231,579*	*b*	*$ 177,679*	*$ 53,900*				$ 231,579	$ (53,900)	$ 53,900		*$ -*		
CCP - CAMA WELLS	*$ 12,553,725*	*b*	*$ 12,920,646*	*$ (366,921)*	$ 6,887,207	$ 4,026,607	$ 268,280	$ 993,942	$ 740,798	$ (653,639)	$ 3,813	*$ 170,505*	174,318	$ 29,053
CCP - CCR WELLS	*$ 1,765,992*	*b*	*$ 1,453,687*	*$ 312,305*	$ 10,297	$ 1,148,639	$ 121,511	$ 165,961	$ 7,279	$ 21,774		*$ 174,318*	174,318	$ 29,053
CCP- DAM STABILIATION	*$ 5,199,044*	*b*	*$ 5,199,044*	$ -	$ 626,178	$ 4,572,866						*$ -*		
CCP - DRY ASH CONVERSION	$ -	*b*	$ -	$ -								*$ -*		
CCP- GWAP CAP	*$ 2,523,000*	*b*	$ -	*$ 2,523,000*								*$ 1,112,500*	1,112,500	$ 1,142,500
CCP - LANDFILL	$ -	*b*	$ -	$ -								*$ -*		
CCP - LINED RETENTION BASIN	*$ 137,032*	*b*	*$ 137,032*	$ -			$ 137,523	$ (491)				*$ -*		
CCP - MISCELLANEOUS	*$ 7,356,100*	*b*	*$ 7,187,210*	*$ 168,890*	$ 3,567,803	$ 1,389,974	$ 1,373,778	$ 677,085	$ 171,850	$ (65,850)	$ 6,721	*$ 112,814*	119,535	$ 121,926
CCP - SW/PW REROUTE	*$ 316,710*	*b*	*$ 316,710*	$ -	$ 40,678	$ 442,506	$ (166,474)					*$ -*		
CCP - WASTE WATER TREATMENT	$ -	*b*	$ -	$ -			$ -					*$ -*		
EHS - ARO BOTTLED WATER	*$ 1,691,092*	*c*	*$ 1,687,272*	*$ 3,820*		$ 305,614	$ 988,791	$ 392,867		50		*$ 50*	50	$ 52
EHS - ARO GROUNDWATER	*$ 41,446,256*	*c*	*$ 8,225,760*	*$ 33,220,497*		$ 1,275,393	$ 2,153,408	$ 1,906,863	$ 2,670,590	$ (259,452)	$ 219,506	*$ 2,849,240*	3,068,746	$ 1,262,674
EHS - ARO MUNICIPAL WATER LINE	*$ 15,288,400*	*c*	*$ 11,662,935*	*$ 3,625,465*		$ 93,422	$ 2,192,341	$ 9,438,690	$ (78,578)	$ 152,018	$ 17,059	*$ 26,501*	43,560	$ 63,587
EHS - ARO PERMITTING	*$ 2,834,085*	*c*	*$ 749,207*	*$ 2,084,878*			$ 220,107	$ 274,970	$ 245,790		$ 8,339	*$ 342,449*	350,788	$ 306,140
PMC MANAGED PROJECTS	$ -	*g*	$ -	$ -								*$ -*		
Other Misc ARO & Juris Allocations	*$ 0*	*b*	*$ 0*	$ -	*$ -*	*$ 0*	*$ (0)*	*$ (0)*	$ -	$ -	$ -	*$ -*		
Groundwater Corrective Action Plans (Excavate)	*$ 19,760,000*	*f*	$ -	*$ 19,760,000*	$ -	$ -	$ -	$ -				*$ 658,667*	$ 658,667	$ 658,667
NCDEQ Settlement Impact (See red note below)	$ -	*f*	$ -	$ -	$ -	$ -	$ -	$ -				*$ -*		
Remaining Current Year Forecast	$ -	*f*	$ -	$ -	$ -	$ -	$ -	$ -						
	$ -		$ -	$ -										
Inflation Impacts	*$ 224,305,401*	*h*	$ -	*$ 224,305,401*	$ -	$ -	$ -	$ -				$ -		*$ 282,174*
Total Allen	***$ 1,129,842,383***		***$ 63,009,708***	***$ 1,066,832,675***	**$ 13,233,460**	**$ 19,430,295**	**$ 8,306,467**	**$ 15,235,608**	**$ 6,401,046**	**$ 4,718,161**	**$ 402,833**	**$ 13,226,420**	**$ 13,629,253**	**$ 13,719,029**
Total Less Inflation	$ 905,536,982												*$ 13,629,253*	*$ 13,436,855*
ARO Input file - TPC As of Q120	$ 905,536,982												$ 13,629,253	$ 13,436,855
Variance check s/b "0"	$ 0												$ -	$ -
Spend To Date					$ 13,233,460	$ 19,430,295	$ 8,306,467	$ 15,235,608	$ 6,401,046	$ 4,718,161	$ 402,833			
Variance check s/b "0"					*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	Basin Closure WBS Variance check s/b "0">	$ -	$ -

FN - Please see Footnotes tab for further explanations

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow years
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will be gr

Duke Energy Carolinas														
Ash Management ARO Cash Flows Summary														
Estimates as of Q1-2020- March 31, 2020														
Actuals As of 01/31/2020														
Allen														
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Basin Closure:														
2.1.01 - Design & Permitting														
2.1.02 - Mobilization, Demobilization & Site Preparation	$ 301,244	$ 1,204,977	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 301,244	$ -	$ -
2.1.03 - Site Infrastructure	$ 527,177	$ 527,177	$ 527,177	$ 527,177	$ 527,177	$ 376,555	$ 376,555	$ 376,555	$ 376,555	$ 376,555	$ 376,555	$ 376,555	$ 376,555	$ 376,555
2.1.04 - Water Management & Treatment	$ 4,217,419	$ 4,217,419	$ 4,217,419	$ 4,217,419	$ 4,217,419	$ 4,217,419	$ 3,614,931	$ 3,614,931	$ 3,614,931	$ 3,614,931	$ 3,012,442	$ 3,012,442	$ 3,012,442	$ 1,807,465
2.1.05 - Ash Excavation & Processing		$ 9,000,000	$ 22,500,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000
2.1.06 - Landfill Construction & Landfill Capping	$ 20,484,607	$ 13,656,405	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ 6,828,202
2.1.07 - Site Restoration	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,958,087	$ 7,832,350
2.1.11 - Capex - Equipment & Facility Cost														
2.1.12 - Contract Cost														
2.1.12 - Revenue														
3.1 - Duke External Engineering	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ 421,742	$ 421,742	$ 421,742
3.1 - Duke Labor and Indirects	$ 2,917,048	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 2,460,161	$ 1,968,129
4.1 - Contingency - Risk EMV	$ 1,580,930	$ 3,161,859	$ 3,952,324	$ 3,952,324	$ 5,533,254	$ 7,904,648	$ 7,904,648	$ 7,904,648	$ 7,904,648	$ 7,904,648	$ 3,952,324	$ 3,161,859	$ 3,161,859	$ 1,580,930
Fulfillment Fee														
CCP - BASIN CLOSURE- Actuals														
Remaining Current Year Forecast														
Total Basin Closure:	**$ 31,082,780**	**$ 35,282,353**	**$ 41,539,639**	**$ 46,039,639**	**$ 47,620,569**	**$ 49,841,341**	**$ 49,238,852**	**$ 49,238,852**	**$ 49,238,852**	**$ 49,238,852**	**$ 44,684,040**	**$ 43,562,206**	**$ 45,219,050**	**$ 47,815,373**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY														
CCP - ARO ROUTINE MAINTENANCE	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295	$ 693,295
CCP - ASW WELLS														
CCP - CAMA WELLS	$ 29,053	$ 29,053	$ 29,053											
CCP - CCR WELLS	$ 29,053	$ 29,053	$ 29,053											
CCP- DAM STABILIATION														
CCP - DRY ASH CONVERSION														
CCP- GWAP CAP	$ 30,000	$ 208,000	$ 30,000											
CCP - LANDFILL														
CCP - LINED RETENTION BASIN														
CCP - MISCELLANEOUS	$ -	$ -	$ -											
CCP - SW/PW REROUTE														
CCP - WASTE WATER TREATMENT														
EHS - ARO BOTTLED WATER	$ 53	$ 55	$ 56	$ 58	$ 60	$ 61	$ 63	$ 65	$ 67	$ 69	$ 71	$ 73	$ 76	$ 78
EHS - ARO GROUNDWATER	$ 995,900	$ 860,860	$ 860,861	$ 861,303	$ 861,303	$ 861,303	$ 877,109	$ 877,030	$ 877,030	$ 877,030	$ 877,175	$ 877,175	$ 877,278	$ 829,148
EHS - ARO MUNICIPAL WATER LINE	$ 46,774	$ 48,178	$ 49,623	$ 51,112	$ 52,645	$ 54,224	$ 55,851	$ 57,527	$ 59,252	$ 61,030	$ 62,861	$ 64,747	$ 66,689	$ 68,690
EHS - ARO PERMITTING	$ 260,219	$ 221,186	$ 114,982	$ 89,317	$ 52,317	$ 47,930	$ 107,840	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS														
Other Misc ARO & Juris Allocations														
Groundwater Corrective Action Plans (Excavate)	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667
NCDEQ Settlement Impact (See red note below)														
Remaining Current Year Forecast														
Inflation Impacts	*$ 1,435,601*	*$ 2,446,601*	*$ 3,814,516*	*$ 5,299,250*	*$ 6,632,038*	*$ 8,167,342*	*$ 9,339,162*	*$ 10,601,297*	*$ 11,906,725*	*$ 13,239,661*	*$ 13,310,611*	*$ 14,229,602*	*$ 16,051,987*	*$ 18,320,116*
Total Allen	**$ 35,261,395**	**$ 40,477,300**	**$ 47,819,745**	**$ 53,692,640**	**$ 56,570,892**	**$ 60,324,164**	**$ 60,970,839**	**$ 62,144,233**	**$ 63,451,388**	**$ 64,786,104**	**$ 60,304,219**	**$ 60,103,265**	**$ 63,584,540**	**$ 68,402,867**
Total Less Inflation	*$ 33,825,794*	*$ 38,030,700*	*$ 44,005,229*	*$ 48,393,390*	*$ 49,938,854*	*$ 52,156,821*	*$ 51,631,678*	*$ 51,542,936*	*$ 51,544,663*	*$ 51,546,443*	*$ 46,993,609*	*$ 45,873,663*	*$ 47,532,554*	*$ 50,082,751*
ARO Input file - TPC As of Q120	$ 33,825,794	$ 38,030,700	$ 44,005,229	$ 48,393,390	$ 49,938,854	$ 52,156,821	$ 51,631,678	$ 51,542,936	$ 51,544,663	$ 51,546,443	$ 46,993,609	$ 45,873,663	$ 47,532,554	$ 50,082,751
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date														
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations														
Column called "Remaining Forecast to be allocated to future years" is in Q3-2020 Annual ARO remeasurement cycle.														
Item Labeled NCDEQ Settlement impact is the high level net impact resanted by NCDEQ to extend beneficaiton activities until 2035.														

Duke Energy Carolinas															
Ash Management ARO Cash Flows Summary															
Estimates as of Q1-2020- March 31, 2020															
Actuals As of 01/31/2020															
Allen															
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**
Basin Closure:															
2.1.01 - Design & Permitting															
2.1.02 - Mobilization, Demobilization & Site Preparation	$ -	$ 1,054,355	$ 150,622	$ -	$ -	$ -	$ -	$ -							
2.1.03 - Site Infrastructure	$ 376,555	$ 376,555	$ 376,555	$ -	$ -										
2.1.04 - Water Management & Treatment	$ 1,807,465	$ 1,204,977	$ 602,488	$ -	$ -										
2.1.05 - Ash Excavation & Processing	$ 22,500,000	$ 10,493,064													
2.1.06 - Landfill Construction & Landfill Capping	$ 6,828,202	$ 6,828,202	$ 6,828,202	$ -	$ -										
2.1.07 - Site Restoration	$ 9,790,437	$ -													
2.1.11 - Capex - Equipment & Facility Cost															
2.1.12 - Contract Cost															
2.1.12 - Revenue															
3.1 - Duke External Engineering	$ 843,484	$ 1,054,355	$ 1,054,355	$ -	$ -										
3.1 - Duke Labor and Indirects	$ 1,968,129	$ 1,054,355	$ 1,054,355	$ 1,054,355	$ -										
4.1 - Contingency - Risk EMV	$ 2,371,394	$ 2,371,394	$ 1,580,930	$ 1,580,930	$ -										
Fulfillment Fee															
CCP - BASIN CLOSURE- Actuals															
Remaining Current Year Forecast															
Total Basin Closure:	**$ 46,485,667**	**$ 24,437,257**	**$ 11,647,507**	**$ 2,635,284**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY															
CCP - ARO ROUTINE MAINTENANCE	$ 693,295	$ 693,295	$ 693,295	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS															
CCP - CAMA WELLS															
CCP - CCR WELLS															
CCP- DAM STABILIATION															
CCP - DRY ASH CONVERSION															
CCP- GWAP CAP															
CCP - LANDFILL															
CCP - LINED RETENTION BASIN															
CCP - MISCELLANEOUS															
CCP - SW/PW REROUTE															
CCP - WASTE WATER TREATMENT															
EHS - ARO BOTTLED WATER	$ 80	$ 83	$ 85	$ 88	$ 90	$ 93	$ 96	$ 99	$ 102	$ 105	$ 108	$ 111	$ 114	$ 118	$ 121
EHS - ARO GROUNDWATER	$ 828,941	$ 828,941	$ 828,715	$ 828,301	$ 828,598	$ 828,598	$ 828,375	$ 828,375	$ 828,454	$ 828,454	$ 828,454	$ 828,454	$ 828,477	$ 833,015	$ 769,060
EHS - ARO MUNICIPAL WATER LINE	$ 70,750	$ 72,873	$ 75,059	$ 77,311	$ 79,630	$ 82,019	$ 84,480	$ 237,014	$ 89,549	$ 92,235	$ 95,002	$ 97,852	$ 100,788	$ 103,811	$ 106,926
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS															
Other Misc ARO & Juris Allocations															
Groundwater Corrective Action Plans (Excavate)	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	$ 658,667	
NCDEQ Settlement Impact (See red note below)															
Remaining Current Year Forecast															
Inflation Impacts	*$ 19,232,768*	*$ 11,318,115*	*$ 6,315,347*	*$ 2,549,251*	*$ 1,356,589*	*$ 1,441,665*	*$ 1,528,568*	*$ 1,709,525*	*$ 1,708,690*	*$ 1,801,889*	*$ 1,897,255*	*$ 1,994,844*	*$ 2,094,733*	*$ 2,200,700*	*$ 1,680,135*
Total Allen	**$ 67,987,668**	**$ 38,026,730**	**$ 20,236,175**	**$ 7,814,248**	**$ 3,988,920**	**$ 4,076,388**	**$ 4,165,531**	**$ 4,499,025**	**$ 4,350,806**	**$ 4,446,695**	**$ 4,544,831**	**$ 4,645,273**	**$ 4,748,124**	**$ 4,861,657**	**$ 3,621,588**
Total Less Inflation	*$ 48,754,900*	*$ 26,708,615*	*$ 13,920,828*	*$ 5,264,996*	*$ 2,632,331*	*$ 2,634,723*	*$ 2,636,963*	*$ 2,789,500*	*$ 2,642,116*	*$ 2,644,806*	*$ 2,647,576*	*$ 2,650,429*	*$ 2,653,391*	*$ 2,660,957*	*$ 1,941,452*
ARO Input file - TPC As of Q120	$ 48,754,900	$ 26,708,615	$ 13,920,828	$ 5,264,996	$ 2,632,331	$ 2,634,723	$ 2,636,963	$ 2,789,500	$ 2,642,116	$ 2,644,806	$ 2,647,576	$ 2,650,429	$ 2,653,391	$ 2,660,957	$ 1,941,452
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date															
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations															
Column called "Remaining Forecast to be allocated to future years" is r															
Item Labeled NCDEQ Settlement impact is the high level net impact resu															

Duke Energy Carolinas																
Ash Management ARO Cash Flows Summary																
Estimates as of Q1-2020- March 31, 2020																
Actuals As of 01/31/2020																
Allen																
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**
Basin Closure:																
2.1.01 - Design & Permitting																
2.1.02 - Mobilization, Demobilization & Site Preparation																
2.1.03 - Site Infrastructure																
2.1.04 - Water Management & Treatment																
2.1.05 - Ash Excavation & Processing																
2.1.06 - Landfill Construction & Landfill Capping																
2.1.07 - Site Restoration																
2.1.11 - Capex - Equipment & Facility Cost																
2.1.12 - Contract Cost																
2.1.12 - Revenue																
3.1 - Duke External Engineering																
3.1 - Duke Labor and Indirects																
4.1 - Contingency - Risk EMV																
Fulfillment Fee																
CCP - BASIN CLOSURE- Actuals																
Remaining Current Year Forecast																
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY																
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS																
CCP - CAMA WELLS																
CCP - CCR WELLS																
CCP- DAM STABILIATION																
CCP - DRY ASH CONVERSION																
CCP- GWAP CAP																
CCP - LANDFILL																
CCP - LINED RETENTION BASIN																
CCP - MISCELLANEOUS																
CCP - SW/PW REROUTE																
CCP - WASTE WATER TREATMENT																
EHS - ARO BOTTLED WATER	$ 125	$ 129	$ 133	$ 137	$ 141	$ 145	$ 149	$ 154	$ 158	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 770,293	$ 771,733	$ 776,474	$ 781,761	$ 798,378	$ 825,682	$ -	$ -	$ -							
EHS - ARO MUNICIPAL WATER LINE	$ 110,133	$ 113,437	$ 116,841	$ 120,346	$ 123,956	$ 127,675	$ 131,505	$ 135,450	$ 139,514							
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500							
PMC MANAGED PROJECTS																
Other Misc ARO & Juris Allocations																
Groundwater Corrective Action Plans (Excavate)																
NCDEQ Settlement Impact (See red note below)																
Remaining Current Year Forecast																
Inflation Impacts	*$ 1,760,210*	*$ 1,842,522*	*$ 1,930,207*	*$ 2,020,911*	*$ 2,126,311*	*$ 2,247,245*	*$ 1,385,537*	*$ 1,444,521*	*$ 1,505,158*	*$ 1,358,328*	*$ 1,408,858*	*$ 1,460,449*	*$ 1,513,123*	*$ 1,566,903*	*$ 1,621,813*	*$ 1,677,876*
Total Allen	**$ 3,706,107**	**$ 3,793,166**	**$ 3,889,000**	**$ 3,988,500**	**$ 4,114,132**	**$ 4,266,092**	**$ 2,582,537**	**$ 2,645,471**	**$ 2,710,175**	**$ 2,406,174**	**$ 2,456,703**	**$ 2,508,294**	**$ 2,560,968**	**$ 2,614,749**	**$ 2,669,658**	**$ 2,725,721**
Total Less Inflation	*$ 1,945,897*	*$ 1,950,645*	*$ 1,958,793*	*$ 1,967,589*	*$ 1,987,821*	*$ 2,018,847*	*$ 1,197,000*	*$ 1,200,950*	*$ 1,205,018*	*$ 1,047,846*	*$ 1,047,846*	*$ 1,047,846*	*$ 1,047,846*	*$ 1,047,846*	*$ 1,047,846*	*$ 1,047,846*
ARO Input file - TPC As of Q120	$ 1,945,897	$ 1,950,645	$ 1,958,793	$ 1,967,589	$ 1,987,821	$ 2,018,847	$ 1,197,000	$ 1,200,950	$ 1,205,018	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846	$ 1,047,846
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date																
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																
Column called "Remaining Forecast to be allocated to future years" is r																
Item Labeled NCDEQ Settlement impact is the high level net impact resu																

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Allen													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2067**	**2068**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation													
2.1.03 - Site Infrastructure													
2.1.04 - Water Management & Treatment													
2.1.05 - Ash Excavation & Processing													
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration													
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering													
3.1 - Duke Labor and Indirects													
4.1 - Contingency - Risk EMV													
Fulfillment Fee													
CCP - BASIN CLOSURE- Actuals													
Remaining Current Year Forecast													
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 1,047,846	$ 1,047,846	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS													
CCP - CAMA WELLS													
CCP - CCR WELLS													
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS													
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER													
EHS - ARO MUNICIPAL WATER LINE													
EHS - ARO PERMITTING													
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)													
NCDEQ Settlement Impact (See red note below)													
Remaining Current Year Forecast													
Inflation Impacts	*$ 1,735,116*	*$ 1,793,558*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Total Allen	**$ 2,782,961**	**$ 2,841,404**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	*$ 1,047,846*	*$ 1,047,846*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
ARO Input file - TPC As of Q120	$ 1,047,846	$ 1,047,846	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is r													
Item Labeled NCDEQ Settlement impact is the high level net impact resu													

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Belews Creek

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020
Basin Closure:		a											
2.1.01 - Design & Permitting	$ -		$ -	$ -									
2.1.02 - Mobilization, Demobilization & Site Preparation	$ 1,952,460		$ -	$ 1,952,460									$ -
2.1.03 - Site Infrastructure	$ 7,575,545		$ -	$ 7,575,545									$ 156,197
2.1.04 - Water Management & Treatment	$ 44,190,678		$ -	$ 44,190,678									$ 683,361
2.1.05 - Ash Excavation & Processing	$ 234,295,200		$ -	$ 234,295,200									
2.1.06 - Landfill Construction & Landfill Capping	$ 88,511,520		$ -	$ 88,511,520									$ -
2.1.07 - Site Restoration	$ 9,762,300		$ -	$ 9,762,300									$ -
2.1.11 - Capex - Equipment & Facility Cost	$ -		$ -	$ -									
2.1.12 - Contract Cost	$ -		$ -	$ -									
2.1.12 - Revenue	$ -		$ -	$ -									
3.1 - Duke External Engineering	$ 10,933,776		$ -	$ 10,933,776									$ 1,366,722
3.1 - Duke Labor and Indirects	$ 27,493,891		$ -	$ 27,493,891									$ 2,186,755
4.1 - Contingency - Risk EMV	$ 51,493,399		$ -	$ 51,493,399									$ 260,068
Fulfillment Fee	$ -		$ -	$ -									
CCP - BASIN CLOSURE- ACTUALS	$ 10,108,502		$ 10,108,502	$ -	$ 1,805,268	$ 2,172,663	$ 217,630	$ 1,829,338	$ 3,783,903		$ 299,699		
Remaining Current Year Forecast	$ 5,946,103		$ -	$ 5,946,103						$ 1,592,700		$ 4,353,404	
Total Basin Closure:	**$ 492,263,375**	*a*	**$ 10,108,502**	**$ 482,154,872**	**$ 1,805,268**	**$ 2,172,663**	**$ 217,630**	**$ 1,829,338**	**$ 3,783,903**	**$ 1,592,700**	**$ 299,699**	**$ 4,353,404**	**$ 4,653,103**
Post Closure Maintenance (Basin only)	$ 30,597,779	*b*	$ -	$ 30,597,779								$ -	$ -
Landfill Capping	$ 16,196,080	*c*	$ -	$ 16,196,080								$ -	$ -
Landfill Contingency	$ 2,429,412	*c*	$ -	$ 2,429,412								$ -	$ -
Landfill Post Closure Maintenance	$ 5,147,789	*c*	$ -	$ 5,147,789						$ 61,416		$ 61,416	$ 61,416
CCP - ALTERNATE SPILLWAY	$ -		$ -	$ -								$ -	
CCP - ARO ROUTINE MAINTENANCE	$ 39,670,806	*b*	$ 9,269,674	$ 30,401,131	$ 118,502	$ 2,347,953	$ 2,334,494	$ 1,847,672	$ 3,034,713	$ (833,234)	$ (413,659)	$ 2,615,138	2,201,479
CCP - ASW WELLS	$ -	*b*	$ -	$ -						$ -		$ -	
CCP - CAMA WELLS	$ 8,944,687	*b*	$ 9,055,928	$ (111,241)	$ 4,966,170	$ 3,338,465	$ 30,602	$ 231,760	$ 488,930	$ (401,771)		$ 174,318	174,318
CCP - CCR WELLS	$ 3,251,920	*b*	$ 2,938,238	$ 313,682		$ 2,475,894	$ 313,429	$ 143,013	$ 5,902	$ 23,151		$ 174,318	174,318
CCP- DAM STABILIATION	$ 11,711,843	*b*	$ 11,711,843	$ -		$ 11,624,450	$ 87,393					$ -	
CCP - DRY ASH CONVERSION	$ -	*b*	$ -	$ -								$ -	
CCP- GWAP CAP	$ 4,238,952	*b*	$ 1,715,952	$ 2,523,000		$ 172,745	$ 1,322,334	$ 220,873				$ 1,112,500	1,112,500
CCP - LANDFILL	$ -	*b*	$ -	$ -								$ -	
CCP - LINED RETENTION BASIN	$ -	*b*	$ -	$ -								$ -	
CCP - MISCELLANEOUS	$ 11,872,185	*b*	$ 9,361,961	$ 2,510,224	$ 2,971,254	$ 3,884,641	$ 1,941,786	$ 271,742	$ 230,582	$ 217,418	$ 61,956	$ 1,925,382	1,987,338
CCP - SW/PW REROUTE	$ -	*b*	$ -	$ -								$ -	
CCP - WASTE WATER TREATMENT	$ -	*b*	$ -	$ -								$ -	
EHS - ARO BOTTLED WATER	$ 210,940	*c*	$ 195,660	$ 15,280		$ 36,701	$ 104,199	$ 54,759		$ 200		$ 200	200
EHS - ARO GROUNDWATER	$ 36,585,295	*c*	$ 7,976,576	$ 28,608,719		$ 369,353	$ 2,672,336	$ 2,359,189	$ 2,414,595	$ 148,044	$ 161,103	$ 2,252,576	2,413,679
EHS - ARO MUNICIPAL WATER LINE	$ 18,030,885	*c*	$ 789,829	$ 17,241,056		$ 56,883	$ 99,128	$ 500,873	$ 127,863	$ 184,137	$ 5,082	$ 213,543	218,625
EHS - ARO PERMITTING	$ 3,673,471	*c*	$ 1,249,234	$ 2,424,237			$ 411,309	$ 484,363	$ 336,311		$ 17,251	$ 362,749	380,000
PMC MANAGED PROJECTS	$ -	*g*	$ -	$ -								$ -	
Other Misc ARO & Juris Allocations	$ 0	*b*	$ 0	$ -	$ -	$ 0	$ (0)	$ -	$ -	$ -	$ -	$ -	
Groundwater Corrective Action Plans (Excavate)	$ 20,776,000	*h*	$ -	$ 20,776,000	$ -	$ -	$ -	$ -				$ 692,533	$ 692,533
NCDEQ Settlement Impact (See red note below)	$ (46,735,038)	*h*	$ -	$ (46,735,038)	$ -	$ -	$ -	$ -				$ 2,892,522	$ 2,892,522
Remaining Current Year Forecast	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -					
	$ -		$ -	$ -									
Inflation Impacts	$ 134,154,953	*g*	$ -	$ 134,154,953	$ -	$ -	$ -	$ -				$ -	
Total Belews Creek	**$ 793,021,333**		**$ 64,373,399**	**$ 728,647,935**	**$ 9,861,194**	**$ 26,479,748**	**$ 9,534,640**	**$ 7,943,584**	**$ 10,422,799**	**$ 992,061**	**$ 131,433**	**$ 16,830,598**	**$ 16,962,031**
Total Less Inflation	$ 658,866,381												$ 16,962,031
ARO Input file - TPC As of Q120	$ 658,866,381												$ 16,962,031
Variance check s/b "0"	$ -												$ -
Spend To Date					$ 9,861,194	$ 26,479,748	$ 9,534,640	$ 7,943,584	$ 10,422,799	$ 992,061	$ 131,433		
Variance check s/b "0"					$ -	$ -	$ -	$ -	$ -	$ -	$ -	**Basin Closure WBS Variance check s/b "0">**	$ -

FN - Please see Footnotes tab for further explanations

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow y
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will b

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Belews Creek

Item	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033
Basin Closure:												$ -	$ -
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation	$ -	$ 195,246	$ 780,984	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 195,246	$ 780,984	
2.1.03 - Site Infrastructure	$ 156,197	$ 546,689	$ 624,787	$ 624,787	$ 624,787	$ 624,787	$ 624,787	$ 624,787	$ 624,787	$ 624,787	$ 624,787	$ 624,787	$ 624,787
2.1.04 - Water Management & Treatment	$ 3,189,018	$ 3,189,018	$ 3,644,592	$ 3,644,592	$ 3,644,592	$ 3,644,592	$ 3,644,592	$ 3,644,592	$ 3,189,018	$ 3,189,018	$ 3,189,018	$ 3,189,018	$ 3,189,018
2.1.05 - Ash Excavation & Processing			$ 9,000,000	$ 18,000,000	$ 22,500,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 22,795,200	$ -
2.1.06 - Landfill Construction & Landfill Capping	$ -	$ 13,276,728	$ 8,851,152	$ 7,080,922	$ 7,080,922	$ 7,080,922	$ 7,080,922	$ 7,080,922	$ 6,195,806	$ 6,195,806	$ 6,195,806	$ 6,195,806	$ 6,195,806
2.1.07 - Site Restoration	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 976,230	$ 3,904,920
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering	$ 683,361	$ 956,705	$ 956,705	$ 956,705	$ 956,705	$ 1,366,722	$ 1,366,722	$ 1,366,722	$ 683,361	$ 410,017	$ 273,344	$ 273,344	$ 683,361
3.1 - Duke Labor and Indirects	$ 2,186,755	$ 2,186,755	$ 2,186,755	$ 2,255,091	$ 2,255,091	$ 2,255,091	$ 2,255,091	$ 2,255,091	$ 1,640,066	$ 1,640,066	$ 1,594,509	$ 1,594,509	$ 1,594,509
4.1 - Contingency - Risk EMV	$ 520,135	$ 1,560,406	$ 2,080,541	$ 3,640,947	$ 4,161,083	$ 5,201,353	$ 5,201,353	$ 5,201,353	$ 5,201,353	$ 5,201,353	$ 5,201,353	$ 3,120,812	$ 2,600,677
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ 6,735,466**	**$ 21,911,547**	**$ 28,125,517**	**$ 36,203,045**	**$ 41,223,180**	**$ 47,173,468**	**$ 47,173,468**	**$ 47,173,468**	**$ 44,534,392**	**$ 44,261,048**	**$ 44,274,064**	**$ 39,550,691**	**$ 18,793,078**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479	$ 2,201,479
CCP - ASW WELLS													
CCP - CAMA WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053									
CCP - CCR WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053									
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP	$ 1,142,500	$ 30,000	$ 208,000	$ 30,000									
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS	$ 367,424												
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ 206	$ 212	$ 219	$ 225	$ 232	$ 239	$ 246	$ 253	$ 261	$ 269	$ 277	$ 285	$ 294
EHS - ARO GROUNDWATER	$ 990,857	$ 725,423	$ 657,285	$ 657,285	$ 657,622	$ 657,622	$ 657,622	$ 657,536	$ 657,476	$ 657,476	$ 657,476	$ 657,585	$ 657,585
EHS - ARO MUNICIPAL WATER LINE	$ 225,184	$ 231,939	$ 238,897	$ 246,064	$ 253,446	$ 261,050	$ 268,881	$ 276,948	$ 285,256	$ 293,814	$ 302,628	$ 311,707	$ 321,058
EHS - ARO PERMITTING	$ 320,000	$ 272,000	$ 231,200	$ 155,178	$ 150,253	$ 146,944	$ 89,395	$ 35,000	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533
NCDEQ Settlement Impact (See red note below)	$ 13,859,406	$ 13,142,990	$ 8,250,020	$ (1,499,024)	$ (2,073,388)	$ (4,286,632)	$ (6,918,440)	$ (6,578,768)	$ (5,785,930)	$ (6,065,786)	$ (11,015,552)	$ (15,863,726)	$ (5,624,488)
Remaining Current Year Forecast													
Inflation Impacts	*$ 559,746*	*$ 1,669,105*	*$ 2,619,910*	*$ 3,363,856*	*$ 4,726,917*	*$ 6,229,546*	*$ 6,925,533*	*$ 8,052,774*	*$ 8,775,166*	*$ 9,729,587*	*$ 9,552,689*	*$ 7,825,854*	*$ 5,310,613*
Total Belews Creek	**$ 27,214,324**	**$ 40,996,751**	**$ 43,344,583**	**$ 42,170,164**	**$ 47,893,691**	**$ 53,137,665**	**$ 51,152,132**	**$ 52,572,638**	**$ 51,439,550**	**$ 51,849,336**	**$ 46,744,510**	**$ 35,455,325**	**$ 22,431,068**
Total Less Inflation	*$ 26,654,578*	*$ 39,327,646*	*$ 40,724,673*	*$ 38,806,308*	*$ 43,166,775*	*$ 46,908,119*	*$ 44,226,600*	*$ 44,519,865*	*$ 42,664,384*	*$ 42,119,749*	*$ 37,191,822*	*$ 27,629,471*	*$ 17,120,455*
ARO Input file - TPC As of Q120	$ 26,654,578	$ 39,327,646	$ 40,724,673	$ 38,806,308	$ 43,166,775	$ 46,908,119	$ 44,226,600	$ 44,519,865	$ 42,664,384	$ 42,119,749	$ 37,191,822	$ 27,629,471	$ 17,120,455
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													

Column called "Remaining Forecast to be allocated to future years" is zero's in Q3-2020 Annual ARO remeasurement cycle.
Item Labeled NCDEQ Settlement impact is the high level net impact reslie granted by NCDEQ to extend beneficaiton activities until 2035.

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Belews Creek													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**
Basin Closure:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation													
2.1.03 - Site Infrastructure													
2.1.04 - Water Management & Treatment													
2.1.05 - Ash Excavation & Processing													
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration	$ 4,881,150												
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering	$ -												
3.1 - Duke Labor and Indirects	$ 1,594,509												
4.1 - Contingency - Risk EMV	$ 2,600,677												
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ 9,076,336**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926
Landfill Capping	$ -	$ -	$ -	$ -	$ 10,163,680	$ 6,032,400	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ 1,524,552	$ 904,860	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 61,416	$ 181,829	$ 181,829	$ 181,829	$ 181,829	$ 181,829	$ 120,413	$ 120,413	$ 120,413
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -
CCP - ASW WELLS													
CCP - CAMA WELLS													
CCP - CCR WELLS													
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS													
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ 303	$ 312	$ 321	$ 331	$ 340	$ 351	$ 361	$ 372	$ 383	$ 395	$ 407	$ 419	$ 431
EHS - ARO GROUNDWATER	$ 657,662	$ 628,120	$ 627,963	$ 627,963	$ 627,792	$ 694,082	$ 694,331	$ 694,331	$ 694,144	$ 694,144	$ 694,210	$ 694,210	$ 694,210
EHS - ARO MUNICIPAL WATER LINE	$ 330,690	$ 340,611	$ 350,829	$ 361,354	$ 372,194	$ 383,360	$ 394,861	$ 406,707	$ 418,908	$ 1,016,475	$ 444,043	$ 457,364	$ 471,085
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 60,381	$ 93,638	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533	$ 692,533
NCDEQ Settlement Impact (See red note below)	$ (5,810,084)	$ (502,287)	$ (512,357)	$ (522,892)	$ (12,221,803)	$ 4,373,457	$ 10,868,883	$ (755,068)	$ (767,093)	$ (1,364,672)	$ (730,901)	$ (744,235)	$ (757,968)
Remaining Current Year Forecast													
Inflation Impacts	*$ 2,041,860*	*$ 826,017*	*$ 890,784*	*$ 956,911*	*$ 1,024,427*	*$ 6,944,804*	*$ 7,187,350*	*$ 1,235,602*	*$ 1,308,970*	*$ 1,383,879*	*$ 1,460,361*	*$ 1,538,450*	*$ 1,618,178*
Total Belews Creek	**$ 8,088,142**	**$ 3,084,148**	**$ 3,148,915**	**$ 3,215,042**	**$ 3,282,558**	**$ 21,287,984**	**$ 21,133,712**	**$ 3,493,732**	**$ 3,567,101**	**$ 3,642,010**	**$ 3,718,492**	**$ 3,796,580**	**$ 3,876,308**
Total Less Inflation	*$ 6,046,281*	*$ 2,258,130*	*$ 2,258,130*	*$ 2,258,130*	*$ 2,258,130*	*$ 14,343,179*	*$ 13,946,362*	*$ 2,258,130*	*$ 2,258,130*	*$ 2,258,130*	*$ 2,258,130*	*$ 2,258,130*	*$ 2,258,130*
ARO Input file - TPC As of Q120	$ 6,046,281	$ 2,258,130	$ 2,258,130	$ 2,258,130	$ 2,258,130	$ 14,343,179	$ 13,946,362	$ 2,258,130	$ 2,258,130	$ 2,258,130	$ 2,258,130	$ 2,258,130	$ 2,258,130
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is r													
Item Labeled NCDEQ Settlement impact is the high level net impact res													

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Belews Creek													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**
Basin Closure:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation													
2.1.03 - Site Infrastructure													
2.1.04 - Water Management & Treatment													
2.1.05 - Ash Excavation & Processing													
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration													
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering													
3.1 - Duke Labor and Indirects													
4.1 - Contingency - Risk EMV													
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS													
CCP - CAMA WELLS													
CCP - CCR WELLS													
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS													
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ 444	$ 458	$ 471	$ 485	$ 500	$ 515	$ 530	$ 546	$ 563	$ 580	$ 597	$ 615	$ 633
EHS - ARO GROUNDWATER	$ 694,210	$ 694,230	$ 608,777	$ 616,923	$ 617,912	$ 619,067	$ 622,870	$ 627,111	$ 640,442	$ 662,344	$ 716,211	$ 170,938	$ 199,337
EHS - ARO MUNICIPAL WATER LINE	$ 485,217	$ 499,774	$ 514,767	$ 530,210	$ 546,116	$ 562,500	$ 579,375	$ 596,756	$ 614,659	$ 633,099	$ 652,092	$ 671,654	$ 691,804
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 692,533	$ 692,533	$ 692,533										
NCDEQ Settlement Impact (See red note below)	$ (772,114)	$ (786,703)	$ (716,257)	$ (739,860)	$ (756,771)	$ (774,324)	$ (795,017)	$ (816,656)	$ (847,905)	$ (888,264)	$ (961,142)	$ (435,450)	$ (484,016)
Remaining Current Year Forecast													
Inflation Impacts	*$ 1,699,580*	*$ 1,782,692*	*$ 1,867,550*	*$ 1,354,870*	*$ 1,416,199*	*$ 1,478,817*	*$ 1,542,750*	*$ 1,608,025*	*$ 1,674,671*	*$ 1,742,717*	*$ 1,812,192*	*$ 1,883,125*	*$ 1,955,548*
Total Belews Creek	**$ 3,957,711**	**$ 4,040,823**	**$ 4,125,680**	**$ 2,920,467**	**$ 2,981,797**	**$ 3,044,414**	**$ 3,108,347**	**$ 3,173,622**	**$ 3,240,268**	**$ 3,308,314**	**$ 3,377,789**	**$ 3,448,722**	**$ 3,521,145**
Total Less Inflation	*$ 2,258,130*	*$ 2,258,130*	*$ 2,258,130*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*
ARO Input file - TPC As of Q120	$ 2,258,130	$ 2,258,130	$ 2,258,130	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is r													
Item Labeled NCDEQ Settlement impact is the high level net impact res													

Duke Energy Carolinas																	
Ash Management ARO Cash Flows Summary																	
Estimates as of Q1-2020- March 31, 2020																	
Actuals As of 01/31/2020																	
Belews Creek																	
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**
Basin Closure:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2.1.01 - Design & Permitting																	
2.1.02 - Mobilization, Demobilization & Site Preparation																	
2.1.03 - Site Infrastructure																	
2.1.04 - Water Management & Treatment																	
2.1.05 - Ash Excavation & Processing																	
2.1.06 - Landfill Construction & Landfill Capping																	
2.1.07 - Site Restoration																	
2.1.11 - Capex - Equipment & Facility Cost																	
2.1.12 - Contract Cost																	
2.1.12 - Revenue																	
3.1 - Duke External Engineering																	
3.1 - Duke Labor and Indirects																	
4.1 - Contingency - Risk EMV																	
Fulfillment Fee																	
CCP - BASIN CLOSURE- ACTUALS																	
Remaining Current Year Forecast																	
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ 1,019,926	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ 120,413	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY																	
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS																	
CCP - CAMA WELLS																	
CCP - CCR WELLS																	
CCP- DAM STABILIATION																	
CCP - DRY ASH CONVERSION																	
CCP- GWAP CAP																	
CCP - LANDFILL																	
CCP - LINED RETENTION BASIN																	
CCP - MISCELLANEOUS																	
CCP - SW/PW REROUTE																	
CCP - WASTE WATER TREATMENT																	
EHS - ARO BOTTLED WATER																	
EHS - ARO GROUNDWATER	$ 116,190	$ 116,190	$ 116,190	$ 116,190	$ 116,190	$ 116,190	$ 116,190	$ 116,190	$ 116,190	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE																	
EHS - ARO PERMITTING																	
PMC MANAGED PROJECTS																	
Other Misc ARO & Juris Allocations																	
Groundwater Corrective Action Plans (Excavate)																	
NCDEQ Settlement Impact (See red note below)	$ 309,068	$ 309,068	$ 309,068	$ 309,068	$ (236,603)	$ (236,603)	$ (236,603)	$ (236,603)	$ (236,603)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Remaining Current Year Forecast																	
Inflation Impacts	*$ 2,029,492*	*$ 2,104,989*	*$ 2,182,071*	*$ 2,260,773*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Total Belews Creek	**$ 3,595,089**	**$ 3,670,586**	**$ 3,747,669**	**$ 3,826,370**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ 1,565,597*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
ARO Input file - TPC As of Q120	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ 1,565,597	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date																	
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																	
Column called "Remaining Forecast to be allocated to future years" is r																	
Item Labeled NCDEQ Settlement impact is the high level net impact res																	

Duke Energy Carolinas			
Ash Management ARO Cash Flows Summary			
Estimates as of Q1-2020- March 31, 2020			
Actuals As of 01/31/2020			
Belews Creek			
	Forecast	**Forecast**	**Forecast**
Item	**2077**	**2078**	**2079**
Basin Closure:	$ -	$ -	$ -
2.1.01 - Design & Permitting			
2.1.02 - Mobilization, Demobilization & Site Preparation			
2.1.03 - Site Infrastructure			
2.1.04 - Water Management & Treatment			
2.1.05 - Ash Excavation & Processing			
2.1.06 - Landfill Construction & Landfill Capping			
2.1.07 - Site Restoration			
2.1.11 - Capex - Equipment & Facility Cost			
2.1.12 - Contract Cost			
2.1.12 - Revenue			
3.1 - Duke External Engineering			
3.1 - Duke Labor and Indirects			
4.1 - Contingency - Risk EMV			
Fulfillment Fee			
CCP - BASIN CLOSURE- ACTUALS			
Remaining Current Year Forecast			
Total Basin Closure:	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY			
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -
CCP - ASW WELLS			
CCP - CAMA WELLS			
CCP - CCR WELLS			
CCP- DAM STABILIATION			
CCP - DRY ASH CONVERSION			
CCP- GWAP CAP			
CCP - LANDFILL			
CCP - LINED RETENTION BASIN			
CCP - MISCELLANEOUS			
CCP - SW/PW REROUTE			
CCP - WASTE WATER TREATMENT			
EHS - ARO BOTTLED WATER			
EHS - ARO GROUNDWATER	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE			
EHS - ARO PERMITTING			
PMC MANAGED PROJECTS			
Other Misc ARO & Juris Allocations			
Groundwater Corrective Action Plans (Excavate)			
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -
Remaining Current Year Forecast			
Inflation Impacts	$ -	$ -	$ -
Total Belews Creek	**$ -**	**$ -**	**$ -**
Total Less Inflation	$ -	$ -	$ -
ARO Input file - TPC As of Q120	$ -	$ -	$ -
Variance check s/b "0"	$ -	$ -	$ -
Spend To Date			
Variance check s/b "0"	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations			
Column called "Remaining Forecast to be allocated to future years" is r			
Item Labeled NCDEQ Settlement impact is the high level net impact res			

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Buck

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020
Basin Closure:		a											
2.1.01 - Design & Permitting	$ -		$ -	$ -									
2.1.02 - Mobilization, Demobilization & Site Preparation	$ 3,068,231		$ -	$ 3,068,231									
2.1.03 - Site Infrastructure	$ 4,425,137		$ -	$ 4,425,137									$ 405,330
2.1.04 - Water Management & Treatment	$ 5,288,462		$ -	$ 5,288,462									$ 528,846
2.1.05 - Ash Excavation & Processing	$ 200,050,833		$ -	$ 200,050,833									
2.1.06 - Landfill Construction & Landfill Capping	$ -		$ -	$ -									
2.1.07 - Site Restoration	$ 3,112,200		$ -	$ 3,112,200									
2.1.11 - Capex - Equipment & Facility Cost	$ 12,076,000		$ -	$ 12,076,000									$ 73,238,343
2.1.12 - Contract Cost	$ 80,908,000		$ -	$ 80,908,000									
2.1.12 - Revenue	$ (109,020,000)		$ -	$ (109,020,000)									
3.1 - Duke External Engineering	$ 1,901,715		$ -	$ 1,901,715									$ 172,883
3.1 - Duke Labor and Indirects	$ 18,384,744		$ -	$ 18,384,744									$ 1,671,340
4.1 - Contingency - Risk EMV	$ 14,825,469		$ -	$ 14,825,469									$ 4,947,504
Fulfillment Fee	$ -		$ -	$ -									
CCP - BASIN CLOSURE- ACTUALS	$ 181,871,798		$ 181,871,798	$ -	$ 660,323	$ 1,939,999	$ 13,659,288	$ 54,493,358	$ 104,085,520		$ 7,033,311		
Remaining Current Year Forecast	$ 87,890,392		$ -	$ 87,890,392						$ 13,959,457		$ 73,930,936	
Total Basin Closure:	**$ 504,782,980**	*a*	**$ 181,871,798**	**$ 322,911,182**	**$ 660,323**	**$ 1,939,999**	**$ 13,659,288**	**$ 54,493,358**	**$ 104,085,520**	**$ 13,959,457**	**$ 7,033,311**	**$ 73,930,936**	**$ 80,964,246**
Post Closure Maintenance (Basin only)	$ 10,332,942	*b*	$ -	$ 10,332,942								$ -	$ -
Landfill Capping	$ -	*c*	$ -	$ -								$ -	
Landfill Contingency	$ -	*c*	$ -	$ -								$ -	
Landfill Post Closure Maintenance	$ -	*c*	$ -	$ -								$ -	
CCP - ALTERNATE SPILLWAY	$ 3,534,746		$ 3,888,140	$ (353,395)	$ 11,220	$ 1,774,367	$ 586,564	$ 1,162,595	$ 352,544	$ (352,544)	$ 850	$ (850)	
CCP - ARO ROUTINE MAINTENANCE	$ 5,639,284	*b*	$ 1,792,503	$ 3,846,780	$ 301,167	$ 378,430	$ 408,709	$ 375,960	$ 306,938	$ 72,609	$ 21,299	$ 358,248	379,547
CCP - ASW WELLS	$ -	*b*	$ -	$ -								$ -	
CCP - CAMA WELLS	$ 9,820,626	*b*	$ 9,442,936	$ 377,690	$ 6,273,418	$ 2,735,715	$ 433,804			$ 87,159		$ 174,318	174,318
CCP - CCR WELLS	$ 2,030,435	*b*	$ 1,717,393	$ 313,043		$ 1,632,303	$ (19,000)	$ 97,548	$ 6,541	$ 22,512		$ 174,318	174,318
CCP- DAM STABILIATION	$ 3,271	*b*	$ 3,271	$ -	$ 1,507	$ 1,764						$ -	
CCP - DRY ASH CONVERSION	$ 2,493,000	*b*	$ -	$ 2,493,000								$ -	-
CCP- GWAP CAP	$ -	*b*	$ -	$ -								$ -	
CCP - LANDFILL	$ -	*b*	$ -	$ -								$ -	
CCP - LINED RETENTION BASIN	$ -	*b*	$ -	$ -								$ -	
CCP - MISCELLANEOUS	$ 4,214,212	*b*	$ 4,135,360	$ 78,853	$ 2,768,004	$ 432,192	$ 666,860	$ 152,536	$ 121,770	$ (86,770)	$ (6,002)	$ 85,022	79,020
CCP - SW/PW REROUTE	$ 1,759,917	*b*	$ 1,766,432	$ (6,515)	$ 19,549	$ 457,311	$ 435,249	$ 847,807	$ 6,515	$ (6,515)		$ -	
CCP - WASTE WATER TREATMENT	$ -	*b*	$ -	$ -								$ -	
EHS - ARO BOTTLED WATER	$ 928,953	*c*	$ 927,807	$ 1,146		$ 127,265	$ 488,452	$ 312,091		$ 15		$ 15	15
EHS - ARO GROUNDWATER	$ 22,933,287	*c*	$ 3,986,571	$ 18,946,716		$ 311,657	$ 1,565,111	$ 1,222,547	$ 865,276	$ (14,831)	$ 21,980	$ 935,239	957,219
EHS - ARO MUNICIPAL WATER LINE	$ 6,846,547	*c*	$ 5,228,305	$ 1,618,242		$ 30,831	$ 420,127	$ 4,738,844	$ 36,582	$ (6,630)	$ 1,920	$ 19,068	20,988
EHS - ARO PERMITTING	$ 3,689,205	*c*	$ 719,693	$ 2,969,512			$ 183,279	$ 267,031	$ 258,027		$ 11,356	$ 298,644	310,000
PMC MANAGED PROJECTS	$ -	*g*	$ -	$ -								$ -	
Other Misc ARO & Juris Allocations	$ 0	*b*	$ 0	$ -	$ -	$ 0	$ -	$ -	$ -	$ -	$ -	$ -	
Groundwater Corrective Action Plans (Excavate)	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -				$ -	
NCDEQ Settlement Impact (See red note below)	$ (142,444,512)	*h*	$ -	$ (142,444,512)	$ -	$ -	$ -	$ -				$ -	$ -
Remaining Current Year Forecast	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -					
	$ -		$ -	$ -									
Inflation Impacts	$ 38,412,669	*g*	$ -	$ 38,412,669	$ -	$ -	$ -	$ -				$ -	
Total Buck	**$ 474,977,562**		**$ 215,480,209**	**$ 259,497,354**	**$ 10,035,189**	**$ 9,821,833**	**$ 18,828,443**	**$ 63,670,317**	**$ 106,039,713**	**$ 13,674,461**	**$ 7,084,713**	**$ 75,974,958**	**$ 83,059,671**
Total Less Inflation	$ 436,564,893												$ 83,059,671
ARO Input file - TPC As of Q120	$ 436,564,893												$ 83,059,671
Variance check s/b "0"	$ -												$ -
Spend To Date					$ 10,035,189	$ 9,821,833	$ 18,828,443	$ 63,670,317	$ 106,039,713	$ 13,674,461	$ 7,084,713		
Variance check s/b "0"					$ -	$ -	$ -	$ -	$ -	$ -	$ -	**Basin Closure WBS Variance check s/b "0">**	$ -

FN - Please see Footnotes tab for further explanations

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow years i
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will be gra

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Buck													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation									$ 1,804,374	$ 1,263,857			
2.1.03 - Site Infrastructure	$ 405,330	$ 405,330	$ 405,330	$ 405,330	$ 405,330	$ 405,330	$ 405,330	$ 405,330	$ 405,330	$ 405,330	$ 371,837		
2.1.04 - Water Management & Treatment	$ 528,846	$ 528,846	$ 528,846	$ 528,846	$ 528,846	$ 528,846	$ 528,846	$ 528,846	$ 528,846	$ 528,846			
2.1.05 - Ash Excavation & Processing	$ 2,690,833	$ 2,640,000	$ 2,640,000	$ 2,640,000	$ 3,473,333	$ 37,193,333	$ 37,193,333	$ 37,193,333	$ 37,193,333	$ 37,193,333			
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration											$ 3,112,200		
2.1.11 - Capex - Equipment & Facility Cost	$ 12,076,000												
2.1.12 - Contract Cost	$ 8,090,800	$ 8,090,800	$ 8,090,800	$ 8,090,800	$ 8,090,800	$ 8,090,800	$ 8,090,800	$ 8,090,800	$ 8,090,800	$ 8,090,800			
2.1.12 - Revenue	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)	$ (10,902,000)			
3.1 - Duke External Engineering	$ 172,883	$ 172,883	$ 172,883	$ 172,883	$ 172,883	$ 172,883	$ 172,883	$ 172,883	$ 172,883	$ 172,883	$ 172,888		
3.1 - Duke Labor and Indirects	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340	$ 1,671,340		
4.1 - Contingency - Risk EMV	$ 214,228	$ 214,228	$ 214,228	$ 214,228	$ 3,495,809	$ 3,495,809	$ 3,495,809	$ 2,576,966	$ 340,217	$ 290,171	$ 273,780		
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ 14,948,260**	**$ 2,821,427**	**$ 2,821,427**	**$ 2,821,427**	**$ 6,936,341**	**$ 40,656,341**	**$ 40,656,341**	**$ 39,737,498**	**$ 39,305,124**	**$ 38,714,560**	**$ 5,602,045**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 344,431	$ 344,431	$ 344,431	$ 344,431
Landfill Capping													
Landfill Contingency													
Landfill Post Closure Maintenance													
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ 379,547	$ 379,547	$ 379,547	$ 379,547	$ 379,547	$ 379,547	$ 379,547	$ 379,547	$ 379,547	$ -	$ -	$ -	$ -
CCP - ASW WELLS													
CCP - CAMA WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053									
CCP - CCR WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053									
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION	$ -	$ 2,255,000	$ 30,000	$ 208,000									
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS	$ 80,600	$ -											
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ 15	$ 16	$ 16	$ 17	$ 17	$ 18	$ 18	$ 19	$ 20	$ 20	$ 21	$ 21	$ 22
EHS - ARO GROUNDWATER	$ 813,642	$ 549,019	$ 460,565	$ 460,565	$ 460,801	$ 460,801	$ 460,801	$ 460,741	$ 460,699	$ 460,699	$ 460,699	$ 460,775	$ 460,775
EHS - ARO MUNICIPAL WATER LINE	$ 21,618	$ 22,266	$ 22,934	$ 23,622	$ 24,331	$ 25,061	$ 25,813	$ 26,587	$ 27,385	$ 28,206	$ 29,052	$ 29,924	$ 30,822
EHS - ARO PERMITTING	$ 275,000	$ 233,750	$ 198,688	$ 354,608	$ 354,608	$ 354,608	$ 263,141	$ 35,000	$ 26,579	$ 37,033	$ 47,853	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)													
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ 100,524	$ (33,619,476)	$ (33,619,476)	$ (33,020,949)	$ (34,487,135)	$ (34,241,003)	$ (1,128,488)	$ 4,284,046	$ 8,284,046
Remaining Current Year Forecast													
Inflation Impacts	*$ 348,113*	*$ 268,190*	*$ 255,482*	*$ 373,249*	*$ 904,080*	*$ 1,096,542*	*$ 1,278,760*	*$ 1,378,027*	*$ 1,174,883*	*$ 1,234,442*	*$ 1,375,585*	*$ 1,454,934*	*$ 2,834,401*
Total Buck	**$ 16,924,901**	**$ 6,587,322**	**$ 4,226,764**	**$ 4,679,141**	**$ 9,160,249**	**$ 9,353,442**	**$ 9,444,945**	**$ 8,996,471**	**$ 6,887,101**	**$ 6,578,388**	**$ 6,731,198**	**$ 6,591,631**	**$ 11,971,997**
Total Less Inflation	*$ 16,576,789*	*$ 6,319,132*	*$ 3,971,283*	*$ 4,305,892*	*$ 8,256,169*	*$ 8,256,900*	*$ 8,166,185*	*$ 7,618,443*	*$ 5,712,218*	*$ 5,343,946*	*$ 5,355,613*	*$ 5,136,698*	*$ 9,137,596*
ARO Input file - TPC As of Q120	$ 16,576,789	$ 6,319,132	$ 3,971,283	$ 4,305,892	$ 8,256,169	$ 8,256,900	$ 8,166,185	$ 7,618,443	$ 5,712,218	$ 5,343,946	$ 5,355,613	$ 5,136,698	$ 9,137,596
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is n Q3-2020 Annual ARO remeasurement cycle.													
Item Labeled NCDEQ Settlement impact is the high level net impact resinted by NCDEQ to extend beneficaiton activities until 2035.						Cape Fear							

Duke Energy Carolinas															
Ash Management ARO Cash Flows Summary															
Estimates as of Q1-2020- March 31, 2020															
Actuals As of 01/31/2020															
Buck															
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**
Basin Closure:															
2.1.01 - Design & Permitting															
2.1.02 - Mobilization, Demobilization & Site Preparation															
2.1.03 - Site Infrastructure															
2.1.04 - Water Management & Treatment															
2.1.05 - Ash Excavation & Processing															
2.1.06 - Landfill Construction & Landfill Capping															
2.1.07 - Site Restoration															
2.1.11 - Capex - Equipment & Facility Cost															
2.1.12 - Contract Cost															
2.1.12 - Revenue															
3.1 - Duke External Engineering															
3.1 - Duke Labor and Indirects															
4.1 - Contingency - Risk EMV															
Fulfillment Fee															
CCP - BASIN CLOSURE- ACTUALS															
Remaining Current Year Forecast															
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431
Landfill Capping															
Landfill Contingency															
Landfill Post Closure Maintenance															
CCP - ALTERNATE SPILLWAY															
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS															
CCP - CAMA WELLS															
CCP - CCR WELLS															
CCP- DAM STABILIATION															
CCP - DRY ASH CONVERSION															
CCP- GWAP CAP															
CCP - LANDFILL															
CCP - LINED RETENTION BASIN															
CCP - MISCELLANEOUS															
CCP - SW/PW REROUTE															
CCP - WASTE WATER TREATMENT															
EHS - ARO BOTTLED WATER	$ 23	$ 23	$ 24	$ 25	$ 26	$ 26	$ 27	$ 28	$ 29	$ 30	$ 30	$ 31	$ 32	$ 33	$ 34
EHS - ARO GROUNDWATER	$ 460,829	$ 442,406	$ 442,295	$ 442,295	$ 442,175	$ 441,954	$ 442,112	$ 442,112	$ 441,993	$ 441,993	$ 442,035	$ 442,035	$ 442,035	$ 442,035	$ 442,048
EHS - ARO MUNICIPAL WATER LINE	$ 31,746	$ 32,699	$ 33,680	$ 34,690	$ 35,731	$ 36,803	$ 37,907	$ 39,044	$ 40,215	$ 86,422	$ 42,628	$ 43,907	$ 45,224	$ 46,581	$ 47,978
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS															
Other Misc ARO & Juris Allocations															
Groundwater Corrective Action Plans (Excavate)															
NCDEQ Settlement Impact (See red note below)	$ 6,709,061	$ 6,227,751	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Remaining Current Year Forecast															
Inflation Impacts	*$ 2,554,263*	*$ 2,584,286*	*$ 330,546*	*$ 355,512*	*$ 381,013*	*$ 407,064*	*$ 433,919*	*$ 461,335*	*$ 489,339*	*$ 545,661*	*$ 547,523*	*$ 577,672*	*$ 608,554*	*$ 640,189*	*$ 672,609*
Total Buck	**$ 10,117,854**	**$ 9,649,096**	**$ 1,168,476**	**$ 1,194,453**	**$ 1,220,876**	**$ 1,247,778**	**$ 1,275,896**	**$ 1,304,451**	**$ 1,333,508**	**$ 1,436,036**	**$ 1,394,148**	**$ 1,425,577**	**$ 1,457,777**	**$ 1,490,770**	**$ 1,524,601**
Total Less Inflation	*$ 7,563,591*	*$ 7,064,810*	*$ 837,930*	*$ 838,941*	*$ 839,862*	*$ 840,714*	*$ 841,977*	*$ 843,115*	*$ 844,169*	*$ 890,376*	*$ 846,625*	*$ 847,905*	*$ 849,223*	*$ 850,581*	*$ 851,992*
ARO Input file - TPC As of Q120	$ 7,563,591	$ 7,064,810	$ 837,930	$ 838,941	$ 839,862	$ 840,714	$ 841,977	$ 843,115	$ 844,169	$ 890,376	$ 846,625	$ 847,905	$ 849,223	$ 850,581	$ 851,992
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date															
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations															
Column called "Remaining Forecast to be allocated to future years" is r															
Item Labeled NCDEQ Settlement impact is the high level net impact res															

Duke Energy Carolinas															
Ash Management ARO Cash Flows Summary															
Estimates as of Q1-2020- March 31, 2020															
Actuals As of 01/31/2020															
Buck															
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**
Basin Closure:															
2.1.01 - Design & Permitting															
2.1.02 - Mobilization, Demobilization & Site Preparation															
2.1.03 - Site Infrastructure															
2.1.04 - Water Management & Treatment															
2.1.05 - Ash Excavation & Processing															
2.1.06 - Landfill Construction & Landfill Capping															
2.1.07 - Site Restoration															
2.1.11 - Capex - Equipment & Facility Cost															
2.1.12 - Contract Cost															
2.1.12 - Revenue															
3.1 - Duke External Engineering															
3.1 - Duke Labor and Indirects															
4.1 - Contingency - Risk EMV															
Fulfillment Fee															
CCP - BASIN CLOSURE- ACTUALS															
Remaining Current Year Forecast															
Total Basin Closure:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Post Closure Maintenance (Basin only)	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ 344,431	$ -	$ -	$ -	$ -
Landfill Capping															
Landfill Contingency															
Landfill Post Closure Maintenance															
CCP - ALTERNATE SPILLWAY															
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS															
CCP - CAMA WELLS															
CCP - CCR WELLS															
CCP- DAM STABILIATION															
CCP - DRY ASH CONVERSION															
CCP- GWAP CAP															
CCP - LANDFILL															
CCP - LINED RETENTION BASIN															
CCP - MISCELLANEOUS															
CCP - SW/PW REROUTE															
CCP - WASTE WATER TREATMENT															
EHS - ARO BOTTLED WATER	$ 35	$ 36	$ 38	$ 39	$ 40	$ 41	$ 42	$ 43	$ 45	$ 46	$ 48				
EHS - ARO GROUNDWATER	$ 444,469	$ 450,417	$ 451,139	$ 401,740	$ 404,208	$ 406,960	$ 415,611	$ 429,824	$ 464,781	$ 496,840	$ 579,382	$ -	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE	$ 49,418	$ 50,900	$ 52,427	$ 54,000	$ 55,620	$ 57,289	$ 59,007	$ 60,777	$ 62,601	$ 64,479	$ 66,413				
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500				
PMC MANAGED PROJECTS															
Other Misc ARO & Juris Allocations															
Groundwater Corrective Action Plans (Excavate)															
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 344,431	$ 344,431	$ 344,431	$ 344,431
Remaining Current Year Forecast															
Inflation Impacts	*$ 707,820*	*$ 747,088*	*$ 782,941*	*$ 772,385*	*$ 809,806*	*$ 848,612*	*$ 894,877*	*$ 949,031*	*$ 1,029,439*	*$ 1,110,556*	*$ 1,258,786*	*$ 446,488*	*$ 463,098*	*$ 480,056*	*$ 497,370*
Total Buck	**$ 1,563,673**	**$ 1,610,372**	**$ 1,648,477**	**$ 1,590,095**	**$ 1,631,606**	**$ 1,674,833**	**$ 1,731,468**	**$ 1,801,607**	**$ 1,918,798**	**$ 2,033,852**	**$ 2,266,561**	**$ 790,920**	**$ 807,529**	**$ 824,487**	**$ 841,801**
Total Less Inflation	*$ 855,854*	*$ 863,285*	*$ 865,535*	*$ 817,710*	*$ 821,799*	*$ 826,221*	*$ 836,592*	*$ 852,577*	*$ 889,358*	*$ 923,296*	*$ 1,007,775*	*$ 344,431*	*$ 344,431*	*$ 344,431*	*$ 344,431*
ARO Input file - TPC As of Q120	$ 855,854	$ 863,285	$ 865,535	$ 817,710	$ 821,799	$ 826,221	$ 836,592	$ 852,577	$ 889,358	$ 923,296	$ 1,007,775	$ 344,431	$ 344,431	$ 344,431	$ 344,431
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date															
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations															
Column called "Remaining Forecast to be allocated to future years" is r															
Item Labeled NCDEQ Settlement impact is the high level net impact res															

Duke Energy Carolinas																
Ash Management ARO Cash Flows Summary																
Estimates as of Q1-2020- March 31, 2020																
Actuals As of 01/31/2020																
Buck																
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2064**	**2065**	**2066**	**2067**	**2068**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
Basin Closure:																
2.1.01 - Design & Permitting																
2.1.02 - Mobilization, Demobilization & Site Preparation																
2.1.03 - Site Infrastructure																
2.1.04 - Water Management & Treatment																
2.1.05 - Ash Excavation & Processing																
2.1.06 - Landfill Construction & Landfill Capping																
2.1.07 - Site Restoration																
2.1.11 - Capex - Equipment & Facility Cost																
2.1.12 - Contract Cost																
2.1.12 - Revenue																
3.1 - Duke External Engineering																
3.1 - Duke Labor and Indirects																
4.1 - Contingency - Risk EMV																
Fulfillment Fee																
CCP - BASIN CLOSURE- ACTUALS																
Remaining Current Year Forecast																
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping																
Landfill Contingency																
Landfill Post Closure Maintenance																
CCP - ALTERNATE SPILLWAY																
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS																
CCP - CAMA WELLS																
CCP - CCR WELLS																
CCP- DAM STABILIATION																
CCP - DRY ASH CONVERSION																
CCP- GWAP CAP																
CCP - LANDFILL																
CCP - LINED RETENTION BASIN																
CCP - MISCELLANEOUS																
CCP - SW/PW REROUTE																
CCP - WASTE WATER TREATMENT																
EHS - ARO BOTTLED WATER																
EHS - ARO GROUNDWATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE																
EHS - ARO PERMITTING																
PMC MANAGED PROJECTS																
Other Misc ARO & Juris Allocations																
Groundwater Corrective Action Plans (Excavate)																
NCDEQ Settlement Impact (See red note below)	$ 344,431	$ 344,431	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Remaining Current Year Forecast																
Inflation Impacts	*$ 515,048*	*$ 533,097*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Total Buck	**$ 859,479**	**$ 877,528**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	*$ 344,431*	*$ 344,431*	$ -	*$ -*	$ -	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
ARO Input file - TPC As of Q120	$ 344,431	$ 344,431	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date																
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																
Column called "Remaining Forecast to be allocated to future years" is r																
Item Labeled NCDEQ Settlement impact is the high level net impact res																

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Cliffside

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020
Basin Closure:		a											
2.1.01 - Design & Permitting	$ -		$ -	$ -									
2.1.02 - Mobilization, Demobilization & Site Preparation	$ 1,173,888		$ -	$ 1,173,888									$ -
2.1.03 - Site Infrastructure	$ 4,554,685		$ -	$ 4,554,685									$ 93,911
2.1.04 - Water Management & Treatment	$ 24,651,648		$ -	$ 24,651,648									$ 1,369,536
2.1.05 - Ash Excavation & Processing	$ 135,466,560		$ -	$ 135,466,560									$ 5,400,000
2.1.06 - Landfill Construction & Landfill Capping	$ 42,500,000		$ -	$ 42,500,000									$ -
2.1.07 - Site Restoration	$ 5,869,440		$ -	$ 5,869,440									$ -
2.1.11 - Capex - Equipment & Facility Cost	$ -		$ -	$ -									
2.1.12 - Contract Cost	$ -		$ -	$ -									
2.1.12 - Revenue	$ -		$ -	$ -									
3.1 - Duke External Engineering	$ 3,286,886		$ -	$ 3,286,886									$ 1,643,443
3.1 - Duke Labor and Indirects	$ 15,475,757		$ -	$ 15,475,757									$ 1,848,874
4.1 - Contingency - Risk EMV	$ 29,686,561		$ -	$ 29,686,561									$ 149,932
Fulfillment Fee	$ -		$ -	$ -									
CCP - BASIN CLOSURE- ACTUALS	$ 18,484,400		$ 18,484,400	$ -	$ 2,662,027	$ 7,678,382	$ 5,189,424	$ 1,788,434	$ 1,084,932		$ 81,202		
Remaining Current Year Forecast	$ 16,228,670		$ -	$ 16,228,670						$ 5,804,176		$ 10,424,494	
Total Basin Closure:	**$ 297,378,496**	*a*	**$ 18,484,400**	**$ 278,894,096**	**$ 2,662,027**	**$ 7,678,382**	**$ 5,189,424**	**$ 1,788,434**	**$ 1,084,932**	**$ 5,804,176**	**$ 81,202**	**$ 10,424,494**	**$ 10,505,696**
Post Closure Maintenance (Basin only)	$ 25,267,664	*b*	$ -	$ 25,267,664								$ -	$ -
Landfill Capping	$ 7,056,080	*c*	$ -	$ 7,056,080								$ -	$ -
Landfill Contingency	$ 1,058,412	*c*	$ -	$ 1,058,412								$ -	$ -
Landfill Post Closure Maintenance	$ 1,761,466	*c*	$ -	$ 1,761,466								$ -	$ -
CCP - ALTERNATE SPILLWAY	$ 4,608,933		$ -	$ 4,608,933	$ 21,267	$ 4,427,999	$ 159,666					$ -	
CCP - ARO ROUTINE MAINTENANCE	$ 10,245,237	*b*	$ 4,342,516	$ 5,902,720	$ 6,781	$ 364,047	$ 1,492,669	$ 1,334,663	$ 1,045,911	$ 6,536	$ 98,445	$ 954,002	1,052,447
CCP - ASW WELLS	$ -	*b*	$ -	$ -			$ -					$ -	
CCP - CAMA WELLS	$ 14,344,662	*b*	$ 13,958,288	$ 386,373	$ 7,950,336	$ 3,968,099	$ 695,315	$ 743,110	$ 598,469	$ 98,803	$ 2,960	$ 171,358	174,318
CCP - CCR WELLS	$ 3,110,111	*b*	$ 2,820,171	$ 289,940		$ 2,315,922	$ 255,897	$ 218,709	$ 29,644	$ (591)		$ 174,318	174,318
CCP- DAM STABILIATION	$ 61,205	*b*	$ 61,205	$ -		$ 9,791	$ 51,414					$ -	
CCP - DRY ASH CONVERSION	$ -	*b*	$ -	$ -			$ -					$ -	
CCP- GWAP CAP	$ 2,523,000	*b*	$ -	$ 2,523,000			$ -					$ 1,112,500	1,112,500
CCP - LANDFILL	$ 9,103,756	*b*	$ 9,103,756	$ -	$ 8,822,395	$ 281,361						$ -	
CCP - LINED RETENTION BASIN	$ -	*b*	$ -	$ -			$ 10	$ (10)				$ -	
CCP - MISCELLANEOUS	$ 11,830,474	*b*	$ 10,056,677	$ 1,773,797	$ 6,406,689	$ 1,398,266	$ 1,497,213	$ 561,270	$ 188,437	$ 684,563	$ 4,803	$ 966,007	970,810
CCP - SW/PW REROUTE	$ -	*b*	$ -	$ -		$ 12	$ (12)					$ -	
CCP - WASTE WATER TREATMENT	$ -	*b*	$ -	$ -								$ -	
EHS - ARO BOTTLED WATER	$ 201,405	*c*	$ 201,405	$ -		$ 20,347	$ 114,922	$ 66,137				$ -	-
EHS - ARO GROUNDWATER	$ 64,472,450	*c*	$ 10,071,789	$ 54,400,661		$ 865,807	$ 3,235,891	$ 2,593,495	$ 3,065,882	$ (127,254)	$ 310,714	$ 3,520,259	3,830,973
EHS - ARO MUNICIPAL WATER LINE	$ 1,937,069	*c*	$ 1,940,331	$ (3,262)		$ 21,004	$ 149,825	$ 1,766,241	$ 2,940	$ (2,940)	$ 322	$ (322)	-
EHS - ARO PERMITTING	$ 2,914,898	*c*	$ 933,713	$ 1,981,185			$ 246,484	$ 434,756	$ 235,735		$ 16,738	$ 289,499	306,237
PMC MANAGED PROJECTS	$ -	*g*	$ -	$ -								$ -	
Other Misc ARO & Juris Allocations	$ -	*b*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Groundwater Corrective Action Plans (Excavate)	$ 29,350,000	*h*	$ -	$ 29,350,000	$ -	$ -	$ -	$ -				$ 978,333	$ 978,333
NCDEQ Settlement Impact (See red note below)	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -				$ -	$ -
Remaining Current Year Forecast	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -					
	$ -		$ -	$ -									
Inflation Impacts	$ 85,868,879	*g*	$ -	$ 85,868,879	$ -	$ -	$ -	$ -				$ -	
Total Cliffside	**$ 573,094,197**		**$ 76,583,184**	**$ 496,511,013**	**$ 25,869,494**	**$ 21,351,036**	**$ 13,088,717**	**$ 9,506,805**	**$ 6,251,948**	**$ 6,463,294**	**$ 515,184**	**$ 18,590,449**	**$ 19,105,632**
Total Less Inflation	*487,225,318*												*19,105,632*
ARO Input file - TPC As of Q120	487,225,318												19,105,632
Variance check s/b "0"	-												-
Spend To Date					$ 25,869,494	$ 21,351,036	$ 13,088,717	$ 9,506,805	$ 6,251,948	$ 6,463,294	$ 515,184		
Variance check s/b "0"					$ -	$ -	$ -	$ -	$ -	$ -	$ -	**Basin Closure WBS Variance check s/b "0">**	$ -
FN - Please see Footnotes tab for further explanations													

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow ye

Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will b

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Cliffside													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation	$ -	$ 117,389	$ 469,555	$ -	$ -	$ 117,389	$ 410,861	$ 58,694					
2.1.03 - Site Infrastructure	$ 93,911	$ 469,555	$ 704,333	$ 704,333	$ 704,333	$ 704,333	$ 939,110	$ 234,778					
2.1.04 - Water Management & Treatment	$ 2,739,072	$ 4,108,608	$ 4,108,608	$ 4,108,608	$ 4,108,608	$ 2,739,072	$ 2,739,072	$ -					
2.1.05 - Ash Excavation & Processing	$ 18,000,000	$ 22,500,000	$ 22,500,000	$ 27,000,000	$ 27,000,000	$ 18,466,560	$ -	$ -					
2.1.06 - Landfill Construction & Landfill Capping	$ -	$ 10,625,000	$ 6,375,000	$ 6,375,000	$ 6,375,000	$ 6,375,000	$ 6,375,000						
2.1.07 - Site Restoration	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,347,776	$ 3,521,664	$ -				
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering	$ 821,722	$ 328,689	$ 328,689	$ 328,689	$ 328,689	$ 328,689	$ 328,689	$ 246,516	$ 246,516				
3.1 - Duke Labor and Indirects	$ 1,848,874	$ 1,917,350	$ 1,917,350	$ 2,876,026	$ 2,876,026	$ 1,561,271	$ 1,027,152	$ 1,027,152	$ 424,556				
4.1 - Contingency - Risk EMV	$ 1,499,321	$ 4,198,100	$ 4,497,964	$ 2,998,643	$ 2,998,643	$ 2,998,643	$ 2,998,643	$ 2,998,643	$ 4,497,964				
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ 25,002,900**	**$ 44,264,691**	**$ 40,901,499**	**$ 44,391,298**	**$ 44,391,298**	**$ 33,290,956**	**$ 17,166,302**	**$ 8,087,447**	**$ 5,169,036**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ 706,026	$ 706,026	$ 706,026	$ 706,026	$ 706,026	$ 706,026	$ 706,026	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS													
CCP - CAMA WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053									
CCP - CCR WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053									
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP	$ 1,142,500	$ 30,000	$ 208,000	$ 30,000									
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS	$ 123,226												
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 1,918,705	$ 1,591,741	$ 1,448,347	$ 1,448,348	$ 1,449,092	$ 1,449,092	$ 1,449,092	$ 1,448,901	$ 1,448,770	$ 1,448,770	$ 1,448,770	$ 1,449,010	$ 1,449,010
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 285,000	$ 242,250	$ 205,913	$ 128,224	$ 125,054	$ 41,660	$ 35,000	$ 35,000	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Remaining Current Year Forecast													
Inflation Impacts	*$ 634,511*	*$ 2,031,699*	*$ 2,863,186*	*$ 4,138,287*	*$ 5,217,824*	*$ 4,842,809*	*$ 3,184,260*	*$ 2,060,579*	*$ 1,739,200*	*$ 759,258*	*$ 844,227*	*$ 931,048*	*$ 1,019,629*
Total Cliffside	**$ 30,849,307**	**$ 49,902,847**	**$ 47,369,410**	**$ 51,878,622**	**$ 52,867,627**	**$ 41,308,876**	**$ 23,519,014**	**$ 13,452,516**	**$ 10,195,095**	**$ 4,046,117**	**$ 4,131,086**	**$ 4,218,146**	**$ 4,306,727**
Total Less Inflation	*30,214,796*	*47,871,148*	*44,506,224*	*47,740,335*	*47,649,803*	*36,466,067*	*20,334,753*	*11,391,937*	*8,455,895*	*3,286,859*	*3,286,859*	*3,287,098*	*3,287,098*
ARO Input file - TPC As of Q120	30,214,796	47,871,148	44,506,224	47,740,335	47,649,803	36,466,067	20,334,753	11,391,937	8,455,895	3,286,859	3,286,859	3,287,098	3,287,098
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is rars in Q3-2020 Annual ARO remeasurement cycle.													
Item Labeled NCDEQ Settlement impact is the high level net impact rese granted by NCDEQ to extend beneficaiton activities until 2035.													

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Cliffside													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation													
2.1.03 - Site Infrastructure													
2.1.04 - Water Management & Treatment													
2.1.05 - Ash Excavation & Processing													
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration													
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering													
3.1 - Duke Labor and Indirects													
4.1 - Contingency - Risk EMV													
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -
CCP - ASW WELLS													
CCP - CAMA WELLS													
CCP - CCR WELLS													
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS													
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 1,449,179	$ 1,392,967	$ 1,392,618	$ 1,392,618	$ 1,392,239	$ 1,391,544	$ 1,392,042	$ 1,392,042	$ 1,391,668	$ 1,391,668	$ 1,391,800	$ 1,391,800	$ 1,391,800
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 68,586	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333	$ 978,333
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Remaining Current Year Forecast													
Inflation Impacts	*$ 1,110,127*	*$ 1,181,910*	*$ 1,274,445*	*$ 1,369,053*	*$ 1,465,476*	*$ 1,563,751*	*$ 1,690,997*	*$ 1,767,460*	*$ 1,872,192*	*$ 1,979,333*	*$ 2,088,810*	*$ 2,200,502*	*$ 2,314,541*
Total Cliffside	**$ 4,397,396**	**$ 4,412,966**	**$ 4,505,151**	**$ 4,599,760**	**$ 4,695,803**	**$ 4,793,384**	**$ 4,972,214**	**$ 4,997,591**	**$ 5,101,949**	**$ 5,209,090**	**$ 5,318,698**	**$ 5,430,391**	**$ 5,544,429**
Total Less Inflation	*3,287,268*	*3,231,056*	*3,230,707*	*3,230,707*	*3,230,327*	*3,229,632*	*3,281,217*	*3,230,131*	*3,229,756*	*3,229,756*	*3,229,889*	*3,229,889*	*3,229,889*
ARO Input file - TPC As of Q120	3,287,268	3,231,056	3,230,707	3,230,707	3,230,327	3,229,632	3,281,217	3,230,131	3,229,756	3,229,756	3,229,889	3,229,889	3,229,889
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is r													
Item Labeled NCDEQ Settlement impact is the high level net impact res													

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Cliffside													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation													
2.1.03 - Site Infrastructure													
2.1.04 - Water Management & Treatment													
2.1.05 - Ash Excavation & Processing													
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration													
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering													
3.1 - Duke Labor and Indirects													
4.1 - Contingency - Risk EMV													
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ 842,255	$ -	$ -
Landfill Capping	$ -	$ 7,056,080	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ 1,058,412	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
CCP - ASW WELLS													
CCP - CAMA WELLS													
CCP - CCR WELLS													
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS													
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 1,391,800	$ 1,391,839	$ 1,370,877	$ 1,238,965	$ 1,240,953	$ 1,243,272	$ 1,250,909	$ 1,259,427	$ 1,286,198	$ 83,318	$ 90,094	$ 96,308	$ 112,308
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 978,333	$ 978,333	$ 978,333		$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Remaining Current Year Forecast													
Inflation Impacts	*$ 2,430,974*	*$ 9,002,262*	*$ 2,702,482*	*$ 1,867,048*	*$ 1,953,360*	*$ 2,041,919*	*$ 2,137,722*	*$ 2,236,920*	*$ 2,358,267*	*$ 1,115,123*	*$ 1,167,422*	*$ 207,514*	*$ 235,480*
Total Cliffside	**$ 5,660,862**	**$ 20,405,397**	**$ 5,970,163**	**$ 4,024,484**	**$ 4,112,784**	**$ 4,203,662**	**$ 4,307,102**	**$ 4,414,818**	**$ 4,562,936**	**$ 2,116,912**	**$ 2,175,986**	**$ 380,037**	**$ 424,004**
Total Less Inflation	*3,229,889*	*11,403,135*	*3,267,681*	*2,157,436*	*2,159,424*	*2,161,743*	*2,169,380*	*2,177,898*	*2,204,669*	*1,001,789*	*1,008,565*	*172,523*	*188,524*
ARO Input file - TPC As of Q120	3,229,889	11,403,135	3,267,681	2,157,436	2,159,424	2,161,743	2,169,380	2,177,898	2,204,669	1,001,789	1,008,565	172,523	188,524
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is r													
Item Labeled NCDEQ Settlement impact is the high level net impact res													

Duke Energy Carolinas														
Ash Management ARO Cash Flows Summary														
Estimates as of Q1-2020- March 31, 2020														
Actuals As of 01/31/2020														
Cliffside														
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**	**2069**	**2070**	**2071**	**2072**	**2073**
Basin Closure:														
2.1.01 - Design & Permitting														
2.1.02 - Mobilization, Demobilization & Site Preparation														
2.1.03 - Site Infrastructure														
2.1.04 - Water Management & Treatment														
2.1.05 - Ash Excavation & Processing														
2.1.06 - Landfill Construction & Landfill Capping														
2.1.07 - Site Restoration														
2.1.11 - Capex - Equipment & Facility Cost														
2.1.12 - Contract Cost														
2.1.12 - Revenue														
3.1 - Duke External Engineering														
3.1 - Duke Labor and Indirects														
4.1 - Contingency - Risk EMV														
Fulfillment Fee														
CCP - BASIN CLOSURE- ACTUALS														
Remaining Current Year Forecast														
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ 58,716
CCP - ALTERNATE SPILLWAY														
CCP - ARO ROUTINE MAINTENANCE														
CCP - ASW WELLS														
CCP - CAMA WELLS														
CCP - CCR WELLS														
CCP- DAM STABILIATION														
CCP - DRY ASH CONVERSION														
CCP- GWAP CAP														
CCP - LANDFILL														
CCP - LINED RETENTION BASIN														
CCP - MISCELLANEOUS														
CCP - SW/PW REROUTE														
CCP - WASTE WATER TREATMENT														
EHS - ARO BOTTLED WATER														
EHS - ARO GROUNDWATER	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040
EHS - ARO MUNICIPAL WATER LINE														
EHS - ARO PERMITTING														
PMC MANAGED PROJECTS														
Other Misc ARO & Juris Allocations														
Groundwater Corrective Action Plans (Excavate)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Remaining Current Year Forecast														
Inflation Impacts	*$ 168,203*	*$ 174,460*	*$ 180,848*	*$ 187,371*	*$ 194,031*	*$ 200,830*	*$ 207,773*	*$ 214,861*	*$ 222,098*	*$ 229,487*	*$ 237,031*	*$ 244,733*	*$ 252,597*	*$ 260,627*
Total Cliffside	**$ 297,958**	**$ 304,215**	**$ 310,604**	**$ 317,127**	**$ 323,786**	**$ 330,586**	**$ 337,528**	**$ 344,616**	**$ 351,853**	**$ 359,242**	**$ 366,786**	**$ 374,489**	**$ 382,353**	**$ 390,382**
Total Less Inflation	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*	*129,756*
ARO Input file - TPC As of Q120	129,756	129,756	129,756	129,756	129,756	129,756	129,756	129,756	129,756	129,756	129,756	129,756	129,756	129,756
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date														
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations														
Column called "Remaining Forecast to be allocated to future years" is r														
Item Labeled NCDEQ Settlement impact is the high level net impact res														

Duke Energy Carolinas						
Ash Management ARO Cash Flows Summary						
Estimates as of Q1-2020- March 31, 2020						
Actuals As of 01/31/2020						
Cliffside						
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
Basin Closure:						
2.1.01 - Design & Permitting						
2.1.02 - Mobilization, Demobilization & Site Preparation						
2.1.03 - Site Infrastructure						
2.1.04 - Water Management & Treatment						
2.1.05 - Ash Excavation & Processing						
2.1.06 - Landfill Construction & Landfill Capping						
2.1.07 - Site Restoration						
2.1.11 - Capex - Equipment & Facility Cost						
2.1.12 - Contract Cost						
2.1.12 - Revenue						
3.1 - Duke External Engineering						
3.1 - Duke Labor and Indirects						
4.1 - Contingency - Risk EMV						
Fulfillment Fee						
CCP - BASIN CLOSURE- ACTUALS						
Remaining Current Year Forecast						
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 58,716	$ 58,716	$ 58,716	$ 58,716	$ -	$ -
CCP - ALTERNATE SPILLWAY						
CCP - ARO ROUTINE MAINTENANCE						
CCP - ASW WELLS						
CCP - CAMA WELLS						
CCP - CCR WELLS						
CCP- DAM STABILIATION						
CCP - DRY ASH CONVERSION						
CCP- GWAP CAP						
CCP - LANDFILL						
CCP - LINED RETENTION BASIN						
CCP - MISCELLANEOUS						
CCP - SW/PW REROUTE						
CCP - WASTE WATER TREATMENT						
EHS - ARO BOTTLED WATER						
EHS - ARO GROUNDWATER	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ 71,040	$ -
EHS - ARO MUNICIPAL WATER LINE						
EHS - ARO PERMITTING						
PMC MANAGED PROJECTS						
Other Misc ARO & Juris Allocations						
Groundwater Corrective Action Plans (Excavate)	$ -	$ -	$ -	$ -	$ -	$ -
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ -	$ -
Remaining Current Year Forecast						
Inflation Impacts	*$ 268,825*	*$ 277,195*	*$ 285,741*	*$ 294,466*	*$ 166,095*	$ -
Total Cliffside	**$ 398,580**	**$ 406,951**	**$ 415,497**	**$ 424,222**	**$ 237,135**	**$ -**
Total Less Inflation	*129,756*	*129,756*	*129,756*	*129,756*	*71,040*	-
ARO Input file - TPC As of Q120	129,756	129,756	129,756	129,756	71,040	-
Variance check s/b "0"	-	-	-	-	-	-
Spend To Date						
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations						
Column called "Remaining Forecast to be allocated to future years" is r						
Item Labeled NCDEQ Settlement impact is the high level net impact res						

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Dan River

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020
Basin Closure:		a											
2.1.01 - Design & Permitting	$ -		$ -	$ -									$ 30,000
2.1.02 - Mobilization, Demobilization & Site Preparation	$ -		$ -	$ -									$ 52,000
2.1.03 - Site Infrastructure	$ -		$ -	$ -									$ 180,000
2.1.04 - Water Management & Treatment	$ -		$ -	$ -									$ 5,339,030
2.1.05 - Ash Excavation & Processing	$ -		$ -	$ -									$ 1,500,000
2.1.06 - Landfill Construction & Landfill Capping	$ -		$ -	$ -									
2.1.07 - Site Restoration	$ -		$ -	$ -									$ 493,212
2.1.11 - Capex - Equipment & Facility Cost	$ -		$ -	$ -									$ 865,368
2.1.12 - Contract Cost	$ -		$ -	$ -									$ 3,506,261
2.1.12 - Revenue	$ -		$ -	$ -									
3.1 - Duke External Engineering	$ -		$ -	$ -									
3.1 - Duke Labor and Indirects	$ -		$ -	$ -									
4.1 - Contingency - Risk EMV	$ -		$ -	$ -									
Fulfillment Fee	$ -		$ -	$ -									
CCP - BASIN CLOSURE- ACTUALS	*$ 182,473,444*		*$ 182,473,444*	*$ -*	$ 19,694,318	$ 54,415,023	$ 36,716,062	$ 27,198,918	$ 43,614,118		$ 835,005		
Remaining Current Year Forecast	*$ 17,001,614*		*$ -*	*$ 17,001,614*						$ 5,870,749		*$ 11,130,865*	
Total Basin Closure:	***$ 199,475,058***	*a*	***$ 182,473,444***	***$ 17,001,614***	**$ 19,694,318**	**$ 54,415,023**	**$ 36,716,062**	**$ 27,198,918**	**$ 43,614,118**	**$ 5,870,749**	**$ 835,005**	**$ 11,130,865**	**$ 11,965,871**
Post Closure Maintenance (Basin only)	*$ 9,229,373*	*b*	$ -	*$ 9,229,373*								*$ 307,646*	$ 307,646
Landfill Capping	*$ -*	*c*	$ -	*$ -*								*$ -*	
Landfill Contingency	*$ -*	*c*	$ -	*$ -*								*$ -*	
Landfill Post Closure Maintenance	*$ -*	*c*	$ -	*$ -*								*$ -*	
CCP - ALTERNATE SPILLWAY	*$ -*		$ -	*$ -*								*$ -*	
CCP - ARO ROUTINE MAINTENANCE	*$ 2,334,401*	*b*	*$ 2,545,641*	*$ (211,240)*	$ 76,073	$ 869,054	$ 839,226	$ 550,049	$ 210,899	$ (210,899)	$ 340	*$ (340)*	-
CCP - ASW WELLS	*$ 227,472*	*b*	*$ 375,933*	*$ (148,461)*				$ 227,472	$ 148,461	$ (148,461)		*$ -*	
CCP - CAMA WELLS	*$ 12,069,518*	*b*	*$ 11,749,934*	*$ 319,584*	$ 9,187,300	$ 2,636,508	$ (89,463)	$ 15,589		$ 29,053		*$ 174,318*	174,318
CCP - CCR WELLS	*$ 901,532*	*b*	*$ 581,949*	*$ 319,584*		$ 515,916	$ (19,952)	$ 85,985		$ 29,053		*$ 174,318*	174,318
CCP- DAM STABILIATION	*$ 5,594,399*	*b*	*$ 5,594,399*	*$ -*	$ 1,277,924	$ 4,287,009	$ 29,466					*$ -*	
CCP - DRY ASH CONVERSION	*$ -*	*b*	*$ -*	*$ -*								*$ -*	
CCP- GWAP CAP	*$ 2,523,000*	*b*	*$ -*	*$ 2,523,000*								*$ -*	-
CCP - LANDFILL	*$ -*	*b*	*$ -*	*$ -*								*$ -*	
CCP - LINED RETENTION BASIN	*$ -*	*b*	*$ -*	*$ -*								*$ -*	
CCP - MISCELLANEOUS	*$ 17,134,903*	*b*	*$ 16,638,486*	*$ 496,417*	$ 8,376,630	$ 7,214,230	$ 810,373	$ 168,360	$ 68,338	$ 265,662	$ 555	*$ 113,955*	114,510
CCP - SW/PW REROUTE	*$ -*	*b*	*$ -*	*$ -*								*$ -*	
CCP - WASTE WATER TREATMENT	*$ -*	*b*	*$ -*	*$ -*								*$ -*	
EHS - ARO BOTTLED WATER	*$ -*	*c*	*$ -*	*$ -*								*$ -*	-
EHS - ARO GROUNDWATER	*$ 20,018,392*	*c*	*$ 3,934,202*	*$ 16,084,190*		$ 308,729	$ 1,816,371	$ 1,085,356	$ 622,821	$ (142,189)	$ 100,925	*$ 865,330*	966,255
EHS - ARO MUNICIPAL WATER LINE	*$ 48,021*	*c*	*$ 48,021*	*$ -*		$ 17,529	$ 6,211	$ 24,281				*$ -*	-
EHS - ARO PERMITTING	*$ 1,632,304*	*c*	*$ 470,653*	*$ 1,161,651*			$ 158,121	$ 167,233	$ 132,887		$ 12,411	*$ 122,589*	135,000
PMC MANAGED PROJECTS	*$ -*	*g*	*$ -*	*$ -*								*$ -*	
Other Misc ARO & Juris Allocations	*$ 355*	*b*	*$ 355*	*$ -*	*$ -*	*$ -*	*$ 318*	*$ 37*	*$ -*	*$ -*	*$ -*	*$ -*	
Groundwater Corrective Action Plans (Excavate)	*$ -*	*h*	*$ -*	*$ -*	$ -	$ -	$ -	$ -				*$ -*	
NCDEQ Settlement Impact (See red note below)	*$ -*	*h*	*$ -*	*$ -*	$ -	$ -	$ -	$ -				*$ -*	
Remaining Current Year Forecast	*$ -*	*h*	*$ -*	*$ -*	$ -	$ -	$ -	$ -					
	$ -		*$ -*	*$ -*									
Inflation Impacts	*$ 9,548,936*	*g*	*$ -*	*$ 9,548,936*	$ -	$ -	$ -	$ -				*$ -*	
Total Dan River	***$ 280,737,665***		***$ 224,413,016***	***$ 56,324,649***	**$ 38,612,244**	**$ 70,263,998**	**$ 40,266,734**	**$ 29,523,279**	**$ 44,797,524**	**$ 5,692,968**	**$ 949,237**	**$ 12,888,681**	**$ 13,837,918**
Total Less Inflation	*271,188,729*												*13,837,918*
ARO Input file - TPC As of Q120	271,188,729												13,837,918
Variance check s/b "0"	-												-
Spend To Date					$ 38,612,244	**$ 70,263,998**	**$ 40,266,734**	**$ 29,523,279**	**$ 44,797,524**	**$ 5,692,968**	$ 949,237		
Variance check s/b "0"					*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	**Basin Closure WBS Variance check s/b "0">**	$ -

FN - Please see Footnotes tab for further explanations

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow years
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will be g

Duke Energy Carolinas															
Ash Management ARO Cash Flows Summary															
Estimates as of Q1-2020- March 31, 2020															
Actuals As of 01/31/2020															
Dan River															
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**
Basin Closure:															
2.1.01 - Design & Permitting															
2.1.02 - Mobilization, Demobilization & Site Preparation															
2.1.03 - Site Infrastructure															
2.1.04 - Water Management & Treatment															
2.1.05 - Ash Excavation & Processing															
2.1.06 - Landfill Construction & Landfill Capping															
2.1.07 - Site Restoration															
2.1.11 - Capex - Equipment & Facility Cost															
2.1.12 - Contract Cost															
2.1.12 - Revenue															
3.1 - Duke External Engineering															
3.1 - Duke Labor and Indirects															
4.1 - Contingency - Risk EMV															
Fulfillment Fee															
CCP - BASIN CLOSURE- ACTUALS															
Remaining Current Year Forecast	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646
Landfill Capping															
Landfill Contingency															
Landfill Post Closure Maintenance															
CCP - ALTERNATE SPILLWAY															
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -										
CCP - ASW WELLS															
CCP - CAMA WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053											
CCP - CCR WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053											
CCP- DAM STABILIATION															
CCP - DRY ASH CONVERSION															
CCP- GWAP CAP	$ 2,255,000	$ 30,000	$ 208,000	$ 30,000											
CCP - LANDFILL															
CCP - LINED RETENTION BASIN															
CCP - MISCELLANEOUS	$ 116,800														
CCP - SW/PW REROUTE															
CCP - WASTE WATER TREATMENT															
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 721,324	$ 559,969	$ 549,444	$ 549,444	$ 549,726	$ 549,726	$ 549,726	$ 549,654	$ 549,604	$ 549,604	$ 549,604	$ 549,695	$ 549,695	$ 549,759	$ 527,826
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 125,000	$ 106,250	$ 90,313	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS															
Other Misc ARO & Juris Allocations															
Groundwater Corrective Action Plans (Excavate)															
NCDEQ Settlement Impact (See red note below)															
Remaining Current Year Forecast															
Inflation Impacts	*$ 75,261*	*$ 45,071*	*$ 78,068*	*$ 84,967*	*$ 97,718*	*$ 118,510*	*$ 139,738*	*$ 161,400*	*$ 179,918*	*$ 202,066*	*$ 224,679*	*$ 247,793*	*$ 271,368*	*$ 295,460*	*$ 312,014*
Total Dan River	**$ 3,659,138**	**$ 1,107,042**	**$ 1,291,576**	**$ 1,065,163**	**$ 990,090**	**$ 1,010,882**	**$ 1,032,110**	**$ 1,053,699**	**$ 1,054,667**	**$ 1,076,815**	**$ 1,099,428**	**$ 1,122,633**	**$ 1,146,208**	**$ 1,170,365**	**$ 1,164,986**
Total Less Inflation	*3,583,876*	*1,061,971*	*1,213,508*	*980,196*	*892,372*	*892,372*	*892,372*	*892,299*	*874,750*	*874,750*	*874,750*	*874,841*	*874,841*	*874,905*	*852,972*
ARO Input file - TPC As of Q120	3,583,876	1,061,971	1,213,508	980,196	892,372	892,372	892,372	892,299	874,750	874,750	874,750	874,841	874,841	874,905	852,972
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date															
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations															
Column called "Remaining Forecast to be allocated to future years" is r in Q3-2020 Annual ARO remeasurement cycle.															
Item Labeled NCDEQ Settlement impact is the high level net impact resranted by NCDEQ to extend beneficaiton activities until 2035.															

Duke Energy Carolinas															
Ash Management ARO Cash Flows Summary															
Estimates as of Q1-2020- March 31, 2020															
Actuals As of 01/31/2020															
Dan River															
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**
Basin Closure:															
2.1.01 - Design & Permitting															
2.1.02 - Mobilization, Demobilization & Site Preparation															
2.1.03 - Site Infrastructure															
2.1.04 - Water Management & Treatment															
2.1.05 - Ash Excavation & Processing															
2.1.06 - Landfill Construction & Landfill Capping															
2.1.07 - Site Restoration															
2.1.11 - Capex - Equipment & Facility Cost															
2.1.12 - Contract Cost															
2.1.12 - Revenue															
3.1 - Duke External Engineering															
3.1 - Duke Labor and Indirects															
4.1 - Contingency - Risk EMV															
Fulfillment Fee															
CCP - BASIN CLOSURE- ACTUALS															
Remaining Current Year Forecast	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ 307,646	$ -
Landfill Capping															
Landfill Contingency															
Landfill Post Closure Maintenance															
CCP - ALTERNATE SPILLWAY															
CCP - ARO ROUTINE MAINTENANCE															
CCP - ASW WELLS															
CCP - CAMA WELLS															
CCP - CCR WELLS															
CCP- DAM STABILIATION															
CCP - DRY ASH CONVERSION															
CCP- GWAP CAP															
CCP - LANDFILL															
CCP - LINED RETENTION BASIN															
CCP - MISCELLANEOUS															
CCP - SW/PW REROUTE															
CCP - WASTE WATER TREATMENT															
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 527,694	$ 527,694	$ 527,550	$ 527,287	$ 527,476	$ 527,476	$ 527,334	$ 527,334	$ 527,384	$ 527,384	$ 527,384	$ 527,384	$ 527,398	$ 49,407	$ 50,068
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS															
Other Misc ARO & Juris Allocations															
Groundwater Corrective Action Plans (Excavate)															
NCDEQ Settlement Impact (See red note below)															
Remaining Current Year Forecast															
Inflation Impacts	*$ 336,427*	*$ 361,402*	*$ 386,835*	*$ 412,738*	*$ 439,404*	*$ 466,537*	*$ 494,157*	*$ 522,436*	*$ 551,342*	*$ 580,823*	*$ 610,923*	*$ 641,656*	*$ 673,045*	*$ 309,768*	*$ 58,474*
Total Dan River	**$ 1,189,266**	**$ 1,214,241**	**$ 1,239,531**	**$ 1,265,170**	**$ 1,292,025**	**$ 1,319,158**	**$ 1,346,636**	**$ 1,374,915**	**$ 1,403,871**	**$ 1,433,352**	**$ 1,463,453**	**$ 1,494,185**	**$ 1,525,589**	**$ 684,321**	**$ 126,042**
Total Less Inflation	*852,839*	*852,839*	*852,696*	*852,432*	*852,621*	*852,621*	*852,479*	*852,479*	*852,529*	*852,529*	*852,529*	*852,529*	*852,544*	*374,553*	*67,568*
ARO Input file - TPC As of Q120	852,839	852,839	852,696	852,432	852,621	852,621	852,479	852,479	852,529	852,529	852,529	852,529	852,544	374,553	67,568
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date															
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations															
Column called "Remaining Forecast to be allocated to future years" is r															
Item Labeled NCDEQ Settlement impact is the high level net impact resu															

Duke Energy Carolinas																			
Ash Management ARO Cash Flows Summary																			
Estimates as of Q1-2020- March 31, 2020																			
Actuals As of 01/31/2020																			
Dan River																			
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**	**2069**
Basin Closure:																			
2.1.01 - Design & Permitting																			
2.1.02 - Mobilization, Demobilization & Site Preparation																			
2.1.03 - Site Infrastructure																			
2.1.04 - Water Management & Treatment																			
2.1.05 - Ash Excavation & Processing																			
2.1.06 - Landfill Construction & Landfill Capping																			
2.1.07 - Site Restoration																			
2.1.11 - Capex - Equipment & Facility Cost																			
2.1.12 - Contract Cost																			
2.1.12 - Revenue																			
3.1 - Duke External Engineering																			
3.1 - Duke Labor and Indirects																			
4.1 - Contingency - Risk EMV																			
Fulfillment Fee																			
CCP - BASIN CLOSURE- ACTUALS																			
Remaining Current Year Forecast	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping																			
Landfill Contingency																			
Landfill Post Closure Maintenance																			
CCP - ALTERNATE SPILLWAY																			
CCP - ARO ROUTINE MAINTENANCE																			
CCP - ASW WELLS																			
CCP - CAMA WELLS																			
CCP - CCR WELLS																			
CCP- DAM STABILIATION																			
CCP - DRY ASH CONVERSION																			
CCP- GWAP CAP																			
CCP - LANDFILL																			
CCP - LINED RETENTION BASIN																			
CCP - MISCELLANEOUS																			
CCP - SW/PW REROUTE																			
CCP - WASTE WATER TREATMENT																			
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -										
EHS - ARO GROUNDWATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -										
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500										
PMC MANAGED PROJECTS																			
Other Misc ARO & Juris Allocations																			
Groundwater Corrective Action Plans (Excavate)																			
NCDEQ Settlement Impact (See red note below)																			
Remaining Current Year Forecast																			
Inflation Impacts	*$ 15,830*	*$ 16,530*	*$ 17,245*	*$ 17,974*	*$ 18,719*	*$ 19,480*	*$ 20,256*	*$ 21,049*	*$ 21,859*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dan River	**$ 33,330**	**$ 34,030**	**$ 34,745**	**$ 35,474**	**$ 36,219**	**$ 36,980**	**$ 37,756**	**$ 38,549**	**$ 39,359**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*	-	-	-	-	-	-	-	-	-	-
ARO Input file - TPC As of Q120	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500	17,500	-	-	-	-	-	-	-	-	-	-
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date																			
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																			
Column called "Remaining Forecast to be allocated to future years" is r																			
Item Labeled NCDEQ Settlement impact is the high level net impact resu																			

Duke Energy Carolinas										
Ash Management ARO Cash Flows Summary										
Estimates as of Q1-2020- March 31, 2020										
Actuals As of 01/31/2020										
Dan River										
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
Basin Closure:										
2.1.01 - Design & Permitting										
2.1.02 - Mobilization, Demobilization & Site Preparation										
2.1.03 - Site Infrastructure										
2.1.04 - Water Management & Treatment										
2.1.05 - Ash Excavation & Processing										
2.1.06 - Landfill Construction & Landfill Capping										
2.1.07 - Site Restoration										
2.1.11 - Capex - Equipment & Facility Cost										
2.1.12 - Contract Cost										
2.1.12 - Revenue										
3.1 - Duke External Engineering										
3.1 - Duke Labor and Indirects										
4.1 - Contingency - Risk EMV										
Fulfillment Fee										
CCP - BASIN CLOSURE- ACTUALS										
Remaining Current Year Forecast	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping										
Landfill Contingency										
Landfill Post Closure Maintenance										
CCP - ALTERNATE SPILLWAY										
CCP - ARO ROUTINE MAINTENANCE										
CCP - ASW WELLS										
CCP - CAMA WELLS										
CCP - CCR WELLS										
CCP- DAM STABILIATION										
CCP - DRY ASH CONVERSION										
CCP- GWAP CAP										
CCP - LANDFILL										
CCP - LINED RETENTION BASIN										
CCP - MISCELLANEOUS										
CCP - SW/PW REROUTE										
CCP - WASTE WATER TREATMENT										
EHS - ARO BOTTLED WATER										
EHS - ARO GROUNDWATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE										
EHS - ARO PERMITTING										
PMC MANAGED PROJECTS										
Other Misc ARO & Juris Allocations										
Groundwater Corrective Action Plans (Excavate)										
NCDEQ Settlement Impact (See red note below)										
Remaining Current Year Forecast										
Inflation Impacts	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Dan River	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	-	-	-	-	-	-	-	-	-	-
ARO Input file - TPC As of Q120	-	-	-	-	-	-	-	-	-	-
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-
Spend To Date										
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations										
Column called "Remaining Forecast to be allocated to future years" is r										
Item Labeled NCDEQ Settlement impact is the high level net impact res										

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Marshall

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020
Basin Closure:		a											
2.1.01 - Design & Permitting	$ -		$ -	$ -									
2.1.02 - Mobilization, Demobilization & Site Preparation	*$ 4,469,867*		$ -	*$ 4,469,867*									$ -
2.1.03 - Site Infrastructure	*$ 15,175,198*		$ -	*$ 15,175,198*									$ 312,891
2.1.04 - Water Management & Treatment	*$ 86,715,415*		$ -	*$ 86,715,415*									$ 1,787,947
2.1.05 - Ash Excavation & Processing	*$ 536,384,009*		$ -	*$ 536,384,009*									
2.1.06 - Landfill Construction & Landfill Capping	*$ 187,000,000*		$ -	*$ 187,000,000*									$ -
2.1.07 - Site Restoration	*$ 24,584,267*		$ -	*$ 24,584,267*									$ -
2.1.11 - Capex - Equipment & Facility Cost	$ -		$ -	$ -									
2.1.12 - Contract Cost	$ -		$ -	$ -									
2.1.12 - Revenue	$ -		$ -	$ -									
3.1 - Duke External Engineering	*$ 25,031,254*		$ -	*$ 25,031,254*									$ 3,128,907
3.1 - Duke Labor and Indirects	*$ 61,326,572*		$ -	*$ 61,326,572*									$ 5,840,626
4.1 - Contingency - Risk EMV	*$ 114,259,096*		$ -	*$ 114,259,096*									$ 577,066
Fulfillment Fee	$ -		$ -	$ -									
CCP - BASIN CLOSURE- ACTUALS	*$ 10,900,067*		*$ 10,900,067*	$ -	$ 2,372,829	$ 3,043,243	$ 154,749	$ 638,734	$ 4,581,638		$ 108,875		
Remaining Current Year Forecast	*$ 19,016,670*		$ -	*$ 19,016,670*						$ 7,478,109		*$ 11,538,561*	
Total Basin Closure:	***$ 1,084,862,414***	*a*	***$ 10,900,067***	***$ 1,073,962,347***	**$ 2,372,829**	**$ 3,043,243**	**$ 154,749**	**$ 638,734**	**$ 4,581,638**	**$ 7,478,109**	**$ 108,875**	**$ 11,538,561**	**$ 11,647,436**
Post Closure Maintenance (Basin only)	*$ 35,079,426*	*b*	$ -	*$ 35,079,426*								$ -	$ -
Landfill Capping	*$ 6,580,800*	*c*	$ -	*$ 6,580,800*								$ -	$ -
Landfill Contingency	*$ 987,120*	*c*	$ -	*$ 987,120*								$ -	$ -
Landfill Post Closure Maintenance	*$ 4,887,777*	*c*	$ -	*$ 4,887,777*						$ 182,576		*$ 182,576*	$ 182,576
CCP - ALTERNATE SPILLWAY	*$ 1,934,064*		*$ 1,934,064*	$ -	$ 150,414	$ 1,768,502	$ 15,148					$ -	
CCP - ARO ROUTINE MAINTENANCE	*$ 30,604,140*	*b*	*$ 6,613,500*	*$ 23,990,640*	$ 39,236	$ 1,602,218	$ 1,570,949	$ 1,552,825	$ 1,686,163	$ (316,707)	$ 162,109	*$ 1,207,347*	1,369,456
CCP - ASW WELLS	$ -	*b*	$ -	$ -						$ -		$ -	
CCP - CAMA WELLS	*$ 11,055,454*	*b*	*$ 11,181,945*	*$ (126,492)*	$ 6,852,076	$ 2,708,851	$ 172,369	$ 828,249	$ 609,260	$ (405,889)	$ 11,141	*$ 163,178*	174,319
CCP - CCR WELLS	*$ 1,294,439*	*b*	*$ 983,573*	*$ 310,866*		$ 847,903	$ 46,978	$ 79,974	$ 8,718	$ 20,336		*$ 174,318*	174,318
CCP- DAM STABILIATION	*$ 2,514,785*	*b*	*$ 2,514,785*	$ -	$ 94,331	$ 2,420,454						$ -	
CCP - DRY ASH CONVERSION	$ -	*b*	$ -	$ -								$ -	
CCP- GWAP CAP	*$ 2,523,000*	*b*	$ -	*$ 2,523,000*								*$ 1,112,500*	1,112,500
CCP - LANDFILL	*$ 2,521,378*	*b*	*$ 2,873,201*	*$ (351,822)*			$ 66,469	$ 2,454,910	$ 351,822	$ (351,822)		$ -	
CCP - LINED RETENTION BASIN	$ -	*b*	$ -	$ -								$ -	
CCP - MISCELLANEOUS	*$ 11,912,146*	*b*	*$ 10,586,195*	*$ 1,325,950*	$ 3,703,309	$ 4,890,939	$ 1,769,809	$ 721,943	$ (518,957)	$ 1,094,957	$ 19,154	*$ 104,681*	123,835
CCP - SW/PW REROUTE	*$ 12,067,065*	*b*	*$ 17,874,272*	*$ (5,807,207)*		$ 179,621	$ (179,621)	$ 2,275,808	$ 15,222,184	$ (5,703,184)	$ 376,281	*$ (104,024)*	272,257
CCP - WASTE WATER TREATMENT	$ -	*b*	$ -	$ -								$ -	
EHS - ARO BOTTLED WATER	*$ 186,211*	*c*	*$ 184,301*	*$ 1,910*		$ 35,444	$ 118,677	$ 30,180		$ 25		*$ 25*	25
EHS - ARO GROUNDWATER	*$ 41,351,652*	*c*	*$ 7,322,227*	*$ 34,029,425*		$ 615,151	$ 1,797,427	$ 1,958,507	$ 2,749,455	$ (149,359)	$ 201,688	*$ 2,161,958*	2,363,646
EHS - ARO MUNICIPAL WATER LINE	*$ 4,088,393*	*c*	*$ 1,909,513*	*$ 2,178,880*		$ 47,495	$ 773,963	$ 1,058,544	$ 27,702	$ 26,634	$ 1,810	*$ 26,174*	27,984
EHS - ARO PERMITTING	*$ 2,594,166*	*c*	*$ 687,707*	*$ 1,906,460*			$ 233,327	$ 170,419	$ 273,810		$ 10,151	*$ 206,985*	217,136
PMC MANAGED PROJECTS	$ -	*g*	$ -	$ -								$ -	
Other Misc ARO & Juris Allocations	*$ 0*	*b*	*$ 0*	$ -	$ -	$ -	$ -	*$ 0*	$ -	$ -	$ -	$ -	
Groundwater Corrective Action Plans (Excavate)	*$ 19,091,000*	*h*	$ -	*$ 19,091,000*	$ -	$ -	$ -	$ -				*$ 636,367*	$ 636,367
NCDEQ Settlement Impact (See red note below)	*$ (420,801,351)*	*h*	$ -	*$ (420,801,351)*	$ -	$ -	$ -	$ -				*$ (5,383,736)*	$ (5,383,736)
Remaining Current Year Forecast	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -					
	$ -		$ -	$ -									
Inflation Impacts	*$ 163,779,096*	*g*	$ -	*$ 163,779,096*	$ -	$ -	$ -	$ -				$ -	
Total Marshall	***$ 1,019,113,175***		***$ 75,565,350***	***$ 943,547,825***	**$ 13,212,194**	**$ 18,159,819**	**$ 6,540,243**	**$ 11,770,092**	**$ 24,991,793**	**$ 1,875,676**	**$ 891,209**	**$ 12,026,911**	**$ 12,918,120**
Total Less Inflation	*855,334,079*												*12,918,120*
ARO Input file - TPC As of Q120	855,334,079												12,918,120
Variance check s/b "0"	-												-
Spend To Date					$ 13,212,194	$ 18,159,819	$ 6,540,243	$ 11,770,092	$ 24,991,793	$ 1,875,676	$ 891,209		
Variance check s/b "0"					*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ 0*	*$ -*	**Basin Closure WBS Variance check s/b "0">**	$ -

FN - Please see Footnotes tab for further explanations

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow year
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will be

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Marshall

Item	Forecast 2021	Forecast 2022	Forecast 2023	Forecast 2024	Forecast 2025	Forecast 2026	Forecast 2027	Forecast 2028	Forecast 2029	Forecast 2030	Forecast 2031	Forecast 2032	Forecast 2033
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation	$ -	$ 446,987	$ 1,787,947	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2.1.03 - Site Infrastructure	$ 312,891	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227	$ 782,227
2.1.04 - Water Management & Treatment	$ 6,257,813	$ 6,257,813	$ 5,363,840	$ 5,363,840	$ 5,363,840	$ 5,363,840	$ 5,363,840	$ 4,469,867	$ 4,469,867	$ 4,469,867	$ 4,469,867	$ 4,469,867	$ 4,469,867
2.1.05 - Ash Excavation & Processing	$ 18,000,000	$ 22,500,000	$ 22,500,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000
2.1.06 - Landfill Construction & Landfill Capping	$ -	$ 28,050,000	$ 18,700,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000
2.1.07 - Site Restoration	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,564,453	$ 1,251,563	$ 1,251,563
3.1 - Duke Labor and Indirects	$ 4,432,618	$ 3,754,688	$ 4,276,173	$ 3,598,243	$ 2,920,313	$ 2,920,313	$ 2,920,313	$ 2,920,313	$ 2,920,313	$ 2,920,313	$ 2,920,313	$ 2,920,313	$ 2,920,313
4.1 - Contingency - Risk EMV	$ 1,154,132	$ 2,308,265	$ 4,616,529	$ 5,770,661	$ 8,078,926	$ 8,078,926	$ 8,078,926	$ 8,078,926	$ 8,078,926	$ 8,078,926	$ 8,078,926	$ 6,924,794	$ 5,770,661
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ 31,721,908**	**$ 65,664,433**	**$ 59,591,168**	**$ 51,559,424**	**$ 53,189,759**	**$ 53,189,759**	**$ 53,189,759**	**$ 52,295,786**	**$ 52,295,786**	**$ 52,295,786**	**$ 52,295,786**	**$ 50,828,763**	**$ 49,674,630**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 182,576	$ 54,460	$ 54,460
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000
CCP - ASW WELLS													
CCP - CAMA WELLS	$ 29,055	$ 29,055	$ 29,055	$ 29,055									
CCP - CCR WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053									
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP	$ 1,142,500	$ 30,000	$ 208,000	$ 30,000									
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS	$ 126,312	$ -	$ -	$ -									
CCP - SW/PW REROUTE	$ -	$ -	$ -	$ -									
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ 26	$ 27	$ 27	$ 28	$ 29	$ 30	$ 31	$ 32	$ 33	$ 34	$ 35	$ 36	$ 37
EHS - ARO GROUNDWATER	$ 1,323,865	$ 1,031,951	$ 879,006	$ 879,007	$ 879,458	$ 879,458	$ 879,458	$ 879,342	$ 889,723	$ 889,723	$ 889,723	$ 870,745	$ 870,745
EHS - ARO MUNICIPAL WATER LINE	$ 28,824	$ 29,688	$ 30,579	$ 31,496	$ 32,441	$ 33,414	$ 34,417	$ 35,449	$ 36,513	$ 37,608	$ 38,736	$ 39,898	$ 41,095
EHS - ARO PERMITTING	$ 189,500	$ 161,075	$ 136,913	$ 129,642	$ 129,877	$ 119,599	$ 116,339	$ 109,523	$ 59,088	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367
NCDEQ Settlement Impact (See red note below)	$ (1,994,621)	$ (10,828,745)	$ (3,340,644)	$ 6,828,522	$ (770,677)	$ (1,034,837)	$ (7,082,118)	$ (6,302,941)	$ (6,288,767)	$ (1,246,797)	$ (1,223,045)	$ (149,675)	$ (12,195,125)
Remaining Current Year Forecast													
Inflation Impacts	*$ 724,823*	*$ 2,464,357*	*$ 3,826,618*	*$ 5,325,399*	*$ 6,064,290*	*$ 7,318,300*	*$ 7,681,908*	*$ 8,851,590*	*$ 10,060,029*	*$ 12,453,759*	*$ 13,853,848*	*$ 15,124,637*	*$ 12,469,592*
Total Marshall	**$ 35,240,185**	**$ 60,529,836**	**$ 63,308,720**	**$ 66,760,569**	**$ 61,444,120**	**$ 62,424,666**	**$ 56,738,737**	**$ 57,787,724**	**$ 58,971,347**	**$ 66,366,556**	**$ 67,791,525**	**$ 68,522,731**	**$ 52,669,301**
Total Less Inflation	*34,515,363*	*58,065,479*	*59,482,101*	*61,435,170*	*55,379,830*	*55,106,366*	*49,056,828*	*48,936,134*	*48,911,319*	*53,912,797*	*53,937,677*	*53,398,094*	*40,199,709*
ARO Input file - TPC As of Q120	34,515,363	58,065,479	59,482,101	61,435,170	55,379,830	55,106,366	49,056,828	48,936,134	48,911,319	53,912,797	53,937,677	53,398,094	40,199,709
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is rs in Q3-2020 Annual ARO remeasurement cycle.													
Item Labeled NCDEQ Settlement impact is the high level net impact resgranted by NCDEQ to extend beneficaiton activities until 2035.													

Duke Energy Carolinas												
Ash Management ARO Cash Flows Summary												
Estimates as of Q1-2020- March 31, 2020												
Actuals As of 01/31/2020												
Marshall												
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**
Basin Closure:												
2.1.01 - Design & Permitting												
2.1.02 - Mobilization, Demobilization & Site Preparation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,787,947	$ 446,987	$ -		
2.1.03 - Site Infrastructure	$ 782,227	$ 782,227	$ 782,227	$ 625,781	$ 625,781	$ 469,336	$ 469,336	$ 469,336	$ 469,336	$ -		
2.1.04 - Water Management & Treatment	$ 4,469,867	$ 3,575,893	$ 3,575,893	$ 2,681,920	$ 2,681,920	$ 893,973	$ 893,973	$ 893,973	$ 893,973	$ -		
2.1.05 - Ash Excavation & Processing	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 27,000,000	$ 14,384,009				
2.1.06 - Landfill Construction & Landfill Capping	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 7,480,000	$ 5,610,000	$ -		
2.1.07 - Site Restoration	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,458,427	$ 9,833,707	$ 12,292,134	$ -		
2.1.11 - Capex - Equipment & Facility Cost												
2.1.12 - Contract Cost												
2.1.12 - Revenue												
3.1 - Duke External Engineering	$ 938,672	$ 625,781	$ 625,781	$ 625,781	$ 625,781	$ 625,781	$ 312,891	$ 312,891	$ 625,781	$ -		
3.1 - Duke Labor and Indirects	$ 2,920,313	$ 2,920,313	$ 2,868,164	$ 2,868,164	$ 2,190,235	$ 1,512,305	$ 1,460,156	$ 1,460,156	$ 782,227	$ -		
4.1 - Contingency - Risk EMV	$ 4,616,529	$ 3,462,397	$ 3,462,397	$ 3,462,397	$ 3,462,397	$ 3,462,397	$ 3,462,397	$ 3,462,397	$ 2,308,265	$ -		
Fulfillment Fee												
CCP - BASIN CLOSURE- ACTUALS												
Remaining Current Year Forecast												
Total Basin Closure:	**$ 48,207,608**	**$ 45,846,611**	**$ 45,794,463**	**$ 44,744,044**	**$ 44,066,114**	**$ 41,443,792**	**$ 43,537,180**	**$ 40,084,416**	**$ 23,428,702**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314
Landfill Capping	$ 6,580,800	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ 987,120	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 54,460	$ 109,224	$ 109,224	$ 109,224	$ 109,224	$ 109,224	$ 109,224	$ 109,224	$ 109,224	$ 109,224	$ 109,224	$ 109,224
CCP - ALTERNATE SPILLWAY												
CCP - ARO ROUTINE MAINTENANCE	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ 1,100,000	$ -		$ -	$ -
CCP - ASW WELLS												
CCP - CAMA WELLS												
CCP - CCR WELLS												
CCP- DAM STABILIATION												
CCP - DRY ASH CONVERSION												
CCP- GWAP CAP												
CCP - LANDFILL												
CCP - LINED RETENTION BASIN												
CCP - MISCELLANEOUS												
CCP - SW/PW REROUTE												
CCP - WASTE WATER TREATMENT												
EHS - ARO BOTTLED WATER	$ 38	$ 39	$ 40	$ 41	$ 43	$ 44	$ 45	$ 47	$ 48	$ 49	$ 51	$ 52
EHS - ARO GROUNDWATER	$ 870,847	$ 817,981	$ 817,776	$ 817,776	$ 817,553	$ 817,145	$ 817,438	$ 817,438	$ 817,218	$ 817,218	$ 817,295	$ 817,295
EHS - ARO MUNICIPAL WATER LINE	$ 42,328	$ 43,598	$ 44,906	$ 46,253	$ 47,641	$ 49,070	$ 50,542	$ 52,058	$ 53,620	$ 100,229	$ 56,837	$ 58,543
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 40,419	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS												
Other Misc ARO & Juris Allocations												
Groundwater Corrective Action Plans (Excavate)	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367	$ 636,367
NCDEQ Settlement Impact (See red note below)	$ (27,813,699)	$ (46,575,278)	$ (46,524,234)	$ (45,475,163)	$ (38,566,241)	$ (35,922,022)	$ (44,272,254)	$ (40,821,008)	$ (24,235,951)	$ (853,859)	$ (810,547)	$ (812,254)
Remaining Current Year Forecast												
Inflation Impacts	*$ 10,361,931*	*$ 730,146*	*$ 787,396*	*$ 845,848*	*$ 3,743,217*	*$ 3,995,098*	*$ 1,028,673*	*$ 1,092,192*	*$ 1,157,045*	*$ 1,223,260*	*$ 1,290,865*	*$ 1,359,890*
Total Marshall	**$ 41,045,299**	**$ 2,726,188**	**$ 2,783,437**	**$ 2,841,890**	**$ 11,994,337**	**$ 12,246,218**	**$ 3,024,715**	**$ 3,088,234**	**$ 3,153,087**	**$ 3,219,302**	**$ 3,286,907**	**$ 3,355,932**
Total Less Inflation	*30,683,368*	*1,996,042*	*1,996,042*	*1,996,042*	*8,251,120*	*8,251,120*	*1,996,042*	*1,996,042*	*1,996,042*	*1,996,042*	*1,996,042*	*1,996,042*
ARO Input file - TPC As of Q120	30,683,368	1,996,042	1,996,042	1,996,042	8,251,120	8,251,120	1,996,042	1,996,042	1,996,042	1,996,042	1,996,042	1,996,042
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date												
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations												
Column called "Remaining Forecast to be allocated to future years" is r												
Item Labeled NCDEQ Settlement impact is the high level net impact resu												

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Marshall													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation													
2.1.03 - Site Infrastructure													
2.1.04 - Water Management & Treatment													
2.1.05 - Ash Excavation & Processing													
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration													
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering													
3.1 - Duke Labor and Indirects													
4.1 - Contingency - Risk EMV													
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 109,224	$ 109,224	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -							
CCP - ASW WELLS													
CCP - CAMA WELLS													
CCP - CCR WELLS													
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS													
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ 54	$ 56	$ 57	$ 59	$ 61	$ 63	$ 64	$ 66	$ 68	$ 70	$ 72	$ 75	$ 77
EHS - ARO GROUNDWATER	$ 817,295	$ 817,295	$ 817,318	$ 821,796	$ 719,019	$ 720,172	$ 721,518	$ 725,951	$ 730,894	$ 746,430	$ 771,957	$ 822,629	$ 879,371
EHS - ARO MUNICIPAL WATER LINE	$ 60,299	$ 62,108	$ 63,971	$ 65,890	$ 67,867	$ 69,903	$ 72,000	$ 74,160	$ 76,385	$ 78,676	$ 81,037	$ 83,468	$ 85,972
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)	$ 636,367	$ 636,367	$ 636,367	$ 636,367									
NCDEQ Settlement Impact (See red note below)	$ (814,011)	$ (815,822)	$ (763,250)	$ (769,648)	$ (668,850)	$ (672,041)	$ (675,486)	$ (682,080)	$ (689,250)	$ (707,080)	$ (734,970)	$ (788,075)	$ (847,323)
Remaining Current Year Forecast													
Inflation Impacts	*$ 1,430,365*	*$ 1,502,319*	*$ 1,575,785*	*$ 1,650,793*	*$ 1,176,664*	*$ 1,229,928*	*$ 1,284,309*	*$ 1,339,833*	*$ 1,396,523*	*$ 1,454,403*	*$ 1,513,498*	*$ 1,573,835*	*$ 1,635,439*
Total Marshall	**$ 3,426,407**	**$ 3,498,361**	**$ 3,571,827**	**$ 3,646,835**	**$ 2,536,339**	**$ 2,589,603**	**$ 2,643,984**	**$ 2,699,508**	**$ 2,756,198**	**$ 2,814,078**	**$ 2,873,173**	**$ 2,933,510**	**$ 2,995,114**
Total Less Inflation	*1,996,042*	*1,996,042*	*1,996,042*	*1,996,042*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*
ARO Input file - TPC As of Q120	1,996,042	1,996,042	1,996,042	1,996,042	1,359,675	1,359,675	1,359,675	1,359,675	1,359,675	1,359,675	1,359,675	1,359,675	1,359,675
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is r													
Item Labeled NCDEQ Settlement impact is the high level net impact resu													

Duke Energy Carolinas													
Ash Management ARO Cash Flows Summary													
Estimates as of Q1-2020- March 31, 2020													
Actuals As of 01/31/2020													
Marshall													
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**	**2069**	**2070**	**2071**
Basin Closure:													
2.1.01 - Design & Permitting													
2.1.02 - Mobilization, Demobilization & Site Preparation													
2.1.03 - Site Infrastructure													
2.1.04 - Water Management & Treatment													
2.1.05 - Ash Excavation & Processing													
2.1.06 - Landfill Construction & Landfill Capping													
2.1.07 - Site Restoration													
2.1.11 - Capex - Equipment & Facility Cost													
2.1.12 - Contract Cost													
2.1.12 - Revenue													
3.1 - Duke External Engineering													
3.1 - Duke Labor and Indirects													
4.1 - Contingency - Risk EMV													
Fulfillment Fee													
CCP - BASIN CLOSURE- ACTUALS													
Remaining Current Year Forecast													
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314	$ 1,169,314
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ 54,764	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY													
CCP - ARO ROUTINE MAINTENANCE													
CCP - ASW WELLS													
CCP - CAMA WELLS													
CCP - CCR WELLS													
CCP- DAM STABILIATION													
CCP - DRY ASH CONVERSION													
CCP- GWAP CAP													
CCP - LANDFILL													
CCP - LINED RETENTION BASIN													
CCP - MISCELLANEOUS													
CCP - SW/PW REROUTE													
CCP - WASTE WATER TREATMENT													
EHS - ARO BOTTLED WATER	$ 79												
EHS - ARO GROUNDWATER	$ -	$ -	$ -										
EHS - ARO MUNICIPAL WATER LINE	$ 88,551												
EHS - ARO PERMITTING	$ 17,500												
PMC MANAGED PROJECTS													
Other Misc ARO & Juris Allocations													
Groundwater Corrective Action Plans (Excavate)													
NCDEQ Settlement Impact (See red note below)	$ 29,467	$ 135,597	$ 135,597	$ 135,597	$ 135,597	$ 135,597	$ (1,169,314)	$ (1,169,314)	$ (1,169,314)	$ (1,169,314)	$ (1,169,314)	$ (1,169,314)	$ (1,169,314)
Remaining Current Year Forecast													
Inflation Impacts	*$ 1,698,336*	*$ 1,762,554*	*$ 1,828,121*	*$ 1,895,065*	*$ 1,963,414*	*$ 2,033,199*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*	*$ -*
Total Marshall	**$ 3,058,011**	**$ 3,122,229**	**$ 3,187,796**	**$ 3,254,740**	**$ 3,323,089**	**$ 3,392,874**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	*1,359,675*	-	-	-	-	-	-	-
ARO Input file - TPC As of Q120	1,359,675	1,359,675	1,359,675	1,359,675	1,359,675	1,359,675	-	-	-	-	-	-	-
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date													
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations													
Column called "Remaining Forecast to be allocated to future years" is r													
Item Labeled NCDEQ Settlement impact is the high level net impact resu													

Duke Energy Carolinas								
Ash Management ARO Cash Flows Summary								
Estimates as of Q1-2020- March 31, 2020								
Actuals As of 01/31/2020								
Marshall								
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
Basin Closure:								
2.1.01 - Design & Permitting								
2.1.02 - Mobilization, Demobilization & Site Preparation								
2.1.03 - Site Infrastructure								
2.1.04 - Water Management & Treatment								
2.1.05 - Ash Excavation & Processing								
2.1.06 - Landfill Construction & Landfill Capping								
2.1.07 - Site Restoration								
2.1.11 - Capex - Equipment & Facility Cost								
2.1.12 - Contract Cost								
2.1.12 - Revenue								
3.1 - Duke External Engineering								
3.1 - Duke Labor and Indirects								
4.1 - Contingency - Risk EMV								
Fulfillment Fee								
CCP - BASIN CLOSURE- ACTUALS								
Remaining Current Year Forecast								
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Contingency	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Post Closure Maintenance	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ALTERNATE SPILLWAY								
CCP - ARO ROUTINE MAINTENANCE								
CCP - ASW WELLS								
CCP - CAMA WELLS								
CCP - CCR WELLS								
CCP- DAM STABILIATION								
CCP - DRY ASH CONVERSION								
CCP- GWAP CAP								
CCP - LANDFILL								
CCP - LINED RETENTION BASIN								
CCP - MISCELLANEOUS								
CCP - SW/PW REROUTE								
CCP - WASTE WATER TREATMENT								
EHS - ARO BOTTLED WATER								
EHS - ARO GROUNDWATER								
EHS - ARO MUNICIPAL WATER LINE								
EHS - ARO PERMITTING								
PMC MANAGED PROJECTS								
Other Misc ARO & Juris Allocations								
Groundwater Corrective Action Plans (Excavate)								
NCDEQ Settlement Impact (See red note below)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Remaining Current Year Forecast								
Inflation Impacts	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Marshall	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	-	-	-	-	-	-	-	-
ARO Input file - TPC As of Q120	-	-	-	-	-	-	-	-
Variance check s/b "0"	-	-	-	-	-	-	-	-
Spend To Date								
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations								
Column called "Remaining Forecast to be allocated to future years" is r								
Item Labeled NCDEQ Settlement impact is the high level net impact res								

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Riverbend

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020
Basin Closure:		a											
2.1.01 - Design & Permitting	$ -		$ -	$ -									
2.1.02 - Mobilization, Demobilization & Site Preparation	$ -		$ -	$ -									
2.1.03 - Site Infrastructure	$ -		$ -	$ -									
2.1.04 - Water Management & Treatment	$ -		$ -	$ -									
2.1.05 - Ash Excavation & Processing	$ -		$ -	$ -									
2.1.06 - Landfill Construction & Landfill Capping	$ -		$ -	$ -									
2.1.07 - Site Restoration	$ -		$ -	$ -									$ 45,000
2.1.11 - Capex - Equipment & Facility Cost	$ -		$ -	$ -									
2.1.12 - Contract Cost	$ -		$ -	$ -									
2.1.12 - Revenue	$ -		$ -	$ -									
3.1 - Duke External Engineering	$ -		$ -	$ -									
3.1 - Duke Labor and Indirects	$ -		$ -	$ -									$ 104,677
4.1 - Contingency - Risk EMV	$ -		$ -	$ -									
Fulfillment Fee	*$ 46,329,946*		*$ 46,329,946*	$ -					$ 46,329,946				
CCP - BASIN CLOSURE- ACTUALS	*$ 343,780,591*		*$ 343,780,591*	$ -	$ 21,135,761	$ 85,090,540	$ 131,538,979	$ 82,585,036	$ 23,409,387		$ 20,889		
Remaining Current Year Forecast	*$ 4,539,775*		$ -	*$ 4,539,775*						$ 4,410,987		*$ 128,788*	
Total Basin Closure:	***$ 394,650,312***	*a*	***$ 390,110,537***	***$ 4,539,775***	**$ 21,135,761**	**$ 85,090,540**	**$ 131,538,979**	**$ 82,585,036**	**$ 69,739,333**	**$ 4,410,987**	**$ 20,889**	**$ 128,788**	**$ 149,677**
Post Closure Maintenance (Basin only)	*$ 7,073,464*	*b*	$ -	*$ 7,073,464*								*$ 235,782*	$ 235,782
Landfill Capping	$ -	*c*	$ -	$ -								$ -	
Landfill Contingency	$ -	*c*	$ -	$ -								$ -	
Landfill Post Closure Maintenance	$ -	*c*	$ -	$ -								$ -	
CCP - ALTERNATE SPILLWAY	$ -		$ -	$ -								$ -	
CCP - ARO ROUTINE MAINTENANCE	*$ 795,074*	*b*	*$ 807,356*	*$ (12,282)*	$ 64,298	$ 251,069	$ 208,659	$ 147,273	$ 135,888	$ (12,113)	$ 169	*$ (169)*	-
CCP - ASW WELLS	*$ 149,643*	*b*	*$ 165,678*	*$ (16,036)*				$ 149,643	$ 16,036	$ (16,036)		$ -	
CCP - CAMA WELLS	*$ 12,949,805*	*b*	*$ 12,455,904*	*$ 493,901*	$ 9,072,461	$ 3,115,106	$ 283,966	$ (15,629)		$ 29,053		*$ 348,636*	348,636
CCP - CCR WELLS	$ -	*b*	$ -	$ -								$ -	
CCP- DAM STABILIATION	$ -	*b*	$ -	$ -								$ -	
CCP - DRY ASH CONVERSION	$ -	*b*	$ -	$ -								$ -	
CCP- GWAP CAP	*$ 2,523,000*	*b*	$ -	*$ 2,523,000*								$ -	-
CCP - LANDFILL	$ -	*b*	$ -	$ -								$ -	
CCP - LINED RETENTION BASIN	$ -	*b*	$ -	$ -								$ -	
CCP - MISCELLANEOUS	*$ 7,369,373*	*b*	*$ 7,347,939*	*$ 21,433*	$ 9,394,788	$ (2,479,274)	$ 360,377	$ 47,697	$ 24,342	$ (8,342)	$ 10	*$ 14,735*	14,745
CCP - SW/PW REROUTE	$ -	*b*	$ -	$ -								$ -	
CCP - WASTE WATER TREATMENT	$ -	*b*	$ -	$ -								$ -	
EHS - ARO BOTTLED WATER	$ -	*c*	$ -	$ -								$ -	-
EHS - ARO GROUNDWATER	*$ 12,512,968*	*c*	*$ 3,916,158*	*$ 8,596,810*		$ 408,614	$ 1,494,297	$ 1,184,746	$ 783,498	$ (58,388)	$ 45,003	*$ 620,716*	665,719
EHS - ARO MUNICIPAL WATER LINE	*$ 25,551*	*c*	*$ 25,549*	*$ 3*		$ 18,262	$ 6,100	$ 1,189	$ (3)	$ 3		$ -	-
EHS - ARO PERMITTING	*$ 1,790,743*	*c*	*$ 548,380*	*$ 1,242,362*			$ 197,060	$ 204,894	$ 139,997		$ 6,429	*$ 168,571*	175,000
PMC MANAGED PROJECTS	$ -	*g*	$ -	$ -								$ -	
Other Misc ARO & Juris Allocations	*$ 0*	*b*	$ -	*$ 0*	$ -	$ -	$ -	$ -	$ -	*$ 0*	$ -	$ -	
Groundwater Corrective Action Plans (Excavate)	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -				$ -	
NCDEQ Settlement Impact (See red note below)	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -				$ -	
Remaining Current Year Forecast	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -					
	$ -		$ -	$ -									
Inflation Impacts	*$ 6,126,538*	*g*	$ -	*$ 6,126,538*	$ -	$ -	$ -	$ -				$ -	
Total Riverbend	***$ 445,966,471***		***$ 415,377,502***	***$ 30,588,969***	**$ 39,667,308**	**$ 86,404,316**	**$ 134,089,437**	**$ 84,304,849**	**$ 70,839,092**	**$ 4,345,164**	**$ 72,499**	**$ 1,517,060**	**$ 1,589,559**
Total Less Inflation	*439,839,932*												*1,589,559*
ARO Input file - TPC As of Q120	439,839,932												1,589,559
Variance check s/b "0"	0												-
Spend To Date					$ 39,667,308	$ 86,404,316	$ 134,089,437	$ 84,304,849	$ 70,839,092	$ 4,345,164	$ 72,499		
Variance check s/b "0"					$ -	$ -	$ -	$ -	$ -	$ -	$ -	**Basin Closure WBS Variance check s/b "0">**	$ -

FN - Please see Footnotes tab for further explanations

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow years in Q
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will be grant

Duke Energy Carolinas																		
Ash Management ARO Cash Flows Summary																		
Estimates as of Q1-2020- March 31, 2020																		
Actuals As of 01/31/2020																		
Riverbend																		
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**
Basin Closure:																		
2.1.01 - Design & Permitting																		
2.1.02 - Mobilization, Demobilization & Site Preparation																		
2.1.03 - Site Infrastructure																		
2.1.04 - Water Management & Treatment																		
2.1.05 - Ash Excavation & Processing																		
2.1.06 - Landfill Construction & Landfill Capping																		
2.1.07 - Site Restoration																		
2.1.11 - Capex - Equipment & Facility Cost																		
2.1.12 - Contract Cost																		
2.1.12 - Revenue																		
3.1 - Duke External Engineering																		
3.1 - Duke Labor and Indirects																		
4.1 - Contingency - Risk EMV																		
Fulfillment Fee																		
CCP - BASIN CLOSURE- ACTUALS																		
Remaining Current Year Forecast																		
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782
Landfill Capping																		
Landfill Contingency																		
Landfill Post Closure Maintenance																		
CCP - ALTERNATE SPILLWAY																		
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -													
CCP - ASW WELLS																		
CCP - CAMA WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053														
CCP - CCR WELLS																		
CCP- DAM STABILIATION																		
CCP - DRY ASH CONVERSION																		
CCP- GWAP CAP	$ 2,255,000	$ 30,000	$ 208,000	$ 30,000														
CCP - LANDFILL																		
CCP - LINED RETENTION BASIN																		
CCP - MISCELLANEOUS	$ 15,040																	
CCP - SW/PW REROUTE																		
CCP - WASTE WATER TREATMENT																		
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 451,902	$ 320,581	$ 274,617	$ 274,617	$ 274,758	$ 274,758	$ 274,758	$ 274,722	$ 274,697	$ 274,697	$ 274,697	$ 274,743	$ 274,743	$ 274,775	$ 261,106	$ 261,040	$ 261,040	$ 260,969
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 138,500	$ 117,725	$ 100,066	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS																		
Other Misc ARO & Juris Allocations																		
Groundwater Corrective Action Plans (Excavate)																		
NCDEQ Settlement Impact (See red note below)																		
Remaining Current Year Forecast																		
Inflation Impacts	*$ 65,631*	*$ 31,115*	*$ 54,523*	*$ 52,396*	*$ 59,739*	*$ 72,449*	*$ 85,427*	*$ 98,671*	*$ 108,594*	*$ 121,962*	*$ 135,611*	*$ 149,559*	*$ 163,789*	*$ 178,328*	*$ 188,161*	*$ 202,889*	*$ 217,951*	*$ 233,296*
Total Riverbend	**$ 3,190,908**	**$ 764,256**	**$ 902,041**	**$ 656,848**	**$ 605,279**	**$ 617,990**	**$ 630,968**	**$ 644,175**	**$ 636,573**	**$ 649,942**	**$ 663,590**	**$ 677,584**	**$ 691,813**	**$ 706,384**	**$ 702,549**	**$ 717,212**	**$ 732,273**	**$ 747,547**
Total Less Inflation	*3,125,277*	*733,141*	*847,518*	*604,452*	*545,540*	*545,540*	*545,540*	*545,504*	*527,979*	*527,979*	*527,979*	*528,025*	*528,025*	*528,057*	*514,388*	*514,322*	*514,322*	*514,251*
ARO Input file - TPC As of Q120	3,125,277	733,141	847,518	604,452	545,540	545,540	545,540	545,504	527,979	527,979	527,979	528,025	528,025	528,057	514,388	514,322	514,322	514,251
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date																		
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																		
Column called "Remaining Forecast to be allocated to future years" is r3-2020 Annual ARO remeasurement cycle.																		
Item Labeled NCDEQ Settlement impact is the high level net impact resed by NCDEQ to extend beneficaiton activities until 2035.																		

Duke Energy Carolinas																			
Ash Management ARO Cash Flows Summary																			
Estimates as of Q1-2020- March 31, 2020																			
Actuals As of 01/31/2020																			
Riverbend																			
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**
Basin Closure:																			
2.1.01 - Design & Permitting																			
2.1.02 - Mobilization, Demobilization & Site Preparation																			
2.1.03 - Site Infrastructure																			
2.1.04 - Water Management & Treatment																			
2.1.05 - Ash Excavation & Processing																			
2.1.06 - Landfill Construction & Landfill Capping																			
2.1.07 - Site Restoration																			
2.1.11 - Capex - Equipment & Facility Cost																			
2.1.12 - Contract Cost																			
2.1.12 - Revenue																			
3.1 - Duke External Engineering																			
3.1 - Duke Labor and Indirects																			
4.1 - Contingency - Risk EMV																			
Fulfillment Fee																			
CCP - BASIN CLOSURE- ACTUALS																			
Remaining Current Year Forecast																			
Total Basin Closure:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Post Closure Maintenance (Basin only)	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ 235,782	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping																			
Landfill Contingency																			
Landfill Post Closure Maintenance																			
CCP - ALTERNATE SPILLWAY																			
CCP - ARO ROUTINE MAINTENANCE																			
CCP - ASW WELLS																			
CCP - CAMA WELLS																			
CCP - CCR WELLS																			
CCP- DAM STABILIATION																			
CCP - DRY ASH CONVERSION																			
CCP- GWAP CAP																			
CCP - LANDFILL																			
CCP - LINED RETENTION BASIN																			
CCP - MISCELLANEOUS																			
CCP - SW/PW REROUTE																			
CCP - WASTE WATER TREATMENT																			
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 260,839	$ 260,932	$ 260,932	$ 260,862	$ 260,862	$ 260,887	$ 260,887	$ 260,887	$ 260,887	$ 260,894	$ 262,323	$ 50,068	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS																			
Other Misc ARO & Juris Allocations																			
Groundwater Corrective Action Plans (Excavate)																			
NCDEQ Settlement Impact (See red note below)																			
Remaining Current Year Forecast																			
Inflation Impacts	*$ 248,932*	*$ 265,004*	*$ 281,367*	*$ 298,034*	*$ 315,090*	*$ 332,520*	*$ 350,300*	*$ 368,454*	*$ 386,989*	*$ 405,919*	*$ 426,423*	*$ 58,474*	*$ 15,830*	*$ 16,530*	*$ 17,245*	*$ 17,974*	*$ 18,719*	*$ 19,480*	*$ 20,256*
Total Riverbend	**$ 763,053**	**$ 779,218**	**$ 795,582**	**$ 812,178**	**$ 829,234**	**$ 846,689**	**$ 864,469**	**$ 882,623**	**$ 901,158**	**$ 920,095**	**$ 942,029**	**$ 126,042**	**$ 33,330**	**$ 34,030**	**$ 34,745**	**$ 35,474**	**$ 36,219**	**$ 36,980**	**$ 37,756**
Total Less Inflation	*514,121*	*514,214*	*514,214*	*514,144*	*514,144*	*514,169*	*514,169*	*514,169*	*514,169*	*514,176*	*515,606*	*67,568*	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*	*17,500*
ARO Input file - TPC As of Q120	514,121	514,214	514,214	514,144	514,144	514,169	514,169	514,169	514,169	514,176	515,606	67,568	17,500	17,500	17,500	17,500	17,500	17,500	17,500
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date																			
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																			
Column called "Remaining Forecast to be allocated to future years" is r																			
Item Labeled NCDEQ Settlement impact is the high level net impact res																			

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
Riverbend

	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast
Item	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**	**2068**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
Basin Closure:																						
2.1.01 - Design & Permitting																						
2.1.02 - Mobilization, Demobilization & Site Preparation																						
2.1.03 - Site Infrastructure																						
2.1.04 - Water Management & Treatment																						
2.1.05 - Ash Excavation & Processing																						
2.1.06 - Landfill Construction & Landfill Capping																						
2.1.07 - Site Restoration																						
2.1.11 - Capex - Equipment & Facility Cost																						
2.1.12 - Contract Cost																						
2.1.12 - Revenue																						
3.1 - Duke External Engineering																						
3.1 - Duke Labor and Indirects																						
4.1 - Contingency - Risk EMV																						
Fulfillment Fee																						
CCP - BASIN CLOSURE- ACTUALS																						
Remaining Current Year Forecast																						
Total Basin Closure:	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping																						
Landfill Contingency																						
Landfill Post Closure Maintenance																						
CCP - ALTERNATE SPILLWAY																						
CCP - ARO ROUTINE MAINTENANCE																						
CCP - ASW WELLS																						
CCP - CAMA WELLS																						
CCP - CCR WELLS																						
CCP- DAM STABILIATION																						
CCP - DRY ASH CONVERSION																						
CCP- GWAP CAP																						
CCP - LANDFILL																						
CCP - LINED RETENTION BASIN																						
CCP - MISCELLANEOUS																						
CCP - SW/PW REROUTE																						
CCP - WASTE WATER TREATMENT																						
EHS - ARO BOTTLED WATER	$ -	$ -																				
EHS - ARO GROUNDWATER	$ -	$ -	$ -	$ -	$ -																	
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -																				
EHS - ARO PERMITTING	$ 17,500	$ 17,500																				
PMC MANAGED PROJECTS																						
Other Misc ARO & Juris Allocations																						
Groundwater Corrective Action Plans (Excavate)																						
NCDEQ Settlement Impact (See red note below)																						
Remaining Current Year Forecast																						
Inflation Impacts	*$ 21,049*	*$ 21,859*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total Riverbend	**$ 38,549**	**$ 39,359**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	*17,500*	*17,500*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARO Input file - TPC As of Q120	17,500	17,500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Variance check s/b "0"	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spend To Date																						
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																						
Column called "Remaining Forecast to be allocated to future years" is r																						
Item Labeled NCDEQ Settlement impact is the high level net impact res																						

Duke Energy Carolinas
Ash Management ARO Cash Flows Summary
Estimates as of Q1-2020- March 31, 2020
Actuals As of 01/31/2020
WS Lee

Item	Total Project Costs (2015+)	FN	Total Actuals: 1/1/15 - 01/31/2020	Total CF Forecast Feb 2020- 2079	Actuals 2015	Actuals 2016	Actuals 2017	Actuals 2018	Actuals 2019	Forecast Remaining Forecast to be allocated to future years	Actuals YTD Jan 2020	Forecast Feb 2020 - Dec 2020	Actuals & Forecast 2020
Basin Closure:		a											
2.1.01 - Design & Permitting	$ -		$ -	$ -									
2.1.02 - Mobilization, Demobilization & Site Preparation	$ 3,368,126		$ -	$ 3,368,126									$ 1,216,454
2.1.03 - Site Infrastructure	$ 300,000		$ -	$ 300,000									$ 675,529
2.1.04 - Water Management & Treatment	$ 6,191,251		$ -	$ 6,191,251									$ 420,000
2.1.05 - Ash Excavation & Processing	$ 32,444,675		$ -	$ 32,444,675									$ -
2.1.06 - Landfill Construction & Landfill Capping	$ 36,146,265		$ -	$ 36,146,265									$ -
2.1.07 - Site Restoration	$ 5,399,850		$ -	$ 5,399,850									$ 1,000,923
2.1.11 - Capex - Equipment & Facility Cost	$ -		$ -	$ -									
2.1.12 - Contract Cost	$ -		$ -	$ -									
2.1.12 - Revenue	$ -		$ -	$ -									
3.1 - Duke External Engineering	$ 4,799,300		$ -	$ 4,799,300									$ 824,912
3.1 - Duke Labor and Indirects	$ 15,202,842		$ -	$ 15,202,842									$ 2,441,990
4.1 - Contingency - Risk EMV	$ 16,325,082		$ -	$ 16,325,082									$ 1,034,314
Fulfillment Fee	$ -		$ -	$ -									
CCP - BASIN CLOSURE- ACTUALS	$ 91,893,834		$ 91,893,834	$ -	$ 14,317,110	$ 27,109,124	$ 36,579,066	$ 6,823,165	$ 6,814,074		$ 251,295		
Remaining Current Year Forecast	$ 8,108,111		$ -	$ 8,108,111						$ 745,284		$ 7,362,827	
Total Basin Closure:	**$ 220,179,335**	*a*	**$ 91,893,834**	**$ 128,285,501**	**$ 14,317,110**	**$ 27,109,124**	**$ 36,579,066**	**$ 6,823,165**	**$ 6,814,074**	**$ 745,284**	**$ 251,295**	**$ 7,362,827**	**$ 7,614,123**
Post Closure Maintenance (Basin only)	$ 3,038,206	*b*	$ -	$ 3,038,206								$ -	$ -
Landfill Capping	$ -	*c*	$ -	$ -								$ -	
Landfill Contingency	$ -	*c*	$ -	$ -								$ -	
Landfill Post Closure Maintenance	$ -	*c*	$ -	$ -								$ -	
CCP - ALTERNATE SPILLWAY	$ -		$ -	$ -								$ -	
CCP - ARO ROUTINE MAINTENANCE	$ 3,004,625	*b*	$ 1,173,557	$ 1,831,069	$ 18,086	$ 351,803	$ 217,207	$ 301,304	$ 249,955	$ 102,749	$ 35,200	$ 317,504	352,704
CCP - ASW WELLS	$ -	*b*	$ -	$ -								$ -	
CCP - CAMA WELLS	$ -	*b*	$ -	$ -								$ -	
CCP - CCR WELLS	$ 1,617,554	*b*	$ 1,467,239	$ 150,316		$ 1,543,690	$ (180,032)	$ 79,578	$ 22,442	$ 6,611	$ 1,561	$ 27,492	29,053
CCP- DAM STABILIATION	$ 3,253,340	*b*	$ 3,253,340	$ -	$ 340,901	$ 2,912,440						$ -	
CCP - DRY ASH CONVERSION	$ -	*b*	$ -	$ -								$ -	
CCP- GWAP CAP	$ -	*b*	$ -	$ -								$ -	
CCP - LANDFILL	$ -	*b*	$ -	$ -								$ -	
CCP - LINED RETENTION BASIN	$ -	*b*	$ 192,143	$ (192,143)					$ 192,143	$ (192,143)		$ -	
CCP - MISCELLANEOUS	$ 9,836,416	*b*	$ 9,346,408	$ 490,008	$ 5,011,228	$ 3,388,672	$ 477,789	$ 130,810	$ 337,726	$ 288,190	$ 182	$ 99,818	100,000
CCP - SW/PW REROUTE	$ -	*b*	$ -	$ -								$ -	
CCP - WASTE WATER TREATMENT	$ -	*b*	$ -	$ -								$ -	
EHS - ARO BOTTLED WATER	$ -	*c*	$ -	$ -								$ -	-
EHS - ARO GROUNDWATER	$ 14,212,079	*c*	$ 2,089,855	$ 12,122,225		$ 39,008	$ 431,202	$ 954,781	$ 619,585	$ (58,278)	$ 45,278	$ 324,171	369,449
EHS - ARO MUNICIPAL WATER LINE	$ -	*c*	$ -	$ -								$ -	-
EHS - ARO PERMITTING	$ 2,067,637	*c*	$ 403,860	$ 1,663,777			$ 52,455	$ 209,090	$ 136,510		$ 5,805	$ 179,195	185,000
PMC MANAGED PROJECTS	$ -	*g*	$ -	$ -								$ -	
Other Misc ARO & Juris Allocations	$ -	*b*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Groundwater Corrective Action Plans (Excavate)	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -				$ -	
NCDEQ Settlement Impact (See red note below)	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -				$ -	
Remaining Current Year Forecast	$ -	*h*	$ -	$ -	$ -	$ -	$ -	$ -					
	$ -		$ -	$ -									
Inflation Impacts	$ 15,031,369	*g*	$ -	$ 15,031,369	$ -	$ -	$ -	$ -				$ -	
Total WS Lee	**$ 272,240,561**		**$ 109,820,235**	**$ 162,420,326**	**$ 19,687,325**	**$ 35,344,738**	**$ 37,577,688**	**$ 8,498,729**	**$ 8,372,434**	**$ 892,413**	**$ 339,322**	**$ 8,311,007**	**$ 8,650,329**
Total Less Inflation	$ *257,209,192*												$ *8,650,329*
ARO Input file - TPC As of Q120	$ 257,209,192												$ 8,650,329
Variance check s/b "0"	$ -												$ -
Spend To Date					$ 19,687,325	$ 35,344,738	$ 37,577,688	$ 8,498,729	$ 8,372,434	$ 892,413	$ 339,322		
Variance check s/b "0"					$ -	$ -	$ -	$ -	$ -	$ -	$ -	**Basin Closure WBS Variance check s/b "0">**	$ -

FN - Please see Footnotes tab for further explanations

Column called "Remaining Forecast to be allocated to future years" is representative of the 2019 Remaining Forecast & Contingency based on the Q3-2019 Annual ARO remeasurement estimates for 2019 in total less actuals incurred for 2019. This will be trued-up and carried forward into future cash flow y
Item Labeled NCDEQ Settlement impact is the high level net impact resulting from the DEQ Settlement announced on January 2, 2020 to fully excavate all sites except Marshall & Roxboro in where those will only excavate CAMA Ash Only. In addition, settlement includes the assumption that a variance will

Duke Energy Carolinas														
Ash Management ARO Cash Flows Summary														
Estimates as of Q1-2020- March 31, 2020														
Actuals As of 01/31/2020														
WS Lee														
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**
Basin Closure:														
2.1.01 - Design & Permitting														
2.1.02 - Mobilization, Demobilization & Site Preparation	$ 205,902	$ 733,573	$ 983,811	$ 983,811	$ 461,029									
2.1.03 - Site Infrastructure	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000	$ 50,000								
2.1.04 - Water Management & Treatment	$ 666,359	$ 1,086,359	$ 2,009,266	$ 2,009,266	$ 420,000	$ -								
2.1.05 - Ash Excavation & Processing	$ -	$ 7,573,333	$ 12,133,333	$ 12,341,338	$ 396,670	$ -								
2.1.06 - Landfill Construction & Landfill Capping	$ 25,519,265	$ -	$ -	$ -	$ 10,627,000	$ -								
2.1.07 - Site Restoration	$ -	$ -	$ -	$ 3,414,940	$ 1,984,910	$ -								
2.1.11 - Capex - Equipment & Facility Cost														
2.1.12 - Contract Cost														
2.1.12 - Revenue														
3.1 - Duke External Engineering	$ 1,106,053	$ 1,106,053	$ 937,369	$ 937,369	$ 712,456									
3.1 - Duke Labor and Indirects	$ 2,957,990	$ 2,957,990	$ 2,957,990	$ 2,537,990	$ 2,357,990	$ 1,432,891								
4.1 - Contingency - Risk EMV	$ 4,795,328	$ 2,123,284	$ 2,997,990	$ 3,501,478	$ 2,673,899	$ 233,103								
Fulfillment Fee														
CCP - BASIN CLOSURE- ACTUALS														
Remaining Current Year Forecast														
Total Basin Closure:	**$ 35,300,898**	**$ 15,630,593**	**$ 22,069,759**	**$ 25,776,192**	**$ 19,683,954**	**$ 1,715,994**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274
Landfill Capping														
Landfill Contingency														
Landfill Post Closure Maintenance														
CCP - ALTERNATE SPILLWAY														
CCP - ARO ROUTINE MAINTENANCE	$ 352,704	$ 352,704	$ 352,704	$ 352,704	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS														
CCP - CAMA WELLS														
CCP - CCR WELLS	$ 29,053	$ 29,053	$ 29,053	$ 29,053										
CCP- DAM STABILIATION														
CCP - DRY ASH CONVERSION														
CCP- GWAP CAP														
CCP - LANDFILL														
CCP - LINED RETENTION BASIN														
CCP - MISCELLANEOUS	$ 102,000	$ -												
CCP - SW/PW REROUTE														
CCP - WASTE WATER TREATMENT														
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 274,425	$ 412,409	$ 388,408	$ 388,408	$ 361,400	$ 361,400	$ 361,400	$ 361,353	$ 361,320	$ 361,320	$ 361,320	$ 361,380	$ 361,380	$ 361,422
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 132,000	$ 112,200	$ 95,370	$ 462,512	$ 35,000	$ 35,000	$ 35,000	$ 35,000	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS														
Other Misc ARO & Juris Allocations														
Groundwater Corrective Action Plans (Excavate)														
NCDEQ Settlement Impact (See red note below)														
Remaining Current Year Forecast														
Inflation Impacts	*$ 760,013*	*$ 701,845*	*$ 1,475,479*	*$ 2,341,216*	*$ 2,209,961*	*$ 293,982*	*$ 77,932*	*$ 90,011*	*$ 98,745*	*$ 110,901*	*$ 123,312*	*$ 136,000*	*$ 148,939*	*$ 162,164*
Total WS Lee	**$ 36,951,092**	**$ 17,238,805**	**$ 24,410,773**	**$ 29,350,085**	**$ 22,391,589**	**$ 2,507,650**	**$ 575,605**	**$ 587,637**	**$ 578,838**	**$ 590,994**	**$ 603,405**	**$ 616,153**	**$ 629,092**	**$ 642,360**
Total Less Inflation	*$ 36,191,080*	*$ 16,536,960*	*$ 22,935,294*	*$ 27,008,868*	*$ 20,181,628*	*$ 2,213,667*	*$ 497,674*	*$ 497,626*	*$ 480,093*	*$ 480,093*	*$ 480,093*	*$ 480,153*	*$ 480,153*	*$ 480,196*
ARO Input file - TPC As of Q120	$ 36,191,080	$ 16,536,960	$ 22,935,294	$ 27,008,868	$ 20,181,628	$ 2,213,667	$ 497,674	$ 497,626	$ 480,093	$ 480,093	$ 480,093	$ 480,153	$ 480,153	$ 480,196
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date														
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations														
Column called "Remaining Forecast to be allocated to future years" is rears in Q3-2020 Annual ARO remeasurement cycle.														
Item Labeled NCDEQ Settlement impact is the high level net impact resibe granted by NCDEQ to extend beneficaiton activities until 2035.														

Duke Energy Carolinas															
Ash Management ARO Cash Flows Summary															
Estimates as of Q1-2020- March 31, 2020															
Actuals As of 01/31/2020															
WS Lee															
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**	**2047**	**2048**	**2049**
Basin Closure:															
2.1.01 - Design & Permitting															
2.1.02 - Mobilization, Demobilization & Site Preparation															
2.1.03 - Site Infrastructure															
2.1.04 - Water Management & Treatment															
2.1.05 - Ash Excavation & Processing															
2.1.06 - Landfill Construction & Landfill Capping															
2.1.07 - Site Restoration															
2.1.11 - Capex - Equipment & Facility Cost															
2.1.12 - Contract Cost															
2.1.12 - Revenue															
3.1 - Duke External Engineering															
3.1 - Duke Labor and Indirects															
4.1 - Contingency - Risk EMV															
Fulfillment Fee															
CCP - BASIN CLOSURE- ACTUALS															
Remaining Current Year Forecast															
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274
Landfill Capping															
Landfill Contingency															
Landfill Post Closure Maintenance															
CCP - ALTERNATE SPILLWAY															
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		$ -	$ -	$ -	$ -	$ -	$ -
CCP - ASW WELLS															
CCP - CAMA WELLS															
CCP - CCR WELLS															
CCP- DAM STABILIATION															
CCP - DRY ASH CONVERSION															
CCP- GWAP CAP															
CCP - LANDFILL															
CCP - LINED RETENTION BASIN															
CCP - MISCELLANEOUS															
CCP - SW/PW REROUTE															
CCP - WASTE WATER TREATMENT															
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO GROUNDWATER	$ 336,968	$ 336,884	$ 336,884	$ 336,792	$ 336,624	$ 336,744	$ 336,744	$ 336,654	$ 336,654	$ 336,686	$ 336,686	$ 336,686	$ 336,686	$ 336,695	$ 338,540
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500
PMC MANAGED PROJECTS															
Other Misc ARO & Juris Allocations															
Groundwater Corrective Action Plans (Excavate)															
NCDEQ Settlement Impact (See red note below)															
Remaining Current Year Forecast															
Inflation Impacts	*$ 166,709*	*$ 179,747*	*$ 193,090*	*$ 206,673*	*$ 220,498*	*$ 234,754*	*$ 249,250*	*$ 263,997*	*$ 279,105*	*$ 294,551*	*$ 310,301*	*$ 326,382*	*$ 342,801*	*$ 359,572*	*$ 378,213*
Total WS Lee	**$ 622,451**	**$ 635,404**	**$ 648,748**	**$ 662,238**	**$ 675,895**	**$ 690,272**	**$ 704,768**	**$ 719,425**	**$ 734,533**	**$ 750,010**	**$ 765,761**	**$ 781,842**	**$ 798,260**	**$ 815,041**	**$ 835,526**
Total Less Inflation	*$ 455,742*	*$ 455,657*	*$ 455,657*	*$ 455,565*	*$ 455,397*	*$ 455,518*	*$ 455,518*	*$ 455,427*	*$ 455,427*	*$ 455,459*	*$ 455,459*	*$ 455,459*	*$ 455,459*	*$ 455,469*	*$ 457,313*
ARO Input file - TPC As of Q120	$ 455,742	$ 455,657	$ 455,657	$ 455,565	$ 455,397	$ 455,518	$ 455,518	$ 455,427	$ 455,427	$ 455,459	$ 455,459	$ 455,459	$ 455,459	$ 455,469	$ 457,313
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date															
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations															
Column called "Remaining Forecast to be allocated to future years" is r															
Item Labeled NCDEQ Settlement impact is the high level net impact resu															

Duke Energy Carolinas																		
Ash Management ARO Cash Flows Summary																		
Estimates as of Q1-2020- March 31, 2020																		
Actuals As of 01/31/2020																		
WS Lee																		
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2050**	**2051**	**2052**	**2053**	**2054**	**2055**	**2056**	**2057**	**2058**	**2059**	**2060**	**2061**	**2062**	**2063**	**2064**	**2065**	**2066**	**2067**
Basin Closure:																		
2.1.01 - Design & Permitting																		
2.1.02 - Mobilization, Demobilization & Site Preparation																		
2.1.03 - Site Infrastructure																		
2.1.04 - Water Management & Treatment																		
2.1.05 - Ash Excavation & Processing																		
2.1.06 - Landfill Construction & Landfill Capping																		
2.1.07 - Site Restoration																		
2.1.11 - Capex - Equipment & Facility Cost																		
2.1.12 - Contract Cost																		
2.1.12 - Revenue																		
3.1 - Duke External Engineering																		
3.1 - Duke Labor and Indirects																		
4.1 - Contingency - Risk EMV																		
Fulfillment Fee																		
CCP - BASIN CLOSURE- ACTUALS																		
Remaining Current Year Forecast																		
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ 101,274	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping																		
Landfill Contingency																		
Landfill Post Closure Maintenance																		
CCP - ALTERNATE SPILLWAY																		
CCP - ARO ROUTINE MAINTENANCE	$ -	$ -	$ -	$ -														
CCP - ASW WELLS																		
CCP - CAMA WELLS																		
CCP - CCR WELLS																		
CCP- DAM STABILIATION																		
CCP - DRY ASH CONVERSION																		
CCP- GWAP CAP																		
CCP - LANDFILL																		
CCP - LINED RETENTION BASIN																		
CCP - MISCELLANEOUS																		
CCP - SW/PW REROUTE																		
CCP - WASTE WATER TREATMENT																		
EHS - ARO BOTTLED WATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -								
EHS - ARO GROUNDWATER	$ 343,070	$ 343,620	$ 344,262	$ 346,377	$ 348,735	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
EHS - ARO MUNICIPAL WATER LINE	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -								
EHS - ARO PERMITTING	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500								
PMC MANAGED PROJECTS																		
Other Misc ARO & Juris Allocations																		
Groundwater Corrective Action Plans (Excavate)																		
NCDEQ Settlement Impact (See red note below)																		
Remaining Current Year Forecast																		
Inflation Impacts	*$ 399,680*	*$ 418,269*	*$ 437,370*	*$ 458,362*	*$ 480,179*	*$ 18,719*	*$ 19,480*	*$ 20,256*	*$ 21,049*	*$ 21,859*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total WS Lee	**$ 861,523**	**$ 880,663**	**$ 900,405**	**$ 923,513**	**$ 947,688**	**$ 36,219**	**$ 36,980**	**$ 37,756**	**$ 38,549**	**$ 39,359**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	*$ 461,843*	*$ 462,393*	*$ 463,036*	*$ 465,150*	*$ 467,509*	*$ 17,500*	*$ 17,500*	*$ 17,500*	*$ 17,500*	*$ 17,500*	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
ARO Input file - TPC As of Q120	$ 461,843	$ 462,393	$ 463,036	$ 465,150	$ 467,509	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ 17,500	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date																		
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations																		
Column called "Remaining Forecast to be allocated to future years" is r																		
Item Labeled NCDEQ Settlement impact is the high level net impact res																		

Duke Energy Carolinas												
Ash Management ARO Cash Flows Summary												
Estimates as of Q1-2020- March 31, 2020												
Actuals As of 01/31/2020												
WS Lee												
	Forecast	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**	**Forecast**
Item	**2068**	**2069**	**2070**	**2071**	**2072**	**2073**	**2074**	**2075**	**2076**	**2077**	**2078**	**2079**
Basin Closure:												
2.1.01 - Design & Permitting												
2.1.02 - Mobilization, Demobilization & Site Preparation												
2.1.03 - Site Infrastructure												
2.1.04 - Water Management & Treatment												
2.1.05 - Ash Excavation & Processing												
2.1.06 - Landfill Construction & Landfill Capping												
2.1.07 - Site Restoration												
2.1.11 - Capex - Equipment & Facility Cost												
2.1.12 - Contract Cost												
2.1.12 - Revenue												
3.1 - Duke External Engineering												
3.1 - Duke Labor and Indirects												
4.1 - Contingency - Risk EMV												
Fulfillment Fee												
CCP - BASIN CLOSURE- ACTUALS												
Remaining Current Year Forecast												
Total Basin Closure:	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Post Closure Maintenance (Basin only)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Landfill Capping												
Landfill Contingency												
Landfill Post Closure Maintenance												
CCP - ALTERNATE SPILLWAY												
CCP - ARO ROUTINE MAINTENANCE												
CCP - ASW WELLS												
CCP - CAMA WELLS												
CCP - CCR WELLS												
CCP- DAM STABILIATION												
CCP - DRY ASH CONVERSION												
CCP- GWAP CAP												
CCP - LANDFILL												
CCP - LINED RETENTION BASIN												
CCP - MISCELLANEOUS												
CCP - SW/PW REROUTE												
CCP - WASTE WATER TREATMENT												
EHS - ARO BOTTLED WATER												
EHS - ARO GROUNDWATER	$ -	$ -	$ -	$ -	$ -	$ -	$ -					
EHS - ARO MUNICIPAL WATER LINE												
EHS - ARO PERMITTING												
PMC MANAGED PROJECTS												
Other Misc ARO & Juris Allocations												
Groundwater Corrective Action Plans (Excavate)												
NCDEQ Settlement Impact (See red note below)												
Remaining Current Year Forecast												
Inflation Impacts	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Total WS Lee	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Total Less Inflation	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
ARO Input file - TPC As of Q120	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Spend To Date												
Variance check s/b "0"	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
FN - Please see Footnotes tab for further explanations												
Column called "Remaining Forecast to be allocated to future years" is r												
Item Labeled NCDEQ Settlement impact is the high level net impact resu												

Duke Energy Carolinas
Ash Management ARO Cash Flows Sur
Estimates as of Q1-2020- March 31, 20
Actuals As of 01/31/2020
Detail Footnotes
Note: Certain types of actual amounts
Footnotes:
a. Basin Closure includes a contingency
b. Coal Combustion Products (CCP) Bas
c. EHS - Environmental, Health and Safe
d. Post-Closure Maintenance - 30 years
e. Landfill Closure - estimated cash flov
f. Remaining Current Year Forecast - in
g. Beneficiation Sites- STAR Facilities
h. Inflation Impacts - compounded infl

DEC Ash Management ARO Summary; Sites With Substantial Excavation Completed

Site	Kerin Exhibit 11; 2015-2057; Actuals as of 12/31/16	3Q 2018 Estimate; 2015-2059; Actuals as of 7/31/18	3Q 2019 Estimate; 2015-2078; Actuals as of 7/31/19	4Q 2019 Estimate; 2015-2078; Actuals as of 1/31/20
Dan River	$ 232,828,640	$ 257,910,438	$ 280,851,698	$ 280,737,665
Riverbend	$ 419,062,052	$ 430,681,501	$ 445,808,412	$ 445,966,471
Total	**$ 651,890,692**	**$ 688,591,939**	**$ 726,660,110**	**$ 726,704,136**

Public Staff
Junis Exhibit 29

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Jan 24 2018

SETTLEMENT AGREEMENT

This is an AGREEMENT TO SETTLE AND FOR RELEASE OF CLAIMS ("Agreement") made and entered by and among North Carolina Department of Environmental Quality ("DEQ") (formerly known as the North Carolina Department of Environment and Natural Resources) on the one hand, and Duke Energy Carolinas, LLC and Duke Energy Progress, LLC (formerly known as Duke Energy Progress, Inc.) (together, "Duke Energy") on the other. DEQ and Duke Energy (collectively, the "Parties") agree to the following terms as a basis upon which to resolve the issues between them relating to alleged exceedances of state groundwater standards associated with coal ash facilities at sites operated by Duke Energy and its predecessors. By this Agreement, the undersigned settling Parties mutually agree to compromise, settle, and forgo all current, prior, and future claims related to exceedances of groundwater standards associated with coal ash facilities at Duke Energy's North Carolina facilities.

I. RECITALS

WHEREAS, Duke Energy owns and operates the following facilities that are the subject of this Agreement (collectively, the "Duke Energy Sites"):

(1) the Allen Steam Station, located in Gaston County;

(2) the Asheville Steam Electric Generating Plant, located in Buncombe County (the "Asheville Plant");

(3) the Belews Creek Steam Station ("Belews Creek Plant"), located in Stokes County;

(4) the Buck Steam Station, located in Rowan County, which has been retired and is no longer used for the production of electricity;

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(5) the Cape Fear Steam Electric Generating Plant, located in Chatham County, which has been retired and is no longer used for the production of electricity;

(6) the Dan River Steam Station, located in Rockingham County, which has been retired and is no longer used for the production of electricity;;

(7) the H.F. Lee Steam Electric Generating Plant ("H.F. Lee Plant"), located in Wayne County, which has been retired and is no longer used for the production of electricity;

(8) the Marshall Steam Station, located in Catawba County;

(9) the Mayo Steam Electric Generating Plant, located in Person County;

(10) the Riverbend Steam Station, located in Gaston County, which has been retired and is no longer used for the production of electricity;

(11) the Rogers Energy Complex (formerly Cliffside Steam Station), located in Cleveland and Rutherford Counties;

(12) the Roxboro Steam Electric Generating Plant in Person County;

(13) the L.V. Sutton Electric Plant, located in New Hanover County (the "Sutton Plant"), which has been retired and is no longer used for the production of electricity; and,

(14) the Weatherspoon Steam Electric Plant, located in Robeson County, which has been retired and is no longer used for the production of electricity.

WHEREAS, the National Pollutant Discharge Elimination System ("NPDES") Permits associated with the Duke Energy Sites contain requirements for Duke Energy to monitor groundwater at the Duke Energy Sites and to report the results to DEQ.

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WHEREAS, Duke Energy has at all times complied with its groundwater monitoring and reporting requirements of its NPDES Permits for each of the Duke Energy Sites.

WHEREAS, on June 17, 2011, DEQ issued its "Policy for Compliance Evaluations of Long-Term Permitted Facilities with No Prior Groundwater Monitoring Requirement" (hereinafter, the "2011 Policy for Compliance Evaluations"). The 2011 Policy for Compliance Evaluations attempts to address the situation where groundwater monitoring indicates that a "long-term permitted facility" is out of compliance with the 2L standards, including the conditions under which DENR might issue a NOV to the affected facility.

WHEREAS, the 2011 Policy for Compliance Evaluations includes a detailed flow chart dictating the steps to be taken by DEQ should Duke Energy report any exceedance of North Carolina's groundwater standards as established pursuant to N.C.G.S. Chapter 143 and 15A N.C.A.C. Subchapter 2L at the Duke Energy Sites. Those steps include, but are not limited to: (1) verify the accuracy and significance of the results of the groundwater testing; (2) determine whether and to what extent the identified substance could be naturally occurring; and, (3) evaluate other possible sources of the identified substance.

WHEREAS, on August 26, 2014, DEQ sent Duke Energy a Notice of Violation based upon the exceedances of the State's groundwater standards reported to DEQ for the Sutton Plant (the "Sutton NOV").

WHEREAS, on September 20, 2014, the North Carolina Coal Ash Management Act ("CAMA") became effective. CAMA requires, among other actions, closure and dewatering of all ash ponds at the Duke Energy Sites and dictates, in detail, a procedure for assessing, monitoring and where appropriate, remediating groundwater quality in areas around coal ash

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impoundments in North Carolina that follows closely the procedures outlined in DEQ's 2011 Policy for Compliance Evaluations.

WHEREAS, Duke Energy submitted monitoring that showed exceedances of the State's groundwater standards at or beyond the compliance boundary at the Asheville Plant.

WHEREAS, on February 25, 2015, DEQ sent Duke Energy a Notice of Violation, this one based upon groundwater monitoring results reported to DEQ for the Asheville Plant (the "Asheville NOV").

WHEREAS, on March 10, 2015, DEQ assessed a $25.1 million civil penalty (the "Penalty Assessment") against Duke Energy based upon groundwater monitoring results reported to DEQ for the Sutton Plant.

WHEREAS, on April 9, 2015, Duke Energy filed a Petition for Contested Case at the North Carolina Office of Administrative Hearings, challenging the Penalty Assessment on multiple legal and factual grounds (the "Sutton Petition").

WHEREAS, the Parties have engaged in extensive discovery regarding the arguments raised in the Sutton Petition, during which the Parties have concluded that:

(1) The 2011 Policy for Compliance Evaluations is a current DEQ policy that was in effect at the time DEQ issued the Sutton NOV, the Asheville NOV and Penalty Assessment against Duke Energy;

(2) The 2011 Policy for Compliance Evaluations applies to each of the Duke Energy Sites listed above;

(3) The 2011 Policy for Compliance Evaluations states that as "long as the permittee is cooperative with the Division in taking the necessary steps to bring the facility into compliance, a notice of violation may not be necessary."

(4) During the discovery process internal e-mails and testimony by former DENR management demonstrate that, although not expressly stated in the 2011 Policy for Compliance Evaluations, the intent at the time the 2011 Policy for Compliance Evaluations

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was that corrective action would precede any enforcement and would be in lieu of monetary penalties.

WHEREAS, DEQ further acknowledges that the procedures outlined in CAMA are specifically designed to address, and will address, the assessment and corrective action of alleged groundwater contamination associated with coal ash facilities at the Duke Energy Sites. In combination with the specific requirements of CAMA, DEQ further acknowledges that this Agreement fully addresses and resolves all issues related to groundwater contamination associated with coal ash facilities at the Duke Energy Sites, including all groundwater violations alleged in the state enforcement actions currently pending in Superior Court in Wake and Mecklenburg Counties.

WHEREAS, DEQ and Duke Energy have determined that it is in the best interest of the Parties, the environment, as well as the citizens of North Carolina, that they enter into a compromise settlement to avoid the time and expense of prolonged litigation so that the Parties may focus the same on the assessment and, if necessary, corrective action of alleged groundwater standard exceedances at the Duke Energy Sites.

WHEREAS, DEQ and Duke Energy have determined that the actions provided for in this Agreement and the provisions of CAMA represent the best course for prompt assessment and remediation of any alleged groundwater standard exceedances at the Duke Energy Sites.

NOW, THEREFORE, in consideration of the promises and covenants contained herein and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, DEQ and Duke Energy agree to compromise, settle, and dismiss with prejudice all claims and causes of action related to alleged groundwater standard exceedances associated with coal ash facilities at the Duke Energy Sites upon fulfillment of the terms and conditions set forth below:

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II. DUKE ENERGY'S OBLIGATIONS

A. Consistent with 15A NCAC 2L .0106 Duke Energy shall implement accelerated remediation at the Sutton Plant on the following terms and conditions:

(1) Duke Energy will commence installation of extraction wells on the eastern portion of the Sutton Plant property where data show constituents associated with the ash basins at concentrations over the 2L standards ("Constituents of Interest") have migrated off site.

(2) Extraction wells will be used to pump the groundwater to arrest the off-site extent of the migration. The pumped groundwater will be treated as needed to meet standards and returned either to the ash basin or the discharge canal.

(3) This extraction and treatment system will be installed as soon as practicable following receipt of all permits and approvals from DEQ, the issuance of which will occur as soon as practicable. This accelerated groundwater remediation is in addition to and shall be performed concurrent with the coal ash impoundment closure obligations set forth in CAMA.

(4) The extraction wells shall remain operational until such time as Duke Energy demonstrates through sampling, analysis, and appropriate modeling, and subject to DEQ's written concurrence, that off-property constituents of interest have been remediated to 2L Standards and there is no reasonable potential for future off-site migration.

(5) As part of accelerated remediation, DEQ agrees that dry ash can be removed from the head of the ash basins under a construction storm water permit and shall expedite such construction storm water permit in order for Duke Energy to commence the removal of ash which is the source of the constituents of interest from the Sutton Plant. DEQ will issue construction storm water permits for Sutton plant within 10 days of receiving Duke Energy's complete application. Only dry ash from the head of the ash basins will be removed with no impact to wastewater treatment or water levels in the basins. DEQ shall use its best efforts to complete the process of the issuance of the NPDES permit modification at the Sutton Plant to allow for the removal of water and ash beyond the areas covered under the construction storm water permit from the Sutton Plant.

B. Consistent with 15A NCAC 2L .0106 Duke Energy shall implement accelerated remediation at the Asheville Plant, Belews Creek Plant, and H.F. Lee Plant, which are the only three other Duke Energy facilities that demonstrated offsite groundwater impacts in isolated areas that are not impacting private wells in the Comprehensive Site Assessments conducted

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pursuant to CAMA. Such accelerated remediation shall be tailored to each facility's unique characteristics.

C. Petitioner agrees to pay to Respondent the sum of seven million dollars ($7,000,000.00) (the "Payment") in full settlement of all current, prior, and future claims related to exceedances of groundwater standards associated with coal ash facilities at Duke Energy's North Carolina facilities. The Payment shall be made by check and made payable to the North Carolina Department of Environmental Quality and delivered to the following address:

North Carolina Department of Environmental Quality

Sam M. Hayes

217 West Jones Street

Raleigh, North Carolina 27603

The Payment shall be made within thirty (30) days of the receipt by Duke Energy of the acknowledgment described in part III.A. below. The Payment shall be accepted and acknowledged in writing by DEQ as "Payment In Full" in this matter within thirty-five (35) days of the execution of this Agreement.

D. Within fifteen (15) days of the receipt by Duke Energy of the acknowledgment described in part III.A. below, Duke Energy shall file and serve a Voluntary Withdrawal with Prejudice of the Sutton Petition, Case No. 15-EHR-02581, the Petition for Contested Case Hearing filed by Duke Energy related to the Notice of Regulatory Requirements dated July 9, 2014, Case No. 14-EHR-09631, and the Petition for Contested Case Hearing filed by Duke Energy related to the determination that Sutton Lake is waters of state, Case No. 15-EHR-04922.

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III. DEQ'S OBLIGATIONS

A. Within five (5) days of the execution of this Agreement, DEQ shall communicate to Duke Energy, in writing, its withdrawal and rescission, with prejudice, of the Sutton NOV, the Sutton NORR, the Asheville NOV, and the Penalty Assessment.

B. DEQ shall not issue any further Notices of Violation, Notices of Regulatory Requirements, other similar notices, unilateral orders or civil penalty assessments to, file any judicial action against, or take any administrative, regulatory, or other enforcement actions against Duke Energy based on or in any way related to any previous or future groundwater monitoring results or alleged groundwater conditions at any of the coal ash facilities at any of the Duke Energy Sites, as long as Duke Energy continues to be in substantial compliance with CAMA requirements as they relate to groundwater assessment and remediation and closure of ash basins, including corrective action plans. DEQ also shall not issue Notices of Violation, Notices of Regulatory Requirements, other similar notices, unilateral orders or civil penalty assessments to, file any judicial action against, or take any administrative, regulatory, or other enforcement actions against Duke Energy based on or in any way related to the classification of Sutton Lake as waters of the State as set forth in paragraph II.D. above.

C. Except as necessary under CAMA or unless ordered or required to change, alter, modify, or amend by a court of competent jurisdiction or by the enactment or amendment of any applicable federal or state statute, rule, or regulation, or in response to an immediate threat to public health, DEQ agrees to not materially modify the groundwater monitoring terms in the existing NPDES Permits and in issuing future NPDES Permits for the Duke Energy Sites. For purposes of this provision "immediate threat to public health" shall mean circumstances beyond exceedances of the applicable provisions of 15A N.C.A.C. Subchapter 2L (the " 2L Standards"). Except as provided in part III.B above, DEQ further agrees to limit the

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use of the results of any groundwater monitoring required by NPDES permits or CAMA for the determination of prioritizing the coal ash impoundments and approving closure plans. This provision shall not modify the rights, duties and obligations of DEQ or Duke Energy pursuant to CAMA.

D. DEQ agrees that applicable, enforceable groundwater quality standards and naturally occurring (also known as "background") concentrations shall only be those established pursuant to applicable provisions of the " 2L Standards."

E. Duke Energy and DEQ acknowledge that Duke Energy has been receiving and may in the future continue to receive concerns from individuals or local governments regarding alleged adverse impacts to groundwater from beneficial re-use activities conducted under Distribution of Residual Solids Permits, Ash Reuse Permits or similar permits issued by DEQ or its predecessors authorizing ash reuse programs. Except as otherwise provided by CAMA and the Distribution of Residual Solids permits, Ash Reuse Permits, or similar permits issued by DEQ, DEQ shall be responsible for investigating (including, when necessary, collecting and analyzing groundwater samples) and respond to all such concerns and shall notify Duke Energy of all such responses.

F. DEQ will issue construction storm water permits for Sutton plant within 10 days of receiving Duke Energy's complete application. Only dry ash from the head of the ash basins will be removed with no impact to wastewater treatment or water levels in the basins. DEQ shall use its best efforts to complete the process of the issuance of the NPDES permit modification at the Sutton Plant to allow for the removal of water and ash beyond the areas covered under the construction storm water permit from the Sutton Plant.

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IV. LEGAL PROVISIONS

A. Binding Nature of Agreement. The Parties represent and agree that the persons executing this Agreement have full and sufficient authority to sign and agree to be bound by the Agreement, and that this Agreement shall be binding upon DEQ and Duke Energy, and their successors and assigns, upon its execution by all Parties.

B. No Admissions. By entering into this Agreement, the Parties to this Agreement make no admission of liability, violation, or wrongdoing whatsoever, by itself, any of its affiliated companies, or any or its or their present or former officers, directors, employees, or agents.

C. Attorney's Fees, Costs, and Expenses. The Parties agree to bear their own respective attorney's fees, costs, and other expenses that have been incurred in connection with any stage of the state enforcement actions or Duke Energy's Petition for Contested Case related to the Penalty Assessment.

D. Governing Law and Interpretation. This Agreement shall be governed and interpreted in accordance with the laws of the State of North Carolina without regard to the conflict of laws provisions of North Carolina or any other state, and any provision herein that violates a statute or rule shall be void and unenforceable.

E. Enforceability and Remedies for Breach. The Parties stipulate and agree that this Agreement may be enforced in any court of competent jurisdiction in North Carolina, and that venue is appropriate in either Wake or Mecklenburg County. The Parties' sole and exclusive remedy for breach of this Agreement shall be an action for specific performance or injunction. In no event shall any Party be entitled to monetary damages for breach of this Agreement. In addition, no legal action for specific performance or injunction shall be brought or maintained

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until: (a) the non-breaching Party provides written notice to the allegedly breaching Party which explains with particularity the nature of the claimed breach, and (b) within thirty (30) days after receipt of said notice, the allegedly breaching Party fails to cure the claimed breach or, in the case of a claimed breach which cannot be reasonably remedied within a thirty (30) day period, the allegedly breaching Party fails to commence to cure the claimed breach within such thirty (30) day period, and thereafter diligently completes the activities reasonably necessary to remedy the claimed breach. This Agreement may be introduced as evidence in any action involving either or both Parties for the purpose of implementing its terms.

F. Severability. The invalidity or unenforceability of any provision of this Agreement shall in no way affect the validity or enforceability of any other provision; the invalid or unenforceable provision shall be stricken, without assessing damages or imposing penalties to either Party arising out of said provisions by any court of competent jurisdiction.

G. Headings. The headings used in this Agreement are for convenience of reference only and shall in no way define, limit, expand or otherwise affect the meaning of any provision of this Agreement.

H. Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed to be an original, but all of which together shall constitute one and the same instrument.

I. Amendment. This Agreement may not be modified, altered or changed except in a written document that is signed by all Parties and that makes specific reference to this Agreement.

J. Entire Agreement. This Agreement sets forth the entire agreement between the Parties, and fully supersedes any prior agreements or understandings between the Parties related

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to the subject matter of this Agreement, including but not limited to alleged groundwater standard exceedances associated with coal ash ponds at the Duke Energy Sites.

K. Review and Signing. Each Party and counsel for each Party has reviewed this Agreement. Accordingly, this Agreement shall be construed without regard to any presumption or other rule of construction requiring resolution of ambiguities against the drafting Party.

L. The Parties agree that this Agreement does not affect in any way the Joint Enforcement Agreement between DEQ and U.S. EPA, the subject of which does not involve any alleged groundwater standard exceedances associated with coal ash facilities at the Duke Energy Sites.

[Signature page follows]

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IN WITNESS WHEREOF, DEQ and Duke Energy, and their respective counsel have executed this Agreement as of September 29, 2015.

NORTH CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY

By: _____
Its: General Counsel
Date: 9/29/15

KILPATRICK TOWNSEND & STOCKTON LLP

By: _____
Its: _____
Date: 9/29/2015

DUKE ENERGY CAROLINAS, LLC

By: _____
Its: Associate General Counsel
Date: 9/29/2015

DUKE ENERGY PROGRESS, LLC

By: _____
Its: Associate General Counsel
Date: 9/29/2015

McGUIREWOODS LLP

By: _____
Date: 9/29/15

DEC Ash Management ARO Summary; Sites Included in Settlement Agreement

Site	Kerin Exhibit 11; 2015-2057; Actuals as of 12/31/16	3Q 2018 Estimate; 2015-2059; Actuals as of 7/31/18; See Note 1	3Q 2019 Estimate; 2015-2078; Actuals as of 7/31/19; See Note 2	4Q 2019 Estimate; 2015-2078; Actuals as of 1/31/20; See Note 3
Allen	$ 283,368,413	$ 259,658,469	$ 1,110,325,162	$ 1,129,842,383
Belews Creek	$ 410,870,792	$ 337,431,218	$ 841,023,807	$ 793,021,333
Cliffside	$ 265,070,155	$ 256,834,867	$ 536,128,943	$ 573,094,197
Marshall	$ 395,806,013	$ 342,350,719	$ 1,613,927,555	$ 1,019,113,175
Buck	$ 291,561,042	$ 566,806,538	$ 642,234,114	$ 474,977,562
Total	**$ 1,646,676,415**	**$ 1,763,081,811**	**$ 4,743,639,581**	**$ 3,990,048,650**

Notes
1. 3Q 2018 Estimate assumed Cap In Place for Allen, Belews Creek, Cliffside and Marshall
2. 3Q 2019 Estimate based upon April 1, 2019 DEQ Order
3. 4Q 2019 Estimate based upon Settlement Agreement
4. Buck included due to Paragraph 39 of Settlement Agreement concerning variances requests for beneficiation sites.
5. Cost estimates are Class 5, rough order of magnitude estimates. Accuracy range varies +/- 25%.

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Mar 04 2020

STATE OF NORTH CAROLINA COUNTY OF NEW HANOVER	BEFORE THE DEPARTMENT OF ENVIRONMENTAL QUALITY
IN THE MATTER OF: REQUEST FOR VARIANCE FROM SESSION LAW 2014-122, SECTIONS 3(B)(4) AND 3(C), COAL ASH MANAGEMENT ACT BY **DUKE ENERGY PROGRESS, LLC**	**DECISION GRANTING IN PART VARIANCE WITH CONDITIONS**

On November 16, 2018, pursuant to NCGS § 130A-309.215, Duke Energy Progress, LLC (Duke Energy) submitted an Application for Grant of Variance to Extend the Deadline to Close Sutton Plant CCR Surface Impoundments ("Application") to the North Carolina Department of Environmental Quality ("Department"). The Department received additional information regarding the Application ("Additional Information") from Duke Energy on December 14, 2018. The Application requests that the Department issue a variance to extend the Coal Ash Management Act ("CAMA") closure deadline for the Sutton Plant Coal Combustion Residuals ("CCR") surface impoundments by six months from August 1, 2019 to February 1, 2020.

Based on the Department's analysis of the information submitted, the Department makes the following:

FINDINGS OF FACT

1. The L.V. Sutton Energy Complex (Sutton Plant) is located at 801 Sutton Steam Plant Road, near Wilmington, NC in New Hanover County. The facility is located adjacent to the Cape Fear River and Sutton Lake. The Sutton Plant operated as a three-unit, 575-megawatt coal-fired power plant from 1954 until the coal fired units were retired in 2013 and replaced with a 625-megawatt natural gas fired combined-cycle facility.

2. The Sutton facility has two CCR surface impoundments known as the 1971 Basin and the 1984 Basin. These CCR surface impoundments were operated under NPDES Permit No. NC0001422. The 1971 Basin was operated until 1985 and is unlined. The 1984 Basin was operated until 2013 and was constructed with a 24" thick clay liner. In 2013, the coal-fired units at the Sutton Plant were shut down and coal ash was no longer sluiced to the surface impoundments.

3. By October 2014, Duke Energy had developed the initial excavation plan for the CCR surface impoundments at the Sutton Plant. Duke Energy submitted the plan to the Department in November 2014. To meet the August 2019 deadline, the initial excavation

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Mar 04 2020

plans included transporting ash by rail and truck to the Brickhaven Mine facility in Chatham County, NC.

4. As part of the CCR surface impoundments excavation plan, Duke Energy developed the plans for an on-site landfill. Duke Energy submitted the application for the on-site landfill on August 7, 2015. Initial excavation of ash began in November 2015. On April 7, 2016, the Department announced that it would conduct an environmental justice analysis of each Duke Energy coal ash landfill application. The Department submitted its analysis to the EPA Office of Civil Rights, the U.S. Commission on Civil Rights and its North Carolina Advisory Committee for review and approval. Upon completion of this process, the Department issued a permit to construct the Sutton Plant landfill on September 22, 2016. This environmental justice analysis added approximately five months to the landfill construction process.

5. In October 2016, Hurricane Matthew severely impacted the region, delaying both landfill construction and transportation of ash to the Brickhaven Mine.

6. On July 6, 2017, the Department issued the permit to operate the Sutton Plant landfill. The following day Duke Energy began transporting ash to the landfill.

7. In June 2018, dredging operations in the 1971 ash basin were delayed by approximately three weeks due to the unexpected presence of rock and tree stumps in approximately five acres of the basin.

8. In September 2018, Hurricane Florence severely impacted the region causing additional delays in the ability to remove material from the CCR surface impoundments due to extreme flooding as well as damage to the landfill.

9. Throughout this time, Duke Energy evaluated and undertook various measures to accelerate excavation of the CCR surface impoundments, including expediting completion of the onsite landfill and expanding dredging operations.

10. Duke Energy estimates that, as of the end of 2018, it had excavated 4.9 million tons of ash, and that approximately 1.4 million tons of ash remain to be excavated during 2019. From October 2015 until July 2017, Duke Energy excavated an average of 130,000 tons of coal ash per month. Since the landfill became operational in July 2017, Duke Energy has excavated an average of approximately 150,000 tons of coal ash per month.

11. At the end of July 2019, assuming that there are no significant additional delays, Duke Energy forecasts that approximately 350,000 tons of coal ash will require excavation, which means that the excavation would be approximately 94% complete.

12. In terms of Duke Energy's compliance with the provisions of CAMA for the Sutton Plant:

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a. Annual inspection by the Department of the Sutton 1971 and 1984 dams occurred on August 29, 2018 and no concerns or issues were reported.

b. Pursuant to NCGS § 130A-309-211(c1), no permanent replacement water connections were required.

c. Pursuant to NCGS § 130A-309-211(a), Duke submitted a comprehensive site assessment for the Sutton Plant on August 4, 2015.

d. Pursuant to NCGS § 130A-309-211(b), Duke submitted a corrective action plan for the Sutton Plant in two parts on November 2, 2015 and February 1, 2016.

13. In accordance with NCGS § 130A-309.215(a2), the Department provided public notice and held a public hearing on January 14, 2019 in Wilmington, NC. Jim Gregson, Deputy Director of the Department's Division of Water Resources, served as the hearing officer. Further details are provided in the enclosed Hearing Officer's Report dated March 25, 2019. The hearing officer provided the following recommendation:

> Based on the review of the public record, written comments, the North Carolina General Statutes and Administrative Code, the Coal Ash Management Act of 2014, and discussions with other Department staff, I recommend to the Assistant Secretary for the Environment that the request for variance be granted and that the closure deadline for the Sutton Plant CCR surface impoundments be extended by the minimum necessary time period that Duke Energy indicates it will take to complete the closure. The extension should not exceed six months.

Based upon the foregoing Findings of Fact, the Department makes the following:

CONCLUSIONS OF LAW

1. The CCR surface impoundments at the Sutton Plant in Wilmington, North Carolina are subject to Session Law 2014-122. Section 3(b) of Session Law 2014-122 deemed the CCR surface impoundments at the Sutton Plant as high priority. Sections 3(b)(4) and 3(c) of Session Law 2014-122 required that the CCR surface impoundments be closed by excavation no later than August 1, 2019.

2. NCGS § 130A-309-215(a) authorizes the Secretary of the Department of Environmental Quality to grant a variance to extend any CAMA deadlines. Secretary Michael Regan has delegated this authority in writing to Sheila Holman, Assistant Secretary for the Environment.

3. Pursuant to NCGS § 130A-309-215(a1), for a variance requested by an impoundment owner, the owner shall submit an application that includes "identification of the site, applicable requirements, and applicable deadlines for which a variance is sought, and the site-specific circumstances that support the need for the variance."

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4. Additionally, "[t]he owner of the impoundment shall also provide detailed information that demonstrates (i) the owner has substantially complied with all other requirements and deadlines established by this Part; (ii) the owner has made good faith efforts to comply with the applicable deadline for closure of the impoundment; and (iii) that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public." NCGS § 130A-309-215(a1).

5. A variance request shall not be submitted any earlier than one year prior to the applicable deadline.

6. The Department concludes that, in its Application, Duke Energy has identified:
   a. The site for which a variance for the closure deadline is sought as Duke Energy's Sutton Plant (see Application, p. 1);
   b. The applicable requirements in Session Law 2014-122 (see Application, pp. 1-2); and
   c. The applicable deadline for which variance is sought as August 1, 2019 (see Application, p. 2).

7. The Department further concludes that, in its Application and Additional Information, Duke Energy has:
   a. Identified the site-specific information that supports the need for a variance, including the delays caused by two hurricanes, delays caused by the Department's environmental justice review, and Duke Energy's evaluation and implementation of measures to expedite excavation (see Application, pp. 2-9).
   b. Supplied detailed information demonstrating its compliance with the provisions of CAMA, including its submissions of a Comprehensive Site Assessment and a Corrective Action Plan, no issues or concerns were reported with Sutton dams, and no alternative water supplies were required around the Sutton Plan (see Application, pp. 9-10; Additional Information, pp. 3-5).
   c. Supplied detailed information showing it made good faith efforts to comply with the applicable deadline for closure of the CCR surface impoundments, including excavating at an average rate of 150,000 tons per month since commencement of the operation of the onsite landfill, expediting completion of that landfill, expanding dredging operations, adding a third conveyer, simultaneously operating three dredges, and taking various additional measures to meet the August 1, 2019 deadline (see Application, pp. 2-9; Additional Information, pp. 1-3).
   d. Supplied detailed information indicating that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public, including information regarding the technology that is currently being deployed to overcome the delays outlined above, additional technology that has been evaluated, and the computation of the average monthly rate of excavation, the amount of coal ash that remains to be excavated, and the

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number of months remaining until August 1, 2019 (see Application, pp. 2-9; Additional Information, pp. 1-3).

ORDER

Based on the Findings of Fact and Conclusions of Law as set forth above, IT IS HEREBY ORDERED that the request for the variance is GRANTED IN PART pursuant to NCGS § 130A-309-215(a) with the following conditions:

1. The August 1, 2019 closure date for the CCR surface impoundments at Duke Energy's Sutton Plant is extended four (4) months to December 1, 2019.
2. Beginning April 15, 2019, and by the 15th day of each successive month until closure is completed, Duke Energy shall provide the Department with the amount of ash excavated at the Sutton Plant during the previous month and the cumulative total for ash excavation, the amount of ash placed in the landfill, the rate at which the ash is being removed and disposed, and the estimated volume of the remaining ash to meet the requirements of the closure.
3. This variance is only for the activities associated with the closure and removal of ash from the 1971 and 1984 Basins at the Sutton Plant in Wilmington, North Carolina.

This the 26th day of March, 2019.

DEPARTMENT OF ENVIRONMENTAL QUALITY

Sheila Holman
Assistant Secretary for the Environment

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ROY COOPER
Governor
MICHAEL S. REGAN
Secretary
LINDA CULPEPPER
Director

NORTH CAROLINA
Environmental Quality

March 25, 2019

MEMORANDUM

To: Sheila Holman
Assistant Secretary for the Environment

From: Jim Gregson
Deputy Director

Subject: Hearing Officer's Report and Recommendations
Duke Energy Progress, LLC – L.V. Sutton Energy Complex
Variance Request to Extend the Deadline to Close Sutton Plant Coal Combustion Residual (CCR) Surface Impoundments
New Hanover County

On January 14, 2019, I served as the Hearing Officer for the Subject Public Hearing held at Cape Fear Community College, 411 North Front Street, McLeod Building Room S-002, Wilmington, NC 28360. The purpose of the public hearing was to allow the public to comment on Duke Energy's request for variance to extend the Coal Ash Management Act (CAMA) closure deadline for the Sutton Plant CCR impoundments by six months.

No oral comments were presented at the public hearing. I have reviewed all written comments received during the public comment period which ended on February 4, 2019. In preparation of this report I have considered all public comments, Duke Energy's variance application and the public record.

The report has been prepared using the following outline:

I. Site History / Background
II. January 14, 2019, Public Hearing and Comments Summary
III. Recommendations
IV. Attachments

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Hearing Officer Report

JANUARY 14, 2019, PUBLIC HEARING – DUKE ENERGY PROGRESS, LLC VARIANCE REQUEST TO EXTEND DEADLINE TO CLOSE SUTTON PLANT CCR SURFACE IMPOUNDMENT LOCATED AT 801 SUTTON STEAM PLANT ROAD NEW HANOVER COUNTY

I. History / Background

The L.V. Sutton Energy Complex (Sutton Plant) is located at 801 Sutton Steam Plant Road, near Wilmington, NC in New Hanover County. The facility is located adjacent to the Cape Fear River and Sutton Lake. The Sutton Plant operated as a three-unit, 575-megawatt coal-fired power plant from 1954 until the coal fired units were retired in 2013 and were replaced with a 625-megawatt natural gas fired combined-cycle facility.

The Sutton facility has two CCR basins known as the 1971 and 1984 Basins. These basins were operated under NPDES Permit No. NC0001422. Fly and bottom ash sluicing was discontinued when the coal fired units were shut down in 2013. The 1971 Basin was operated until 1985 and is unlined. The 1984 Basin was operated from 1984 until 2013 and was constructed with a 24" thick clay liner.

Section 3(b) of the Coal Ash Management Act, Session Law 2014-122 deemed the CCR surface impoundments at the Sutton Plant as high risk. Sections 3(b)(4) and 3(c) of Session Law 2014-122 further required that the surface impoundments be closed by excavation no later than August 1, 2019.

On November 16, 2018, an application was received from Duke Energy for Variance to extend the deadline to close the Sutton Plant CCR surface impoundments. Additional information regarding the application was received from Duke Energy on December 14, 2018. The application requests that the Department issue a variance to extend the CAMA closure deadline for the Sutton Plant CCR Impoundments by six months; from August 1, 2019 to February 1, 2020.

II. January 14, 2019, Public Hearing and Comments Summary

A public hearing was held on January 14, 2019, at 6:00 pm, at Cape Fear Community College, 411 North Front Street, McLeod Building Room S-002, in Wilmington, NC. The purpose of the public hearing was to allow the public to comment on Duke Energy's request for variance to extend the Coal Ash Management Act (CAMA) closure deadline for the Sutton Plant CCR impoundments by six months.

The Department provided notices of public hearing and public comment by:

- providing Duke Energy's request for a variance and the Department's notice of public hearing and public comment to the New Hanover County Health Department (Attachment A);

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- providing Duke Energy's request for a variance and the Department's notice of public hearing and public comment to the New Hanover County Public Library (Attachment B);
- posting Duke Energy's request for a variance and the Department's notice of public hearing and public comment to the Department's website, issuing a press release, and posting additional notices to its website on January 14, 2019 and February 4, 2019 (Attachment C);
- emailing notice to all persons on its coal ash email distribution list (Attachment D); and
- publishing notice in the *Wilmington Star News* on December 20, 2018; December 27, 2018; and January 3, 2019 (Attachment E).

Approximately 13 people attended the public hearing including 10 staff members of the Department of Environmental Quality and myself. No individuals signed the attendance sign in sheets at the hearing (Attachment F). The hearing officer provided opening comments and a brief overview of the variance request. No one registered in advance of the hearing to provide oral comments. No one responded when the Hearing Officer asked if anyone that did not register to speak would still like to provide oral comments.

The public hearing transcript is included as Attachment G.

In addition to the public hearing, The Department received seven written comments by email during the public comment period. Two of the emails were duplicates. Email comments are included as Attachment H.

WRITTEN COMMENTS SUMMARY

All email comments expressed general objection to the variance request or provided a general request that the ash be removed. The following is a summary by three major topic areas:

- Clean-up has been prolonged too long.
- What has Duke been doing for the past four years?

Response – The classification of the Sutton Plant CCR surface impoundments as high risk and the requirements for closure of the impoundments by August 1, 2019, were mandated in Session Law 2014-122 which became effective on September 20, 2014. By October 2014, Duke Energy had developed the initial excavation plan for the surface impoundments at the Sutton Plant. The plan was submitted to the Department of Environmental Quality in November 2014. To meet the August 2019 deadline, the initial excavation plans included transporting ash by rail and truck to the Brickhaven Mine facility in Chatham County. At the same time Duke began developing the plans for an on-site landfill. The application for the on-site landfill was submitted on August 7, 2015. Initial excavation of ash began in November 2015. On April 7, 2016, NC DEQ announced that it would conduct an environmental justice review of each Duke Energy coal ash landfill application and ask the EPA Office of Civil

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Rights, the U.S. Commission on Civil Rights and its North Carolina Advisory Committee to review and approve the environmental justice analysis before the permit is issued. The additional review by outside groups with expertise in environmental justice issues is to help ensure Duke Energy's construction of a landfill will not have an adverse disparate impact on a minority or low-income community protected by Title VI of the Civil Rights Act of 1964. Upon completion of this process, the permit to construct the Sutton Plant landfill was issued on September 22, 2016. Hurricane Matthew impacted the region in October 2016, causing additional delays in both landfill construction and transportation of ash to the Brickhaven Mine. In June 2018, dredging operations in the 1971 ash basin were delayed by approximately three weeks due to the unexpected presence of rock and tree stumps in approximately five acres of the basin. The permit to operate the Sutton Plant landfill was issued on July 6, 2017. The following day Duke Energy began transporting ash to the landfill. In September 2018, the area was severely impacted by Hurricane Florence causing additional delays in the ability to remove material from the ash basins due to extreme flooding and damage to the landfill. Duke Energy estimates that approximately 1.4 million tons of ash remain to be excavated during 2019.

- Ash basins should not have been in flood prone areas.

  Response – A review of current FEMA flood maps for the Sutton Plant area indicate the ash basins are in a Flood Zone X (Area of Minimal Flood Hazard). It is recognized that the Sutton Plant property was severely impacted by the historic rainfall events associated with Hurricane Florence.

III. Recommendations

Based on the review of the public record, written comments, the North Carolina General Statutes and Administrative Code, the Coal Ash Management Act of 2014, and discussions with other Department staff, I recommend to the Assistant Secretary for the Environment that the request for variance be granted and that the closure deadline for the Sutton Plant CCR surface impoundments be extended by the minimum necessary time period that Duke Energy indicates it will take to complete the closure. The extension should not to exceed six months.

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IV. Attachments

A. Notice to New Hanover Health Department
B. Notice to New Hanover Public Library
C. Notices Posted to the Department's Website
D. Notices Sent to the Department's Coal Ash Email Distribution List
E. Notices Published in the *Wilmington Star News*
F. Public Hearing Attendance Sign-in Sheet
G. Public Hearing Transcript
H. Written Comments Received During Public Comment Period

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Attachment A

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From: Martin, Sharon L.
To: programsupport@nhcgov.com
Subject: Public Notice of Variance request on Duke Energy Sutton Coal Ash Closure
Date: Friday, December 14, 2018 4:45:00 PM
Attachments: SuttonVariance public notice -12142018.pdf
Sutton Station Application for Grant of Variance to Close Impoundments_20181116.pdf

Dear program support,

I spoke with James in your environmental health section and he indicated you were the best contact. Attached is a public notice of the Duke Energy request for variance for the closure deadline of the Sutton Coal Ash Facility.

We are required by law to make a copy of this notice and document available in the county health department. Please post as necessary.

Feel free to give me a call if you have any questions of concerns.

Thanks,
Sharon Martin
Public Information Officer

Sharon Martin
Public Information Officer, Division of Air Quality
North Carolina Department of Environmental Quality
919.707.8446 (Office)
919.675.4912 (Mobile)
Sharon.Martin@ncdenr.gov

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

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NOTICE FOR PUBLIC MEETING AND PUBLIC COMMENT PERIOD ON REQUEST FOR VARIANCE TO EXTEND CLOSURE DEADLINE
Duke Energy Sutton Plant

Duke Energy has made a request to the North Carolina Department of Environmental Quality (DEQ) for a variance to extend the Coal Ash Management Act closure deadline by six months for the Sutton Coal Ash facility located at:

801 Sutton Steam Plant Road
Wilmington, NC 28401

This notice serves as a Notice of Public Meeting and Opportunity for Public Comment for this request. The public meeting will be held at the Cape Fear Community College on January 14, 2019 in the Union Station Building.

A copy of the variance request is posted on the DEQ website at deq.nc.gov/Sutton-Variance.

Interested persons are invited to provide comment on the variance request. Written comments may be sent to:

Ellen Lorscheider
1646 Mail Service Center
Raleigh, North Carolina 27699 1646
Phone/Fax: (919)707-8200

The comment period began on December 14, 2018 and ends on February 4, 2019. Written comments may also be submitted during the public comment period via email at the following address:

publiccomments@ncdenr.gov

Please type "Sutton Variance Request" in the subject line.

After weighing all relevant comments received, DEQ will decide whether to grant the request.

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George T. Hamrick
Senior Vice President
Coal Combustion Products

400 S. Tryon Street, ST06A
Charlotte, NC 28202

Phone: 980-373-8113
Email: george.hamrick@duke-energy.com

November 16, 2018

VIA UPS OVERNIGHT DELIVERY AND ELECTRONIC MAIL

Mr. Michael S. Regan
Secretary
North Carolina Department of Environmental Quality
217 W Jones St
Raleigh, NC 27603

RE: Application for Grant of Variance to Extend Deadline to Close Sutton Plant CCR Surface Impoundments (N.C.G.S. § 130A-309.215)

Dear Secretary Regan:

North Carolina General Statutes Section 130A-309.215(a) authorizes the Secretary of the North Carolina Department of Environmental Quality ("NCDEQ" or "Department") to "grant a variance to extend any deadline under [the Coal Ash Management Act ("CAMA")] on the Secretary's own motion, or that of an impoundment owner, on the basis that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public." Pursuant to N.C.G.S. § 130A-309.215(a1), where a variance is requested by an impoundment owner, the impoundment owner must within one year prior to the applicable deadline, request a variance including, at a minimum, information regarding (A) the site; (B) applicable requirements; (C) applicable deadlines for which a variance is sought; (D) site-specific circumstances supporting the need for the variance; and (E) detailed information demonstrating that "(i) the owner has substantially complied with all other requirements and deadlines established by [CAMA]; (ii) the owner has made good faith efforts to comply with the applicable deadline for closure of the impoundment; and (iii) that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public."

Consistent with the requirements of subsection (a1) of N.C.G.S. § 130A-309.215, Duke Energy Progress, LLC ("Duke Energy" or "Company") hereby submits this application for a variance to extend by six months the CAMA closure deadline applicable to the coal combustion residuals ("CCR") surface impoundments at Duke Energy's Sutton Plant ("Sutton") in Wilmington, North Carolina. Section I of this application

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addresses elements A, B, and C above; Section II addresses elements D, (E)(ii), and (E)(iii); and Section III addresses element (E)(i). As detailed in Section II below, NCDEQ's grant of the variance is warranted, because despite Duke Energy's application of best available technology found to be economically reasonable, compliance with the applicable CAMA deadline cannot be achieved due to myriad factors, including the impacts of several permitting delays, two major hurricanes, and other unforeseeable challenges and limitations beyond the Company's control.

I. Site; Applicable Requirements and Applicable Deadline

Sections 3.(b)(4) and 3.(c) of CAMA (Sess. L. 2014-122) require that the CCR surface impoundments at Sutton be closed by removal of CCR by no later than August 1, 2019 ("Deadline"). For the reasons discussed in detail below, despite Duke Energy's good faith efforts to apply best available technology found to be economically reasonable, Duke Energy has determined that it may not be able to meet the Deadline without producing serious hardship without equal or greater benefits to the public.

II. Site-specific Circumstances Demonstrating Why Compliance with CAMA's Deadline Cannot be Achieved Despite Duke Energy's Good Faith Efforts and Application of Best Available Technology

Throughout the basin excavation process, Duke Energy has encountered numerous challenges that have cumulatively resulted in the current schedule delay at Sutton and have impacted the Company's ability to close the Sutton CCR surface impoundments by the Deadline. During this period, Duke Energy has consistently exercised best efforts to minimize any delays in meeting the Deadline and has taken important steps to overcome the various challenges and limitations presented in an effort to recover schedule.

Under the standard set out in N.C.G.S. § 130A-309.215, whether application of a given technology would be commercially or economically reasonable requires that the costs of such technology be balanced against its benefits to the public. Following this fundamental principle over the course of the basin closure project, Duke Energy has consistently looked for and evaluated measures to safely and reasonably minimize any delays to the extent possible, considering at all times, the risks and benefits associated with each of the options considered.

In October 2014, the Company developed the initial Sutton Excavation Plan and held the Phase I excavation bidding event for excavation of the first two million tons of CCR for rail transport, which was determined to be the amount of ash that would need

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to be transported by rail to meet the Deadline. The contractor Duke Energy selected under this bidding event ("Contractor A") was chosen not only because it had bid the lowest price per ton, but also because it had completeness of technical support, engineering competence, and extensive wet ash basin experience. Due to CAMA's aggressive completion date of August 1, 2019, the complexity of CCR excavation at Sutton, and the expected timeline to construct an on-site landfill, the Brickhaven structural fill in Chatham County, North Carolina was selected as the initial CCR placement site for ash from the Sutton impoundments.

On November 13, 2014, Duke Energy submitted the initial Sutton Excavation Plan to the Department to cover the first 12 to 18 months (Phase I) of ash basin excavation activities. In general, the scope of work included site preparation, initiation of basin dewatering, ash basin preparation, construction of the on-site landfill, and ash removal from the basins. Under the initial Excavation Plan, Duke Energy would begin placing ash in the Brickhaven structural fill—a beneficial use of CCR pursuant to N.C.G.S. § 130A-309.201(1), (11), and (14). Ash would be transported from the site via rail car and also trucked to Brickhaven. Although the quantity trucked was small relative to the quantities transported by rail, this action demonstrated Duke Energy's commitment to commence ash excavation and placement operations as soon as feasible. Rail operations would consist of 85 car unit trains, with rail cars averaging 90 tons per car. The monthly goal was to deliver 14 loaded trains to Brickhaven per month, working seven days per week, or approximately 107,000 tons per month.

While transporting ash to Brickhaven, Duke Energy developed simultaneously an on-site landfill in order to meet the Deadline. Based on an engineering feasibility study commissioned by Duke Energy, it was determined that an on-site landfill would be the least-cost option to dispose of the ash and would have the least environmental impact. Moreover, it was determined to be the most expedient method of ash removal from the basins, consistent with the requirements of CAMA. North Carolina's solid waste rules, which prohibit the commencement of construction activities without having first secured the necessary permits, on-site landfill construction could not begin until issuance of the Permit to Construct.

On August 7, 2015, Duke Energy submitted its application for a Permit to Construct the on-site landfill to dispose of five million tons of coal ash from the Sutton impoundments (Phase II). On September 3, 2015, NCDEQ sent a letter to Duke Energy notifying the Company that the landfill application had been deemed "complete." NCDEQ sent a follow-up letter on October 7, 2015, requesting supplemental information, which Duke Energy provided on December 10, 2015. NCDEQ then initiated a 60-day public comment period, which ran from February 11 to April 15, 2016. The Company reasonably expected that the permit would issue soon after the conclusion

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of the comment period because (i) the public meeting was not heavily attended or contentious, (ii) NCDEQ Solid Waste Division staff had been reviewing the application since it was submitted on August 7, 2015, and (iii) it historically took the Department only a few weeks after expiration of the comment period to issue such permits.[1]

Duke Energy completed the updated 2015 Sutton Excavation Plan in November 2015 and revised the milestone dates, which reflected a reasonable expectation that it would secure the Permit to Construct in early 2016, thereby supporting a schedule to complete excavation of the ash by March 2019. Duke Energy was planning to move two million tons of ash via rail and, in parallel, dispose of ash in the on-site landfill from late January 2017 to July 2017. The Company estimated that it could excavate and move between approximately 200,000 to 225,000 tons of ash per month, 93,000 to 118,000 tons of which would be via truck to the landfill and approximately 107,000 tons of which would be via rail to Brickhaven.

However, on April 7, 2016, NCDEQ announced a new policy at a town hall meeting sponsored by the North Carolina Advisory Committee ("Advisory Committee") of the United States Commission on Civil Rights ("USCCR"), followed by a news release announcing a new review and approval process for all CCR landfills. Available at https://deq.nc.gov/press-release/north-carolina-take-extra-steps-protect-minority-communities. NCDEQ declared that it would go "beyond state and federal requirements" by conducting an environmental justice review of each Duke Energy coal ash CCR landfill application, including applications for expansions of existing on-site CCR landfills, and ask EPA's Office of Civil Rights, the USCCR, and the Advisory Committee to review and approve the environmental justice analysis before the permit is issued. NCDEQ reiterated this new policy a week later in a letter to the Advisory Committee. As a result of this new and unexpected process, on September 22, 2016, Duke Energy finally secured the Permit to Construct the Sutton landfill, which was one full year after NCDEQ had deemed the application "complete," and almost five months later than the latest date on which the permit was reasonably expected.

As a result of the permit delay, Duke Energy lost the six plus months of parallel (*i.e.*, on-site and off-site) excavation and placement/disposal for which it had planned. If issuance of the Permit to Construct would not have been delayed, the landfill construction would have been ongoing over this entire period of time, which would have created substantial margin on available space and volume to dispose of ash. The loss of this time and the ability to create margin had a significant negative impact on the ability to complete the project by the Deadline. Compounding this delay, Hurricane Matthew

[1] North Carolina General Statutes Section 130A-309.203 directs NCDEQ to expedite permit reviews for permits necessary to complete basin closure activities under CAMA—60 days after the comment period on the draft permit decision closes.

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struck eastern North Carolina on October 8, 2016, further delaying the mobilization of landfill construction, limiting access to the work site, and interrupting rail transport of ash to Brickhaven for 20 days due to railway flooding.

As a result of these unforeseen complications in the landfill permitting process, coupled with historic impacts to the region and Duke Energy's operations from Hurricane Matthew, Duke Energy's excavation schedule was delayed by over six months. However, throughout 2017, Duke Energy continuously evaluated actions and implemented them where the Company determined it was safe and commercially reasonable to do so. Following is a summary of the options the Company evaluated and the economically reasonable measures it undertook to address challenges and limitations and achieve schedule recovery:

- Duke Energy added a third conveyor to increase its margin on rail production. Accelerating the completion of Phase I provided crucial time to transition to Phase II while Duke Energy awaited construction of the on-site landfill to be completed.

- Duke Energy mobilized Contractor B—the contractor performing Phase II of ash excavation—to the site prior to Contractor A completing Phase I to support removal of non-ash material from the 1971 Basin, which accelerated Phase II of basin excavation.

- Due to mild weather and the Company's implementation of parallel activities, construction of Cell 3 of the landfill was completed well in advance of the scheduled September 1, 2017, completion date. As a result of this reduction in the landfill construction schedule, Duke Energy was in a position to start disposing of ash in the landfill upon receipt of the Permit to Operate. NCDEQ issued the permit on July 6, 2017, and the Company promptly started moving ash into the landfill on the following day, representing a 55-day acceleration of the schedule.

- Duke Energy evaluated parallel shipments of ash to Brickhaven and to the on-site landfill but rejected this action primarily based on logistical and contractual constraints. At that time (mid-2017), the Company could only process between approximately 200,000 to 225,000 tons of ash per month irrespective of where it was ultimately placed or disposed of.

- As the project schedule progressed, the landfill continued to be critical path due to the need to get additional cells permitted and operating. Duke Energy took efforts to expedite the landfill construction schedule and was able to complete Cells 5 and 6 a year ahead of schedule, thereby completely removing the landfill

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from critical path. In addition, the necessary permits to operate all six cells were secured. Critically, Duke Energy also secured the necessary permits to treat the landfill leachate on-site. This is significant because of the volume of leachate generated by the landfill—as more air space opened up, the volume of precipitation infiltrating into the ash and water draining from the ash itself increased, thus increasing the amount of leachate that needed to be treated.[2] By constructing Phase 2 of the site's wastewater treatment facility, getting the system installed to transfer the landfill leachate to that facility, and securing the necessary discharge permit, Duke Energy was able to simultaneously operate three cells instead of one, thereby allowing it to increase production substantially.

- The Company evaluated the feasibility of applying additional resources in order to increase the production rate, including expanding to night operations. Leveraging its experience, Duke Energy increased its dredging excavation activities up to 20 hours per day, six days a week using two 10-hour shifts or extended shifts.

- A new large dredge was assembled, commissioned, and placed into service in January 2018. Several measures were put into place to continuously improve performance, as follows: (1) A one-week outage was scheduled in late April 2018 to address design and breakdown issues and warranty work on the new dredge; (2) a second smaller dredge was placed into service in mid-April; (3) a third dredge was made available for use as a backup; (4) operating personnel and supervision were staffed up to support increased production; and (5) additional rigor was added to Job Hazard Analysis and Pre-job Briefs, along with increased supervisory oversight. These measures resulted in improved dredge performance. Duke Energy continues to monitor and review performance for additional improvement opportunities.[3]

During Duke Energy's dam decommissioning application discussions with the state, the Company was unexpectedly required by the Department to maintain a 50-foot buffer on the dikes until issuance of a decommissioning permit. The state's decision to limit Duke Energy to a minimum of a 50-foot buffer of ash on the dikes of the 1971 Basin further challenged Duke Energy's ability to meet the Deadline, despite exercising best efforts. The buffer requirement prevented Duke Energy from excavating all of the ash

[2] Trucking and treating leachate is the alternate method of managing leachate, but the extent to which this can be done is dependent on the capacity of local vendors and municipalities. The limit is approximately 40,000 gallons per day, which would allow for only one landfill cell to be open at a time.

[3] Although the operation of three dredges was evaluated, the Company rejected this option due to safety concerns associated with the number of cables, anchors, and pipes that would be introduced.

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from the basin dikes until after a dam decommissioning permit could be secured authorizing Duke Energy to remove the dikes. The result was that over 125,000 tons of material remained in the buffer zone of the dikes—material that was originally scheduled to be excavated as Duke Energy cut into the basin. Because Duke Energy was compelled to leave the material in the buffer zone of the dikes, ash was trapped on the dikes, which were surrounded by water. This not only prevented the Company from more efficiently achieving its production goals as planned, but required going back to excavate the material off the dikes from the buffer zone in a less efficient manner, thereby extending schedule.

Although it is not possible to recover the loss of margin occasioned by the delay in securing the necessary permit to decommission the dikes, Duke Energy saved substantial time by plotting the coordinates of the bottom of the 1971 Basin by taking 240 sample borings prior to digging below the groundwater table. Based on those sample borings, the Company determined the lower extent of the ash, thereby allowing it to dredge down directly to those coordinates. Duke Energy then developed as-built drawings certifying that it excavated to those coordinates to establish excavation had been completed. If the Company would not have taken this action, it would have been required to go into the basin on a barge and take 100-foot grid samples, which would have taken significant time. Moreover, if Duke Energy would have found samples that indicated the existence of ash, it would have had to go back to do further excavation. By getting the borings done ahead of time and delineating the GPS coordinates of the contours of the bottom of the basin, the Company saved significant amounts of time.

To further challenge excavation operations, in late June 2018, while continuing to dredge in the 1971 Basin, both dredges encountered trees and stumps (remnants of a Cyprus forest) in three areas estimated to total approximately five acres, which challenged production by requiring an average of 45 non-productive hours per week to clean dredge cutter heads. Neither dredge type could make sufficient progress in those areas due to continuous clogging of the dredge pumps. However, Duke Energy promptly took interim action to redeploy dredge resources to other locations in the basin to maintain production while developing alternatives to effectively remove stumps and debris without compromising production and the dredge schedule. The Company determined to bridge out over two of the three areas to allow for the utilization of mechanical excavation to remove the stumps and CCR material from these areas (approximately 139,000 cubic yards of material). With respect to the third area (approximately 50,000 cubic yards of material), because there was no nearby land access to the area, bridging was rejected as an option. Other options Duke Energy considered included, amphibious excavation, barge excavation, and continued dredging at a reduced rate. To help inform its decision, the Company obtained additional bathymetric and aerial survey data. After evaluating the available options, all of which

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would result in schedule delay, Duke Energy determined that dredging through the area would be the most technically feasible option and would result in the least impact on schedule. Although this was the most commercially reasonable option, it, nevertheless, resulted in a schedule loss of three weeks.

In 2018, weather continued to contribute to Duke Energy's inability to meet the Deadline. As in 2017, Sutton experienced above-average levels of precipitation in 2018. Through October 2018, the Wilmington area received historical levels of rainfall. Although average total precipitation in Wilmington in the months of April through September is 35.22 inches, actual rainfall over this six-month period in 2018 was 74.8 inches.[4] Thus, over this six-month period in 2018, Wilmington received 39.58 inches more rainfall than is normally the case. Under the extremely wet conditions presented, ash could not be dried to the level required for transportation and placement in the landfill.

Sutton, which was directly in the Hurricane Florence's path, experienced the full force of the storm's winds and rainfall. By September 11, 2018, precipitation intensity charts showed 25 to 30 inches of predicted rainfall in a concentrated portion of the coastal area just north of Wilmington. Duke Energy took numerous planning and engineering actions before the hurricane to prepare the site and minimize potential storm impacts, including staffing Sutton during the storm, pre-staging equipment, actively reducing water levels in the ponds before the storm arrived, and placing structural materials on-site to respond quickly if repairs were needed.

Rainfall began at Sutton on September 13, with 5.7 inches falling as measured by gauges at the site. On September 14, Sutton received an additional 11.5 inches of rainfall in three hours, between 6:00 a.m. and 9:00 a.m.[5] This rainfall significantly exceeded the 25-year, 24-hour storm event design capacity of the run-on/run-off berm for landfill Cells 4 and 5. On September 16, a second peak rain event occurred between the hours of 12:00 a.m. and 6:00 a.m., with the site receiving an additional 4.2 inches of rainfall. Cumulative rainfall received by 8:00 a.m. on September 16 was approximately 30.1 inches.

On September 17, the site response team's priorities were to ensure the site was stable and prepared to handle another rain event by cleaning out ditches, installing

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[4] In fact, new rainfall records were set in each of the months of May and September 2018. *See* https://w2.weather.gov/climate/index.php?wfo=ilm.

[5] The flooding Cape Fear River triggered the shutdown of the entire plant, including its natural gas-fired operations—and evacuation of plant staff. The storm resulted in 1.8 million Duke Energy customers losing power.

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check dams, pumping contact water to the ash basins, restoring power to the site to support wastewater processing equipment operations, and developing a recovery plan to resume ash excavation. On that same day, the construction contractor remobilized and began to manage water in the landfill. The Department performed an inspection on September 28 after repairs had been completed and gave permission for landfill operations and placement of ash in the landfill to resume. Excavation and placement of ash resumed on September 29—only 16 days after the storm began impacting Sutton.

III. Substantial Compliance with all Other CAMA Requirements and Deadlines

In compliance with CAMA, in 2015, Duke Energy embarked on an aggressive plan to close all ash basins across its North Carolina fleet, which is a complex task requiring significant planning, coordination with state regulators, and dedication of resources. In North Carolina, the Company has 31 coal ash basins subject to the requirements of CAMA, which imposes on Duke Energy, among other things, stringent structural stability, closure, post-closure care, groundwater monitoring, and corrective action requirements for CCR surface impoundments, as well as permanent water supply obligations.[6]

In July 2016, the North Carolina legislature amended CAMA to require Duke Energy to rectify any deficiencies identified by, and to comply with the requirements of, any dam safety order issued by the state for CCR surface impoundments. *See* N.C.G.S. § 130A-309-213(d)(1)b. On August 22, 2016, pursuant to N.C.G.S. § 143-215.32, NCDEQ issued Dam Safety Order 16-01 ("DSO") requiring certain repairs to impoundment dams at nine facility's subject to CAMA. Consistent with the requirements of the DSO, Duke Energy promptly undertook the required repairs and sent the Department a letter dated June 1, 2018, notifying it that the Company had fully complied with the requirements of the DSO in accordance with N.C.G.S. §§ 130A-309-213(d)(1)b. and 143-215.32. Specifically, Duke Energy completed all of the repair plans specified by, and timely submitted all of the completion reports to, NCDEQ. The Department conducted as-built inspections for each item and issued Certificates of Final Approval indicating that the required work had been completed as designed. In addition, the annual inspection of each dam has been completed, and the Company has received Notice of Inspection Reports documenting that no deficiencies are present.[7] Finally, on October 10, NCDEQ

[6] Twenty-six of these basins are also regulated under the federal CCR rule.

[7] The Sutton surface impoundments were not subject to the DSO. Nevertheless, the October 17, 2017, inspection report from the state indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams

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made official notification to the Environmental Management Commission that Duke Energy had complied with all dam safety requirements, as required by N.C.G.S. § 130A-309-213(d)(1)b.

With respect to the permanent water supply requirements imposed under CAMA, Duke Energy provided each eligible and consenting resident with an alternative drinking water supply (*i.e.*, connection to a public water system or a filtration system) by the deadline set out in N.C.G.S. § 130A-309-211(c1). On October 12, 2018, NCDEQ issued a press release announcing that "permanent replacement water supplies have been provided to all eligible households near Duke Energy coal ash facilities in North Carolina . . . by the deadline of October 15, 2018 set forth in the Coal Ash Management Act." Available at https://deq.nc.gov/news/press-releases/2018/10/12/release-deq-completes-permanent-replacement-water-supplies-coal-ash.

Consistent with the requirements of N.C.G.S. § 130A-309-211, Duke Energy submitted the groundwater assessments to NCDEQ by the applicable CAMA deadline. In addition, the Company has submitted for six sites and continues to prepare for other sites updated comprehensive site assessments. Updated groundwater corrective action plans are also being submitted. These documents will be submitted to NCDEQ in accordance with the schedule provided to Duke Energy by the Department.[8] The Company is also preparing site-specific coal ash impoundment closure plans in accordance with the requirements of N.C.G.S. § 130A-309-214(a)(4). These closure plans will be submitted to the Department no later than the applicable deadline set out in CAMA.

Finally, Duke Energy has substantially complied with all other requirements and deadlines established under CAMA, including its annual inspection, annual reporting, and ash beneficiation requirements.

Conclusion

The latest bathymetric survey data show that Duke Energy has dredged approximately 760,000 cubic yards from the 1971 Basin and that there are approximately 240,000 cubic yards of dredge material remaining. In addition, there are

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occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.

[8] Although not required under CAMA, Duke Energy completed installation of the accelerated remediation system required under Paragraph II.A. of that certain Agreement to Settle and for Release of Claims entered into among NCDEQ and Duke Energy on September 29, 2015.

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987,500 cubic yards remaining in the 1984 Basin. By August 1, 2019, Duke Energy estimates it will have excavated and moved for placement or disposal approximately 94 percent of the total ash to be excavated and moved from the Sutton impoundments.

As detailed above, the Company's commitment to the application of best available technology found to be economically reasonable to meet the Deadline has resulted in significant schedule recovery, despite the many challenges and limitations with which Duke Energy was presented throughout the excavation process. Despite these good faith efforts to meet the Deadline, Duke Energy estimates that it requires an additional six months. Accordingly, the Company respectfully requests that the Department grant Duke Energy a variance to extend the Deadline to **February 1, 2020**, to close the Sutton surface impoundments. Although this application requests a six-month variance, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the Deadline.

If you have any questions, please do not hesitate to contact Randy Hart at randy.hart@duke-energy.com or (980) 373-5630. We appreciate your time and consideration.

Respectfully submitted,

George T. Hamrick

George T. Hamrick
Senior Vice President, Coal Combustion Products

NCDEQ cc: Sheila C. Holman (sheila.holman@ncdenr.gov)
William F. Lane (bill.lane@ncdenr.gov)

Duke Energy cc: ccprecords@duke-energy.com; Randy Hart

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December 14, 2018

VIA ELECTRONIC MAIL

Ms. Sheila Holman
Assistant Secretary for Environment
North Carolina Department of Environmental Quality
217 W Jones St
Raleigh, NC 27603

RE: Sutton Variance Application: Response to Request for Supplemental Information

Dear Ms. Holman:

Thank you for your letter dated December 12, 2018, requesting supplemental information regarding Duke Energy's Application for Variance to Extend Closure Date for Sutton Plant CCR Surface Impoundments dated November 16, 2018 ("Variance Application"). Specifically, you requested additional information regarding the current and projected process rates for ash excavation, assumptions made in calculating these rates, and technologies evaluated, and why they were ultimately selected or rejected. You also asked Duke Energy to discuss whether the Sutton Plant has met the requirements and deadlines set out in the Coal Ash Management Act, as amended ("CAMA"). This letter responds to the North Carolina Department of Environmental Quality's ("NCDEQ") request for supplemental information. In addition, Duke Energy provides information regarding the status of Duke Energy's compliance with N.C.G.S. § 130A-309.216 regarding the installation of ash beneficiation projects at three Duke Energy sites in North Carolina. Although this information was not requested by NCDEQ or applicable to the Sutton Plant, we thought it might be helpful as you evaluate the Variance Application.

Rates of Excavation, Assumptions, and Technologies Evaluated

Sutton is forecasted to have excavated 4,900,000 tons of ash by the end of 2018. Based on the estimated volume of material in each of the 1971 and 1984 Basins, there will be approximately 1,400,000 tons remaining to be excavated in 2019 to meet final compliance criteria. Over the past three years, the excavation rate for the project has averaged approximately 130,000 tons per month. Since the on-site landfill was put into operation, the excavation rate has averaged approximately 150,000 tons per month. The current excavation plan assumes that Duke Energy will continue to excavate at a rate of 150,000 tons per month. At the end of July 2019, Duke Energy is forecasting to have approximately 350,000 tons remaining to be excavated. Using the original

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amount of 6,655,200 tons in the basins, this equates to approximately 94 percent complete. After closure by removal has been completed, post-excavation validation sampling is further required. The sampling is scheduled to take about one month to complete the field and lab work. As detailed in Section II of Duke Energy's November 16 Variance Application, throughout its history, the project has been challenged with regulatory, weather, operational, and other unforeseen challenges, which have significantly impacted the monthly production rate despite Duke Energy's application of best efforts.

Although the excavation rate of 150,000 tons that is currently assumed will not be sufficient to achieve closure by the August 1, 2019 deadline established under CAMA, this number reflects the actions Duke Energy undertook to gain schedule, as set forth in the Variance Application. The technologies/actions Duke Energy considered and either adopted or rejected are summarized in the chart below.

Technologies Evaluated	Status
Send parallel shipments of ash to Brickhaven and on-site landfill after securing delayed permit	*Rejected – Logistical and contractual constraints*
Add third conveyor	Adopted – Allowed Duke Energy to increase its margin on rail production
Early mobilization of Phase II contractor prior to Phase I contractor's completion of work	Adopted – Supported early mobilization and removal of non-ash material from 1971 Basin, thereby accelerating Phase II of basin excavation
Accelerate construction of Cell 3 of on-site landfill	Adopted – Allowed landfill to be filled earlier than scheduled at 150,000 tons per month and eliminated project down time with rail operations being complete
Expedite construction of Cells 5, 6, and 7 of on-site landfill	Adopted – Removed landfill from critical path
Simultaneous operation of multiple landfill cells	Adopted – Substantially increased production
Increase dredging excavation activities up to 20 hours per day, six days per week	Adopted – Substantially increased production
Place additional dredge into service	Adopted – Substantially increased production
Simultaneous operation of three dredges	*Rejected – Safety concerns associated with number of cables, anchors, and pipes*
Plot GPS coordinates of bottom of 1971 Basin	Adopted – Saved significant time by confirming lower extent of ash and avoiding need to go back and do additional excavation and post-excavation sampling time estimates
Redeploy dredge resources to other basin locations while developing alternatives to remove stumps and debris	Adopted – Avoided loss of production and dredge schedule
Take measures in advance of Hurricane Florence reaching landfall to prepare site	Adopted – Minimized potential storm impacts, thus allowing for prompt return to ash excavation and disposal operations

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The Sutton site received 5.67 inches of rainfall in November 2018, which impacted eight working days of production, or 64,000 to 80,000 tons of CCR material. Through the first nine days of December 2018, the site has received an additional 3.08 inches of precipitation. In total, as of December 9, a total of 97.67 inches of rain has fallen on the site. This has caused 93 lost working days in 2018, equivalent to 697,500 tons of production.

In addition to delays associated with poor weather, recent dredging production from the 1971 Basin deep ash borrow area has been impaired by the lodging of rocks in the cutter head and dredge pump. A bottom sonar survey identified three rock outcroppings varying from 50 to 250 feet in length. An engineering evaluation will consider this data to determine how Duke Energy should modify the final dredging depths to account for the rock formations/outcroppings. To minimize any schedule delays, the large dredge has been moved to another area in the basin.

These problems demonstrate that despite Duke Energy's continuous application of best efforts, production delays occur because of factors entirely out of Duke Energy's control. They further highlight the fact that estimated excavation rates are influenced by many external factors. Therefore, it would not be prudent to conclude that the project will recover 350,000 tons of shortfall in the first seven months of 2019. In light of the extended variance application process set out in CAMA, which essentially provides a single opportunity to apply for a variance[1], it is critical that the variance request include adequate margin to accommodate additional schedule delays despite Duke Energy's application of best available technology found to be economically reasonable.

Substantial Compliance with Other CAMA Requirements and Deadlines Applicable to the Sutton Plant

- N.C.G.S. § 130A-309-213(d)(1)b. (dam stability) – Although the CCR surface impoundments at the Sutton Plant were not subject to Dam Safety Order 16-01, the October 17, 2017 inspection report from NCDEQ indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.

- N.C.G.S. § 130A-309-211(c1) (provision of permanent water supply) – Although subject to the statutory requirement to establish permanent replacement water supplies for eligible households, it was determined that no connection was needed at the Sutton Plant. NCDEQ sent its concurrence with this determination to Duke Energy on August 10, 2018.

[1] North Carolina General Statutes Section 130A-309.215(a1) provides that Duke Energy may not apply for a variance "earlier than one year prior to the applicable deadline."

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- N.C.G.S. § 130A-309-211(a) (comprehensive site assessment) – The comprehensive site assessment for the Sutton Plant was submitted to NCDEQ via cover letter dated August 4, 2015.

- N.C.G.S. § 130A-309-211(b) (corrective action plan) – The corrective action plan was submitted in two parts. Part 1 was dated November 2, 2015, and Part 2 was dated February 1, 2016.[2]

Compliance with N.C.G.S. § 130A-309.216 (ash beneficiation projects)

North Carolina General Statutes Section 130A-309.216 requires Duke Energy to install and operate three large-scale coal ash beneficiation projects to produce reprocessed ash for use in the concrete industry. Duke Energy selected the Buck and H.F. Lee Plants prior to the January 1, 2017 deadline set out in subsection (a) of Section 130A-309.216, and selected the Cape Fear Plant prior to the deadline established under subsection (b) of Section 130A-309.216. Construction of the beneficiation unit at the Buck Plant began in November 2018 and will require 18 to 24 months to complete. Construction of the beneficiation unit at the H.F. Lee Plant is targeted to begin in February 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months. Finally, construction of the beneficiation unit at Cape Fear is targeted to begin in May 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months.

Conclusion

As explained in the Variance Application, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the August 1, 2019 closure deadline established by CAMA, including taking advantage of good weather days and continuing to move material into the landfill 60 hours or more per week, as weather allows. Nevertheless, Duke Energy respectfully requests that NCDEQ grant it a variance to extend until February 1, 2020, the deadline to close the CCR surface impoundments at the Sutton Plant.

[2] Outside of CAMA, Duke Energy submitted a Sutton comprehensive site assessment supplement dated August 31, 2016, and an updated comprehensive site assessment dated January 30, 2018.

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If you have any questions, please do not hesitate to contact Randy Hart at randy.hart@duke-energy.com or (980) 373-5630. We appreciate your time and consideration.

Respectfully submitted,

George T. Hamrick
Senior Vice President, Coal Combustion Products

NCDEQ cc: William F. Lane (bill.lane@ncdenr.gov)
Ed Mussler (ed.mussler@ncdenr.gov)

Duke Energy cc: ccprecords@duke-energy.com; Randy Hart

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Attachment B

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From: Martin, Sharon L.
To: jrider@nhcgov.com
Subject: Library copy of Public Notice of Duke Energy Request for Variance on Sutton Coal Ash Closure deadline
Date: Friday, December 14, 2018 4:49:00 PM
Attachments: SuttonVariance public notice -12142018.pdf
Sutton Station Application for Grant of Variance to Close Impoundments_20181116.pdf

Mr. Rider,

Thank you for speaking with me today. Attached are the public notice of the public meeting and comment period as well as the request for variance. Please post as necessary. Thank you so much for your help in this matter, and please let me know if there's ever anything you need.

Thank you,
Sharon Martin
Public Information Officer

Sharon Martin
Public Information Officer, Division of Air Quality
North Carolina Department of Environmental Quality
919.707.8446 (Office)
919.675.4912 (Mobile)
Sharon.Martin@ncdenr.gov

Email correspondence to and from this address is subject to the North Carolina Public Records Law and may be disclosed to third parties.

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NOTICE FOR PUBLIC MEETING AND PUBLIC COMMENT PERIOD ON REQUEST FOR VARIANCE TO EXTEND CLOSURE DEADLINE
Duke Energy Sutton Plant

Duke Energy has made a request to the North Carolina Department of Environmental Quality (DEQ) for a variance to extend the Coal Ash Management Act closure deadline by six months for the Sutton Coal Ash facility located at:

801 Sutton Steam Plant Road
Wilmington, NC 28401

This notice serves as a Notice of Public Meeting and Opportunity for Public Comment for this request. The public meeting will be held at the Cape Fear Community College on January 14, 2019 in the Union Station Building.

A copy of the variance request is posted on the DEQ website at deq.nc.gov/Sutton-Variance.

Interested persons are invited to provide comment on the variance request. Written comments may be sent to:

Ellen Lorscheider
1646 Mail Service Center
Raleigh, North Carolina 27699 1646
Phone/Fax: (919)707-8200

The comment period began on December 14, 2018 and ends on February 4, 2019. Written comments may also be submitted during the public comment period via email at the following address:

publiccomments@ncdenr.gov

Please type "Sutton Variance Request" in the subject line.

After weighing all relevant comments received, DEQ will decide whether to grant the request.

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George T. Hamrick
Senior Vice President
Coal Combustion Products

400 S. Tryon Street, ST06A
Charlotte, NC 28202

Phone: 980-373-8113
Email: george.hamrick@duke-energy.com

November 16, 2018

VIA UPS OVERNIGHT DELIVERY AND ELECTRONIC MAIL

Mr. Michael S. Regan
Secretary
North Carolina Department of Environmental Quality
217 W Jones St
Raleigh, NC 27603

RE: Application for Grant of Variance to Extend Deadline to Close Sutton Plant CCR Surface Impoundments (N.C.G.S. § 130A-309.215)

Dear Secretary Regan:

North Carolina General Statutes Section 130A-309.215(a) authorizes the Secretary of the North Carolina Department of Environmental Quality ("NCDEQ" or "Department") to "grant a variance to extend any deadline under [the Coal Ash Management Act ("CAMA")] on the Secretary's own motion, or that of an impoundment owner, on the basis that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public." Pursuant to N.C.G.S. § 130A-309.215(a1), where a variance is requested by an impoundment owner, the impoundment owner must within one year prior to the applicable deadline, request a variance including, at a minimum, information regarding (A) the site; (B) applicable requirements; (C) applicable deadlines for which a variance is sought; (D) site-specific circumstances supporting the need for the variance; and (E) detailed information demonstrating that "(i) the owner has substantially complied with all other requirements and deadlines established by [CAMA]; (ii) the owner has made good faith efforts to comply with the applicable deadline for closure of the impoundment; and (iii) that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public."

Consistent with the requirements of subsection (a1) of N.C.G.S. § 130A-309.215, Duke Energy Progress, LLC ("Duke Energy" or "Company") hereby submits this application for a variance to extend by six months the CAMA closure deadline applicable to the coal combustion residuals ("CCR") surface impoundments at Duke Energy's Sutton Plant ("Sutton") in Wilmington, North Carolina. Section I of this application

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addresses elements A, B, and C above; Section II addresses elements D, (E)(ii), and (E)(iii); and Section III addresses element (E)(i). As detailed in Section II below, NCDEQ's grant of the variance is warranted, because despite Duke Energy's application of best available technology found to be economically reasonable, compliance with the applicable CAMA deadline cannot be achieved due to myriad factors, including the impacts of several permitting delays, two major hurricanes, and other unforeseeable challenges and limitations beyond the Company's control.

I. Site; Applicable Requirements and Applicable Deadline

Sections 3.(b)(4) and 3.(c) of CAMA (Sess. L. 2014-122) require that the CCR surface impoundments at Sutton be closed by removal of CCR by no later than August 1, 2019 ("Deadline"). For the reasons discussed in detail below, despite Duke Energy's good faith efforts to apply best available technology found to be economically reasonable, Duke Energy has determined that it may not be able to meet the Deadline without producing serious hardship without equal or greater benefits to the public.

II. Site-specific Circumstances Demonstrating Why Compliance with CAMA's Deadline Cannot be Achieved Despite Duke Energy's Good Faith Efforts and Application of Best Available Technology

Throughout the basin excavation process, Duke Energy has encountered numerous challenges that have cumulatively resulted in the current schedule delay at Sutton and have impacted the Company's ability to close the Sutton CCR surface impoundments by the Deadline. During this period, Duke Energy has consistently exercised best efforts to minimize any delays in meeting the Deadline and has taken important steps to overcome the various challenges and limitations presented in an effort to recover schedule.

Under the standard set out in N.C.G.S. § 130A-309.215, whether application of a given technology would be commercially or economically reasonable requires that the costs of such technology be balanced against its benefits to the public. Following this fundamental principle over the course of the basin closure project, Duke Energy has consistently looked for and evaluated measures to safely and reasonably minimize any delays to the extent possible, considering at all times, the risks and benefits associated with each of the options considered.

In October 2014, the Company developed the initial Sutton Excavation Plan and held the Phase I excavation bidding event for excavation of the first two million tons of CCR for rail transport, which was determined to be the amount of ash that would need

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to be transported by rail to meet the Deadline. The contractor Duke Energy selected under this bidding event ("Contractor A") was chosen not only because it had bid the lowest price per ton, but also because it had completeness of technical support, engineering competence, and extensive wet ash basin experience. Due to CAMA's aggressive completion date of August 1, 2019, the complexity of CCR excavation at Sutton, and the expected timeline to construct an on-site landfill, the Brickhaven structural fill in Chatham County, North Carolina was selected as the initial CCR placement site for ash from the Sutton impoundments.

On November 13, 2014, Duke Energy submitted the initial Sutton Excavation Plan to the Department to cover the first 12 to 18 months (Phase I) of ash basin excavation activities. In general, the scope of work included site preparation, initiation of basin dewatering, ash basin preparation, construction of the on-site landfill, and ash removal from the basins. Under the initial Excavation Plan, Duke Energy would begin placing ash in the Brickhaven structural fill—a beneficial use of CCR pursuant to N.C.G.S. § 130A-309.201(1), (11), and (14). Ash would be transported from the site via rail car and also trucked to Brickhaven. Although the quantity trucked was small relative to the quantities transported by rail, this action demonstrated Duke Energy's commitment to commence ash excavation and placement operations as soon as feasible. Rail operations would consist of 85 car unit trains, with rail cars averaging 90 tons per car. The monthly goal was to deliver 14 loaded trains to Brickhaven per month, working seven days per week, or approximately 107,000 tons per month.

While transporting ash to Brickhaven, Duke Energy developed simultaneously an on-site landfill in order to meet the Deadline. Based on an engineering feasibility study commissioned by Duke Energy, it was determined that an on-site landfill would be the least-cost option to dispose of the ash and would have the least environmental impact. Moreover, it was determined to be the most expedient method of ash removal from the basins, consistent with the requirements of CAMA. North Carolina's solid waste rules, which prohibit the commencement of construction activities without having first secured the necessary permits, on-site landfill construction could not begin until issuance of the Permit to Construct.

On August 7, 2015, Duke Energy submitted its application for a Permit to Construct the on-site landfill to dispose of five million tons of coal ash from the Sutton impoundments (Phase II). On September 3, 2015, NCDEQ sent a letter to Duke Energy notifying the Company that the landfill application had been deemed "complete." NCDEQ sent a follow-up letter on October 7, 2015, requesting supplemental information, which Duke Energy provided on December 10, 2015. NCDEQ then initiated a 60-day public comment period, which ran from February 11 to April 15, 2016. The Company reasonably expected that the permit would issue soon after the conclusion

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of the comment period because (i) the public meeting was not heavily attended or contentious, (ii) NCDEQ Solid Waste Division staff had been reviewing the application since it was submitted on August 7, 2015, and (iii) it historically took the Department only a few weeks after expiration of the comment period to issue such permits.[1]

Duke Energy completed the updated 2015 Sutton Excavation Plan in November 2015 and revised the milestone dates, which reflected a reasonable expectation that it would secure the Permit to Construct in early 2016, thereby supporting a schedule to complete excavation of the ash by March 2019. Duke Energy was planning to move two million tons of ash via rail and, in parallel, dispose of ash in the on-site landfill from late January 2017 to July 2017. The Company estimated that it could excavate and move between approximately 200,000 to 225,000 tons of ash per month, 93,000 to 118,000 tons of which would be via truck to the landfill and approximately 107,000 tons of which would be via rail to Brickhaven.

However, on April 7, 2016, NCDEQ announced a new policy at a town hall meeting sponsored by the North Carolina Advisory Committee ("Advisory Committee") of the United States Commission on Civil Rights ("USCCR"), followed by a news release announcing a new review and approval process for all CCR landfills. Available at https://deq.nc.gov/press-release/north-carolina-take-extra-steps-protect-minority-communities. NCDEQ declared that it would go "beyond state and federal requirements" by conducting an environmental justice review of each Duke Energy coal ash CCR landfill application, including applications for expansions of existing on-site CCR landfills, and ask EPA's Office of Civil Rights, the USCCR, and the Advisory Committee to review and approve the environmental justice analysis before the permit is issued. NCDEQ reiterated this new policy a week later in a letter to the Advisory Committee. As a result of this new and unexpected process, on September 22, 2016, Duke Energy finally secured the Permit to Construct the Sutton landfill, which was one full year after NCDEQ had deemed the application "complete," and almost five months later than the latest date on which the permit was reasonably expected.

As a result of the permit delay, Duke Energy lost the six plus months of parallel (*i.e.*, on-site and off-site) excavation and placement/disposal for which it had planned. If issuance of the Permit to Construct would not have been delayed, the landfill construction would have been ongoing over this entire period of time, which would have created substantial margin on available space and volume to dispose of ash. The loss of this time and the ability to create margin had a significant negative impact on the ability to complete the project by the Deadline. Compounding this delay, Hurricane Matthew

[1] North Carolina General Statutes Section 130A-309.203 directs NCDEQ to expedite permit reviews for permits necessary to complete basin closure activities under CAMA—60 days after the comment period on the draft permit decision closes.

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struck eastern North Carolina on October 8, 2016, further delaying the mobilization of landfill construction, limiting access to the work site, and interrupting rail transport of ash to Brickhaven for 20 days due to railway flooding.

As a result of these unforeseen complications in the landfill permitting process, coupled with historic impacts to the region and Duke Energy's operations from Hurricane Matthew, Duke Energy's excavation schedule was delayed by over six months. However, throughout 2017, Duke Energy continuously evaluated actions and implemented them where the Company determined it was safe and commercially reasonable to do so. Following is a summary of the options the Company evaluated and the economically reasonable measures it undertook to address challenges and limitations and achieve schedule recovery:

- Duke Energy added a third conveyor to increase its margin on rail production. Accelerating the completion of Phase I provided crucial time to transition to Phase II while Duke Energy awaited construction of the on-site landfill to be completed.

- Duke Energy mobilized Contractor B—the contractor performing Phase II of ash excavation—to the site prior to Contractor A completing Phase I to support removal of non-ash material from the 1971 Basin, which accelerated Phase II of basin excavation.

- Due to mild weather and the Company's implementation of parallel activities, construction of Cell 3 of the landfill was completed well in advance of the scheduled September 1, 2017, completion date. As a result of this reduction in the landfill construction schedule, Duke Energy was in a position to start disposing of ash in the landfill upon receipt of the Permit to Operate. NCDEQ issued the permit on July 6, 2017, and the Company promptly started moving ash into the landfill on the following day, representing a 55-day acceleration of the schedule.

- Duke Energy evaluated parallel shipments of ash to Brickhaven and to the on-site landfill but rejected this action primarily based on logistical and contractual constraints. At that time (mid-2017), the Company could only process between approximately 200,000 to 225,000 tons of ash per month irrespective of where it was ultimately placed or disposed of.

- As the project schedule progressed, the landfill continued to be critical path due to the need to get additional cells permitted and operating. Duke Energy took efforts to expedite the landfill construction schedule and was able to complete Cells 5 and 6 a year ahead of schedule, thereby completely removing the landfill

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from critical path. In addition, the necessary permits to operate all six cells were secured. Critically, Duke Energy also secured the necessary permits to treat the landfill leachate on-site. This is significant because of the volume of leachate generated by the landfill—as more air space opened up, the volume of precipitation infiltrating into the ash and water draining from the ash itself increased, thus increasing the amount of leachate that needed to be treated.[2] By constructing Phase 2 of the site's wastewater treatment facility, getting the system installed to transfer the landfill leachate to that facility, and securing the necessary discharge permit, Duke Energy was able to simultaneously operate three cells instead of one, thereby allowing it to increase production substantially.

- The Company evaluated the feasibility of applying additional resources in order to increase the production rate, including expanding to night operations. Leveraging its experience, Duke Energy increased its dredging excavation activities up to 20 hours per day, six days a week using two 10-hour shifts or extended shifts.

- A new large dredge was assembled, commissioned, and placed into service in January 2018. Several measures were put into place to continuously improve performance, as follows: (1) A one-week outage was scheduled in late April 2018 to address design and breakdown issues and warranty work on the new dredge; (2) a second smaller dredge was placed into service in mid-April; (3) a third dredge was made available for use as a backup; (4) operating personnel and supervision were staffed up to support increased production; and (5) additional rigor was added to Job Hazard Analysis and Pre-job Briefs, along with increased supervisory oversight. These measures resulted in improved dredge performance. Duke Energy continues to monitor and review performance for additional improvement opportunities.[3]

During Duke Energy's dam decommissioning application discussions with the state, the Company was unexpectedly required by the Department to maintain a 50-foot buffer on the dikes until issuance of a decommissioning permit. The state's decision to limit Duke Energy to a minimum of a 50-foot buffer of ash on the dikes of the 1971 Basin further challenged Duke Energy's ability to meet the Deadline, despite exercising best efforts. The buffer requirement prevented Duke Energy from excavating all of the ash

[2] Trucking and treating leachate is the alternate method of managing leachate, but the extent to which this can be done is dependent on the capacity of local vendors and municipalities. The limit is approximately 40,000 gallons per day, which would allow for only one landfill cell to be open at a time.

[3] Although the operation of three dredges was evaluated, the Company rejected this option due to safety concerns associated with the number of cables, anchors, and pipes that would be introduced.

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from the basin dikes until after a dam decommissioning permit could be secured authorizing Duke Energy to remove the dikes. The result was that over 125,000 tons of material remained in the buffer zone of the dikes—material that was originally scheduled to be excavated as Duke Energy cut into the basin. Because Duke Energy was compelled to leave the material in the buffer zone of the dikes, ash was trapped on the dikes, which were surrounded by water. This not only prevented the Company from more efficiently achieving its production goals as planned, but required going back to excavate the material off the dikes from the buffer zone in a less efficient manner, thereby extending schedule.

Although it is not possible to recover the loss of margin occasioned by the delay in securing the necessary permit to decommission the dikes, Duke Energy saved substantial time by plotting the coordinates of the bottom of the 1971 Basin by taking 240 sample borings prior to digging below the groundwater table. Based on those sample borings, the Company determined the lower extent of the ash, thereby allowing it to dredge down directly to those coordinates. Duke Energy then developed as-built drawings certifying that it excavated to those coordinates to establish excavation had been completed. If the Company would not have taken this action, it would have been required to go into the basin on a barge and take 100-foot grid samples, which would have taken significant time. Moreover, if Duke Energy would have found samples that indicated the existence of ash, it would have had to go back to do further excavation. By getting the borings done ahead of time and delineating the GPS coordinates of the contours of the bottom of the basin, the Company saved significant amounts of time.

To further challenge excavation operations, in late June 2018, while continuing to dredge in the 1971 Basin, both dredges encountered trees and stumps (remnants of a Cyprus forest) in three areas estimated to total approximately five acres, which challenged production by requiring an average of 45 non-productive hours per week to clean dredge cutter heads. Neither dredge type could make sufficient progress in those areas due to continuous clogging of the dredge pumps. However, Duke Energy promptly took interim action to redeploy dredge resources to other locations in the basin to maintain production while developing alternatives to effectively remove stumps and debris without compromising production and the dredge schedule. The Company determined to bridge out over two of the three areas to allow for the utilization of mechanical excavation to remove the stumps and CCR material from these areas (approximately 139,000 cubic yards of material). With respect to the third area (approximately 50,000 cubic yards of material), because there was no nearby land access to the area, bridging was rejected as an option. Other options Duke Energy considered included, amphibious excavation, barge excavation, and continued dredging at a reduced rate. To help inform its decision, the Company obtained additional bathymetric and aerial survey data. After evaluating the available options, all of which

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would result in schedule delay, Duke Energy determined that dredging through the area would be the most technically feasible option and would result in the least impact on schedule. Although this was the most commercially reasonable option, it, nevertheless, resulted in a schedule loss of three weeks.

In 2018, weather continued to contribute to Duke Energy's inability to meet the Deadline. As in 2017, Sutton experienced above-average levels of precipitation in 2018. Through October 2018, the Wilmington area received historical levels of rainfall. Although average total precipitation in Wilmington in the months of April through September is 35.22 inches, actual rainfall over this six-month period in 2018 was 74.8 inches.[4] Thus, over this six-month period in 2018, Wilmington received 39.58 inches more rainfall than is normally the case. Under the extremely wet conditions presented, ash could not be dried to the level required for transportation and placement in the landfill.

Sutton, which was directly in the Hurricane Florence's path, experienced the full force of the storm's winds and rainfall. By September 11, 2018, precipitation intensity charts showed 25 to 30 inches of predicted rainfall in a concentrated portion of the coastal area just north of Wilmington. Duke Energy took numerous planning and engineering actions before the hurricane to prepare the site and minimize potential storm impacts, including staffing Sutton during the storm, pre-staging equipment, actively reducing water levels in the ponds before the storm arrived, and placing structural materials on-site to respond quickly if repairs were needed.

Rainfall began at Sutton on September 13, with 5.7 inches falling as measured by gauges at the site. On September 14, Sutton received an additional 11.5 inches of rainfall in three hours, between 6:00 a.m. and 9:00 a.m.[5] This rainfall significantly exceeded the 25-year, 24-hour storm event design capacity of the run-on/run-off berm for landfill Cells 4 and 5. On September 16, a second peak rain event occurred between the hours of 12:00 a.m. and 6:00 a.m., with the site receiving an additional 4.2 inches of rainfall. Cumulative rainfall received by 8:00 a.m. on September 16 was approximately 30.1 inches.

On September 17, the site response team's priorities were to ensure the site was stable and prepared to handle another rain event by cleaning out ditches, installing

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[4] In fact, new rainfall records were set in each of the months of May and September 2018. *See* https://w2.weather.gov/climate/index.php?wfo=ilm.

[5] The flooding Cape Fear River triggered the shutdown of the entire plant, including its natural gas-fired operations—and evacuation of plant staff. The storm resulted in 1.8 million Duke Energy customers losing power.

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check dams, pumping contact water to the ash basins, restoring power to the site to support wastewater processing equipment operations, and developing a recovery plan to resume ash excavation. On that same day, the construction contractor remobilized and began to manage water in the landfill. The Department performed an inspection on September 28 after repairs had been completed and gave permission for landfill operations and placement of ash in the landfill to resume. Excavation and placement of ash resumed on September 29—only 16 days after the storm began impacting Sutton.

III. Substantial Compliance with all Other CAMA Requirements and Deadlines

In compliance with CAMA, in 2015, Duke Energy embarked on an aggressive plan to close all ash basins across its North Carolina fleet, which is a complex task requiring significant planning, coordination with state regulators, and dedication of resources. In North Carolina, the Company has 31 coal ash basins subject to the requirements of CAMA, which imposes on Duke Energy, among other things, stringent structural stability, closure, post-closure care, groundwater monitoring, and corrective action requirements for CCR surface impoundments, as well as permanent water supply obligations.[6]

In July 2016, the North Carolina legislature amended CAMA to require Duke Energy to rectify any deficiencies identified by, and to comply with the requirements of, any dam safety order issued by the state for CCR surface impoundments. *See* N.C.G.S. § 130A-309-213(d)(1)b. On August 22, 2016, pursuant to N.C.G.S. § 143-215.32, NCDEQ issued Dam Safety Order 16-01 ("DSO") requiring certain repairs to impoundment dams at nine facility's subject to CAMA. Consistent with the requirements of the DSO, Duke Energy promptly undertook the required repairs and sent the Department a letter dated June 1, 2018, notifying it that the Company had fully complied with the requirements of the DSO in accordance with N.C.G.S. §§ 130A-309-213(d)(1)b. and 143-215.32. Specifically, Duke Energy completed all of the repair plans specified by, and timely submitted all of the completion reports to, NCDEQ. The Department conducted as-built inspections for each item and issued Certificates of Final Approval indicating that the required work had been completed as designed. In addition, the annual inspection of each dam has been completed, and the Company has received Notice of Inspection Reports documenting that no deficiencies are present.[7] Finally, on October 10, NCDEQ

[6] Twenty-six of these basins are also regulated under the federal CCR rule.

[7] The Sutton surface impoundments were not subject to the DSO. Nevertheless, the October 17, 2017, inspection report from the state indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams

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made official notification to the Environmental Management Commission that Duke Energy had complied with all dam safety requirements, as required by N.C.G.S. § 130A-309-213(d)(1)b.

With respect to the permanent water supply requirements imposed under CAMA, Duke Energy provided each eligible and consenting resident with an alternative drinking water supply (*i.e.*, connection to a public water system or a filtration system) by the deadline set out in N.C.G.S. § 130A-309-211(c1). On October 12, 2018, NCDEQ issued a press release announcing that "permanent replacement water supplies have been provided to all eligible households near Duke Energy coal ash facilities in North Carolina . . . by the deadline of October 15, 2018 set forth in the Coal Ash Management Act." Available at https://deq.nc.gov/news/press-releases/2018/10/12/release-deq-completes-permanent-replacement-water-supplies-coal-ash.

Consistent with the requirements of N.C.G.S. § 130A-309-211, Duke Energy submitted the groundwater assessments to NCDEQ by the applicable CAMA deadline. In addition, the Company has submitted for six sites and continues to prepare for other sites updated comprehensive site assessments. Updated groundwater corrective action plans are also being submitted. These documents will be submitted to NCDEQ in accordance with the schedule provided to Duke Energy by the Department.[8] The Company is also preparing site-specific coal ash impoundment closure plans in accordance with the requirements of N.C.G.S. § 130A-309-214(a)(4). These closure plans will be submitted to the Department no later than the applicable deadline set out in CAMA.

Finally, Duke Energy has substantially complied with all other requirements and deadlines established under CAMA, including its annual inspection, annual reporting, and ash beneficiation requirements.

Conclusion

The latest bathymetric survey data show that Duke Energy has dredged approximately 760,000 cubic yards from the 1971 Basin and that there are approximately 240,000 cubic yards of dredge material remaining. In addition, there are

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occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.

[8] Although not required under CAMA, Duke Energy completed installation of the accelerated remediation system required under Paragraph II.A. of that certain Agreement to Settle and for Release of Claims entered into among NCDEQ and Duke Energy on September 29, 2015.

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987,500 cubic yards remaining in the 1984 Basin. By August 1, 2019, Duke Energy estimates it will have excavated and moved for placement or disposal approximately 94 percent of the total ash to be excavated and moved from the Sutton impoundments.

As detailed above, the Company's commitment to the application of best available technology found to be economically reasonable to meet the Deadline has resulted in significant schedule recovery, despite the many challenges and limitations with which Duke Energy was presented throughout the excavation process. Despite these good faith efforts to meet the Deadline, Duke Energy estimates that it requires an additional six months. Accordingly, the Company respectfully requests that the Department grant Duke Energy a variance to extend the Deadline to **February 1, 2020**, to close the Sutton surface impoundments. Although this application requests a six-month variance, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the Deadline.

If you have any questions, please do not hesitate to contact Randy Hart at randy.hart@duke-energy.com or (980) 373-5630. We appreciate your time and consideration.

Respectfully submitted,

George T. Hamrick

George T. Hamrick
Senior Vice President, Coal Combustion Products

NCDEQ cc: Sheila C. Holman (sheila.holman@ncdenr.gov)
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December 14, 2018

VIA ELECTRONIC MAIL

Ms. Sheila Holman
Assistant Secretary for Environment
North Carolina Department of Environmental Quality
217 W Jones St
Raleigh, NC 27603

RE: Sutton Variance Application: Response to Request for Supplemental Information

Dear Ms. Holman:

Thank you for your letter dated December 12, 2018, requesting supplemental information regarding Duke Energy's Application for Variance to Extend Closure Date for Sutton Plant CCR Surface Impoundments dated November 16, 2018 ("Variance Application"). Specifically, you requested additional information regarding the current and projected process rates for ash excavation, assumptions made in calculating these rates, and technologies evaluated, and why they were ultimately selected or rejected. You also asked Duke Energy to discuss whether the Sutton Plant has met the requirements and deadlines set out in the Coal Ash Management Act, as amended ("CAMA"). This letter responds to the North Carolina Department of Environmental Quality's ("NCDEQ") request for supplemental information. In addition, Duke Energy provides information regarding the status of Duke Energy's compliance with N.C.G.S. § 130A-309.216 regarding the installation of ash beneficiation projects at three Duke Energy sites in North Carolina. Although this information was not requested by NCDEQ or applicable to the Sutton Plant, we thought it might be helpful as you evaluate the Variance Application.

Rates of Excavation, Assumptions, and Technologies Evaluated

Sutton is forecasted to have excavated 4,900,000 tons of ash by the end of 2018. Based on the estimated volume of material in each of the 1971 and 1984 Basins, there will be approximately 1,400,000 tons remaining to be excavated in 2019 to meet final compliance criteria. Over the past three years, the excavation rate for the project has averaged approximately 130,000 tons per month. Since the on-site landfill was put into operation, the excavation rate has averaged approximately 150,000 tons per month. The current excavation plan assumes that Duke Energy will continue to excavate at a rate of 150,000 tons per month. At the end of July 2019, Duke Energy is forecasting to have approximately 350,000 tons remaining to be excavated. Using the original

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amount of 6,655,200 tons in the basins, this equates to approximately 94 percent complete. After closure by removal has been completed, post-excavation validation sampling is further required. The sampling is scheduled to take about one month to complete the field and lab work. As detailed in Section II of Duke Energy's November 16 Variance Application, throughout its history, the project has been challenged with regulatory, weather, operational, and other unforeseen challenges, which have significantly impacted the monthly production rate despite Duke Energy's application of best efforts.

Although the excavation rate of 150,000 tons that is currently assumed will not be sufficient to achieve closure by the August 1, 2019 deadline established under CAMA, this number reflects the actions Duke Energy undertook to gain schedule, as set forth in the Variance Application. The technologies/actions Duke Energy considered and either adopted or rejected are summarized in the chart below.

Technologies Evaluated	Status
Send parallel shipments of ash to Brickhaven and on-site landfill after securing delayed permit	*Rejected – Logistical and contractual constraints*
Add third conveyor	Adopted – Allowed Duke Energy to increase its margin on rail production
Early mobilization of Phase II contractor prior to Phase I contractor's completion of work	Adopted – Supported early mobilization and removal of non-ash material from 1971 Basin, thereby accelerating Phase II of basin excavation
Accelerate construction of Cell 3 of on-site landfill	Adopted – Allowed landfill to be filled earlier than scheduled at 150,000 tons per month and eliminated project down time with rail operations being complete
Expedite construction of Cells 5, 6, and 7 of on-site landfill	Adopted – Removed landfill from critical path
Simultaneous operation of multiple landfill cells	Adopted – Substantially increased production
Increase dredging excavation activities up to 20 hours per day, six days per week	Adopted – Substantially increased production
Place additional dredge into service	Adopted – Substantially increased production
Simultaneous operation of three dredges	*Rejected – Safety concerns associated with number of cables, anchors, and pipes*
Plot GPS coordinates of bottom of 1971 Basin	Adopted – Saved significant time by confirming lower extent of ash and avoiding need to go back and do additional excavation and post-excavation sampling time estimates
Redeploy dredge resources to other basin locations while developing alternatives to remove stumps and debris	Adopted – Avoided loss of production and dredge schedule
Take measures in advance of Hurricane Florence reaching landfall to prepare site	Adopted – Minimized potential storm impacts, thus allowing for prompt return to ash excavation and disposal operations

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The Sutton site received 5.67 inches of rainfall in November 2018, which impacted eight working days of production, or 64,000 to 80,000 tons of CCR material. Through the first nine days of December 2018, the site has received an additional 3.08 inches of precipitation. In total, as of December 9, a total of 97.67 inches of rain has fallen on the site. This has caused 93 lost working days in 2018, equivalent to 697,500 tons of production.

In addition to delays associated with poor weather, recent dredging production from the 1971 Basin deep ash borrow area has been impaired by the lodging of rocks in the cutter head and dredge pump. A bottom sonar survey identified three rock outcroppings varying from 50 to 250 feet in length. An engineering evaluation will consider this data to determine how Duke Energy should modify the final dredging depths to account for the rock formations/outcroppings. To minimize any schedule delays, the large dredge has been moved to another area in the basin.

These problems demonstrate that despite Duke Energy's continuous application of best efforts, production delays occur because of factors entirely out of Duke Energy's control. They further highlight the fact that estimated excavation rates are influenced by many external factors. Therefore, it would not be prudent to conclude that the project will recover 350,000 tons of shortfall in the first seven months of 2019. In light of the extended variance application process set out in CAMA, which essentially provides a single opportunity to apply for a variance[1], it is critical that the variance request include adequate margin to accommodate additional schedule delays despite Duke Energy's application of best available technology found to be economically reasonable.

Substantial Compliance with Other CAMA Requirements and Deadlines Applicable to the Sutton Plant

- N.C.G.S. § 130A-309-213(d)(1)b. (dam stability) – Although the CCR surface impoundments at the Sutton Plant were not subject to Dam Safety Order 16-01, the October 17, 2017 inspection report from NCDEQ indicates "the inspections revealed the dams to be well maintained and in good order." Similarly, the most recent annual inspection of the Sutton 1971 and 1984 Basin dams occurred on August 29, 2018; no concerns or issues were reported by NCDEQ that would necessitate issuance of a Notice of Deficiency or Notice of Violation.

- N.C.G.S. § 130A-309-211(c1) (provision of permanent water supply) – Although subject to the statutory requirement to establish permanent replacement water supplies for eligible households, it was determined that no connection was needed at the Sutton Plant. NCDEQ sent its concurrence with this determination to Duke Energy on August 10, 2018.

[1] North Carolina General Statutes Section 130A-309.215(a1) provides that Duke Energy may not apply for a variance "earlier than one year prior to the applicable deadline."

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- N.C.G.S. § 130A-309-211(a) (comprehensive site assessment) – The comprehensive site assessment for the Sutton Plant was submitted to NCDEQ via cover letter dated August 4, 2015.

- N.C.G.S. § 130A-309-211(b) (corrective action plan) – The corrective action plan was submitted in two parts. Part 1 was dated November 2, 2015, and Part 2 was dated February 1, 2016.[2]

Compliance with N.C.G.S. § 130A-309.216 (ash beneficiation projects)

North Carolina General Statutes Section 130A-309.216 requires Duke Energy to install and operate three large-scale coal ash beneficiation projects to produce reprocessed ash for use in the concrete industry. Duke Energy selected the Buck and H.F. Lee Plants prior to the January 1, 2017 deadline set out in subsection (a) of Section 130A-309.216, and selected the Cape Fear Plant prior to the deadline established under subsection (b) of Section 130A-309.216. Construction of the beneficiation unit at the Buck Plant began in November 2018 and will require 18 to 24 months to complete. Construction of the beneficiation unit at the H.F. Lee Plant is targeted to begin in February 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months. Finally, construction of the beneficiation unit at Cape Fear is targeted to begin in May 2019, pending receipt of all required permits. Construction is expected to take approximately 18 to 24 months.

Conclusion

As explained in the Variance Application, Duke Energy is committed to continuing to undertake best efforts to evaluate opportunities and implement commercially reasonable measures to meet the August 1, 2019 closure deadline established by CAMA, including taking advantage of good weather days and continuing to move material into the landfill 60 hours or more per week, as weather allows. Nevertheless, Duke Energy respectfully requests that NCDEQ grant it a variance to extend until February 1, 2020, the deadline to close the CCR surface impoundments at the Sutton Plant.

[2] Outside of CAMA, Duke Energy submitted a Sutton comprehensive site assessment supplement dated August 31, 2016, and an updated comprehensive site assessment dated January 30, 2018.

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If you have any questions, please do not hesitate to contact Randy Hart at randy.hart@duke-energy.com or (980) 373-5630. We appreciate your time and consideration.

Respectfully submitted,

George T. Hamrick
Senior Vice President, Coal Combustion Products

NCDEQ cc: William F. Lane (bill.lane@ncdenr.gov)
Ed Mussler (ed.mussler@ncdenr.gov)

Duke Energy cc: ccprecords@duke-energy.com; Randy Hart

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Attachment C

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Postings to the N.C. Department of Environmental Quality's Website

The North Carolina Department of Environmental Quality (NCDEQ) posted Duke Energy's request for a variance and notice of public meeting and comment on NCDEQ's website on the following dates and at the following website addresses:

- **December 14, 2018 NCDEQ Press Release**: "Comment Period and Public Meeting on Duke Energy Request for Sutton Plant Variance to Extend Closure Deadline" available at https://deq.nc.gov/news/press-releases/2018/12/14/comment-period-and-public-meeting-duke-energy-request-sutton-plant

- **December 14, 2018 NCDEQ Public Notices and Hearings**: "Notice of Comment Period and Public Meeting on Duke Energy Request for Variance to Extend Sutton Closure Deadline" available at https://deq.nc.gov/news/events/notice-comment-period-and-public-meeting-duke-energy-request-variance-extend-sutton

- **January 14, 2019 NCDEQ Public Notices and Hearings**: "Public Meeting on Duke Energy Request for Variance on Sutton Closure Deadline" available at https://deq.nc.gov/news/events/public-meeting-duke-energy-request-variance-sutton-closure-deadline

- **February 4, 2019 NCDEQ Public Notices and Hearings**: "Comment Period Ends on Duke Energy Request for Variance on Sutton Closure Deadline" available at https://deq.nc.gov/news/events/comment-period-ends-duke-energy-request-variance-sutton-closure-deadline

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Attachment D

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SuttonVariance - 12/14/2018 4:14:03 PM

Comment Period: Duke requests Sutton variance to extend closure deadline

Created by: Sharon Martin

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SuttonVariance - 12/14/2018 4:14:03 PM

Comment Period: Duke requests Sutton variance to extend closure deadline

Copy of Email

Roy Cooper, Governor

Michael S. Regan, Secretary

Release: IMMEDIATE
Date: December 14, 2018

Contact: Megan Thorpe
Phone: 919-707-8670

Comment Period: Duke requests Sutton Plant variance to extend closure deadline

RALEIGH – The North Carolina Department of Environmental Quality today announced a public comment period for Duke Energy's request for variance to extend the CAMA closure deadline for their Sutton Plant by six months. When the comment period concludes on February 4, 2019, DEQ will consider that input and then make a decision whether to grant Duke's request.

View Duke's request here: deq.nc.gov/Sutton-Variance.

A public meeting on this request will take place at Cape Fear Community College on January 14, 2019. The public and media are invited to attend and comment on Duke's request.

Written comments on the request for variance can be sent to the attention of Ellen Lorscheider, 1646 Mail Service Center, Raleigh, N.C. 27699-1646.

Comments may also be submitted by email to: publiccomments@ncdenr.gov. Please include the term "Sutton Variance Request" in the email's subject line. The deadline for submitting comments is Feb. 4, 2019.

WHAT: Public Meeting on Duke's request for Variance at Sutton Coal Ash facility

WHEN: January 14, 2019, at 6:00 pm

WHERE: Cape Fear Community College
502 N. Front St.,
Wilmington, N.C., 28360

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Website: http://www.ncdenr.gov
Facebook: http://www.facebook.com/ncdeq
Twitter: http://twitter.com/NCDEQ
RSS Feed: http://portal.ncdenr.org/web/ope/news-releases-rss
1601 Mail Service Center, Raleigh, NC 27699-1601

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SuttonVariance - 12/14/2018 4:14:03 PM

Comment Period: Duke requests Sutton variance to extend closure deadline

Email Details

Subject
Comment Period: Duke requests Sutton variance to extend closure deadline

Sender Name
Megan Thorpe

Sender Email
Megan.Thorpe@ncdenr.gov

Created:
Fri, 14 Dec 2018 16:27:36 Eastern Standard Time

Submitted:
Fri, 14 Dec 2018 16:27:37 Eastern Standard Time

Sent:
Fri, 14 Dec 2018 16:27:37 Eastern Standard Time

Recipient Lists

Contacts:
Asheville Media; DENR Internal; DENR PIOs; Division of Waste Management; Fayetteville Media; Interested Parties; Little Washington; Louise; Major Media; Mooresville; Raleigh Media; Wilmington; Winston-Salem Media

List of Media Contact Recipients

Name	Outlet	Status	Links Clicked
		Not Opened	0
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SuttonVariance - 12/14/2018 4:14:03 PM

Comment Period: Duke requests Sutton variance to extend closure deadline

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Doug Heyl		Opened	0
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Mr. Michael Abernathy	The Times News Burlington, NC	Not Opened	0
Michael Abraczinskas		Not Opened	0
Sarah Adair		Opened	0
Cathy Akroyd		Not Opened	0
Jennifer Allen		Opened	0
Kerri Allen		Opened	0
Greg Andeck		Not Opened	0
David Anderson		Opened	0
AP DESK		Not Opened	0
AP Raleigh		Not Opened	0

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WSOC TV Assignment Desk		Not Opened	0
Nancy Avery		Not Opened	0
Karl Baker		Not Opened	0
Greg Barnes		Opened	0
Mr. Mark Barrett State,Federal Government & Politics Reporter	Asheville Citizen-Times	Not Opened	0
Todd Benz General Manager	The Courier-Times	Not Opened	0
Shannon Best Media Director	Sampson Independent	Not Opened	0
BladenJournalNewsDesk		Not Opened	0
Ms. Loretta Boniti Senior Political Reporter	Spectrum News Raleigh	Not Opened	0
Lynn Bonner		Not Opened	0
Ms. Lynn Bonner Politics Reporter	The News & Observer	Not Opened	0
Ms. Pat Bradford Publisher & Editor	Wrightsville Beach Magazine	Not Opened	0
Russ Bradley		Not Opened	0
Mr. Cullen Browder Anchor & Reporter	WRAL-TV	Not Opened	0
Jeanne Brown		Not Opened	0
Jared Brumbaugh		Not Opened	0

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Cal Bryant Editor	Roanoke-Chowan News-Herald	Not Opened	0
Ron Bryant		Not Opened	0
Tim Buckland		Not Opened	0
Kevin Burk		Not Opened	0
Jenny Callison	Wilmington Journal	Not Opened	0
Scott Calvert		Not Opened	0
John Camp	ABC 11 Eyewitness News Extra - WTVD-TV	Not Opened	0
Christine Carroll Editor	Richmond County Daily Journal	Not Opened	0
Chrysta Carroll		Not Opened	0
Chrysta Carroll	Bladen Journal	Not Opened	0
Gerard Carroll		Opened	0
Charles Carter		Opened	0
Tony Caudle		Not Opened	0
Dan Charles		Not Opened	0
Sterling Cheatham		Not Opened	0
Catherine Clabby		Not Opened	0
Cobey Culton		Not Opened	0

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Chris Coudriet		Not Opened	0
Michael Cramer		Not Opened	0
Mike Cronin		Not Opened	0
Valerie Crowder		Opened	0
Linda Culpepper		Not Opened	0
Emery Dalesio		Not Opened	0
Amin Davis		Not Opened	0
Candice Davis HR	The Citizen Times	Not Opened	0
Mike Davis		Opened	0
Shannon Deaton		Not Opened	0
John Deem Editor	Statesville Record & Landmark	Not Opened	0
Marion Deerhake		Opened	0
Debra Derr		Opened	0
Donald Dixon		Opened	0
Tyler Dukes		Not Opened	0
Stephanie Ebbs		Opened	0
Beth Eckert		Not Opened	0
Charlotte Edens		Opened	0
Charles Elam		Not Opened	0

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Kelsey Ellis		Not Opened	0
Quintin Ellison Editor	Sylva Herald & Ruralite	Not Opened	0
Kimberly Fail		Not Opened	0
Travis Fain		Not Opened	0
Mr. Travis Fain Statehouse Reporter	WRAL-TV	Not Opened	0
Crystal Feldman		Not Opened	0
Jim Fletchner		Not Opened	0
Mr. Steve Garland Advertising Sales Manager	Taylorsville Times	Not Opened	0
Mitch Gillespie		Opened	0
Steve Ginley		Not Opened	0
Gail Goodman		Opened	0
Larry Goodwin		Opened	0
Leslie Griffith		Opened	0
Vaughn Hagerty		Opened	0
Christina Haley		Opened	0
Lindsey Hallock		Opened	0
Ann Hardy		Opened	0
Cris Harrelson		Not Opened	0
Maria Hegsted		Not Opened	0

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Doug Heyl		Not Opened	0
Mark Hibbs		Opened	0
Sheila Holman		Opened	0
Shana Hoover Advertising/Marketing Director	The Wilson Times	Opened	0
Zachary Horner	The Sanford Herald	Not Opened	0
Kim Horton		Not Opened	0
Sandra Hurley Publisher	Mount Airy News	Not Opened	0
Emilie Ikeda		Not Opened	0
Melody Isaak		Not Opened	0
Rusty Jacobs		Not Opened	0
Mr. Craig Jarvis Business Reporter	The News & Observer	Opened	0
Becky Johnson	The Mountaineer	Not Opened	0
Paul Johnson		Not Opened	0
Chris Jones		Not Opened	0
Mark Jurkowitz Publisher	Outer Banks Sentinel	Not Opened	0
Mr. Dan Kane Investigative Reporter	The News & Observer	Not Opened	0
Steve Keen		Opened	0

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Donna King		Not Opened	0
Richard King		Not Opened	0
Jamie Kritzer		Not Opened	0
Ms. Laura LaFleur		Not Opened	0
Ms. Laura LaFleur		Not Opened	0
Laura LaFleur		Not Opened	0
Bill Lane		Opened	1
Coby LaRue Publisher	The Alleghany News	Opened	0
Leigh Lawrence		Opened	0
Teresa Laws General Manager	Ashe Post & Times (West Jefferson, NC)	Opened	0
Dr. Suzanne Lazorick		Opened	0
Kristine Leggett		Not Opened	0
Connie Leinback Editor/ Publisher	Ocracoke Observer	Not Opened	0
Laura Leonard		Opened	0
Laura Leslie	WRAL-TV	Opened	0
Jim Lister		Opened	0
Melissa Long		Not Opened	0
Ellen Lorscheider		Not Opened	0
John Lucey		Opened	0

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Janet Mack		Not Opened	0
Chris Mackey		Not Opened	0
Angela Marshall		Not Opened	0
Lance Martin Editor	RRSpin (Roanoke Rapids, NC)	Not Opened	0
Sharon Martin		Opened	0
Lynn Matheson		Not Opened	0
Tom Mayor Editor	Mountain Times	Not Opened	0
Jim McCleskey		Opened	0
Mr. Gareth McGrath Local Editor	StarNews	Not Opened	0
Stanley Meiburg		Opened	0
Anderson Miller		Not Opened	0
Eric Millsap Regional Editor	Hickory Daily Record	Not Opened	0
Beau Minnick		Not Opened	0
Jeff Moore		Opened	0
jerome Moore		Opened	0
Molly Moore		Not Opened	0
Jordan Morley		Not Opened	0
James Morrisson		Not Opened	0

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Gary Morrow		Opened	0
Carolyn Moser		Opened	0
Katie Mosher Communications Director		Not Opened	0
Jennifer Mundt		Opened	0
Bridget Munger		Opened	0
Mr. John Murawski Business Reporter	The News & Observer	Not Opened	0
Ed Mussler		Opened	1
John Nichols		Not Opened	0
John Nicholson		Opened	0
Sheila Nicholson		Not Opened	0
Joe Nolan		Not Opened	0
North State Journal		Not Opened	0
Shrikar Nunna		Opened	0
Alaina Oakes		Not Opened	0
Nick Ochsner		Opened	0
Governors Office		Not Opened	0
Elizabeth Ouzts		Opened	0
Elizabeth Ouzts		Not Opened	0
Sarah Ovaska-Few		Not Opened	0

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Jenni Owen		Not Opened	0
Jodie Owen		Not Opened	0
Tim Owens		Not Opened	0
Charles Petersen		Opened	0
Kendra Pierre-Louis		Opened	0
Michael Pjetraj		Not Opened	0
Mark Plemmons Editor	Independent Tribune	Not Opened	0
Ely Portillo		Opened	0
Adam Powell Editor	The News of Orange County	Opened	0
Kevin Powell General Manager	Tryon Daily Bulletin	Not Opened	0
Tammy Proctor		Opened	0
Candace Prusiewicz		Not Opened	0
Bill Puette		Not Opened	0
Rachael Raney Publisher	The Sanford Herald	Opened	0
Michael Regan		Not Opened	0
Regina		Not Opened	0
William Richardson		Not Opened	0

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William Richardson		Not Opened	0
Mr. Deon Roberts Business Reporter	The Charlotte Observer	Not Opened	0
Gary Robertson		Not Opened	0
Fritz Rohde		Not Opened	0
Kirk Ross		Not Opened	0
Krik Ross		Opened	0
Albert Rubin		Not Opened	0
Leslie Rudd		Not Opened	0
Editor Sanford Herald		Not Opened	0
News Desk Sanford Herald		Not Opened	0
Michael Scott		Not Opened	0
Eliza Sease		Not Opened	0
Jamie Shell Editor	Avery Journal-Times	Not Opened	0
Christy Simmons		Opened	1
Butch Smith		Not Opened	0
Erin Smith		Opened	0
Janet Joye Smith		Not Opened	0

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Patricia Smith		Not Opened	0
Ruth Ravitz Smith		Opened	0
Tricia Smith		Not Opened	0
John D. Solomon		Opened	0
Mike Soraghan		Not Opened	0
Lisa Sorg		Opened	1
Lorea A Stallard		Not Opened	0
Laura Strickler		Not Opened	0
Megan Suggs	Statesville Record & Landmark	Not Opened	0
Kristi Swartz		Not Opened	0
Hiroko Tabuchi	The New York Times	Not Opened	0
Malissa Talbert		Not Opened	0
Lucy Talley Publisher	The Shelby Star	Not Opened	0
Noelle Talley		Not Opened	0
Noelle Talley		Not Opened	0
Noelle Talley	Governor Roy Cooper	Not Opened	0
Jeremy Tarr		Not Opened	0

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SuttonVariance - 12/14/2018 4:14:03 PM

Comment Period: Duke requests Sutton variance to extend closure deadline

Phillip Tarte		Opened	0
Jeff Thompson		Opened	0
Joyce Thompson Administration	The Times News Burlington, NC	Not Opened	0
Megan Thorpe		Not Opened	0
William Toler Editor	The Anson Record	Not Opened	0
Mike Trainor		Not Opened	0
WBTV TV	WBTV-TV	Opened	0
WILM TV	WILM-TV	Not Opened	0
WSPA TV	WSPA-TV	Opened	0
WWAY TV	WWAY-TV	Not Opened	0
Therese Vick		Not Opened	0
Curt Vincent General Manager/ Editor	Bladen Journal	Not Opened	0
W. Curt Vincent Editor	The Laurinburg Exchange	Not Opened	0
Toby Vinson		Opened	0
Adam Wagner		Opened	1
Adam Wagner		Not Opened	0
Glen Walker		Not Opened	0
Lisa Wall Editor	The News-Herald (Morganton, NC)	Not Opened	0

SuttonVariance - 12/14/2018 4:14:03 PM

Comment Period: Duke requests Sutton variance to extend closure deadline

Michael Ware		Not Opened	0
Dan Way		Not Opened	0
Mr. Dan Way Associate Editor	Carolina Journal	Not Opened	0
Sam Weber		Not Opened	0
Mykel Wedig		Opened	0
Sadie Weiner		Not Opened	0
Elizabeth Werner		Opened	1
Rex Whaley		Not Opened	0
Richard Whisnant		Not Opened	0
Nancy Wickle Editor/ Publisher	The Daily Dispatch	Opened	0
Julie Wilsey		Not Opened	0
Bryce Wilson Station Manager	The Goldsboro Daily News	Not Opened	0
Vince Winkel	WHQR-FM	Not Opened	0
Alan Wooten		Opened	0
Sarah Young		Opened	1
Ana Zivanovic-Nenandovic		Not Opened	0

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AFFIDAVIT OF PUBLICATION

STATE OF NORTH CAROLINA
COUNTY OF NEW HANOVER

NOTICE FOR PUBLIC MEETING AND PUBLIC COMMENT PERIOD ON REQUEST FOR VARIANCE TO EXTEND CLOSURE DEADLINE

Duke Energy Sutton Plant
Duke Energy has made a request to the North Carolina Department of Environmental Quality (DEQ) for a variance to extend the Coal Ash Management Act closure deadline by six months for the Sutton Coal Ash facility located at 801 Sutton Steam Plant Road, Wilmington, NC 28401.
This notice serves as a Notice of Public Meeting and Opportunity for Public Comment for this request. The public meeting will be held at 6 p.m. Jan. 14, 2019 at Cape Fear Community College, McLeod Building Room S-002, 411 Front Street, Wilmington, N.C.

A copy of the variance request is posted on the DEQ website at deq.nc.gov/Sutton-Variance. Interested persons are invited to provide comment on the variance request. Written comments may be sent to:
Ellen Lorscheider
1646 Mail Service Center
Raleigh, North Carolina 27699 1646
Phone/Fax: (919)707-8200

The comment period began on Dec. 14, 2018 and ends on Feb. 4, 2019. Written comments may also be submitted during the public comment period via email at the following address:
publiccomments@ncdenr.gov.
Please type "Sutton Variance Request" in the subject line. After weighing all relevant comments received, DEQ will decide whether to grant the request.

Before the undersigned, a Notary Public of Said County and State,

Jarimy Springer

Who, being duly sworn or affirmed, according to the law, says that he/she is

Accounting Specialist

of THE STAR-NEWS, a corporation organized and doing business under the Laws of the State of North Carolina, and publishing a newspaper known as STAR-NEWS in the City of Wilmington

NOTICE FOR PUBLIC MEETING AND PUBLIC COMMENT PERIOD ON REQUEST FOR VARIANCE TO EXTEND CLOSURE DEADLINE Duke Energy Sutton Plant Duke Energy has made a request to the North Carolina Department of Environmental Quality DEQ for a variance to extend the Coal

was inserted in the aforesaid newspaper in space, and on dates as follows:

12/20 1x, s12/27 1x, s1/3 1x

And at the time of such publication Star-News was a newspaper meeting all the requirements and qualifications prescribed by Sec. No. 1-597 G.S. of N.C.

Jarimy Springer

Title: **Accounting Specialist**

Sworn or affirmed to, and subscribed before me this 15th day of February, A.D., 2019

In Testimony Whereof, I have hereunto set my hand and affixed my official seal, the day and year aforesaid.

David Beal

Notary Public

My commission expires 4th day of Nov., 2023

DAWN BEAL NOTARY PUBLIC NEW HANOVER COUNTY, NC

Upon reading the aforegoing affidavit with the advertisement thereto annexed it is adjudged by the Court that the said publication was duly and properly made and that the summons has been duly and legally served on the defendant(s).

This _____ day of _____, ____

Clerk of Superior Court

MAIL TO:

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Attachment F

ATTENDANCE SHEET - January 14, 2019
SUTTON VARIANCE PUBLIC MEETING
If you do not wish to speak, you may submit written comments to publiccomments@ncdenr.gov by February 4, 2019.

	PRINT NAME	AFFILIATION (Resident, Elected Official, Other)	E-MAIL (if you wish to receive updates)	DO YOU WISH TO SPEAK? (✔)
101				
102				
103				
104				
105				
106				
107				
108				
109				
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111				
112				
113				
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121				

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HEARING OFFICER'S SPEECH January 14, 2019

I would like to call this public hearing to order.

My name is Jim Gregson. I am the Deputy Director of the Division of Water Resources, Department of Environmental Quality, for the State of North Carolina.

This hearing is being held in accordance with North Carolina General Statute 130A-309.214 in response to an application on the part of Duke Energy for a variance to extend the deadline to close the Sutton Plant CCR Surface Impoundments, in accordance with North Carolina General Statute 130A-309.215.

On November 16, 2018 the North Carolina Department of Environmental Quality received an application from Duke Energy for Variance to Extend the Deadline to Close the Sutton Plan CCR Surface Impoundments. Additional information regarding the application was received from Duke Energy on December 14, 2018.

The application requests that the Department issue a variance to extend the CAMA closure deadline for the Sutton Plant CCR Impoundments by six months; from August 1, 2019 to February 1, 2020.

The Department reviewed the submitted application and in accordance with the law;

- Opened a public comment period that started on December 14, 2018. The public comment period will end on February 4, 2019 at 5:00 PM,
- Announced this public hearing would be held to gather public comment, and
- Provided public notice in the Wilmington area newspapers [Megan, please edit]

In addition to comments gathered here tonight, written comments on the request for variance can be sent to the attention of;

Jim Gregson
1646 Mail Service Center
Raleigh, N.C. 27699-1646.

Comments may also be submitted by email to:

publiccomments@ncdenr.gov

Please include the term "Sutton Variance Request" in the email's subject line. The deadline for submitting comments is Feb. 4, 2019.

As hearing officer, it is my responsibility to listen to your comments and assist in the preparation of a report, which summarizes the information presented tonight and provides recommendations on the request for a variance. To aid in preparing the report, audio of tonight's hearing is being recorded. In addition, I ask that you provide me with a written copy of your comments if possible. Comments should be relevant to the issue of the request for a Variance to Extend the Deadline to Close Sutton Plant CCR Surface Impoundments to be considered in the Department's final decision.

At this time, I will provide an overview of how the hearing will be conducted:

1. I will call on speakers in the order they signed up.
2. Each speaker will be limited to 5 minutes.
3. There will be no cross-examination of speakers or division staff.
4. All public comments will be directed to me as the hearing officer.

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5. I ask that everyone respect the right of others to speak without interruption.

At this time, I will give a brief summary of the closure requirements for the coal ash impoundments at Sutton Steam Station. Section 3(b) of the Coal Ash Management Act, Session Law 2014-122 deemed the coal combustion residuals surface impoundments at Sutton Steam Station as high risk. Sections 3(b)(4) and 3(c) of Session Law 2014-122 further required that the surface impoundments be closed by excavation no later than August 1, 2019.

The Coal Ash Management Act allows for a variance in the deadlines imposed under the law. The General Assembly authorized the Secretary of the Department of Environmental Quality to grant a variance on the basis that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public. The owner of the impoundment must provide the site-specific circumstances that support the need for the variance. The owner must also provide information showing that the owner has substantially complied with all other requirements and deadlines established by CAMA, that the owner has made good faith efforts to comply with the applicable deadline, and that compliance with the deadline cannot be achieved by application of best available technology found to be economically reasonable at the time and would produce serious hardship without equal or greater benefits to the public. The application by Duke Energy requests an extension of 6 months to complete the closure of the coal combustion residuals surface impoundments at Sutton Steam Station.

The variance request cites a number of issues and circumstances that has resulted in Duke Energy's inability to complete the excavation and closure of the impoundments at Sutton Steam Station. These include delays due to Hurricane Matthew in 2016, permit delays for the on-site landfill, weather delays in 2017, record rain in July of 2018, and Hurricane Florence in September 2018.

After review of this variance request, DEQ's preliminary evaluation is that a 3 to 6 month extension is appropriate, and is here tonight to take comment on the potential granting of the variance.

Now, we will hear from audience members who wish to speak in the order that they registered.

The department may only consider technical and scientific information related to the request for Variance to Extend Deadline to Close Sutton Plant CCR Surface Impoundments when making recommendations the variance. Other issues concerning this facility, or the issue of coal combustion residuals as a whole are beyond the scope of this public hearing.

When your name is called, please come to the podium, state your name and indicate any group you may be representing or affiliated with. To ensure that we hear from all who wish to speak, there will be a 5-minute time limit for providing comments. Staff will keep track of the time and raise a sign to indicate when you have 1-minute remaining and when you have 30 seconds remaining to finish your comments. Please keep your comments concise and limit them to the issue of the variance request for the deadline to complete the excavation of coal combustion residuals from impoundments at the Sutton Steam Station. I appreciate your cooperation in complying with these requests.

(Call out names.)

That concludes tonight's line-up of speakers. Staff will be available for questions or comments after the hearing.

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I would like to thank you all for attending tonight's hearing. Your input is greatly appreciated. Remember that you will have until 5:00 pm on Monday, February 4th, 2019 to submit comments on this variance request.

After careful study of all comments received and the requirements of state laws, the department will make a decision on this variance application for the Sutton CCR Impoundments.

This hearing is closed.

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Attachment H

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Gregson, Jim

From: Louanne Kaye <louannekaye@ymail.com>
Sent: Friday, February 01, 2019 1:47 PM
To: SVC_DENR.publiccomments
Subject: [External] Coal Ash Wilmington area

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov

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This clean up has been prolonged for TOO long

Louanne Kaye Wilmington

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Gregson, Jim

From: Bruce Santhuff <Bruce@Spaloo.com>
Sent: Saturday, January 26, 2019 12:07 PM
To: SVC_DENR.publiccomments
Subject: [External] Sutton Variance Request

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Not sure why Duke would need more than 5 years to clean up the coal ash ponds. What did they do for the last 4 years? It was a mistake that these coal ash basins were located in flood-prone zones and water way areas to begin with! What is the guarantee that they will not ask for another extension or that more coal ash will contaminate our water system before the next hurricane season?

Thank you,
Bruce
Bruce Santhuff

Virus-free. www.avast.com

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Gregson, Jim

From: Janet Rodrick <jan.rodrick@gmail.com>
Sent: Friday, January 25, 2019 4:00 PM
To: SVC_DENR.publiccomments
Subject: [External] Duke Energy Variance request

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Good Morning,

Duke Energy should not be granted any variances that would delay or prevent them from having to clean up coal ash and more right away.
It is a crying shame that they have even tried to make thus request and that it is up for consideration!!!
Where is the consideration for the citizens/taxpayers to our right for clean water, clean air, and to have companies that don't follow the legal rules to be punished!!!???
Please consider the future for all of us that will be living with this disgusting and disgraceful mess that Duke Energy has knowingly created!!
Just because you may not be receiving many letters of complaint does not mean that the citizens are not upset about having their water& air quality be destroyed, Rather they are busy trying to live their lives in hope that our elected officials will ALWAYS do the right thing by its people!
PLEASE DO NIT GRANT SNY MIRE FAVORS TO DUKE ENERGY!
They must be held accountable right away
Thank you for your consideration,
Sincerely
Janet Rodrick

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Mar 04 2020

Gregson, Jim

From: angela ohare <ohare4ts@hotmail.com>
Sent: Friday, January 25, 2019 3:26 PM
To: SVC_DENR.publiccomments
Subject: [External] Sutton variance request.

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov

Please see to it that these coal stores get removed and cleaned up before damage is caused to our waterways and environment. Thank you.

Sent from Mail for Windows 10

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Gregson, Jim

From: Karen Hamilton <khamilton2188@yahoo.com>
Sent: Friday, January 25, 2019 9:42 AM
To: SVC_DENR.publiccomments
Cc: Karen Hamilton
Subject: [External] Fwd: Duke energy clean up Sutton Variance Request

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov

Sent from my iPad

Begin forwarded message:

> **From:** Karen Hamilton <khamilton2188@yahoo.com>
> **Date:** January 25, 2019 at 9:38:25 AM EST
> **To:** publiccomments@ncdenr.gov
> **Subject: Duke energy clean up**
>
> Duke energy needs to clean up the coal ash in North Carolina. They have had five years to do this and have failed to complete the project. Clean water and a healthy environment for our children and grandchildren are imperative. Duke Energy's money and political power in this state should not excuse them from these detrimental conditions they continue to allow.
> I am just a concerned citizen and not affiliated with any group.
> Karen Hamilton 2188 Scotts Hill Loop Rd Wilmington, NC 28411
> Sent from my iPad

OFFICIAL COPY
Mar 04 2020

Gregson, Jim

From: Karen Hamilton <khamilton2188@yahoo.com>
Sent: Friday, January 25, 2019 9:38 AM
To: SVC_DENR.publiccomments
Subject: [External] Duke energy clean up

CAUTION: External email. Do not click links or open attachments unless you verify. Send all suspicious email as an attachment to report.spam@nc.gov<mailto:report.spam@nc.gov>

Duke energy needs to clean up the coal ash in North Carolina. They have had five years to do this and have failed to complete the project. Clean water and a healthy environment for our children and grandchildren are imperative. Duke Energy's money and political power in this state should not excuse them from these detrimental conditions they continue to allow.
I am just a concerned citizen and not affiliated with any group.
Karen Hamilton 2188 Scotts Hill Loop Rd Wilmington, NC 28411 Sent from my iPad

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Gregson, Jim

From: Sue Skoda <sue.mort1228@yahoo.com>
Sent: Thursday, January 24, 2019 4:01 PM
To: SVC_DENR.publiccomments
Subject: [External] Sutton Variance Request

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Hello Ellen Lorscheider,

I read the article "Duke could get coal ash extension" in the Star News on January 16. I had no idea and there was no advertisement regarding the Monday's hearing open to the public.

I am writing to comment that the extension should NOT be granted to February 1 of 2020. The reasons being that Duke had 5 years, under the 2014 Coal Ash Management Act, to close the "high priority" basins at Sutton and did not do so in a planned timely or emergent manner. They are well aware that our state is in the hurricane belt and major storms would impact this clean up at any time and yet, they waited until the storms came.

It's unfortunate that the weather was not cooperative with two hurricanes but, the longer these basins are left, the more contamination of our water, air and overall environment. Yes, another hurricane can impact us again this season and that is why these closures need to happen as soon as possible. This should not be debatable but closures mandated for the safety and welfare of our people and environment.

I strongly encourage the DEQ to examine that this variance request should not be allowed. Who can say that they will not ask for another extension in February 2020 thus again, risking the lives, health and welfare of everyone.

Thank you for the opportunity to express my strong health and community values. I hope that DEQ will do the right thing for the safety of its people and not a corporation.

Sue Skoda, RN, MSN

Duke Energy Carolinas
Response to
Attorney General's Office Data Request
Data Request No. AGO 6

Docket No. E-7, Sub 1214

Date of Request: **January 9, 2020**
Date of Response: **January 17, 2020**

☐ **CONFIDENTIAL**

☒ **NOT CONFIDENTIAL**

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached response to AGO Data Request No. 6-1, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to AGO under my supervision.

Camal O. Robinson
Senior Counsel
Duke Energy Carolinas

AGO
Data Request No. 6
DEC Docket No. E-7, Sub 1214
Item No. 6-1

Request:

In response to Public Staff Data Request No. 2-1, the attached response and embedded Excel file was provided that lists locations where the Company has disposed of CCR for all current and former coal generating stations. In columns I through N of the Excel spread sheet, the response shows the amounts of CCR disposed of annually at each CCR storage area in tons and in cubic yards for 2017 (may-dec), 2018, and 2019 (through 7/31/19). Please provide the like information for all of 2017 and 2019 and for all prior years, i.e., the amount of CCR disposed of during each year in which the CCR storage area was in operation (receiving or storing CCR), listing the amounts in cubic yards and tonnage in separate columns for each year as was done for 2017, 2018, and 2019.

Response:

Please see the attached file.

DEC_AGO_DR_6-1.xlsx

AGO Data Request No. 6 | | | | AGO Exhibit 3B

Question 1

Please list all locations where the Company has disposed of CCR, including both original locations, and where applicable, new or relocation sites if CCR has been moved from its original location. For each location provide:

Duke Energy Carolinas

State	Site	Physical address	Nomenclature to identify CCR storage area		Years during which CCR storage area was in operation (receiving or storing CCR)	Amount of CCR disposed of cumulatively (tons)	See Note below	Amount of CCR disposed of cumulatively (cubic yards)	CCR Disposed Annually (tons)												CCR Disposed Annually (cubic yards)									A description of the engineering features and construction of the storage areas including storage volume					
									2010 (July-Dec for LFs)	2011	2012	2013	2014	2015	2016	2017 (May - Dec for LFs)	2017	See Note below	2018	See Note below	2019	See Note below	2019 (through 7/31/19)	2010	2011	2012	2013	2014	2015	2016	2017 (May - Dec for LFs)	2017	2018	2019	2019 (through 7/31/19)	Initial Construction	Expansion dates	Capacity (tons)	Capacity (cubic yards)	Liner
			Facility Type	Facility Name																																		
NC	Allen	253 Plant Allen Rd., Belmont, NC 28012	Pond	Retired Ash Basin	1957-1973	6,152,310		5,126,925								-																			1957	1965, 1968	Not available	Not available	None
			Pond	Active Ash Basin	1972-2018	10,479,837		8,733,198			19,265	23,565	15,748	15,929		9,715	9,715		4,412		-		-										8,096	8,096	3,677	-	1973	-	Not available	Not available	None
			Fill	Ash Fill 1	2004-2009	428,400		357,000								-	-		-		-		-												-	2004	-	428,400	357,000	None
			Fill	Ash Fill 2	2004-2009	562,800		469,000								-	-		-		-		-												-	2004	-	562,800	469,000	None
			Fill	Subgrade for Landfill	2010-2010	600,000		500,000								-	-		-		-		-												-	2010	-	Not available	Not available	None
			Landfill	RAB Landfill	2010 - present	1,194,986		995,822	161,978	252,215	70,256	203,260	163,023	122,334	103,888	48,992	64,220		51,164		88,184		33,706	**134,982**	**210,179**	**58,547**	**169,383**	**135,853**	**101,945**	**86,573**	40,827	53,517	42,637	73,487	28,088	2009	-	2,499,000	2,082,500	Soil, HDPE, Geocomposite, HDPE, LCS
	Belews Creek	3195 Pine Hall Rd., Belews Creek, NC 27009	Pond	Active Ash Basin	1972-2018	11,971,315		9,976,096			49,459	47,702	45,258	43,016		39,151	39,151		12,726		-		-												-	1972	-			None
			Fill	Structural Fill	2004-2009	986,400		822,000								-	-		-		-		-												-	2004	-			
			Landfill	Pine Hall Rd. Landfill	1984-2014	3,616,800		3,014,000								-	-		-		-		-												-	1984	-	3,616,800	3,014,000	None
			Landfill	Craig Road Landfill	2007 - present	3,087,123		1,739,269	184,102	371,397	187,505	112,672	223,578	151,546	123,725	50,931	113,836		102,205		175,094		83,624	**153,418**	**309,498**	**156,254**	**93,893**	**186,315**	**126,288**	**103,104**	42,443	94,863	85,171	145,912	69,687	2007	2013	7,586,268	6,321,890	GCL, HDPE, LCS
			Landfill	Gypsum (FGD) Landfill	2008 - present	919,742		766,452	135,827	276,093	133,749	105,182	198,709	140,571	4,714	20,043	23,407	**	36,253		32,779	^	(7,087)	**113,189**	**230,078**	**111,458**	**87,652**	**165,591**	**117,143**	**3,928**	16,703	19,506	30,211	27,316	(5,906)	2008		1,800,000	1,500,000	GCL, HDPE, LCS
	Buck	1385 Dukeville Rd., Salisbury, NC 28146	Pond	Ash Basin 1 (additional primary pond)	1982-2013	3,550,800		2,959,000				911				-	-		-		-		-					**759**	-	-	-				-	1982	-	Not available	Not available	None
			Pond	Ash Basin 2 (Primary Pond)	1957-2013	1,998,000		1,665,000								-	-		-		-		-					-	-	-	-				-	1957	1977, 1979	Not available	Not available	None
			Pond	Ash Basin 3 (Secondary pond	1977-2013	864,000		720,000								-	-		-		-		-					-	-	-	-				-	1977	1979	Not available	Not available	None
			Fill	Ash fill area	2009-2010	235,200		196,000								-	-		-		-		-					-	-	-	-				-	2009	-	235,200	196,000	None
	Cliffside	573 Duke Power Rd., Mooresboro, NC 28114	Pond	Units 1-4 Inactive Ash Basin	1957-1977	(455,259)		(379,383)								-																		-	1957	-	Not available	Not available	None
			Pond	Unit 5 Inactive Ash Basin	1970-1980	2,352,000		1,960,000								-	-		-		-		-					-	-	-	-				-	1970	-	Not available	Not available	None
			Pond	Active Ash Basin	1980-2018	5,038,467		4,198,723				31,759	53,481	32,828	46,985	-	-		1,454		-		-					**26,466**	**44,567**	**27,357**	**39,154**	-	-	1,212	-	-	1980	-	Not available	Not available	None
			Fill	Ash Storage 1 (considered part of active ash basin)	early 1980's	204,000		170,000								-	-		-		-		-					-	-	-	-				-	-	-	204,000	170,000	None
			Landfill	CCP Landfill	2010 - present	2,759,432		2,299,527	12,183	52,821	56,773	401,429	366,236	330,052	677,088	257,014	488,585		308,248		305,726		170,852	**10,153**	**44,018**	**47,311**	**334,524**	**305,197**	**275,043**	**564,240**	214,178	407,154	256,873	254,772	142,377	2010	2015	5,204,400	4,337,000	Soil, GCL, HDPE, LCS
	Dan River	864 S Edgewood Rd., Eden, NC 27288	Pond	Primary Ash Basin	1956 - 2012	(1,288,292)		(1,073,577)								-	-		-		-		-					-	-	-	-				-	1956	1968, 1977	Not available	Not available	None
			Pond	Secondary Ash Basin	1977 - 2012	(494,360)		(411,967)								-	-		-		-		-					-	-	-	-				-	1977	-	Not available	Not available	None
			Fill	Ash Fill 1	1980 - unknown	(954,500)		(795,417)								-	-		-		-		-					-	-	-	-				-		-	(954,500)	(795,417)	None
			Fill	Ash Fill 2	1980 - unknown	(573,780)		(478,150)								-	-		-		-		-					-	-	-	-				-		-	(573,780)	(478,150)	None
			Landfill	Dan River Landfill	2017-present	1,920,022		1,900,018								-	528,667		796,757		1,165,828											440,556	663,964	971,523		2017	-	2,575,327	2,146,106	GCL, HDPE, Geocomposite, HDPE, LCS
	Marshall	8320 NC Hwy. 150 E., Terrell, NC 28682	Pond	Active Ash Basin	1965 - 2018	16,835,839		14,029,866				45,528	52,544	42,078	50,655	47,216	47,216		25,754	***	-		-					**37,940**	**43,786**	**35,065**	**42,213**	39,347	39,347	21,462	-	-	1965	-	Not available	Not available	None
			Fill	Structural Fill (solar panels)	2000 - 2013	6,492,000		5,410,000								-	-		-		-		-					-	-	-	-				-	2000	-	6,492,000	5,410,000	None
			Fill	Subgrade fill (Cells 1&2)	2010 - 2011	462,000		385,000								-	-		-		-		-					-	-	-	-				-	2010	-	Not available	Not available	
			Fill	Subgrade fill (Cells 3&4)	2011 - 2012	409,200		341,000								-	-		-		-		-					-	-	-	-				-	2011	-	Not available	Not available	
			Landfill	Old Ash Fill (part of retired landfill)	1984 - 1986	626,400		522,000								-	-		-		-		-					-	-	-	-				-	1984	-	626,400	522,000	None
			Landfill	Retired Landfill (permit 18-04)	1986 - 1999	4,876,800		4,064,000								-	-		-		-		-					-	-	-	-				-	1986	-	4,876,800	4,064,000	None
			Landfill	Industrial Landfill (Permit 18-12)	2011 - present	3,259,606		1,883,005			286,943	74,715	44,755	43,009	89,027	456,203	321,759	445,695		384,095		412,536		206,920		**239,119**	**62,263**	**37,256**	**35,841**	**74,189**	**380,169**	268,133	371,413	320,079	343,780	172,433	2011	2018	4,594,824	3,829,020	Soil, HDPE, Geocomposite, HDPE, LCS
			Landfill	FGD Landfill (permit 18-09)	2006 - 2019	1,068,728		890,607	43,619	73,115	28,841	177,583	382,475	401,170	-	-	-		-		-		-	**36,349**	**60,929**	**24,034**	**147,986**	**318,729**	**334,308**	-	-	-	-	-	-	2006		1,068,728	890,607	GCL, HDPE, LCS
	Riverbend	175 Steam Plant Road, Mt. Holly, NC 28120	Pond	Primary Ash Basin	1957-2014	(2,619,350)	*	(2,182,792)				1,063				-	-		-		-		-					**886**	-	-	-				-	1957	1979	Not available	Not available	
			Pond	Secondary Ash Basin	1957-2014	(995,400)	*	(829,500)								-	-		-		-		-					-	-	-	-				-	1957	1979	Not available	Not available	
			Fill	Ash fill area	1979 - 2007	(1,449,200)	*	(1,207,667)								-	-		-		-		-					-	-	-	-				-	1979	-	Not available	Not available	
			Fill	Cinder Pit	1929-1957	(290,500)	*	(242,083)								-	-		-		-		-					-	-	-	-				-			Not available	Not available	
SC	WS Lee	205 Lee Steam Plant Rd., Belton, SC 29627	Pond	Primary Ash Basin	1974-2014	2,247,003		1,872,503								-	-		-		46,203	**	-					-	-	-	-			38,503	-	1974	1985	Not available	Not available	None
			Pond	Secondary Ash Basin	1978-2014	(46,203)		(38,503)								-	-		-		-		-					-	-	-	-				-	1978	1985	Not available	Not available	None
			Fill	Ash Fill Area (Old ash fill area)	1951 - 1974	(378,989)		(315,824)								-	-		-		-		-					-	-	-	-				-	1951		Not available	Not available	None
			Pond	1951/1959 Inactive Ash Basin	1951-1974	(1,178,337)		(981,948)								-	-		-		-		-					-	-	-	-				-	1951		Not available	Not available	None
			Fill	Structural Fill	2000 - 2007	859,200		716,000								-	-		-		-		-					-	-	-	-				-	2000		Not available	Not available	None

Duke Energy Carolinas
Response to
Attorney General's Office Data Request
Data Request No. AGO 6

Docket No. E-7, Sub 1214

Date of Request: **January 9, 2020**
Date of Response: **January 31, 2020**

☐ **CONFIDENTIAL**

☒ **NOT CONFIDENTIAL**

Confidential Responses are provided pursuant to Confidentiality Agreement

The attached supplemental response to AGO Data Request No. 6-1, was provided to me by the following individual(s): Trudy H. Morris, Project Manager II, and was provided to AGO under my supervision.

Camal O. Robinson
Senior Counsel
Duke Energy Carolinas

AGO
Data Request No. 6
DEC Docket No. E-7, Sub 1214
Item No. 6-1
Page 1 of 1

Request:

In response to Public Staff Data Request No. 2-1, the attached response and embedded Excel file was provided that lists locations where the Company has disposed of CCR for all current and former coal generating stations. In columns I through N of the Excel spread sheet, the response shows the amounts of CCR disposed of annually at each CCR storage area in tons and in cubic yards for 2017 (may-dec), 2018, and 2019 (through 7/31/19). Please provide the like information for all of 2017 and 2019 and for all prior years, i.e., the amount of CCR disposed of during each year in which the CCR storage area was in operation (receiving or storing CCR), listing the amounts in cubic yards and tonnage in separate columns for each year as was done for 2017, 2018, and 2019.

Supplemental Response 1/31/20:

Information responsive to this request for years 1997-2009 can be found in document "Duke_USAO_00272241," available on Relativity. Information responsive to this request for years 1985-2003 is also publicly available on the U.S. Energy Information Administration's Website, available at https://www.eia.gov/electricity/data/eia767/

AGO Exhibit 38

Duke Power Company

1991 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/91): Sheet 1 of 2

Notes: 1. All ash production and utilization quantities are in 1000's of dry tons.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		8.04		0.76			0.43		9.23	9.23
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.55							0.55	0.55
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JAN Total Ash Utilized	**0.00**	**8.59**	**0.00**	**0.76**	**0.00**	**0.00**	**0.43**	**0.00**	**9.78**	**9.78**
FEB Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		12.36		0.00			0.43		12.79	22.02
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.84							0.84	1.39
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
FEB Total Ash Utilized	**0.00**	**13.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.43**	**0.00**	**13.63**	**23.41**
MAR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		15.89		0.20			0.30		16.39	38.41
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.00							1.00	2.39
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAR Total Ash Utilized	**0.00**	**16.89**	**0.00**	**0.20**	**0.00**	**0.00**	**0.30**	**0.00**	**17.39**	**40.80**
APR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		15.33		0.53			0.46		16.32	54.73

Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.02							1.02	3.41
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
APR Total Ash Utilized	**0.00**	**16.35**	**0.00**	**0.53**	**0.00**	**0.00**	**0.46**	**0.00**	**17.34**	**58.14**
MAY Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		14.26		0.00			0.44		14.70	69.43
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.90							0.90	4.31
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAY Total Ash Utilized	**0.00**	**15.16**	**0.00**	**0.00**	**0.00**	**0.00**	**0.44**	**0.00**	**15.60**	**73.74**
JUN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		16.37		0.39			0.48		17.24	86.67
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.95							0.95	5.26
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUN Total Ash Utilized	**0.00**	**17.32**	**0.00**	**0.39**	**0.00**	**0.00**	**0.48**	**0.00**	**18.19**	**91.93**

Duke Power Company
1991 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/91): Sheet 2 of 2

		Belews				Incrmntl	Cumultv

Month	Allen	Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Total	Total
JUL Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		11.27		0.15			0.38		11.80	98.47
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.82							0.82	6.08
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUL Total Ash Utilized	**0.00**	**12.09**	**0.00**	**0.15**	**0.00**	**0.00**	**0.38**	**0.00**	**12.62**	**104.55**
AUG Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		11.98		0.07			0.45		12.50	110.98
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.57							0.57	6.65
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
AUG Total Ash Utilized	**0.00**	**12.55**	**0.00**	**0.07**	**0.00**	**0.00**	**0.45**	**0.00**	**13.07**	**117.63**
SEP Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		12.48		0.44			0.31		13.23	124.21
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.60							0.60	7.25
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
SEP Total Ash Utilized	**0.00**	**13.08**	**0.00**	**0.44**	**0.00**	**0.00**	**0.31**	**0.00**	**13.83**	**131.46**
OCT Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		17.22		0.66			0.55		18.43	142.64
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.97							0.97	8.22
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
OCT Total Ash Utilized	**0.00**	**18.19**	**0.00**	**0.66**	**0.00**	**0.00**	**0.55**	**0.00**	**19.40**	**150.86**
NOV Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		14.35		0.58			0.72		15.65	158.29

Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.09							1.09	9.31
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
NOV Total Ash Utilized	**0.00**	**15.44**	**0.00**	**0.58**	**0.00**	**0.00**	**0.72**	**0.00**	**16.74**	**167.60**
DEC Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		11.26		1.04			0.22		12.52	170.81
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.93							0.93	10.24
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
DEC Total Ash Utilized	**0.00**	**12.19**	**0.00**	**1.04**	**0.00**	**0.00**	**0.22**	**0.00**	**13.45**	**181.05**

Year to Date Produced	**64.28**	**456.09**	**12.68**	**51.91**	**10.56**	**15.30**	**327.08**	**13.67**		**951.57**
YTD Utilization:										
Concrete	0.00	160.81	0.00	4.83	0.00	0.00	5.17	0.00		170.81
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
JTM Bottom Ash	0.00	10.24	0.00	0.00	0.00	0.00	0.00	0.00		10.24
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD Ash Utilized	**0.00**	**171.05**	**0.00**	**4.83**	**0.00**	**0.00**	**5.17**	**0.00**		**181.05**
YTD Percent Utilized	**0.0%**	**37.5%**	**0.0%**	**9.3%**	**0.0%**	**0.0%**	**1.6%**	**0.0%**		**19.0%**
YTD + Projected Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD + Projected Utilization	0.00	171.05	0.00	4.83	0.00	0.00	5.17	0.00		181.05
YTD + Projected % Utilization	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!

Duke Power Company
1992 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/92): Sheet 1 of 2

Notes: 1. All ash production and utilization quantities are in 1000's of dry tons.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		11.62		0.63			0.28		12.53	12.53
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.49							1.49	1.49
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JAN Total Ash Utilized	**0.00**	**13.11**	**0.00**	**0.63**	**0.00**	**0.00**	**0.28**	**0.00**	**14.02**	**14.02**
FEB Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		11.76		1.20			0.37		13.33	25.86
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.53							1.53	3.02
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
FEB Total Ash Utilized	**0.00**	**13.29**	**0.00**	**1.20**	**0.00**	**0.00**	**0.37**	**0.00**	**14.86**	**28.88**
MAR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		13.94		0.95			0.37		15.26	41.12
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.21							1.21	4.23
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAR Total Ash Utilized	**0.00**	**15.15**	**0.00**	**0.95**	**0.00**	**0.00**	**0.37**	**0.00**	**16.47**	**45.35**
APR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		16.30		0.00			0.47		16.77	57.89

Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.16							2.16	6.39
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
APR Total Ash Utilized	**0.00**	**18.46**	**0.00**	**0.00**	**0.00**	**0.00**	**0.47**	**0.00**	**18.93**	**64.28**
MAY Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		15.40		0.00			0.67		16.07	73.96
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.72							2.72	9.11
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAY Total Ash Utilized	**0.00**	**18.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.67**	**0.00**	**18.79**	**83.07**
JUN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		16.84		0.00			0.73		17.57	91.53
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.28							2.28	11.39
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUN Total Ash Utilized	**0.00**	**19.12**	**0.00**	**0.00**	**0.00**	**0.00**	**0.73**	**0.00**	**19.85**	**102.92**

Duke Power Company
1992 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/92): Sheet 2 of 2

		Belews				Incrmntl	Cumultv

Month	Allen	Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Total	Total
JUL Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		21.86		0.00			0.48		22.34	113.87
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		4.01							4.01	15.40
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUL Total Ash Utilized	**0.00**	**25.87**	**0.00**	**0.00**	**0.00**	**0.00**	**0.48**	**0.00**	**26.35**	**129.27**
AUG Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		18.47		0.53			0.44		19.44	133.31
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.86							2.86	18.26
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
AUG Total Ash Utilized	**0.00**	**21.33**	**0.00**	**0.53**	**0.00**	**0.00**	**0.44**	**0.00**	**22.30**	**151.57**
SEP Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		19.13		0.33			0.50		19.96	153.28
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		3.54							3.54	21.80
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
SEP Total Ash Utilized	**0.00**	**22.67**	**0.00**	**0.33**	**0.00**	**0.00**	**0.50**	**0.00**	**23.50**	**175.08**
OCT Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		14.79		0.82			0.57		16.18	169.46
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.59							2.59	24.39
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
OCT Total Ash Utilized	**0.00**	**17.38**	**0.00**	**0.82**	**0.00**	**0.00**	**0.57**	**0.00**	**18.77**	**193.85**
NOV Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		13.97		0.08			0.42		14.47	183.93

Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.20							2.20	26.59
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
NOV Total Ash Utilized	**0.00**	**16.17**	**0.00**	**0.08**	**0.00**	**0.00**	**0.42**	**0.00**	**16.67**	**210.52**
DEC Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		13.77		0.00			0.36		14.13	198.06
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.06							1.06	27.65
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
DEC Total Ash Utilized	**0.00**	**14.83**	**0.00**	**0.00**	**0.00**	**0.00**	**0.36**	**0.00**	**15.19**	**225.71**

Year to Date Produced	**104.90**	**429.37**	**23.75**	**65.66**	**23.52**	**24.38**	**375.05**	**24.78**		**1071.41**
YTD Utilization:										
Concrete	0.00	187.85	0.00	4.55	0.00	0.00	5.66	0.00		198.06
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
JTM Bottom Ash	0.00	27.65	0.00	0.00	0.00	0.00	0.00	0.00		27.65
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD Ash Utilized	**0.00**	**215.50**	**0.00**	**4.55**	**0.00**	**0.00**	**5.66**	**0.00**		**225.71**
YTD Percent Utilized	**0.0%**	**50.2%**	**0.0%**	**6.9%**	**0.0%**	**0.0%**	**1.5%**	**0.0%**		**21.1%**
YTD + Projected Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD + Projected Utilization	0.00	215.50	0.00	4.55	0.00	0.00	5.66	0.00		225.71
YTD + Projected % Utilization	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!

Duke Power Company

1993 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/93): Sheet 1 of 2

Notes: 1. All ash production and utilization quantities are in 1000's of dry tons.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		11.41		0.00			0.29		11.70	11.70
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.70							0.70	0.70
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JAN Total Ash Utilized	**0.00**	**12.11**	**0.00**	**0.00**	**0.00**	**0.00**	**0.29**	**0.00**	**12.40**	**12.40**
FEB Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		13.77		0.10			0.30		14.17	25.87
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.25							1.25	1.95
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
FEB Total Ash Utilized	**0.00**	**15.02**	**0.00**	**0.10**	**0.00**	**0.00**	**0.30**	**0.00**	**15.42**	**27.82**
MAR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		17.11		0.20			0.34		17.65	43.52
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.11							2.11	4.06
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAR Total Ash Utilized	**0.00**	**19.22**	**0.00**	**0.20**	**0.00**	**0.00**	**0.34**	**0.00**	**19.76**	**47.58**
APR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		19.68		0.00			0.27		19.95	63.47

Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.06							2.06	6.12
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
APR Total Ash Utilized	**0.00**	**21.74**	**0.00**	**0.00**	**0.00**	**0.00**	**0.27**	**0.00**	**22.01**	**69.59**
MAY Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		22.96		0.00			0.40		23.36	86.83
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.30							2.30	8.42
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAY Total Ash Utilized	**0.00**	**25.26**	**0.00**	**0.00**	**0.00**	**0.00**	**0.40**	**0.00**	**25.66**	**95.25**
JUN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		28.25		0.30			0.50		29.05	115.88
Structural Fill							2.86		2.86	2.86
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.24							2.24	10.66
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUN Total Ash Utilized	**0.00**	**30.49**	**0.00**	**0.30**	**0.00**	**0.00**	**3.36**	**0.00**	**34.15**	**129.40**

Duke Power Company
1993 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/93): Sheet 2 of 2

		Belews				Incrmntl	Cumultv

Month	Allen	Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Total	Total
JUL Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		26.78		1.00			0.25		28.03	143.91
Structural Fill									0.00	2.86
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.37							2.37	13.03
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUL Total Ash Utilized	**0.00**	**29.15**	**0.00**	**1.00**	**0.00**	**0.00**	**0.25**	**0.00**	**30.40**	**159.80**
AUG Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		24.36		0.20			0.39		24.95	168.86
Structural Fill								11.70	11.70	14.56
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.94					0.38		2.32	15.35
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
AUG Total Ash Utilized	**0.00**	**26.30**	**0.00**	**0.20**	**0.00**	**0.00**	**0.77**	**11.70**	**38.97**	**198.77**
SEP Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		24.68		0.20			0.34		25.22	194.08
Structural Fill								17.50	17.50	32.06
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.78					1.17		2.95	18.30
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
SEP Total Ash Utilized	**0.00**	**26.46**	**0.00**	**0.20**	**0.00**	**0.00**	**1.51**	**17.50**	**45.67**	**244.44**
OCT Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		27.04		0.40			0.35		27.79	221.87
Structural Fill								20.00	20.00	52.06
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.94					1.00		2.94	21.24
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
OCT Total Ash Utilized	**0.00**	**28.98**	**0.00**	**0.40**	**0.00**	**0.00**	**1.35**	**20.00**	**50.73**	**295.17**
NOV Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		23.01		0.30			0.47		23.78	245.65

Structural Fill								5.70	5.70	57.76
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.96					1.82		2.78	24.02
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
NOV Total Ash Utilized	**0.00**	**23.97**	**0.00**	**0.30**	**0.00**	**0.00**	**2.29**	**5.70**	**32.26**	**327.43**
DEC Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		19.66		0.40			0.47		20.53	266.18
Structural Fill								5.70	5.70	63.46
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.25					1.17		2.42	26.44
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
DEC Total Ash Utilized	**0.00**	**20.91**	**0.00**	**0.40**	**0.00**	**0.00**	**1.64**	**5.70**	**28.65**	**356.08**

Year to Date Produced	**158.63**	**512.58**	**24.69**	**89.95**	**28.41**	**32.71**	**420.87**	**36.96**		**1304.80**
YTD Utilization:										
Concrete	0.00	258.71	0.00	3.10	0.00	0.00	4.37	0.00		266.18
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	2.86	60.60		63.46
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
JTM Bottom Ash	0.00	20.90	0.00	0.00	0.00	0.00	5.54	0.00		26.44
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD Ash Utilized	**0.00**	**279.61**	**0.00**	**3.10**	**0.00**	**0.00**	**12.77**	**60.60**		**356.08**
YTD Percent Utilized	**0.0%**	**54.5%**	**0.0%**	**3.4%**	**0.0%**	**0.0%**	**3.0%**	**164.0%**		**27.3%**
YTD + Projected Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD + Projected Utilization	0.00	279.61	0.00	3.10	0.00	0.00	12.77	60.60		356.08
YTD + Projected % Utilization	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!

Duke Power Company

1994 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/94): Sheet 1 of 2

Notes: 1. All ash production and utilization quantities are in 1000's of dry tons.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		10.95		0.26			0.27		11.48	11.48
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.78					1.17		1.95	1.95
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JAN Total Ash Utilized	**0.00**	**11.73**	**0.00**	**0.26**	**0.00**	**0.00**	**1.44**	**0.00**	**13.43**	**13.43**
FEB Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		14.88		0.51			0.40		15.79	27.27
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		0.95					1.72		2.67	4.62
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
FEB Total Ash Utilized	**0.00**	**15.83**	**0.00**	**0.51**	**0.00**	**0.00**	**2.12**	**0.00**	**18.46**	**31.89**
MAR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		19.85		0.03			0.52		20.40	47.67
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.63					2.20		3.83	8.45
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAR Total Ash Utilized	**0.00**	**21.48**	**0.00**	**0.03**	**0.00**	**0.00**	**2.72**	**0.00**	**24.23**	**56.12**
APR Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		4.60		0.44			0.52		5.56	53.23

Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.95					1.75		3.70	12.15
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
APR Total Ash Utilized	**0.00**	**6.55**	**0.00**	**0.44**	**0.00**	**0.00**	**2.27**	**0.00**	**9.26**	**65.38**
MAY Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		26.93		0.28			0.73		27.94	81.17
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.63					1.82		3.45	15.60
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
MAY Total Ash Utilized	**0.00**	**28.56**	**0.00**	**0.28**	**0.00**	**0.00**	**2.55**	**0.00**	**31.39**	**96.77**
JUN Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		30.27		0.45			1.44		32.16	113.33
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.94					2.05		3.99	19.59
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUN Total Ash Utilized	**0.00**	**32.21**	**0.00**	**0.45**	**0.00**	**0.00**	**3.49**	**0.00**	**36.15**	**132.92**

Duke Power Company
1994 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/94): Sheet 2 of 2

		Belews				Incrmntl	Cumultv

Month	Allen	Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Total	Total
JUL Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		26.03		0.20			2.04		28.27	141.60
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.44					1.90		3.34	22.93
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
JUL Total Ash Utilized	**0.00**	**27.47**	**0.00**	**0.20**	**0.00**	**0.00**	**3.94**	**0.00**	**31.61**	**164.53**
AUG Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		28.53		0.12			2.52		31.17	172.77
Structural Fill									0.00	0.00
Flowable Fill									0.00	0.00
JTM Bottom Ash		2.00					1.95		3.95	26.88
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
AUG Total Ash Utilized	**0.00**	**30.53**	**0.00**	**0.12**	**0.00**	**0.00**	**4.47**	**0.00**	**35.12**	**199.65**
SEP Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		35.32		0.00			5.22		40.54	213.31
Structural Fill							12.96	72.00	84.96	84.96
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.99					2.00		3.99	30.87
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
SEP Total Ash Utilized	**0.00**	**37.31**	**0.00**	**0.00**	**0.00**	**0.00**	**20.18**	**72.00**	**129.49**	**329.14**
OCT Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		35.80		0.20			10.39		46.39	259.70
Structural Fill							9.85	77.90	87.75	172.71
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.72					1.40		3.12	33.99
Duke Bottom Ash									0.00	0.00
Other									0.00	0.00
OCT Total Ash Utilized	**0.00**	**37.52**	**0.00**	**0.20**	**0.00**	**0.00**	**21.64**	**77.90**	**137.26**	**466.40**
NOV Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		31.08		0.39			13.70		45.17	304.87

Structural Fill							5.32	68.70	74.02	246.73
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.59					1.42		3.01	37.00
Duke Bottom Ash							0.39		0.39	0.39
Other									0.00	0.00
NOV Total Ash Utilized	**0.00**	**32.67**	**0.00**	**0.39**	**0.00**	**0.00**	**20.83**	**68.70**	**122.59**	**588.99**
DEC Ash Produced									**0.00**	**0.00**
Utilization:										
Concrete		26.52		0.42			9.78		36.72	341.59
Structural Fill							15.53	67.70	83.23	329.96
Flowable Fill									0.00	0.00
JTM Bottom Ash		1.24					1.85		3.09	40.09
Duke Bottom Ash							1.35		1.35	1.74
Other									0.00	0.00
DEC Total Ash Utilized	**0.00**	**27.76**	**0.00**	**0.42**	**0.00**	**0.00**	**28.51**	**67.70**	**124.39**	**713.38**
Year to Date Produced	**156.88**	**495.19**	**20.30**	**80.87**	**17.50**	**20.82**	**433.55**	**36.02**		**1261.13**
YTD Utilization:										
Concrete	0.00	290.76	0.00	3.30	0.00	0.00	47.53	0.00		341.59
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	43.66	286.30		329.96
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
JTM Bottom Ash	0.00	18.86	0.00	0.00	0.00	0.00	21.23	0.00		40.09
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	1.74	0.00		1.74
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD Ash Utilized	**0.00**	**309.62**	**0.00**	**3.30**	**0.00**	**0.00**	**114.16**	**286.30**		**713.38**
YTD Percent Utilized	**0.0%**	**62.5%**	**0.0%**	**4.1%**	**0.0%**	**0.0%**	**26.3%**	**794.8%**		**56.6%**
YTD + Projected Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD + Projected Utilization	0.00	309.62	0.00	3.30	0.00	0.00	114.16	286.30		713.38
YTD + Projected % Utilization	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!		#DIV/0!

Duke Power Company

1995 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/95): Sheet 1 of 2

Notes: 1. All ash production and utilization quantities are in 1000's of dry tons.
2. Projected ash production is based on PROMOD base coal consumption scenario (assuming 10% ash) dated 7/18/95.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Ash Produced	**7.69**	**41.77**	**0.87**	**4.94**	**0.18**	**0.53**	**30.18**	**1.11**	**87.27**	**87.27**
Utilization:										
Concrete	0.00	23.11	0.00	0.23	0.00	0.00	8.78	0.00	32.12	32.12
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	2.43	10.87	13.30	13.30
Flowable Fill	0.00	0.00	0.00	0.01	0.00	0.00	0.02	0.00	0.03	0.03
JTM Bottom Ash	0.00	1.77	0.00	0.00	0.00	0.00	2.20	0.00	3.97	3.97
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.00	0.53	0.53
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JAN Total Ash Utilized	**0.00**	**24.88**	**0.00**	**0.24**	**0.00**	**0.00**	**13.96**	**10.87**	**49.95**	**49.95**
FEB Ash Produced	**6.66**	**40.11**	**0.60**	**8.18**	**1.51**	**0.48**	**35.78**	**2.10**	**95.43**	**182.69**
Utilization:										
Concrete	0.00	22.58	0.00	0.26	0.00	0.00	10.72	0.00	33.56	65.68
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19.99	19.99	33.29
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
JTM Bottom Ash	0.00	1.76	0.00	0.00	0.00	0.00	2.07	0.00	3.83	7.80
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.00	0.25	0.78
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
FEB Total Ash Utilized	**0.00**	**24.34**	**0.00**	**0.26**	**0.00**	**0.00**	**13.04**	**19.99**	**57.63**	**107.58**
MAR Ash Produced	**2.59**	**42.98**	**0.03**	**1.96**	**0.34**	**0.36**	**30.09**	**0.42**	**78.77**	**261.46**
Utilization:										
Concrete	0.00	32.22	0.00	0.29	0.00	0.00	18.12	0.00	50.62	116.30
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.29
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.00	0.06	0.08
JTM Bottom Ash	0.00	2.25	0.00	0.00	0.00	0.00	1.40	0.00	3.65	11.45
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.56	0.00	0.56	1.34
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAR Total Ash Utilized	**0.00**	**34.47**	**0.00**	**0.29**	**0.00**	**0.00**	**20.13**	**0.00**	**54.89**	**162.46**
APR Ash Produced	**3.59**	**21.92**	**0.00**	**0.00**	**0.08**	**0.00**	**33.34**	**1.35**	**60.27**	**321.73**
Utilization:										
Concrete	0.00	17.19	0.00	0.39	0.00	0.00	18.04	0.00	35.62	151.92

Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	2.97	41.34	44.31	77.60
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.10
JTM Bottom Ash	0.00	1.93	0.00	0.00	0.00	0.00	1.50	0.00	3.43	14.88
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.00	0.03	1.37
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
APR Total Ash Utilized	**0.00**	**19.12**	**0.00**	**0.39**	**0.00**	**0.00**	**22.55**	**41.34**	**83.40**	**245.86**
MAY Ash Produced	**13.70**	**23.48**	**1.39**	**0.90**	**1.99**	**2.15**	**46.37**	**3.06**	**93.03**	**414.76**
Utilization:										
Concrete	0.00	21.91	0.00	0.06	0.00	0.00	21.39	0.00	43.36	195.28
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	16.88	23.63	40.51	118.11
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10
JTM Bottom Ash	0.00	2.82	0.00	0.00	0.00	0.00	1.82	0.00	4.64	19.52
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.14	0.00	0.14	1.51
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
MAY Total Ash Utilized	**0.00**	**24.73**	**0.00**	**0.06**	**0.00**	**0.00**	**40.23**	**23.63**	**88.64**	**334.51**
JUN Ash Produced	**12.55**	**30.94**	**1.26**	**7.91**	**2.02**	**1.96**	**44.33**	**3.77**	**104.74**	**519.50**
Utilization:										
Concrete	0.00	25.25	0.00	0.11	0.00	0.00	17.95	0.00	43.31	238.58
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	15.37	0.00	15.37	133.47
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.18	0.28
JTM Bottom Ash	0.00	0.56	0.00	0.00	0.00	0.00	2.98	0.00	3.55	23.07
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.28	0.00	0.28	1.79
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JUN Total Ash Utilized	**0.00**	**25.82**	**0.00**	**0.11**	**0.00**	**0.00**	**36.75**	**0.00**	**62.68**	**397.18**

1995 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/95): Sheet 2 of 2

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JUL Ash Produced	**18.23**	**49.43**	**4.41**	**15.10**	**4.41**	**4.11**	**50.41**	**5.78**	**151.88**	**671.37**
Utilization:										
Concrete	0.00	37.93	0.00	0.13	0.00	0.00	7.87	0.00	45.93	284.51
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	31.53	0.00	31.53	165.00
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.00	0.07	0.35
JTM Bottom Ash	0.00	1.58	0.00	0.00	0.00	0.00	1.90	0.00	3.48	26.55
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	1.05	0.00	1.05	2.84
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
JUL Total Ash Utilized	**0.00**	**39.51**	**0.00**	**0.13**	**0.00**	**0.00**	**42.43**	**0.00**	**82.07**	**479.25**
AUG Ash Produced	**19.92**	**49.32**	**4.06**	**15.57**	**2.43**	**5.38**	**47.50**	**4.42**	**148.59**	**819.96**
Utilization:										
Concrete	0.00	41.30	0.00	0.00	0.00	0.00	7.09	0.00	48.39	332.91
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	31.48	0.00	31.48	196.48
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.08	0.43
JTM Bottom Ash	0.00	1.76	0.00	0.00	0.00	0.00	1.96	0.00	3.72	30.27
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	2.25	0.00	2.25	5.09
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.68	0.00	0.68	0.68
AUG Total Ash Utilized	**0.00**	**43.06**	**0.00**	**0.00**	**0.00**	**0.00**	**43.54**	**0.00**	**86.60**	**565.85**
SEP Ash Produced	**5.64**	**24.57**	**0.15**	**7.56**	**0.41**	**0.52**	**38.67**	**0.83**	**78.36**	**898.32**
Utilization:										
Concrete	0.00	22.82	0.00	0.00	0.00	0.00	20.84	0.00	43.66	376.57
Structural Fill	3.19	0.00	0.00	0.00	0.00	0.00	10.36	0.00	13.55	210.04
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.00	0.16	0.59
JTM Bottom Ash	0.00	1.35	0.00	0.00	0.00	0.00	1.64	0.00	2.99	33.26
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	4.43	0.00	4.43	9.52
Other	0.00	0.00	0.00	0.00	0.00	0.00	1.03	0.00	1.03	1.70
SEP Total Ash Utilized	**3.19**	**24.17**	**0.00**	**0.00**	**0.00**	**0.00**	**38.46**	**0.00**	**65.82**	**631.67**
OCT Ash Produced	**5.94**	**24.76**	**0.17**	**9.84**	**0.41**	**0.00**	**37.30**	**0.00**	**78.41**	**976.74**
Utilization:										
Concrete	0.00	21.75	0.00	0.00	0.00	0.00	18.95	0.00	40.71	417.27
Structural Fill	38.84	0.00	0.00	0.00	0.00	0.00	10.39	0.00	49.23	259.27
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.00	0.18	0.77
JTM Bottom Ash	0.00	0.43	0.00	0.00	0.00	0.00	3.02	0.00	3.46	36.72
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	3.42	0.00	3.42	12.93
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.70
OCT Total Ash Utilized	**38.84**	**22.19**	**0.00**	**0.00**	**0.00**	**0.00**	**35.97**	**0.00**	**96.99**	**728.66**

NOV Ash Produced	**15.06**	**35.81**	**3.30**	**12.30**	**1.20**	**1.55**	**41.80**	**1.63**	**112.66**	**1089.39**
Utilization:										
Concrete	0.00	25.21	0.00	0.00	0.00	0.00	10.87	0.00	36.08	453.36
Structural Fill	27.06	0.00	0.00	0.00	0.00	0.00	18.87	0.00	45.93	305.20
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.30	0.00	0.30	1.07
JTM Bottom Ash	0.00	0.46	0.00	0.00	0.00	0.00	2.41	0.00	2.87	39.59
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	2.39	0.00	2.39	15.32
Other	0.00	0.00	0.00	0.00	0.00	0.00	1.04	0.00	1.04	2.74
NOV Total Ash Utilized	**27.06**	**25.67**	**0.00**	**0.00**	**0.00**	**0.00**	**35.89**	**0.00**	**88.62**	**817.28**
DEC Ash Produced	**16.39**	**41.64**	**1.38**	**8.71**	**1.88**	**2.45**	**40.89**	**3.01**	**116.36**	**1205.75**
Utilization:										
Concrete	0.00	26.14	0.00	0.00	0.00	0.00	6.33	0.00	32.47	485.83
Structural Fill	38.84	0.00	0.00	0.00	0.00	0.00	19.20	0.00	58.04	363.24
Flowable Fill	0.00	0.21	0.00	0.00	0.00	0.00	0.33	0.00	0.54	1.61
JTM Bottom Ash	0.00	0.73	0.00	0.00	0.00	0.00	1.52	0.00	2.25	41.84
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.20	15.53
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.74
DEC Total Ash Utilized	**38.84**	**27.08**	**0.00**	**0.00**	**0.00**	**0.00**	**27.58**	**0.00**	**93.50**	**910.79**
Year to Date Produced	**127.96**	**426.74**	**17.63**	**92.96**	**16.86**	**19.49**	**476.64**	**27.47**		**1205.75**
YTD Utilization:										
Concrete	0.00	317.43	0.00	1.47	0.00	0.00	166.94	0.00		485.83
Structural Fill	107.93	0.00	0.00	0.00	0.00	0.00	159.48	95.83		363.24
Flowable Fill	0.00	0.21	0.00	0.01	0.00	0.00	1.39	0.00		1.61
JTM Bottom Ash	0.00	17.41	0.00	0.00	0.00	0.00	24.43	0.00		41.84
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	15.53	0.00		15.53
Other	0.00	0.00	0.00	0.00	0.00	0.00	2.74	0.00		2.74
YTD Ash Utilized	**107.93**	**335.04**	**0.00**	**1.48**	**0.00**	**0.00**	**370.51**	**95.83**		**910.79**
YTD Percent Utilized	**84.3%**	**78.5%**	**0.0%**	**1.6%**	**0.0%**	**0.0%**	**77.7%**	**348.8%**		**75.5%**
YTD + Projected Production	127.96	426.74	17.63	92.96	16.86	19.49	476.64	27.47		1205.75
YTD + Projected Utilization	107.93	335.04	0.00	1.48	0.00	0.00	370.51	95.83		910.79
YTD + Projected % Utilization	84.3%	78.5%	0.0%	1.6%	0.0%	0.0%	77.7%	348.8%		75.5%

Duke Power Company

1996 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/96): Sheet 1 of 2

Notes: 1. All coal consumption, ash production, and ash utilization quantities are in 1000's of dry tons.
2. Projected ash production is based on ENPRO EN9612ST base coal consumption scenario (assuming 10% ash) dated December, 1996.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Coal Consumption	**161.25**	**404.17**	**16.42**	**87.06**	**10.14**	**33.27**	**466.49**	**39.17**	**1,217.989**	**1,217.989**
JAN % Ash	9.86	9.28	11.91	8.79	11.33	8.61	9.56	8.56		
JAN Ash Produced	**15.90**	**37.51**	**1.96**	**7.65**	**1.15**	**2.86**	**44.60**	**3.35**	**114.98**	**114.98**
Utilization:										
Concrete		18.40					5.51		23.91	23.91
Mineral Filler							1.07		1.07	1.07
Structural Fill	15.80						4.01		19.81	19.81
Flowable Fill							0.29		0.29	0.29
JTM Bottom Ash		0.86					2.08		2.94	2.94
Duke Bottom Ash							0.63		0.63	0.63
Mill Rejects							3.76		3.76	3.76
Other									0.00	0.00
JAN Total Ash Utilized	**15.80**	**19.26**	**0.00**	**0.00**	**0.00**	**0.00**	**17.34**	**0.00**	**52.40**	**52.40**
FEB Coal Consumption	**79.34**	**228.34**	**23.59**	**93.45**	**21.88**	**26.63**	**351.22**	**55.57**	**880.015**	**2,098.004**
FEB % Ash	9.36	9.61	11.19	8.50	10.60	9.57	9.21	8.51		
FEB Ash Produced	**7.43**	**21.94**	**2.64**	**7.94**	**2.32**	**2.55**	**32.35**	**4.73**	**81.90**	**196.88**
Utilization:										
Concrete		15.93					8.43		24.36	48.27
Mineral Filler							1.49		1.49	2.56
Structural Fill	27.05						6.30		33.35	53.16
Flowable Fill							0.28		0.28	0.58
JTM Bottom Ash		0.68					1.93		2.60	5.54
Duke Bottom Ash							2.02		2.02	2.65
Mill Rejects							0.84		0.84	4.59
Other									0.00	0.00
FEB Total Ash Utilized	**27.05**	**16.61**	**0.00**	**0.00**	**0.00**	**0.00**	**21.29**	**0.00**	**64.95**	**117.35**
MAR Coal Consumption	**85.27**	**240.69**	**24.04**	**85.62**	**13.03**	**16.69**	**372.25**	**19.45**	**857.059**	**2,955.063**
MAR % Ash	8.89	9.43	12.26	8.47	10.76	8.95	9.72	8.91		
MAR Ash Produced	**7.58**	**22.70**	**2.95**	**7.25**	**1.40**	**1.49**	**36.18**	**1.73**	**81.29**	**278.17**
Utilization:										
Concrete		18.67					14.91		33.59	81.86
Mineral Filler							0.73		0.73	3.30
Structural Fill	26.86						0.00		26.86	80.02
Flowable Fill							0.14		0.14	0.72
JTM Bottom Ash		0.49					2.44		2.92	8.47
Duke Bottom Ash							0.20		0.20	2.85
Mill Rejects							0.00		0.00	4.59
Other									0.00	0.00
MAR Total Ash Utilized	**26.86**	**19.16**	**0.00**	**0.00**	**0.00**	**0.00**	**18.42**	**0.00**	**64.44**	**181.79**
APR Coal Consumption	**98.33**	**367.40**	**39.20**	**68.71**	**7.50**	**3.08**	**369.00**	**15.45**	**968.658**	**3,923.720**
APR % Ash	9.49	9.73	12.18	8.57	10.59	9.01	9.97	9.52		
APR Ash Produced	**9.33**	**35.75**	**4.78**	**5.89**	**0.79**	**0.28**	**36.79**	**1.47**	**95.07**	**373.24**
Utilization:										
Concrete		29.62					7.84		37.46	119.31
Mineral Filler							1.05		1.05	4.34
Structural Fill	37.24						0.00		37.24	117.26
Flowable Fill							0.33		0.33	1.04
JTM Bottom Ash		0.46					2.54		3.00	11.47
Duke Bottom Ash							0.06		0.06	2.91
Mill Rejects							2.18		2.18	6.77
Other									0.00	0.00
APR Total Ash Utilized	**37.24**	**30.08**	**0.00**	**0.00**	**0.00**	**0.00**	**13.99**	**0.00**	**81.30**	**263.10**
MAY Coal Consumption	**91.79**	**474.23**	**52.07**	**43.86**	**32.44**	**26.05**	**410.52**	**57.22**	**1,188.191**	**5,111.911**
MAY % Ash	10.16	9.89	11.51	8.36	12.29	9.62	9.63	9.50		
MAY Ash Produced	**9.33**	**46.90**	**5.99**	**3.67**	**3.99**	**2.51**	**39.53**	**5.44**	**117.35**	**490.59**
Utilization:										
Concrete		46.75					6.46		53.22	172.53
Mineral Filler		0.00					0.94		0.94	5.28
Structural Fill	67.46						0.00		67.46	184.72
Flowable Fill							0.16		0.16	1.20
JTM Bottom Ash		0.62					2.86		3.48	14.95
Duke Bottom Ash							0.03		0.03	2.94
Mill Rejects							1.65		1.65	8.42
Other									0.00	0.00

MAY Total Ash Utilized	**67.46**	**47.37**	**0.00**	**0.00**	**0.00**	**0.00**	**12.11**	**0.00**	**126.94**	**390.04**
JUN Coal Consumption	**205.17**	**463.38**	**67.58**	**136.14**	**46.96**	**57.07**	**480.58**	**71.97**	**1,528.851**	**6,640.762**
JUN % Ash	10.12	10.21	10.91	8.17	10.39	11.06	9.27	9.11		
JUN Ash Produced	**20.76**	**47.31**	**7.37**	**11.12**	**4.88**	**6.31**	**44.55**	**6.56**	**148.87**	**639.46**
Utilization:										
Concrete		34.74					3.02		37.76	210.29
Mineral Filler							1.03		1.03	6.31
Structural Fill	40.88						0.00		40.88	225.60
Flowable Fill							0.34		0.34	1.54
JTM Bottom Ash		0.57					3.07		3.64	18.58
Duke Bottom Ash							0.02		0.02	2.96
Mill Rejects							0.40		0.40	8.82
Other									0.00	0.00
JUN Total Ash Utilized	**40.88**	**35.31**	**0.00**	**0.00**	**0.00**	**0.00**	**7.87**	**0.00**	**84.06**	**474.10**

Duke Power Company
1996 Monthly Coal Ash Production and Utilization Tracking (as of 12/31/96): Sheet 2 of 2

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JUL Coal Consumption	**199.88**	**511.92**	**78.57**	**152.34**	**56.90**	**66.88**	**477.03**	**85.57**	**1,629.081**	**8,269.843**
JUL % Ash	9.99	9.46	11.36	8.36	9.24	10.72	10.34	8.83		
JUL Ash Produced	**19.97**	**48.43**	**8.93**	**12.74**	**5.26**	**7.17**	**49.32**	**7.56**	**159.36**	**798.82**
Utilization:										
Concrete		37.98					2.13		40.11	250.40
Mineral Filler							0.85		0.85	7.16
Structural Fill	46.78						15.53		62.31	287.90
Flowable Fill							0.28		0.28	1.82
JTM Bottom Ash		1.16					3.45		4.61	23.20
Duke Bottom Ash							0.08		0.08	3.04
Mill Rejects							0.59		0.59	9.41
Other									0.00	0.00
JUL Total Ash Utilized	**46.78**	**39.14**	**0.00**	**0.00**	**0.00**	**0.00**	**22.91**	**0.00**	**108.83**	**582.93**
AUG Coal Consumption	**212.05**	**471.36**	**76.22**	**145.58**	**48.99**	**65.14**	**509.59**	**82.50**	**1,611.424**	**9,881.267**
AUG % Ash	9.37	9.88	10.61	9.17	11.50	9.57	9.94	9.09		
AUG Ash Produced	**19.87**	**46.57**	**8.09**	**13.35**	**5.63**	**6.23**	**50.65**	**7.50**	**157.90**	**956.72**
Utilization:										
Concrete		40.09					2.11		42.19	292.59
Mineral Filler							0.93		0.93	8.09
Structural Fill	47.49						41.18		88.67	376.57
Flowable Fill							0.45		0.45	2.26
JTM Bottom Ash		0.82					3.60		4.43	27.62
Duke Bottom Ash							3.74		3.74	6.78
Mill Rejects							0.00		0.00	9.41
Other									0.00	0.00
AUG Total Ash Utilized	**47.49**	**40.91**	**0.00**	**0.00**	**0.00**	**0.00**	**52.00**	**0.00**	**140.40**	**723.33**
SEP Coal Consumption	**166.24**	**415.77**	**37.31**	**110.91**	**9.78**	**19.07**	**386.71**	**55.94**	**1,201.723**	**11,082.990**
SEP % Ash	10.29	9.53	8.94	8.76	9.96	10.39	9.75	8.89		
SEP Ash Produced	**17.11**	**39.62**	**3.34**	**9.72**	**0.97**	**1.98**	**37.70**	**4.97**	**115.41**	**1,072.13**
Utilization:										
Concrete		29.49					2.82		32.31	324.91
Mineral Filler							0.78		0.78	8.87
Structural Fill	63.54						30.46		94.00	470.57
Flowable Fill							0.19		0.19	2.45
JTM Bottom Ash		0.92					3.79		4.71	32.33
Duke Bottom Ash							7.57		7.57	14.35
Mill Rejects							0.00		0.00	9.41
Other									0.00	0.00

SEP Total Ash Utilized	**63.54**	**30.41**	**0.00**	**0.00**	**0.00**	**0.00**	**45.60**	**0.00**	**139.56**	**862.89**
OCT Coal Consumption	**226.72**	**487.25**	**47.58**	**135.02**	**30.61**	**40.34**	**351.60**	**69.85**	**1,388.956**	**12,471.946**
OCT % Ash	10.68	9.33	11.48	9.46	9.94	9.12	9.67	9.71		
OCT Ash Produced	**24.21**	**45.46**	**5.46**	**12.77**	**3.04**	**3.68**	**34.00**	**6.78**	**135.41**	**1,207.54**
Utilization:										
Concrete		38.58					4.17		42.75	367.65
Mineral Filler							1.02		1.02	9.89
Structural Fill	91.29						2.68		93.97	564.54
Flowable Fill							0.05		0.05	2.50
JTM Bottom Ash		0.87					4.01		4.89	37.21
Duke Bottom Ash							7.86		7.86	22.21
Mill Rejects							0.65		0.65	10.06
Other									0.00	0.00
OCT Total Ash Utilized	**91.29**	**39.45**	**0.00**	**0.00**	**0.00**	**0.00**	**20.44**	**0.00**	**151.19**	**1014.07**
NOV Coal Consumption	**279.24**	**436.25**	**84.93**	**176.44**	**58.94**	**56.59**	**380.18**	**90.28**	**1,562.842**	**14,034.788**
NOV % Ash	9.78	9.37	11.16	9.41	10.73	9.93	9.56	9.49		
NOV Ash Produced	**27.31**	**40.88**	**9.48**	**16.60**	**6.32**	**5.62**	**36.35**	**8.57**	**151.12**	**1,358.66**
Utilization:										
Concrete		31.54					0.86		32.41	400.06
Mineral Filler		0.03					0.71		0.73	10.63
Structural Fill	72.30						0.00		72.30	636.84
Flowable Fill							0.00		0.00	2.50
JTM Bottom Ash		0.32					3.45		3.78	40.99
Duke Bottom Ash							2.35		2.35	24.56
Mill Rejects							1.54		1.54	11.60
Other									0.00	0.00
NOV Total Ash Utilized	**72.30**	**31.90**	**0.00**	**0.00**	**0.00**	**0.00**	**8.91**	**0.00**	**113.11**	**1127.18**
DEC Coal Consumption	**221.73**	**364.14**	**74.88**	**142.31**	**56.32**	**58.68**	**412.52**	**81.58**	**1,412.154**	**15,446.942**
DEC % Ash	10.50	9.12	10.54	8.93	9.89	10.58	9.40	9.53		
DEC Ash Produced	**23.28**	**33.21**	**7.89**	**12.71**	**5.57**	**6.21**	**38.78**	**7.77**	**135.42**	**1,494.08**
Utilization:										
Concrete		19.67					3.80		23.46	423.53
Mineral Filler							0.64		0.64	11.27
Structural Fill	38.10						0.00		38.10	674.94
Flowable Fill							0.00		0.00	2.50
JTM Bottom Ash		0.94					3.23		4.17	45.15
Duke Bottom Ash							7.06		7.06	31.62
Mill Rejects							0.63		0.63	12.23
Other									0.00	0.00
DEC Total Ash Utilized	**38.10**	**20.61**	**0.00**	**0.00**	**0.00**	**0.00**	**15.35**	**0.00**	**74.06**	**1201.24**
Year to Date Coal Consumed	**2,026.997**	**4,865.203**	**622.395**	**1,377.458**	**393.481**	**469.485**	**4,967.701**	**724.531**		**15,447.250**
Year to Date Ash Produced	**202.07**	**466.27**	**68.86**	**121.41**	**41.33**	**46.89**	**480.80**	**66.43**		**1,494.08**
YTD Utilization:										
Concrete	0.00	361.47	0.00	0.00	0.00	0.00	62.06	0.00		423.53
Mineral Filler	0.00	0.03	0.00	0.00	0.00	0.00	11.24	0.00		11.27
Structural Fill	574.79	0.00	0.00	0.00	0.00	0.00	100.15	0.00		674.94
Flowable Fill	0.00	0.00	0.00	0.00	0.00	0.00	2.50	0.00		2.50
JTM Bottom Ash	0.00	8.72	0.00	0.00	0.00	0.00	36.44	0.00		45.15
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	31.62	0.00		31.62
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	12.23	0.00		12.23
Other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD Ash Utilized	**574.79**	**370.21**	**0.00**	**0.00**	**0.00**	**0.00**	**256.24**	**0.00**		**1201.24**
YTD Percent Ash Utilized	**284.4%**	**79.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**53.3%**	**0.0%**		**80.4%**
YTD + Projected Ash Production	202.07	466.27	68.86	121.41	41.33	46.89	480.80	66.43		1494.08
YTD + Projected Ash Utilization	574.79	370.21	0.00	0.00	0.00	0.00	256.24	0.00		1201.24
YTD + Projected % Ash Utilization	284.4%	79.4%	0.0%	0.0%	0.0%	0.0%	53.3%	0.0%		80.4%

1997 Monthly Ash Production & Utilization

Notes:

1. All coal consumption, ash production, and ash utilization quantities are in 1000's of dry tons.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Coal Consumption	**263.12**	**496.37**	**80.27**	**151.56**	**53.01**	**62.53**	**490.04**	**83.68**	**1,680.582**	**1,680.582**
JAN % Ash	10.69	9.00	10.75	8.21	9.78	10.39	9.32	8.57		
JAN Ash Produced	**28.13**	**44.67**	**8.63**	**12.44**	**5.18**	**6.50**	**45.67**	**7.17**	**158.40**	**158.40**
Utilization: Concrete		20.93					2.08		23.01	23.01
Mineral Filler							0.64		0.64	0.64
Structural Fill							36.73		36.73	36.73
JTM Bottom Ash		0.57					3.66		4.23	4.23
Duke Bottom Ash							6.10		6.10	6.10
Mill Rejects							0.00		0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	28.13	2.76	8.63	12.44	5.18	6.50	-5.00	7.17	65.82	65.82
Net Ash Placed in Landfills		20.41					1.47		21.88	21.88
JAN Total Ash Utilized	**0.00**	**21.50**	**0.00**	**0.00**	**0.00**	**0.00**	**49.20**	**0.00**	**70.70**	**70.70**
FEB Coal Consumption	**163.89**	**468.05**	**28.00**	**68.45**	**7.35**	**5.03**	**425.20**	**18.52**	**1,184.490**	**2,865.072**
FEB % Ash	10.91	9.03	11.46	8.00	10.84	9.00	9.80	7.29		
FEB Ash Produced	**17.88**	**42.26**	**3.21**	**5.48**	**0.80**	**0.45**	**41.67**	**1.35**	**113.10**	**271.50**
Utilization: Concrete		26.08					0.48		26.55	49.56
Mineral Filler							0.63		0.63	1.26
Structural Fill							34.59		34.59	71.32
JTM Bottom Ash		0.78					2.86		3.64	7.86
Duke Bottom Ash							6.98		6.98	13.08
Mill Rejects							0.00		0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	17.88	4.79	3.21	5.48	0.80	0.45	-3.86	1.35	30.09	95.91
Net Ash Placed in Landfills		10.62					0.00		10.62	32.50
FEB Total Ash Utilized	**0.00**	**26.86**	**0.00**	**0.00**	**0.00**	**0.00**	**45.53**	**0.00**	**72.39**	**143.09**
MAR Coal Consumption	**87.03**	**483.20**	**19.67**	**77.29**	**3.66**	**5.49**	**436.41**	**17.37**	**1,130.102**	**3,995.174**
MAR % Ash	11.04	9.14	12.55	7.27	11.58	8.72	9.65	8.28		
MAR Ash Produced	**9.61**	**44.16**	**2.47**	**5.62**	**0.42**	**0.48**	**42.11**	**1.44**	**106.31**	**377.81**
Utilization: Concrete		32.12							32.12	81.68
Mineral Filler							0.61		0.61	1.87
Structural Fill							31.69		31.69	103.01
JTM Bottom Ash		1.54					3.09		4.63	12.49
Duke Bottom Ash							10.57		10.57	23.65
Mill Rejects							0.00		0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	9.61	3.78	2.47	5.62	0.42	0.48	-3.85	1.44	19.96	115.87
Net Ash Placed in Landfills		6.73					0.00		6.73	39.23
MAR Total Ash Utilized	**0.00**	**33.66**	**0.00**	**0.00**	**0.00**	**0.00**	**45.96**	**0.00**	**79.62**	**222.71**
APR Coal Consumption	**199.19**	**504.09**	**44.86**	**116.86**	**15.43**	**3.40**	**433.19**	**40.17**	**1,357.189**	**5,352.363**
APR % Ash	11.35	9.35	11.69	8.21	11.29	8.43	10.15	8.14		
APR Ash Produced	**22.61**	**47.13**	**5.24**	**9.59**	**1.74**	**0.29**	**43.97**	**3.27**	**133.85**	**511.66**
Utilization: Concrete		33.91					0.00		33.91	115.59
Mineral Filler		0.00					0.68		0.68	2.56
Structural Fill							41.37		41.37	144.38
JTM Bottom Ash		3.08					3.17		6.25	18.74
Duke Bottom Ash							1.36		1.36	25.01
Mill Rejects							0.00		0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	22.61	1.49	5.24	9.59	1.74	0.29	-2.61	3.27	41.62	157.49
Net Ash Placed in Landfills		8.66					0.00		8.66	47.89
APR Total Ash Utilized	**0.00**	**36.99**	**0.00**	**0.00**	**0.00**	**0.00**	**46.58**	**0.00**	**83.57**	**306.28**
MAY Coal Consumption	**216.75**	**392.07**	**64.27**	**51.99**	**33.50**	**16.05**	**393.97**	**75.95**	**1,244.535**	**6,596.898**
MAY % Ash	10.32	9.40	11.58	8.68	10.67	8.53	9.83	8.44		
MAY Ash Produced	**22.37**	**36.85**	**7.44**	**4.51**	**3.57**	**1.37**	**38.73**	**6.41**	**121.26**	**632.91**
Utilization: Concrete		31.77					0.30		32.08	147.67
Mineral Filler							0.99		0.99	3.55
Structural Fill							40.72		40.72	185.10
JTM Bottom Ash		3.24					3.37		6.61	25.35
Duke Bottom Ash							15.82		15.82	40.83
Mill Rejects							2.46		2.46	2.46
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	22.37	1.84	7.44	4.51	3.57	1.37	-24.94	6.41	22.58	180.07
Net Ash Placed in Landfills		0.00					0.00		0.00	47.89

MAY Total Ash Utilized	**0.00**	**35.01**	**0.00**	**0.00**	**0.00**	**0.00**	**63.67**	**0.00**	**98.68**	**404.96**
JUN Coal Consumption	**156.38**	**399.18**	**52.80**	**93.44**	**30.47**	**46.30**	**412.57**	**57.52**	**1,248.657**	**7,845.555**
JUN % Ash	10.37	9.50	12.76	8.49	10.36	9.16	11.29	8.94		
JUN Ash Produced	**16.22**	**37.92**	**6.74**	**7.93**	**3.16**	**4.24**	**46.58**	**5.14**	**127.93**	**760.84**
Utilization: Concrete		32.38					0.58		32.96	180.62
Mineral Filler							0.78		0.78	4.33
Structural Fill					52.25		42.02		94.27	279.37
JTM Bottom Ash		3.48					3.67		7.15	32.51
Duke Bottom Ash							1.07		1.07	41.91
Mill Rejects							0.00		0.00	2.46
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	16.22	0.80	6.74	7.93	-49.09	4.24	-1.54	5.14	-9.56	170.51
Net Ash Placed in Landfills		1.26					0.00		1.26	49.15
JUN Total Ash Utilized	**0.00**	**35.86**	**0.00**	**0.00**	**52.25**	**0.00**	**48.12**	**0.00**	**136.23**	**541.19**

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JUL Coal Consumption	**218.20**	**519.69**	**94.01**	**151.94**	**61.86**	**71.14**	**478.22**	**101.49**	**1,696.555**	**9,542.110**
JUL % Ash	9.46	9.26	10.99	8.71	10.55	9.27	10.73	8.86		
JUL Ash Produced	**20.64**	**48.12**	**10.33**	**13.23**	**6.53**	**6.59**	**51.31**	**8.99**	**165.76**	**926.60**
Utilization: Concrete		34.51					0.72		35.23	215.86
Mineral Filler		0.00					1.03		1.03	5.36
Structural Fill					52.25		41.52		93.77	373.14
JTM Bottom Ash		4.43					5.13		9.56	42.06
Duke Bottom Ash							0.00		0.00	41.91
Mill Rejects							0.00		0.00	2.46
Other: Ash Removal							9.15		9.15	9.15
Net Ash Sluiced to Basins	20.64	1.39	10.33	13.23	-45.72	6.59	-6.24	8.99	9.23	179.73
Net Ash Placed in Landfills		7.79					0.00		7.79	56.94
JUL Total Ash Utilized	**0.00**	**38.94**	**0.00**	**0.00**	**52.25**	**0.00**	**48.40**	**0.00**	**139.59**	**680.78**
AUG Coal Consumption	**189.54**	**551.69**	**65.04**	**120.69**	**29.98**	**35.86**	**448.04**	**55.73**	**1,496.569**	**11,038.679**
AUG % Ash	9.06	9.56	12.05	9.17	10.62	10.45	11.27	9.33		
AUG Ash Produced	**17.17**	**52.74**	**7.84**	**11.07**	**3.18**	**3.75**	**50.49**	**5.20**	**151.44**	**1078.04**
Utilization: Concrete		39.85					0.19		40.05	255.90
Mineral Filler							0.85		0.85	6.21
Structural Fill							27.91		27.91	401.05
JTM Bottom Ash		2.51					4.79		7.31	49.37
Duke Bottom Ash									0.00	41.91
Mill Rejects							0.00		0.00	2.46
Other: Ash Removal							20.94		20.94	30.09
Net Ash Sluiced to Basins	17.17	2.53	7.84	11.07	3.18	3.75	-4.19	5.20	46.55	226.28
Net Ash Placed in Landfills		7.84					0.00		7.84	64.78
AUG Total Ash Utilized	**0.00**	**42.37**	**0.00**	**0.00**	**0.00**	**0.00**	**33.75**	**0.00**	**76.12**	**756.89**
SEP Coal Consumption	**215.15**	**336.11**	**75.69**	**119.44**	**36.26**	**36.06**	**460.98**	**44.98**	**1,324.673**	**12,363.352**
SEP % Ash	9.16	9.77	11.12	8.90	11.52	9.50	10.62	9.42		
SEP Ash Produced	**19.71**	**32.84**	**8.42**	**10.63**	**4.18**	**3.43**	**48.96**	**4.24**	**132.39**	**1,210.43**
Utilization: Concrete		28.60		0.05			0.22		28.86	284.77
Mineral Filler							1.13		1.13	7.34
Structural Fill							7.35		7.35	408.40
JTM Bottom Ash		2.78					5.81		8.59	57.96
Duke Bottom Ash							2.81		2.81	44.71
Mill Rejects							1.21		1.21	3.67
Other: Ash Removal							25.72		25.72	55.81

Net Ash Sluiced to Basins	19.71	0.57	8.42	10.58	4.18	3.43	4.72	4.24	55.83	282.11
Net Ash Placed in Landfills		0.89							0.89	65.68
SEP Total Ash Utilized	**0.00**	**31.38**	**0.00**	**0.05**	**0.00**	**0.00**	**18.52**	**0.00**	**49.95**	**806.84**
OCT Coal Consumption	**212.95**	**552.48**	**66.93**	**102.06**	**36.09**	**19.42**	**473.34**	**30.55**	**1,493.820**	**13,857.172**
OCT % Ash	10.18	9.42	13.29	9.03	11.74	10.20	10.98	9.43		
OCT Ash Produced	**21.68**	**52.04**	**8.89**	**9.22**	**4.24**	**1.98**	**51.97**	**2.88**	**152.90**	**1,363.33**
Utilization: Concrete		38.78		0.12			0.25		39.14	323.91
Mineral Filler							2.29		2.29	9.63
Structural Fill							4.39		4.39	412.79
JTM Bottom Ash		2.69					6.10		8.79	66.75
Duke Bottom Ash							2.34		2.34	47.05
Mill Rejects							1.20		1.20	4.87
Other: Ash Removal							0.00		0.00	55.81
Net Ash Sluiced to Basins	21.68	4.28	8.89	9.10	4.24	1.98	35.40	2.88	88.46	370.56
Net Ash Placed in Landfills		6.29							6.29	71.97
OCT Total Ash Utilized	**0.00**	**41.47**	**0.00**	**0.12**	**0.00**	**0.00**	**16.57**	**0.00**	**58.16**	**864.99**
NOV Coal Consumption	**235.89**	**547.64**	**75.81**	**135.07**	**23.55**	**39.66**	**350.96**	**74.57**	**1,483.150**	**15,340.322**
NOV % Ash	10.24	9.36	12.95	8.62	11.36	9.32	10.39	9.80		
NOV Ash Produced	**24.16**	**51.26**	**9.82**	**11.64**	**2.68**	**3.70**	**36.46**	**7.31**	**147.02**	**1,510.35**
Utilization: Concrete		27.54		0.38					27.92	351.83
Mineral Filler							1.23		1.23	10.86
Structural Fill							1.90		1.90	414.69
JTM Bottom Ash		3.20					3.02		6.22	72.97
Duke Bottom Ash									0.00	47.05
Mill Rejects									0.00	4.87
Other: Ash Removal							0.00		0.00	55.81
Net Ash Sluiced to Basins	24.16	1.15	9.82	11.26	2.68	3.70	15.28	7.31	75.35	445.91
Net Ash Placed in Landfills		19.37					15.03		34.40	106.37
NOV Total Ash Utilized	**0.00**	**30.74**	**0.00**	**0.38**	**0.00**	**0.00**	**6.15**	**0.00**	**37.27**	**902.26**
DEC Coal Consumption	**231.29**	**563.96**	**89.32**	**122.43**	**51.61**	**55.99**	**514.75**	**83.73**	**1,713.080**	**17,053.402**
DEC % Ash	11.59	9.71	12.98	8.69	10.91	9.82	10.52	9.53		
DEC Ash Produced	**26.81**	**54.76**	**11.59**	**10.64**	**5.63**	**5.50**	**54.15**	**7.98**	**177.06**	**1,687.41**
Utilization: Concrete		22.92		0.23			0.79		23.95	375.77
Mineral Filler							0.72		0.72	11.58
Structural Fill									0.00	414.69
JTM Bottom Ash		2.55					3.44		5.99	78.96
Duke Bottom Ash							5.68		5.68	52.72
Mill Rejects							0.00		0.00	4.87
Other: Ash Removal							0.00		0.00	55.81
Net Ash Sluiced to Basins	26.81	10.84	11.59	10.41	5.63	5.50	-2.94	7.98	75.82	521.74
Net Ash Placed in Landfills		18.45					46.46		64.91	171.28
DEC Total Ash Utilized	**0.00**	**25.47**	**0.00**	**0.23**	**0.00**	**0.00**	**10.63**	**0.00**	**36.33**	**938.59**
Year to Date Coal Consumed	**2,389.369**	**5,814.511**	**756.678**	**1,311.226**	**382.763**	**396.928**	**5,317.666**	**684.261**		**17,053.402**
Year to Date Ash Produced	**246.97**	**544.78**	**90.62**	**112.01**	**41.31**	**38.27**	**552.08**	**61.38**		**1,687.41**
Utilization: Concrete	0.00	369.38	0.00	0.78	0.00	0.00	5.61	0.00		375.77
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	11.58	0.00		11.58
Structural Fill	0.00	0.00	0.00	0.00	104.50	0.00	310.19	0.00		414.69
JTM Bottom Ash	0.00	30.85	0.00	0.00	0.00	0.00	48.11	0.00		78.96
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	52.72	0.00		52.72
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	4.87	0.00		4.87
Other: Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	55.81	0.00		55.81
Net Ash Sluiced to Basins	246.97	36.23	90.62	111.23	-63.19	38.27	0.23	61.38		521.74
Net Ash Placed in Landfills	0.00	108.32	0.00	0.00	0.00	0.00	62.96	0.00		171.28
YTD Total Ash Utilized	**0.00**	**400.23**	**0.00**	**0.78**	**104.50**	**0.00**	**433.08**	**0.00**		**938.59**
YTD Percent Ash Utilized	**0.0%**	**73.5%**	**0.0%**	**0.7%**	**253.0%**	**0.0%**	**78.4%**	**0.0%**		**55.6%**
YTD + Projected Ash Production	246.97	544.78	90.62	112.01	41.31	38.27	552.08	61.38		1687.41
YTD + Projected Ash Utilization	0.00	400.23	0.00	0.78	104.50	0.00	433.08	0.00		938.59
YTD + Projected % Ash Utilization	0.0%	73.5%	0.0%	0.7%	253.0%	0.0%	78.4%	0.0%		55.6%

BC DisposalUpdated 1/26/99

1998 Monthly Ash Production & Utilization

Notes:

1. All coal consumption, ash production, and ash utilization quantities are in 1000's of dry tons.

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JAN Coal Consumption	**71.77**	**483.48**	**36.19**	**110.78**	**3.96**	**2.03**	**478.47**	**10.48**	**1,197.151**	**1,197.151**
JAN % Ash	10.70	9.08	13.37	8.23	10.17	8.73	10.20	10.66		
JAN Ash Produced	**7.68**	**43.90**	**4.84**	**9.12**	**0.40**	**0.18**	**48.80**	**1.12**	**116.04**	**116.04**
Utilization: Concrete		16.43		0.20					16.64	16.64
Mineral Filler							0.49		0.49	0.49
Structural Fill									0.00	0.00
JTM Bottom Ash		1.96					3.50		5.46	5.46
Duke Bottom Ash							0.67		0.67	0.67
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	7.68	22.68	4.84	8.91	0.40	0.18	2.13	1.12	47.94	47.94
Net Ash Placed in Landfills		2.82					42.02		44.84	44.84
JAN Total Ash Utilized	**0.00**	**18.40**	**0.00**	**0.20**	**0.00**	**0.00**	**4.65**	**0.00**	**23.25**	**23.25**
FEB Coal Consumption	**39.56**	**431.62**	**1.66**	**64.28**	**0.00**	**0.00**	**343.31**	**14.35**	**894.783**	**2,091.934**
FEB % Ash	11.32	9.14	13.66	8.32	0.00	0.00	10.18	11.14		
FEB Ash Produced	**4.48**	**39.45**	**0.23**	**5.35**	**0.00**	**0.00**	**34.95**	**1.60**	**86.05**	**202.09**
Utilization: Concrete		20.33		0.20					20.53	37.17
Mineral Filler							0.61		0.61	1.10
Structural Fill									0.00	0.00
JTM Bottom Ash		2.57					4.28		6.85	12.31
Duke Bottom Ash							0.30		0.30	0.97
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	4.48	8.60	0.23	5.15	0.00	0.00	10.23	1.60	30.28	78.23
Net Ash Placed in Landfills		7.95					19.53		27.48	72.32
FEB Total Ash Utilized	**0.00**	**22.89**	**0.00**	**0.20**	**0.00**	**0.00**	**5.19**	**0.00**	**28.29**	**51.54**
MAR Coal Consumption	**141.67**	**405.22**	**24.78**	**109.41**	**22.27**	**22.94**	**360.82**	**36.05**	**1,123.161**	**3,215.095**
MAR % Ash	10.85	9.42	13.71	7.98	10.89	8.10	10.35	10.46		
MAR Ash Produced	**15.37**	**38.17**	**3.40**	**8.73**	**2.43**	**1.86**	**37.34**	**3.77**	**111.07**	**313.16**
Utilization: Concrete		26.47		1.71					28.19	65.35
Mineral Filler							0.63		0.63	1.73
Structural Fill									0.00	0.00
JTM Bottom Ash		2.67					4.99		7.66	19.97
Duke Bottom Ash							1.08		1.08	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	15.37	1.87	3.40	7.02	2.43	1.86	-0.78	3.77	34.94	113.17
Net Ash Placed in Landfills		7.15					31.42		38.57	110.89
MAR Total Ash Utilized	**0.00**	**29.15**	**0.00**	**1.71**	**0.00**	**0.00**	**6.70**	**0.00**	**37.56**	**89.10**
APR Coal Consumption	**81.49**	**458.93**	**8.53**	**48.38**	**1.95**	**5.53**	**417.24**	**12.52**	**1,034.581**	**4,249.676**
APR % Ash	11.05	9.44	14.46	8.75	10.44	8.37	11.62	10.77		
APR Ash Produced	**9.00**	**43.32**	**1.23**	**4.23**	**0.20**	**0.46**	**48.48**	**1.35**	**108.29**	**421.45**
Utilization: Concrete		30.98		0.95					31.93	97.28
Mineral Filler							0.86		0.86	2.59
Structural Fill							22.99		22.99	22.99
JTM Bottom Ash		3.08					5.54		8.62	28.59
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	9.00	3.67	1.23	3.28	0.20	0.46	-8.05	1.35	11.15	124.32
Net Ash Placed in Landfills		5.60					27.14		32.74	143.63
APR Total Ash Utilized	**0.00**	**34.06**	**0.00**	**0.95**	**0.00**	**0.00**	**29.39**	**0.00**	**64.40**	**153.50**
MAY Coal Consumption	**173.34**	**470.83**	**59.24**	**135.63**	**40.77**	**50.66**	**387.65**	**78.74**	**1,396.865**	**5,646.541**
MAY % Ash	10.51	9.55	13.48	7.80	10.85	8.23	10.87	9.66		
MAY Ash Produced	**18.22**	**44.96**	**7.99**	**10.58**	**4.42**	**4.17**	**42.14**	**7.61**	**140.08**	**561.53**
Utilization: Concrete		33.42		1.51					34.93	132.21
Mineral Filler							0.60		0.60	3.19
Structural Fill							67.71		67.71	90.70
JTM Bottom Ash		2.00					5.05		7.05	35.64
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	18.22	2.42	7.99	9.07	4.42	4.17	-41.06	7.61	12.82	137.15
Net Ash Placed in Landfills		7.13					9.84		16.97	160.60

MAY Total Ash Utilized	**0.00**	**35.42**	**0.00**	**1.51**	**0.00**	**0.00**	**73.36**	**0.00**	**110.29**	**263.78**
JUN Coal Consumption	**246.23**	**487.13**	**91.67**	**162.70**	**62.31**	**80.07**	**397.90**	**107.85**	**1,635.855**	**7,282.396**
JUN % Ash	10.30	9.74	12.92	8.33	10.93	8.46	9.46	9.93		
JUN Ash Produced	**25.36**	**47.45**	**11.84**	**13.55**	**6.81**	**6.77**	**37.64**	**10.71**	**160.14**	**721.67**
Utilization: Concrete		38.74		1.12					39.87	172.08
Mineral Filler							0.65		0.65	3.84
Structural Fill							79.81		79.81	170.51
JTM Bottom Ash		1.86					4.79		6.65	42.29
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	25.36	2.34	11.84	12.43	6.81	6.77	-50.23	10.71	26.04	163.19
Net Ash Placed in Landfills		4.50					2.63		7.12	167.72
JUN Total Ash Utilized	**0.00**	**40.61**	**0.00**	**1.12**	**0.00**	**0.00**	**85.25**	**0.00**	**126.98**	**390.76**

1998 Monthly Coal Ash Production and Utilization Tracking (as of 9/30/98): Sheet 2 of 2

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incrmntl Total	Cumultv Total
JUL Coal Consumption	**221.45**	**545.57**	**84.11**	**168.82**	**53.87**	**63.85**	**483.70**	**100.64**	**1,721.997**	**9,004.393**
JUL % Ash	10.55	9.98	13.74	8.22	11.15	8.33	10.09	9.97		
JUL Ash Produced	**23.36**	**54.45**	**11.56**	**13.88**	**6.01**	**5.32**	**48.80**	**10.03**	**173.41**	**895.08**
Utilization: Concrete		41.59		0.66					42.25	214.33
Mineral Filler							0.62		0.62	4.46
Structural Fill							20.23		20.23	190.74
JTM Bottom Ash		1.84					5.53		7.37	49.65
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	23.36	7.33	11.56	13.21	6.01	5.32	0.90	10.03	77.73	240.91
Net Ash Placed in Landfills		3.69					21.52		25.21	192.94
JUL Total Ash Utilized	**0.00**	**43.42**	**0.00**	**0.66**	**0.00**	**0.00**	**26.38**	**0.00**	**70.47**	**461.23**
AUG Coal Consumption	**236.13**	**569.93**	**93.56**	**177.68**	**58.28**	**75.98**	**510.40**	**106.58**	**1,828.542**	**10,832.935**
AUG % Ash	9.01	10.09	13.57	8.72	10.96	8.36	10.26	9.27		
AUG Ash Produced	**21.28**	**57.51**	**12.70**	**15.49**	**6.39**	**6.35**	**52.37**	**9.88**	**181.96**	**1077.04**
Utilization: Concrete		37.76		0.82					38.58	252.91
Mineral Filler							0.84		0.84	5.30
Structural Fill							38.94		38.94	229.69
JTM Bottom Ash		1.84					5.01		6.84	56.50
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	21.28	7.60	12.70	14.68	6.39	6.35	-21.78	9.88	57.09	298.01
Net Ash Placed in Landfills		10.31					29.35		39.66	232.60
AUG Total Ash Utilized	**0.00**	**39.60**	**0.00**	**0.82**	**0.00**	**0.00**	**44.79**	**0.00**	**85.20**	**546.44**
SEP Coal Consumption	**116.00**	**481.00**	**49.00**	**115.00**	**22.00**	**38.00**	**408.12**	**67.00**	**1,296.123**	**12,129.058**
SEP % Ash	9.09	10.30	13.10	9.37	9.75	9.17	9.98	9.73		
SEP Ash Produced	**10.54**	**49.54**	**6.42**	**10.78**	**2.15**	**3.48**	**40.73**	**6.52**	**130.16**	**1,207.20**
Utilization: Concrete		38.25		2.74					40.99	293.90
Mineral Filler							0.84		0.84	6.14
Structural Fill							2.81		2.81	232.50
JTM Bottom Ash		2.65					4.48		7.13	63.63
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00

Net Ash Sluiced to Basins	10.54	-3.62	6.42	8.04	2.15	3.48	6.29	6.52	39.82	337.83
Net Ash Placed in Landfills		12.27					26.30		38.57	271.16
SEP Total Ash Utilized	**0.00**	**40.90**	**0.00**	**2.74**	**0.00**	**0.00**	**8.14**	**0.00**	**51.77**	**598.21**
OCT Coal Consumption	**129.81**	**533.83**	**39.75**	**121.75**	**15.50**	**19.33**	**423.53**	**61.53**	**1,345.038**	**13,474.096**
OCT % Ash	9.95	10.09	14.39	8.86	9.16	9.97	10.30	9.88		
OCT Ash Produced	**12.92**	**53.86**	**5.72**	**10.79**	**1.42**	**1.93**	**43.62**	**6.08**	**136.34**	**1,343.54**
Utilization: Concrete		40.63		3.09					43.72	337.61
Mineral Filler							0.82		0.82	6.96
Structural Fill									0.00	232.50
JTM Bottom Ash		0.92					5.04		5.96	69.59
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	12.92	1.00	5.72	7.70	1.42	1.93	13.33	6.08	50.09	387.92
Net Ash Placed in Landfills		11.32					24.43		35.75	306.92
OCT Total Ash Utilized	**0.00**	**41.55**	**0.00**	**3.09**	**0.00**	**0.00**	**5.86**	**0.00**	**50.49**	**648.70**
NOV Coal Consumption	**69.84**	**427.29**	**43.22**	**111.44**	**0.46**	**2.82**	**393.66**	**18.83**	**1,067.570**	**14,541.666**
NOV % Ash	10.21	10.58	14.22	9.01	10.41	11.06	10.39	11.13		
NOV Ash Produced	**7.13**	**45.21**	**6.15**	**10.04**	**0.05**	**0.31**	**40.90**	**2.10**	**111.88**	**1,455.42**
Utilization: Concrete		36.49		3.66					40.16	377.77
Mineral Filler							0.62		0.62	7.58
Structural Fill									0.00	232.50
JTM Bottom Ash		0.22					4.14		4.36	73.94
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	7.13	4.06	6.15	6.38	0.05	0.31	13.73	2.10	39.90	427.82
Net Ash Placed in Landfills		4.43					22.42		26.85	333.77
NOV Total Ash Utilized	**0.00**	**36.71**	**0.00**	**3.66**	**0.00**	**0.00**	**4.76**	**0.00**	**45.13**	**693.83**
DEC Coal Consumption	**51.36**	**485.40**	**32.85**	**92.34**	**84.00**	**3.35**	**378.32**	**18.58**	**1,146.200**	**15,687.866**
DEC % Ash	9.80	9.50	11.00	9.00	11.00	10.00	10.11	10.00		
DEC Ash Produced	**5.03**	**46.11**	**3.61**	**8.31**	**9.24**	**0.34**	**38.25**	**1.86**	**112.75**	**1,568.17**
Utilization: Concrete		32.32		2.18					34.50	412.27
Mineral Filler							0.62		0.62	8.20
Structural Fill									0.00	232.50
JTM Bottom Ash		0.49					3.45		3.93	77.87
Duke Bottom Ash									0.00	2.05
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Net Ash Sluiced to Basins	5.03	7.83	3.61	6.13	9.24	0.34	14.54	1.86	48.58	476.40
Net Ash Placed in Landfills		5.48					19.64		25.12	358.89
DEC Total Ash Utilized	**0.00**	**32.81**	**0.00**	**2.18**	**0.00**	**0.00**	**4.07**	**0.00**	**39.05**	**732.88**
Year to Date Coal Consumed	**1,578.653**	**5,780.229**	**564.567**	**1,418.217**	**365.370**	**364.559**	**4,983.109**	**633.162**		**15,687.866**
Year to Date Ash Produced	**160.38**	**563.94**	**75.68**	**120.85**	**39.51**	**31.17**	**514.03**	**62.62**		**1,568.17**
Utilization: Concrete	0.00	393.41	0.00	18.85	0.00	0.00	0.00	0.00		412.27
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	8.20	0.00		8.20
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	232.50	0.00		232.50
JTM Bottom Ash	0.00	22.08	0.00	0.00	0.00	0.00	55.79	0.00		77.87
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	2.05	0.00		2.05
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other: Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Net Ash Sluiced to Basins	160.38	65.79	75.68	101.99	39.51	31.17	-60.75	62.62	476.40	476.40
Net Ash Placed in Landfills	0.00	82.65	0.00	0.00	0.00	0.00	276.24	0.00	358.89	358.89
YTD Total Ash Utilized	**0.00**	**415.49**	**0.00**	**18.85**	**0.00**	**0.00**	**298.54**	**0.00**	**732.88**	**732.88**
YTD Percent Ash Utilized	**0.0%**	**73.7%**	**0.0%**	**15.6%**	**0.0%**	**0.0%**	**58.1%**	**0.0%**	**1.47**	**46.7%**
YTD + Projected Ash Production	160.38	563.94	75.68	120.85	39.51	31.17	514.03	62.62		1568.17
YTD + Projected Ash Utilization	0.00	415.49	0.00	18.85	0.00	0.00	298.54	0.00		732.88
YTD + Projected % Ash Utilization	0.0%	73.7%	0.0%	15.6%	0.0%	0.0%	58.1%	0.0%		46.7%

Updated BC moisture to landfill 11/98

1999 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month		Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption		**57.33**	**467.92**	**32.77**	**55.04**	**9.89**	**14.92**	**372.54**	**24.57**	**1,034.978**	**1,034.978**
JAN % Ash		9.50	10.20	13.04	7.93	10.48	10.14	9.44	8.23	**9.81%**	
JAN Ash Produced		**5.45**	**47.73**	**4.27**	**4.36**	**1.04**	**1.51**	**35.17**	**2.02**	**101.55**	**101.55**
Utilization:	Concrete		25.46		0.27					25.73	25.73
	Mineral Filler							0.51		0.51	0.51
	Structural Fill									0.00	0.00
	ISG Bottom Ash		0.49					2.71		3.19	3.19
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal									0.00	0.00
	Ash Disposal Contracts									0.00	0.00
	Net Ash to Basins	5.45	8.49	4.27	4.09	1.04	1.51	3.35	2.02	30.22	30.22
	On-Site Landfills		13.30					28.59		41.89	41.89
	On-Site Fill Projects									0.00	0.00
JAN Total Ash Utilized		**0.00**	**25.95**	**0.00**	**0.27**	**0.00**	**0.00**	**3.22**	**0.00**	**29.44**	**29.44**
FEB Coal Consumption		**36.30**	**434.91**	**15.89**	**64.09**	**6.56**	**11.58**	**348.12**	**14.53**	**931.983**	**1,966.961**
FEB % Ash		8.93	10.69	13.75	8.77	10.50	10.45	10.31	10.90	**10.40%**	
FEB Ash Produced		**3.24**	**46.49**	**2.18**	**5.62**	**0.69**	**1.21**	**35.89**	**1.58**	**96.91**	**198.46**
Utilization:	Concrete		26.34		0.96					27.30	53.03
	Mineral Filler							0.47		0.47	0.98
	Structural Fill									0.00	0.00
	ISG Bottom Ash		0.86					3.17		4.04	7.23
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal									0.00	0.00
	Ash Disposal Contracts			0.32						0.32	0.32
	Net Ash to Basins	3.24	7.18	2.50	4.66	0.69	1.21	0.12	1.58	21.19	51.42
	On-Site Landfills		12.11					32.12		44.23	86.12
	On-Site Fill Projects									0.00	0.00
FEB Total Ash Utilized		**0.00**	**27.20**	**0.00**	**0.96**	**0.00**	**0.00**	**3.64**	**0.00**	**31.81**	**61.25**
MAR Coal Consumption		**202.14**	**296.10**	**59.31**	**144.11**	**30.67**	**38.20**	**388.55**	**88.18**	**1,247.254**	**3,214.214**
MAR % Ash		10.42	11.18	13.24	8.72	10.03	10.61	10.33	10.09	**10.48%**	
MAR Ash Produced		**21.06**	**33.10**	**7.85**	**12.57**	**3.08**	**4.05**	**40.14**	**8.90**	**130.75**	**329.21**
Utilization:	Concrete		36.92		4.31					41.23	94.26
	Mineral Filler							0.54		0.54	1.52
	Structural Fill									0.00	0.00
	ISG Bottom Ash		0.83					4.26		5.09	12.32
	Duke Bottom Ash									0.00	0.00
	Mill Rejects							2.06		2.06	2.06
Other:	Ash Removal									0.00	0.00
	Ash Disposal Contracts			0.53						0.53	0.84
	Net Ash to Basins	21.06	-4.65	8.38	8.26	3.08	4.05	0.42	8.90	49.50	100.92
	On-Site Landfills							32.86		32.86	118.97
	On-Site Fill Projects									0.00	0.00
MAR Total Ash Utilized		**0.00**	**37.75**	**0.00**	**4.31**	**0.00**	**0.00**	**6.86**	**0.00**	**48.92**	**110.17**
APR Coal Consumption		**145.65**	**287.25**	**76.87**	**100.46**	**54.70**	**61.14**	**312.27**	**59.40**	**1,097.730**	**4,311.944**
APR % Ash		10.88	11.03	12.14	8.12	9.75	9.25	10.73	9.24	**10.48%**	
APR Ash Produced		**15.85**	**31.68**	**9.33**	**8.16**	**5.33**	**5.66**	**33.51**	**5.49**	**115.00**	**444.22**
Utilization:	Concrete		37.18		1.76					38.94	133.20
	Mineral Filler							0.52		0.52	2.04
	Structural Fill									0.00	0.00
	ISG Bottom Ash		0.14					4.78		4.92	17.24
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	2.06
Other:	Ash Removal									0.00	0.00
	Ash Disposal Contracts			0.50						0.50	1.34
	Net Ash to Basins	15.85	-6.40	9.83	6.40	5.33	5.66	0.11	5.49	42.26	143.18
	On-Site Landfills		0.76					28.10		28.86	147.83
	On-Site Fill Projects									0.00	0.00
APR Total Ash Utilized		**0.00**	**37.32**	**0.00**	**1.76**	**0.00**	**0.00**	**5.30**	**0.00**	**44.38**	**154.55**
MAY Coal Consumption		**234.98**	**358.63**	**82.42**	**169.93**	**52.49**	**59.72**	**457.08**	**81.35**	**1,496.606**	**5,808.549**
MAY % Ash		10.60	11.09	11.28	8.28	10.15	10.13	10.03	8.84	**10.19%**	
MAY Ash Produced		**24.91**	**39.77**	**9.30**	**14.07**	**5.33**	**6.05**	**45.85**	**7.19**	**152.46**	**596.68**
Utilization:	Concrete		37.83		4.37					42.20	175.40
	Mineral Filler							0.45		0.45	2.49
	Structural Fill									0.00	0.00
	ISG Bottom Ash		0.27					3.67		3.94	21.18
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	2.06
Other:	Ash Removal									0.00	0.00
	Ash Disposal Contracts			0.44						0.44	1.78
	Net Ash to Basins	24.91	0.91	9.74	9.70	5.33	6.05	-3.86	7.19	59.97	203.15
	On-Site Landfills		0.76					45.59		46.35	194.18
	On-Site Fill Projects									0.00	0.00

MAY Total Ash Utilized	**0.00**	**38.10**	**0.00**	**4.37**	**0.00**	**0.00**	**4.12**	**0.00**	**46.59**	**201.14**
JUN Coal Consumption	**223.22**	**525.47**	**68.58**	**145.23**	**49.32**	**53.62**	**447.07**	**68.51**	**1,581.017**	**7,389.566**
JUN % Ash	10.25	10.88	10.54	8.52	10.41	9.26	10.84	9.52	**10.42%**	
JUN Ash Produced	**22.88**	**57.17**	**7.23**	**12.37**	**5.13**	**4.97**	**48.46**	**6.52**	**164.74**	**761.41**
Utilization: Concrete		35.49		4.24					39.73	215.13
Mineral Filler							0.44		0.44	2.93
Structural Fill									0.00	0.00
ISG Bottom Ash		0.14					4.31		4.45	25.63
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	2.06
Other: Ash Removal									0.00	0.00
Ash Disposal Contracts			0.42						0.42	2.20
Net Ash to Basins	22.88	12.07	7.64	8.13	5.13	4.97	-3.94	6.52	63.41	266.56
On-Site Landfills		9.47					47.65		57.12	251.30
On-Site Fill Projects									0.00	0.00
JUN Total Ash Utilized	**0.00**	**35.63**	**0.00**	**4.24**	**0.00**	**0.00**	**4.75**	**0.00**	**44.62**	**245.76**
JUL Coal Consumption	**252.73**	**509.98**	**86.09**	**160.21**	**54.57**	**69.31**	**498.54**	**75.17**	**1,706.596**	**9,096.162**
JUL % Ash	10.07	10.99	10.21	8.22	9.92	8.92	11.01	10.09	**10.40%**	
JUL Ash Produced	**25.45**	**56.05**	**8.79**	**13.17**	**5.41**	**6.18**	**54.89**	**7.58**	**177.53**	**938.94**
Utilization: Concrete		32.75		3.03					35.78	250.91
Mineral Filler							0.37		0.37	3.30
Structural Fill									0.00	0.00
ISG Bottom Ash		0.35					4.61		4.96	30.59
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	2.06
Other: Ash Removal									0.00	0.00
Ash Disposal Contracts			0.18						0.18	2.38
Net Ash to Basins	25.45	22.95	8.97	10.14	5.41	6.18	1.14	7.58	87.82	354.38
On-Site Landfills		0.00					48.77		48.77	300.07
On-Site Fill Projects									0.00	0.00
JUL Total Ash Utilized	**0.00**	**33.10**	**0.00**	**3.03**	**0.00**	**0.00**	**4.98**	**0.00**	**41.11**	**286.87**
AUG Coal Consumption	**206.27**	**569.57**	**64.28**	**149.38**	**57.39**	**52.33**	**475.24**	**82.08**	**1,656.545**	**10,752.706**
AUG % Ash	10.41	10.67	12.47	8.21	9.82	9.03	10.62	10.60	**10.39%**	
AUG Ash Produced	**21.47**	**60.77**	**8.02**	**12.26**	**5.64**	**4.73**	**50.47**	**8.70**	**172.06**	**1111.00**
Utilization: Concrete		35.76		3.86					39.62	290.53
Mineral Filler							0.43		0.43	3.73
Structural Fill									0.00	0.00
ISG Bottom Ash		0.08					4.70		4.78	35.37
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	2.06
Other: Ash Removal									0.00	0.00
Ash Disposal Contracts			0.35						0.35	2.73
Net Ash to Basins	21.47	12.73	8.37	8.40	5.64	4.73	4.82	8.70	74.86	429.24
On-Site Landfills		12.20					40.52		52.72	352.79
On-Site Fill Projects									0.00	0.00
AUG Total Ash Utilized	**0.00**	**35.84**	**0.00**	**3.86**	**0.00**	**0.00**	**5.13**	**0.00**	**44.83**	**331.70**
SEP Coal Consumption	**176.02**	**508.10**	**48.59**	**112.54**	**23.50**	**18.98**	**301.64**	**30.17**	**1,219.541**	**11,972.247**
SEP % Ash	10.28	11.42	14.39	8.32	9.27	10.07	11.40	10.68	**11.00%**	
SEP Ash Produced	**18.09**	**58.03**	**6.99**	**9.36**	**2.18**	**1.91**	**34.39**	**3.22**	**134.17**	**1,245.17**
Utilization: Concrete		27.98		3.34					31.32	321.85
Mineral Filler							0.54		0.54	4.27
Structural Fill									0.00	0.00
ISG Bottom Ash		0.19					3.60		3.79	39.16
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	2.06
Other: Ash Removal									0.00	0.00
Ash Disposal Contracts			0.27						0.27	3.00
Net Ash to Basins	18.09	12.30	7.26	6.02	2.18	1.91	-3.31	3.22	47.67	476.91
On-Site Landfills		17.56					33.56		51.12	403.91
On-Site Fill Projects									0.00	0.00
SEP Total Ash Utilized	**0.00**	**28.17**	**0.00**	**3.34**	**0.00**	**0.00**	**4.14**	**0.00**	**35.65**	**367.35**
OCT Coal Consumption	**164.30**	**467.87**	**49.75**	**105.36**	**9.01**	**11.49**	**327.78**	**9.88**	**1,145.440**	**13,117.686**
OCT % Ash	10.76	10.89	14.79	8.30	9.05	9.31	12.13	11.70	**11.13%**	
OCT Ash Produced	**17.68**	**50.95**	**7.36**	**8.74**	**0.82**	**1.07**	**39.76**	**1.16**	**127.53**	**1,372.71**
Utilization: Concrete		30.33		3.50					33.83	355.68
Mineral Filler							0.37		0.37	4.64
Structural Fill									0.00	0.00
ISG Bottom Ash		0.11					2.97		3.08	42.24
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	2.06
Other: Ash Removal									0.00	0.00
Ash Disposal Contracts			0.34						0.34	3.34
Net Ash to Basins	17.68	7.26	7.70	5.24	0.82	1.07	4.86	1.16	45.78	522.69
On-Site Landfills		13.25					31.56		44.81	448.73
On-Site Fill Projects									0.00	0.00
OCT Total Ash Utilized	**0.00**	**30.44**	**0.00**	**3.50**	**0.00**	**0.00**	**3.34**	**0.00**	**37.28**	**404.63**
NOV Coal Consumption	**163.49**	**485.47**	**58.00**	**127.16**	**27.03**	**49.47**	**209.49**	**37.84**	**1,157.959**	**14,275.645**
NOV % Ash	10.76	10.99	15.75	8.36	9.16	9.64	10.89	10.07	**10.76%**	
NOV Ash Produced	**17.59**	**53.35**	**9.14**	**10.63**	**2.48**	**4.77**	**22.81**	**3.81**	**124.58**	**1,497.29**
Utilization: Concrete		34.34		5.28					39.62	395.30

Mineral Filler							0.35		0.35	4.99
Structural Fill									0.00	0.00
ISG Bottom Ash		0.19					2.77		2.96	45.20
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	2.06
Other: Ash Removal									0.00	0.00
Ash Disposal Contracts			0.31						0.31	3.65
Net Ash to Basins	17.59	9.00	9.44	5.35	2.48	4.77	-3.83	3.81	48.62	571.31
On-Site Landfills		9.82					23.52		33.34	482.07
On-Site Fill Projects									0.00	0.00
NOV Total Ash Utilized	**0.00**	**34.53**	**0.00**	**5.28**	**0.00**	**0.00**	**3.12**	**0.00**	**42.93**	**447.56**
DEC Coal Consumption	**194.06**	**533.31**	**60.04**	**136.48**	**22.52**	**26.51**	**381.82**	**45.46**	**1,400.191**	**15,675.836**
DEC % Ash	11.28	11.18	13.59	7.95	8.53	9.82	10.04	11.15	**10.60%**	
DEC Ash Produced+A200	**21.89**	**59.62**	**8.16**	**10.85**	**1.92**	**2.60**	**38.33**	**5.07**	**148.45**	**1,645.74**
Utilization: Concrete		23.67		4.40					28.07	423.37
Mineral Filler							0.35		0.35	5.34
Structural Fill									0.00	0.00
ISG Bottom Ash		0.55					2.18		2.73	47.94
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	2.06
Other: Ash Removal									0.00	0.00
Ash Disposal Contracts			0.26						0.26	3.91
Net Ash to Basins	21.89	3.87	8.42	6.45	1.92	2.60	2.56	5.07	52.78	624.08
On-Site Landfills		31.53					33.25		64.78	546.85
On-Site Fill Projects									0.00	0.00
DEC Total Ash Utilized	**0.00**	**24.23**	**0.00**	**4.40**	**0.00**	**0.00**	**2.53**	**0.00**	**31.16**	**478.71**
Year to Date Coal Consumed	**2,056.481**	**5,444.598**	**702.607**	**1,469.984**	**397.635**	**467.264**	**4,520.132**	**617.136**		**15,675.836**
Year to Date % Ash	**10.48%**	**10.92%**	**12.61%**	**8.31%**	**9.82%**	**9.57%**	**10.61%**	**9.92%**		
Year to Date Ash Produced	**215.56**	**594.73**	**88.62**	**122.17**	**39.03**	**44.71**	**479.66**	**61.25**		**1,645.74**
Utilization: Concrete	0.00	384.05	0.00	39.32	0.00	0.00	0.00	0.00		423.37
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	5.34	0.00		5.34
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
ISG Bottom Ash	0.00	4.20	0.00	0.00	0.00	0.00	43.73	0.00		47.94
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	2.06	0.00		2.06
Other: Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Ash Disposal Contracts	0.00	0.00	3.91	0.00	0.00	0.00	0.00	0.00		3.91
Net Ash to Basins	215.56	85.72	92.53	82.85	39.03	44.71	-6.58	61.25		615.07
On-Site Landfills	0.00	120.75	0.00	0.00	0.00	0.00	426.10	0.00		546.85
On-Site Fill Projects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
YTD Total Ash Utilized	**0.00**	**388.25**	**0.00**	**39.32**	**0.00**	**0.00**	**51.13**	**0.00**		**478.71**
YTD Percent Ash Utilized	**0.0%**	**65.3%**	**0.0%**	**32.2%**	**0.0%**	**0.0%**	**10.7%**	**0.0%**		**29.1%**
YTD + Projected Ash Production	215.56	594.73	88.62	122.17	39.03	44.71	479.66	61.25		1645.74
YTD + Projected Ash Utilization	0.00	388.25	0.00	39.32	0.00	0.00	51.13	0.00		478.71
YTD + Projected % Ash Utilization	0.0%	65.3%	0.0%	32.2%	0.0%	0.0%	10.7%	0.0%		29.1%

Updated BC moisture to landfill 11/98

* Additional ash removed from ash basin under new ash contract = 9,015.7 (This amount was subtracted from the original ash to Basin total

2000 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption	**168.50**	**392.76**	**76.73**	**143.88**	**35.47**	**46.18**	**431.33**	**52.04**	**1,346.895**	**1,346.895**
JAN % Ash	10.85	10.68	12.23	8.68	8.53	8.51	9.36	9.75	**9.99%**	
JAN Ash Produced	**18.28**	**41.95**	**9.38**	**12.49**	**3.03**	**3.93**	**40.37**	**5.07**	**134.50**	**134.50**
Utilization: Concrete		16.47		2.83					19.30	19.30
Mineral Filler							0.31		0.31	0.31
Structural Fill									0.00	0.00
ISG Bottom Ash		0.94					1.86		2.80	2.80
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.25						0.25	0.25
Net Ash to Basins	18.28	7.58	9.64	9.66	3.03	3.93	0.86	5.07	58.04	58.04
On-Site Landfills		16.96					37.34		54.31	54.31
On-Site Fill Projects									0.00	0.00
JAN Total Ash Utilized	**0.00**	**17.40**	**0.00**	**2.83**	**0.00**	**0.00**	**2.18**	**0.00**	**22.41**	**22.41**
FEB Coal Consumption	**151.30**	**336.69**	**63.54**	**148.03**	**31.92**	**42.31**	**462.21**	**63.91**	**1,299.909**	**2,646.804**
FEB % Ash	10.85	11.02	13.12	8.93	8.91	8.97	9.67	10.12	**10.22%**	
FEB Ash Produced	**16.42**	**37.10**	**8.34**	**13.22**	**2.84**	**3.80**	**44.70**	**6.47**	**132.88**	**267.38**
Utilization: Concrete		24.62		3.63					28.25	47.55
Mineral Filler							0.29		0.29	0.61
Structural Fill									0.00	0.00
ISG Bottom Ash		1.23					2.47		3.70	6.50
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.30						0.30	0.55
Net Ash to Basins	16.42	-2.94	8.64	9.59	2.84	3.80	-1.11	6.47	43.70	101.74
On-Site Landfills		14.20					43.04		57.24	111.54
On-Site Fill Projects									0.00	0.00
FEB Total Ash Utilized	**0.00**	**25.85**	**0.00**	**3.63**	**0.00**	**0.00**	**2.76**	**0.00**	**32.24**	**54.65**
MAR Coal Consumption	**128.16**	**290.42**	**69.78**	**120.00**	**22.72**	**45.16**	**473.94**	**85.64**	**1,235.805**	**3,882.609**
MAR % Ash	10.34	12.65	14.37	9.29	8.45	8.74	10.38	10.31	**10.93%**	
MAR Ash Produced	**13.25**	**36.74**	**10.03**	**11.15**	**1.92**	**3.95**	**49.19**	**8.83**	**135.06**	**402.44**
Utilization: Concrete		32.31		4.81					37.12	84.67
Mineral Filler							0.19		0.19	0.80
Structural Fill									0.00	0.00
ISG Bottom Ash		0.60					2.83		3.43	9.93
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.39						0.39	0.94
Net Ash to Basins	13.25	2.38	10.42	6.34	-18.21	3.95	-1.68	-66.23	-49.79	51.95
On-Site Landfills		1.45					47.85		49.30	160.84
On-Site Fill Projects					20.13			75.06	95.19	95.19
MAR Total Ash Utilized	**0.00**	**32.91**	**0.00**	**4.81**	**0.00**	**0.00**	**3.03**	**0.00**	**40.75**	**95.40**
APR Coal Consumption	**144.28**	**290.01**	**32.29**	**68.36**	**39.33**	**48.16**	**410.35**	**93.64**	**1,126.410**	**5,009.019**
APR % Ash	9.94	13.70	12.84	9.29	8.39	9.44	10.71	9.84	**11.15%**	
APR Ash Produced	**14.34**	**39.73**	**4.15**	**6.35**	**3.30**	**4.55**	**43.95**	**9.21**	**125.58**	**528.01**
Utilization: Concrete		23.52		1.87					25.39	110.06
Mineral Filler							0.21		0.21	1.00
Structural Fill									0.00	0.00
ISG Bottom Ash		0.41					2.32		2.72	12.65
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.25						0.25	1.20
Net Ash to Basins	14.34	5.44	4.40	4.48	-21.87	4.55	2.87	-65.85	-51.64	0.31
On-Site Landfills		10.37					38.55		48.92	209.76
On-Site Fill Projects					25.17			75.06	100.23	195.42
APR Total Ash Utilized	**0.00**	**23.93**	**0.00**	**1.87**	**0.00**	**0.00**	**2.52**	**0.00**	**28.32**	**123.72**
MAY Coal Consumption	**203.87**	**301.87**	**67.51**	**135.32**	**42.25**	**55.08**	**446.40**	**101.73**	**1,354.026**	**6,363.045**
MAY % Ash	10.36	10.96	12.46	9.28	9.53	9.11	9.75	9.85	**10.17%**	
MAY Ash Produced	**21.12**	**33.09**	**8.41**	**12.56**	**4.03**	**5.02**	**43.52**	**10.02**	**137.76**	**665.78**
Utilization: Concrete		35.81		5.70					41.51	151.58
Mineral Filler							0.33		0.33	1.33
Structural Fill							19.96		19.96	19.96
ISG Bottom Ash		0.62					2.72		3.34	15.99
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.33						0.33	1.52
Net Ash to Basins	21.12	-10.55	8.74	6.86	-20.94	5.02	-7.12	-65.04	-61.91	-61.60
On-Site Landfills		7.20					27.64		34.83	244.59
On-Site Fill Projects					24.96			75.06	100.02	295.44

MAY Total Ash Utilized	**0.00**	**36.44**	**0.00**	**5.70**	**0.00**	**0.00**	**23.01**	**0.00**	**65.14**	**188.87**
JUN Coal Consumption	**238.33**	**265.39**	**70.63**	**150.88**	**51.40**	**47.38**	**460.42**	**94.98**	**1,379.403**	**7,742.448**
JUN % Ash	10.90	11.27	14.75	6.96	9.70	8.43	10.83	9.35	**10.48%**	
JUN Ash Produced	**25.98**	**29.91**	**10.42**	**10.50**	**4.99**	**3.99**	**49.86**	**8.88**	**144.53**	**810.31**
Utilization: Concrete		37.98		5.84					43.82	195.40
Mineral Filler							0.88		0.88	2.22
Structural Fill							19.16		19.16	39.12
ISG Bottom Ash		1.62					2.52		4.14	20.13
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.28						0.28	1.80
Net Ash to Basins	25.98	-13.99	10.70	4.66	-27.35	3.99	0.74	-66.18	-61.46	-123.05
On-Site Landfills		4.31					26.56		30.87	275.46
On-Site Fill Projects					32.34			75.06	107.40	402.84
JUN Total Ash Utilized	**0.00**	**39.59**	**0.00**	**5.84**	**0.00**	**0.00**	**22.57**	**0.00**	**68.00**	**256.87**
JUL Coal Consumption	**211.06**	**397.93**	**68.66**	**144.48**	**40.93**	**41.55**	**466.96**	**83.08**	**1,454.648**	**9,197.096**
JUL % Ash	10.65	11.53	13.78	9.02	9.33	10.27	10.21	9.33	**10.61%**	
JUL Ash Produced	**22.48**	**45.88**	**9.46**	**13.03**	**3.82**	**4.27**	**47.68**	**7.75**	**154.37**	**964.67**
Utilization: Concrete		28.15		4.74					32.89	228.29
Mineral Filler							0.74		0.74	2.96
Structural Fill							1.46		1.46	40.58
ISG Bottom Ash		1.35					2.75		4.10	24.23
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.25						0.25	2.06
Net Ash to Basins	22.48	0.53	9.71	8.29	3.82	4.27	-2.40	-67.31	-20.62	-143.67
On-Site Landfills		15.85					45.12		60.98	336.43
On-Site Fill Projects								75.06	75.06	477.90
JUL Total Ash Utilized	**0.00**	**29.50**	**0.00**	**4.74**	**0.00**	**0.00**	**4.96**	**0.00**	**39.20**	**296.07**
AUG Coal Consumption	**254.56**	**455.95**	**82.07**	**152.35**	**55.32**	**72.95**	**458.98**	**107.69**	**1,639.870**	**10,836.966**
AUG % Ash	10.96	11.37	13.76	8.79	9.04	9.86	10.89	9.70	**10.80%**	
AUG Ash Produced	**27.90**	**51.84**	**11.29**	**13.39**	**5.00**	**7.19**	**49.98**	**10.45**	**177.05**	**1141.72**
Utilization: Concrete		35.00		5.81					40.82	269.11
Mineral Filler							0.36		0.36	3.32
Structural Fill									0.00	40.58
ISG Bottom Ash		1.65					2.85		4.49	28.73
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal			0.36						0.36	2.42
Net Ash to Basins	27.90	1.81	11.66	7.58	-7.44	7.19	0.39	-39.59	9.49	-134.18
On-Site Landfills		13.38					46.39		59.77	396.21
On-Site Fill Projects					12.44			50.04	62.48	540.38
AUG Total Ash Utilized	**0.00**	**36.65**	**0.00**	**5.81**	**0.00**	**0.00**	**3.20**	**0.00**	**45.67**	**341.73**
SEP Coal Consumption	**212.11**	**400.66**	**59.68**	**139.53**	**28.42**	**41.94**	**433.87**	**75.97**	**1,392.188**	**12,229.154**
SEP % Ash	11.07	11.44	13.61	9.43	9.07	10.04	11.04	9.45	**10.95%**	
SEP Ash Produced	**23.48**	**45.84**	**8.12**	**13.16**	**2.58**	**4.21**	**47.90**	**7.18**	**152.46**	**1,294.19**
Utilization: Concrete		25.14		4.66					29.80	298.91
Mineral Filler							0.28		0.28	3.60
Structural Fill									0.00	40.58
ISG Bottom Ash		1.57					2.84		4.41	33.13
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal									0.00	2.42
Net Ash to Basins	23.48	3.17	8.12	8.49	-9.66	4.21	0.54	7.18	45.54	-88.64
On-Site Landfills		15.96					44.24		60.20	456.41
On-Site Fill Projects					12.24				12.24	552.62
SEP Total Ash Utilized	**0.00**	**26.70**	**0.00**	**4.66**	**0.00**	**0.00**	**3.12**	**0.00**	**34.49**	**376.22**
OCT Coal Consumption	**132.18**	**491.66**	**37.65**	**110.39**	**6.13**	**22.08**	**392.48**	**52.98**	**1,245.555**	**13,474.709**
OCT % Ash	11.74	11.65	14.71	9.33	8.88	10.04	10.66	9.33	**11.09%**	
OCT Ash Produced	**15.52**	**57.28**	**5.54**	**10.30**	**0.54**	**2.22**	**41.84**	**4.94**	**138.18**	**1,432.36**
Utilization: Concrete		30.31		5.41					35.72	334.63
Mineral Filler							0.35		0.35	3.95
Structural Fill									0.00	40.58
ISG Bottom Ash		0.97					3.61		4.58	37.71
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal									0.00	2.42
Net Ash to Basins	15.52	3.38	5.54	4.89	-11.90	2.22	-0.38	4.94	24.21	-64.44
On-Site Landfills		22.62					38.26		60.88	517.29
On-Site Fill Projects					12.44				12.44	565.06
OCT Total Ash Utilized	**0.00**	**31.28**	**0.00**	**5.41**	**0.00**	**0.00**	**3.96**	**0.00**	**40.65**	**416.87**
NOV Coal Consumption	**164.34**	**486.44**	**58.85**	**134.47**	**9.66**	**41.02**	**446.76**	**60.14**	**1,401.667**	**14,876.376**
NOV % Ash	11.90	11.44	14.40	9.19	9.18	10.37	9.81	9.72	**10.76%**	
NOV Ash Produced	**19.56**	**55.65**	**8.47**	**12.36**	**0.89**	**4.25**	**43.83**	**5.85**	**150.85**	**1,583.21**
Utilization: Concrete		23.60		4.72					28.32	362.95

Mineral Filler							0.37		0.37	4.31
Structural Fill							39.07		39.07	79.65
ISG Bottom Ash		0.97					3.61		4.58	42.29
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal									0.00	2.42
Net Ash to Basins	19.56	7.34	8.47	7.63	-18.52	4.25	-4.52	5.85	30.05	-34.38
On-Site Landfills		23.74					5.31		29.05	546.33
On-Site Fill Projects					19.41				19.41	584.47
NOV Total Ash Utilized	**0.00**	**24.57**	**0.00**	**4.72**	**0.00**	**0.00**	**43.04**	**0.00**	**72.34**	**489.21**
DEC Coal Consumption	**270.80**	**365.72**	**87.46**	**170.79**	**34.69**	**90.41**	**551.78**	**116.81**	**1,688.461**	**16,564.837**
DEC % Ash	10.84	11.60	13.79	9.04	8.82	9.77	10.38	10.79	**10.72%**	
DEC Ash Produced	**29.35**	**42.42**	**12.06**	**15.44**	**3.06**	**8.83**	**57.28**	**12.60**	**181.05**	**1,764.26**
Utilization: Concrete		23.82		3.35					27.17	390.12
Mineral Filler							0.32		0.32	4.63
Structural Fill							34.04		34.04	113.69
ISG Bottom Ash		0.66					1.47		2.13	44.42
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal									0.00	2.42
Net Ash to Basins	29.35	5.77	12.06	12.09	3.06	8.83	3.14	12.60	86.91	52.53
On-Site Landfills		12.17					18.31		30.48	576.82
On-Site Fill Projects									0.00	584.47
DEC Total Ash Utilized	**0.00**	**24.48**	**0.00**	**3.35**	**0.00**	**0.00**	**35.82**	**0.00**	**63.66**	**552.86**
Year to Date Coal Consumed	**2,279.481**	**4,475.494**	**774.842**	**1,618.494**	**398.226**	**594.232**	**5,435.467**	**988.601**		**16,564.837**
Year to Date % Ash	**10.87%**	**11.56%**	**13.64%**	**8.89%**	**9.04%**	**9.46%**	**10.30%**	**9.84%**		
Year to Date Ash Produced	**247.68**	**517.42**	**105.67**	**143.94**	**35.99**	**56.21**	**560.10**	**97.25**		**1,764.26**
Utilization: Concrete	0.00	336.73	0.00	53.39	0.00	0.00	0.00	0.00		390.12
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	4.63	0.00		4.63
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	113.69	0.00		113.69
ISG Bottom Ash	0.00	12.57	0.00	0.00	0.00	0.00	31.85	0.00		44.42
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other: Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Ash Disposal Contracts	0.00	0.00	2.42	0.00	0.00	0.00	0.00	0.00		2.42
Net Ash to Basins	247.68	9.91	108.09	90.56	-123.14	56.21	-40.70	-328.09		20.51
On-Site Landfills	0.00	158.21	0.00	0.00	0.00	0.00	418.61	0.00		576.82
On-Site Fill Projects	0.00	0.00	0.00	0.00	159.13	0.00	0.00	425.34		584.47
YTD Total Ash Utilized	**0.00**	**349.31**	**0.00**	**53.39**	**0.00**	**0.00**	**150.17**	**0.00**		**552.86**
YTD Percent Ash Utilized	**0.0%**	**67.5%**	**0.0%**	**37.1%**	**0.0%**	**0.0%**	**26.8%**	**0.0%**		**31.3%**
YTD + Projected Ash Production	247.68	517.42	105.67	143.94	35.99	56.21	560.10	97.25		1764.26
YTD + Projected Ash Utilization	0.00	349.31	0.00	53.39	0.00	0.00	150.17	0.00		552.86
YTD + Projected % Ash Utilization	0.0%	67.5%	0.0%	37.1%	0.0%	0.0%	26.8%	0.0%		31.3%

Updated BC moisture to landfill 11/98

* Additional ash removed from ash basin under new ash contract = 32,015 (This amount was subtracted from the original ash to Basin total

2001 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month		Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption		**212.45**	**448.00**	**60.53**	**141.60**	**14.24**	**50.23**	**510.97**	**82.94**	**1,520.968**	**1,520.968**
JAN % Ash		11.59	11.64	16.85	8.43	9.00	9.15	10.48	10.94	**11.01%**	
JAN Ash Produced		**24.62**	**52.15**	**10.20**	**11.94**	**1.28**	**4.60**	**53.55**	**9.07**	**167.41**	**167.41**
Utilization:	Concrete		20.16		4.13					24.30	24.30
	Mineral Filler							0.38		0.38	0.38
	Structural Fill							9.54		9.54	9.54
	ISG Bottom Ash		1.03					1.99		3.02	3.02
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road							6.28		6.28	6.28
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	24.62	26.01	10.20	7.80	1.28	4.60	-7.35	9.07	76.24	76.24
	On-Site Landfills		4.95					3.19		8.14	8.14
	On-Site Fill Projects **Silo Ash**							39.52		39.52	39.52
JAN Total Ash Utilized		**0.00**	**21.19**	**0.00**	**4.13**	**0.00**	**0.00**	**11.92**	**0.00**	**37.24**	**37.24**
FEB Coal Consumption		**140.18**	**304.10**	**52.83**	**143.56**	**23.27**	**36.21**	**329.98**	**59.80**	**1,089.925**	**2,610.893**
FEB % Ash		11.51	11.93	16.21	9.46	9.57	11.53	10.83	12.26	**11.38%**	
FEB Ash Produced		**16.13**	**36.28**	**8.56**	**13.58**	**2.23**	**4.17**	**35.74**	**7.33**	**124.03**	**291.44**
Utilization:	Concrete		17.86		4.80					22.65	46.95
	Mineral Filler							0.30		0.30	0.68
	Structural Fill									0.00	9.54
	ISG Bottom Ash		1.16					2.49		3.65	6.67
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road							0.13		0.13	6.40
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	16.13	17.26	8.56	8.79	2.23	4.17	-11.06	7.33	53.41	129.65
	On-Site Landfills							13.07		13.07	21.20
	On-Site Fill Projects **Silo Ash**							30.82		30.82	70.33
FEB Total Ash Utilized		**0.00**	**19.02**	**0.00**	**4.80**	**0.00**	**0.00**	**2.79**	**0.00**	**26.60**	**63.84**
MAR Coal Consumption		**226.58**	**332.52**	**88.61**	**175.38**	**58.57**	**56.87**	**356.33**	**112.16**	**1,407.017**	**4,017.910**
MAR % Ash		11.91	11.79	15.90	8.89	9.24	11.35	10.85	11.70	**11.34%**	
MAR Ash Produced		**26.99**	**39.20**	**14.09**	**15.59**	**5.41**	**6.46**	**38.66**	**13.12**	**159.52**	**450.96**
Utilization:	Concrete		21.88		6.43					28.31	75.26
	Mineral Filler							0.42		0.42	1.10
	Structural Fill									0.00	9.54
	ISG Bottom Ash		1.51					2.20		3.72	10.39
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road							1.51		1.51	7.91
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	26.99	-4.58	14.09	9.16	5.41	6.46	-2.65	13.12	68.00	197.65
	On-Site Landfills		20.39					4.95		25.34	46.55
	On-Site Fill Projects **Silo Ash**							32.22		32.22	102.55
MAR Total Ash Utilized		**0.00**	**23.39**	**0.00**	**6.43**	**0.00**	**0.00**	**2.62**	**0.00**	**32.45**	**96.29**
APR Coal Consumption		**186.14**	**433.97**	**87.41**	**65.89**	**47.95**	**45.45**	**321.22**	**87.39**	**1,275.414**	**5,293.324**
APR % Ash		11.88	11.58	15.75	9.08	10.06	9.90	10.56	11.91	**11.43%**	
APR Ash Produced		**22.11**	**50.25**	**13.77**	**5.98**	**4.82**	**4.50**	**33.92**	**10.41**	**145.77**	**596.73**
Utilization:	Concrete		26.50		1.56					28.06	103.32
	Mineral Filler							0.36		0.36	1.46
	Structural Fill									0.00	9.54
	ISG Bottom Ash		0.78					2.62		3.40	13.78
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road									0.00	7.91
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	22.11	0.91	13.77	4.42	4.82	4.50	-0.27	10.41	60.67	258.33
	On-Site Landfills		22.05					2.06		24.12	70.66
	On-Site Fill Projects **Silo Ash**							29.16		29.16	131.71
APR Total Ash Utilized		**0.00**	**27.29**	**0.00**	**1.56**	**0.00**	**0.00**	**2.97**	**0.00**	**31.82**	**128.11**
MAY Coal Consumption		**202.73**	**511.05**	**81.43**	**65.99**	**19.31**	**42.18**	**290.07**	**88.04**	**1,300.791**	**6,594.115**
MAY % Ash		12.01	11.59	15.13	9.84	9.65	10.53	10.79	11.50	**11.54%**	
MAY Ash Produced		**24.35**	**59.23**	**12.32**	**6.49**	**1.86**	**4.44**	**31.30**	**10.12**	**150.12**	**746.84**
Utilization:	Concrete		28.99		1.41					30.40	133.72
	Mineral Filler							0.20		0.20	1.67
	Structural Fill									0.00	9.54
	ISG Bottom Ash		0.70					0.33		1.03	14.81
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road									0.00	7.91
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	24.35	7.04	12.32	5.08	1.86	4.44	7.17	10.12	72.39	330.72
	On-Site Landfills		22.50							22.50	93.16
	On-Site Fill Projects **Silo Ash**							23.60		23.60	155.31

MAY Total Ash Utilized		**0.00**	**29.69**	**0.00**	**1.41**	**0.00**	**0.00**	**0.53**	**0.00**	**31.63**	**159.74**
	JUN Coal Consumption	**169.25**	**494.72**	**62.33**	**120.15**	**32.85**	**44.59**	**448.17**	**74.13**	**1,446.174**	**8,040.289**
	JUN % Ash	12.09	11.65	13.79	10.44	9.86	10.95	10.68	11.37	**11.32%**	
	JUN Ash Produced	**20.46**	**57.63**	**8.60**	**12.54**	**3.24**	**4.88**	**47.86**	**8.43**	**163.65**	**910.49**
Utilization:	Concrete		27.76		3.25					31.02	164.73
	Mineral Filler							0.28		0.28	1.95
	Structural Fill									0.00	9.54
	ISG Bottom Ash		0.95					0.30		1.24	16.06
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road							0.72		0.72	8.63
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	20.46	-1.87	8.60	9.29	3.24	4.88	2.11	8.43	55.14	385.86
	On-Site Landfills		30.80							30.80	123.96
	On-Site Fill Projects **Silo Ash**							44.46		44.46	199.77
JUN Total Ash Utilized		**0.00**	**28.71**	**0.00**	**3.25**	**0.00**	**0.00**	**0.58**	**0.00**	**32.54**	**192.28**
	JUL Coal Consumption	**221.93**	**537.98**	**78.15**	**141.66**	**30.01**	**43.55**	**488.02**	**68.56**	**1,609.867**	**9,650.156**
	JUL % Ash	11.41	11.90	16.34	9.61	9.13	11.98	11.59	11.50	**11.69%**	
	JUL Ash Produced	**25.32**	**64.02**	**12.77**	**13.61**	**2.74**	**5.22**	**56.56**	**7.88**	**188.13**	**1098.62**
Utilization:	Concrete		26.02		4.57					30.58	195.32
	Mineral Filler							0.69		0.69	2.64
	Structural Fill							19.52		19.52	29.06
	ISG Bottom Ash		1.16					1.37		2.53	18.59
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road							2.05		2.05	10.68
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	25.32	4.77	12.77	9.05	2.74	5.22	0.38	7.88	68.13	453.99
	On-Site Landfills		32.07							32.07	156.03
	On-Site Fill Projects **Silo Ash**							32.55		32.55	232.32
JUL Total Ash Utilized		**0.00**	**27.18**	**0.00**	**4.57**	**0.00**	**0.00**	**21.59**	**0.00**	**53.33**	**245.61**
	AUG Coal Consumption	**268.38**	**532.97**	**89.68**	**175.85**	**56.15**	**77.45**	**522.88**	**115.60**	**1,838.949**	**11,489.105**
	AUG % Ash	11.25	11.92	14.02	8.90	9.63	13.72	11.77	12.93	**11.66%**	
	AUG Ash Produced	**30.19**	**63.53**	**12.57**	**15.65**	**5.41**	**10.63**	**61.54**	**14.95**	**214.47**	**1313.09**
Utilization:	Concrete		31.68		7.12					38.80	234.12
	Mineral Filler							0.37		0.37	3.01
	Structural Fill							34.85		34.85	63.91
	ISG Bottom Ash		1.32					1.53		2.86	21.44
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road							0.30		0.30	10.98
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	30.19	8.33	12.57	8.53	5.41	10.63	-8.05	14.95	82.55	536.53
	On-Site Landfills		22.20							22.20	178.23
	On-Site Fill Projects **Silo Ash**							32.55		32.55	264.87
AUG Total Ash Utilized		**0.00**	**33.00**	**0.00**	**7.12**	**0.00**	**0.00**	**36.75**	**0.00**	**76.87**	**322.48**
	SEP Coal Consumption	**144.84**	**535.75**	**31.87**	**112.45**	**17.72**	**38.46**	**380.92**	**76.11**	**1,338.110**	**12,827.215**
	SEP % Ash	12.44	12.86	13.56	9.85	9.73	12.07	12.48	12.48	**12.38%**	
	SEP Ash Produced	**18.02**	**68.90**	**4.32**	**11.08**	**1.72**	**4.64**	**47.54**	**9.50**	**165.72**	**1,478.81**
Utilization:	Concrete		26.06		4.83					30.89	265.00
	Mineral Filler							0.28		0.28	3.29
	Structural Fill									0.00	63.91
	ISG Bottom Ash		1.05					1.40		2.46	23.90
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road									0.00	10.98
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	18.02	11.43	4.32	6.25	1.72	4.64	3.28	9.50	59.16	595.70
	On-Site Landfills		30.36							30.36	208.59
	On-Site Fill Projects **Silo Ash**							42.57		42.57	307.44
SEP Total Ash Utilized		**0.00**	**27.11**	**0.00**	**4.83**	**0.00**	**0.00**	**1.69**	**0.00**	**33.62**	**356.10**
	OCT Coal Consumption	**189.50**	**306.06**	**34.38**	**136.62**	**9.64**	**25.95**	**412.34**	**56.65**	**1,171.131**	**13,998.346**
	OCT % Ash	11.80	12.90	15.38	9.81	9.09	13.25	11.72	11.56	**11.93%**	
	OCT Ash Produced	**22.36**	**39.48**	**5.29**	**13.40**	**0.88**	**3.44**	**48.33**	**6.55**	**139.72**	**1,618.53**
Utilization:	Concrete		33.47		5.68					39.16	304.16
	Mineral Filler							1.40		1.40	4.69
	Structural Fill									0.00	63.91
	ISG Bottom Ash		1.00					1.63		2.63	26.53
	Duke Bottom Ash									0.00	0.00
	Mill Rejects									0.00	0.00
Other:	Ash Removal/ Haul Road									0.00	10.98
	Color Tex Ash Disposal									0.00	0.00
	Net Ash to Basins	22.36	-7.99	5.29	7.72	0.88	3.44	-0.09	6.55	38.15	633.85
	On-Site Landfills		13.00							13.00	221.59
	On-Site Fill Projects **Silo Ash**							45.39		45.39	352.82
OCT Total Ash Utilized		**0.00**	**34.47**	**0.00**	**5.68**	**0.00**	**0.00**	**3.03**	**0.00**	**43.18**	**399.29**
	NOV Coal Consumption	**144.32**	**247.36**	**20.50**	**123.09**	**10.81**	**15.24**	**365.77**	**58.02**	**985.102**	**14,983.448**
	NOV % Ash	12.71	13.30	15.30	10.07	9.99	14.67	11.27	10.79	**11.93%**	
	NOV Ash Produced	**18.34**	**32.90**	**3.14**	**12.40**	**1.08**	**2.23**	**41.22**	**6.26**	**117.57**	**1,736.10**
Utilization:	Concrete		29.83		5.39					35.22	339.38

Mineral Filler							0.40		0.40	5.09
Structural Fill									0.00	63.91
**ISG Bottom Ash/ Charah		2.11					0.76		2.87	29.40
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal/ Haul Road									0.00	10.98
Color Tex Ash Disposal									0.00	0.00
Net Ash to Basins	18.34	0.96	3.14	7.00	1.08	2.23	3.02	6.26	42.04	675.89
On-Site Landfills		0.00							0.00	221.59
On-Site Fill Projects **Silo Ash**							37.05		37.05	389.87
NOV Total Ash Utilized	**0.00**	**31.94**	**0.00**	**5.39**	**0.00**	**0.00**	**1.16**	**0.00**	**38.49**	**437.77**
DEC Coal Consumption	**52.88**	**545.29**	**18.40**	**100.91**	**1.99**	**0.00**	**361.43**	**26.29**	**1,107.195**	**16,090.643**
DEC % Ash	13.93	13.21	15.49	9.43	10.79	0.00	10.80	11.87	**12.11%**	
DEC Ash Produced+A200	**7.37**	**72.03**	**2.85**	**9.52**	**0.21**	**0.00**	**39.03**	**3.12**	**134.14**	**1,870.23**
Utilization: Concrete		19.54		3.21					22.75	362.13
Mineral Filler							0.28		0.28	5.37
Structural Fill									0.00	63.91
**ISG Bottom Ash/ Charah/ ABC							11.42		11.42	40.82
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal/ Haul Road							1.26		1.26	12.24
Color Tex Ash Disposal									0.00	0.00
Net Ash to Basins	7.37	15.52	2.85	6.31	0.21	-240.00	-10.14	3.12	-214.76	461.12
On-Site Landfills		36.97							36.97	258.56
On-Site Fill Projects **Silo Ash**						240.00	36.21		276.21	666.08
DEC Total Ash Utilized	**0.00**	**19.54**	**0.00**	**3.21**	**0.00**	**0.00**	**11.71**	**0.00**	**34.46**	**472.23**
Year to Date Coal Consumed	**2,159.172**	**5,229.749**	**706.108**	**1,503.148**	**322.523**	**476.177**	**4,788.097**	**905.669**		**16,090.643**
Year to Date % Ash	**11.87%**	**12.15%**	**15.36%**	**9.43%**	**9.58%**	**11.59%**	**11.18%**	**11.79%**		
Year to Date Ash Produced	**256.27**	**635.61**	**108.47**	**141.78**	**30.89**	**55.21**	**535.26**	**106.75**		**1,870.23**
Utilization: Concrete	0.00	309.74	0.00	52.39	0.00	0.00	0.00	0.00		362.13
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	5.37	0.00		5.37
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	63.91	0.00		63.91
ISG Bottom Ash	0.00	12.77	0.00	0.00	0.00	0.00	28.05	0.00		40.82
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other: Ash Removal/ Haul Road	0.00	0.00	0.00	0.00	0.00	0.00	12.24	0.00		12.24
Ash Disposal Contracts	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Net Ash to Basins	256.27	77.80	108.47	89.39	30.89	-184.79	-23.66	106.75		461.12
On-Site Landfills	0.00	235.29	0.00	0.00	0.00	0.00	23.27	0.00		258.56
On-Site Fill Projects **Silo Ash**	0.00	0.00	0.00	0.00	0.00	240.00	426.08	0.00		666.08
YTD Total Ash Utilized	**0.00**	**322.52**	**0.00**	**52.39**	**0.00**	**0.00**	**97.33**	**0.00**		**472.23**
YTD Percent Ash Utilized	**0.0%**	**50.7%**	**0.0%**	**36.9%**	**0.0%**	**0.0%**	**18.2%**	**0.0%**		**25.2%**
YTD + Projected Ash Production	256.27	635.61	108.47	141.78	30.89	55.21	535.26	106.75		1870.23
YTD + Projected Ash Utilization	0.00	322.52	0.00	52.39	0.00	0.00	97.33	0.00		472.23
YTD + Projected % Ash Utilization	0.0%	50.7%	0.0%	36.9%	0.0%	0.0%	18.2%	0.0%		25.2%

** BOTTOM ASH USED ON ROAD AND PLACED BY ABC-
ALSO SALES FROM CHARAH

2002 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption	**53.01**	**546.79**	**20.32**	**74.61**	**2.69**	**4.62**	**453.34**	**22.81**	**1,178.179**	**1,178.179**
JAN % Ash	12.22	12.23	14.09	10.01	10.06	12.86	10.79	12.46	**11.57%**	
JAN Ash Produced	**6.48**	**66.87**	**2.86**	**7.47**	**0.27**	**0.59**	**48.92**	**2.84**	**136.30**	**136.30**
Utilization: Concrete		16.88		2.69					19.57	19.57
Mineral Filler							0.68		0.68	0.68
Structural Fill									0.00	0.00
Charah Bottom Ash							2.29		2.29	2.29
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	6.48	15.88	2.86	4.78	0.27	0.59	2.83	2.84	36.53	36.53
On-Site Landfills		34.11							34.11	34.11
On-Site Fill Projects **Silo Ash**							43.12		43.12	43.12
JAN Total Ash Utilized	**0.00**	**16.88**	**0.00**	**2.69**	**0.00**	**0.00**	**2.97**	**0.00**	**22.54**	**22.54**
FEB Coal Consumption	**68.30**	**464.77**	**30.51**	**3.03**	**6.53**	**5.16**	**407.07**	**31.71**	**1,017.077**	**2,195.256**
FEB % Ash	12.22	11.29	15.23	10.00	10.02	13.42	11.10	11.00	**11.38%**	
FEB Ash Produced	**8.35**	**52.47**	**4.65**	**0.30**	**0.65**	**0.69**	**45.18**	**3.49**	**115.79**	**252.09**
Utilization: Concrete		23.54		0.22					23.77	43.34
Mineral Filler							0.38		0.38	1.07
Structural Fill									0.00	0.00
Charah Bottom Ash							1.77		1.77	4.06
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	8.35	-0.73	4.65	0.08	0.65	0.69	-0.86	3.49	16.31	52.84
On-Site Landfills		29.66							29.66	63.77
On-Site Fill Projects **Silo Ash**							43.89		43.89	87.01
FEB Total Ash Utilized	**0.00**	**23.54**	**0.00**	**0.22**	**0.00**	**0.00**	**2.16**	**0.00**	**25.93**	**48.47**
MAR Coal Consumption	**144.88**	**517.54**	**61.82**	**13.30**	**29.09**	**25.93**	**434.22**	**63.73**	**1,290.514**	**3,485.770**
MAR % Ash	12.77	11.33	15.37	9.72	9.45	13.01	10.41	11.18	**11.34%**	
MAR Ash Produced	**18.50**	**58.64**	**9.50**	**1.29**	**2.75**	**3.37**	**45.20**	**7.13**	**146.38**	**398.47**
Utilization: Concrete		23.27		0.00					23.27	66.61
Mineral Filler							0.33		0.33	1.40
Structural Fill									0.00	0.00
Charah Bottom Ash							1.54		1.54	5.60
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Color Tex Ash Disposal									0.00	0.00
Net Ash to Basins	18.50	-3.02	9.50	1.29	2.75	-224.16	0.67	7.13	-187.34	-134.50
On-Site Landfills		38.39							38.39	102.17
On-Site Fill Projects **Silo Ash**						227.53	42.66		270.19	357.20
MAR Total Ash Utilized	**0.00**	**23.27**	**0.00**	**0.00**	**0.00**	**0.00**	**1.87**	**0.00**	**25.14**	**73.61**
APR Coal Consumption	**163.63**	**399.69**	**76.14**	**26.10**	**37.99**	**38.08**	**434.01**	**55.92**	**1,231.551**	**4,717.321**
APR % Ash	12.35	11.08	16.29	10.05	9.08	13.47	10.23	10.75	**11.25%**	
APR Ash Produced	**20.21**	**44.29**	**12.40**	**2.62**	**3.45**	**5.13**	**44.40**	**6.01**	**138.51**	**536.98**
Utilization: Concrete		34.27		0.00					34.27	100.88
Mineral Filler							0.31		0.31	1.72
Structural Fill									0.00	0.00
Charah Bottom Ash							2.24		2.24	7.84
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	20.21	-20.73	12.40	2.62	3.45	5.13	-2.95	6.01	26.15	-108.35
On-Site Landfills		30.74							30.74	132.90
On-Site Fill Projects **Silo Ash**							44.80		44.80	402.00
APR Total Ash Utilized	**0.00**	**34.27**	**0.00**	**0.00**	**0.00**	**0.00**	**2.56**	**0.00**	**36.83**	**110.44**
MAY Coal Consumption	**150.59**	**450.46**	**42.00**	**108.79**	**27.49**	**24.56**	**370.60**	**42.54**	**1,217.034**	**5,934.355**
MAY % Ash	12.47	11.45	15.77	9.53	9.06	13.04	11.67	10.99	**11.58%**	
MAY Ash Produced	**18.78**	**51.58**	**6.62**	**10.37**	**2.49**	**3.20**	**43.25**	**4.67**	**140.97**	**677.95**
Utilization: Concrete		33.31		1.17					34.49	135.37
Mineral Filler							0.34		0.34	2.06
Structural Fill									0.00	0.00
Charah Bottom Ash							1.42		1.42	9.25
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	18.78	15.73	6.62	9.19	2.49	3.20	1.67	4.67	62.37	-45.99
On-Site Landfills		2.54							2.54	135.44
On-Site Fill Projects **Silo Ash**							39.82		39.82	441.82

MAY Total Ash Utilized	**0.00**	**33.31**	**0.00**	**1.17**	**0.00**	**0.00**	**1.76**	**0.00**	**36.24**	**146.68**
JUN Coal Consumption	**222.07**	**504.34**	**39.77**	**125.55**	**19.99**	**52.87**	**476.29**	**78.69**	**1,519.573**	**7,453.928**
JUN % Ash	11.72	11.02	17.06	9.39	8.22	13.07	11.52	11.10	**11.34%**	
JUN Ash Produced	**26.03**	**55.58**	**6.78**	**11.79**	**1.64**	**6.91**	**54.87**	**8.73**	**172.34**	**850.28**
Utilization: Concrete		30.91		5.67					36.58	171.95
Mineral Filler							0.34		0.34	2.40
Structural Fill									0.00	0.00
Charah Bottom Ash							2.29		2.29	11.55
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	26.03	21.04	6.78	6.12	1.64	6.91	6.46	8.73	83.72	37.74
On-Site Landfills		3.63							3.63	139.06
On-Site Fill Projects **Silo Ash**							45.77		45.77	487.59
JUN Total Ash Utilized	**0.00**	**30.91**	**0.00**	**5.67**	**0.00**	**0.00**	**2.64**	**0.00**	**39.21**	**185.89**
JUL Coal Consumption	**258.36**	**577.66**	**54.05**	**131.10**	**22.25**	**70.00**	**495.00**	**106.92**	**1,715.336**	**9,169.264**
JUL % Ash	11.93	10.85	17.16	9.38	8.01	12.97	10.64	13.24	**11.24%**	
JUL Ash Produced	**30.82**	**62.68**	**9.28**	**12.30**	**1.78**	**9.08**	**52.67**	**14.16**	**192.76**	**1043.04**
Utilization: Concrete		30.02		6.31					36.33	208.28
Mineral Filler							0.29		0.29	2.69
Structural Fill									0.00	0.00
Charah Bottom Ash							2.70		2.70	14.25
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	30.82	-3.16	9.28	5.98	-350.02	9.08	-0.77	14.16	-284.63	-246.90
On-Site Landfills		35.82							35.82	174.88
On-Site Fill Projects **Silo Ash**					351.80		50.45		402.25	889.83
JUL Total Ash Utilized	**0.00**	**30.02**	**0.00**	**6.31**	**0.00**	**0.00**	**2.99**	**0.00**	**39.32**	**225.22**
AUG Coal Consumption	**235.11**	**532.96**	**46.52**	**138.22**	**10.61**	**58.02**	**498.92**	**100.76**	**1,621.118**	**10,790.382**
AUG % Ash	11.29	11.18	17.22	9.21	8.43	11.59	11.07	11.73	**11.20%**	
AUG Ash Produced	**26.54**	**59.59**	**8.01**	**12.73**	**0.89**	**6.72**	**55.23**	**11.82**	**181.54**	**1224.58**
Utilization: Concrete		30.43		5.91					36.34	244.62
Mineral Filler							0.49		0.49	3.18
Structural Fill									0.00	0.00
Charah Bottom Ash							2.29		2.29	16.53
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	26.54	12.91	8.01	6.82	0.89	6.72	1.94	11.82	75.66	-171.23
On-Site Landfills		16.25							16.25	191.13
On-Site Fill Projects **Silo Ash**							50.52		50.52	940.35
AUG Total Ash Utilized		**30.43**	**0.00**	**5.91**	**0.00**	**0.00**	**2.77**	**0.00**	**39.11**	**264.33**
SEP Coal Consumption	**227.76**	**545.15**	**70.96**	**123.96**	**25.74**	**54.57**	**439.30**	**94.71**	**1,582.122**	**12,372.504**
SEP % Ash	11.92	11.16	16.95	10.69	8.24	10.97	10.45	12.80	**11.34%**	
SEP Ash Produced	**27.15**	**60.84**	**12.03**	**13.25**	**2.12**	**5.99**	**45.91**	**12.12**	**179.40**	**1,403.98**
Utilization: Concrete		27.72		5.22					32.94	277.56
Mineral Filler							0.27		0.27	3.45
Structural Fill									0.00	0.00
Charah Bottom Ash							3.44		3.44	19.97
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	27.15	8.19	12.03	8.03	2.12	5.99	-0.86	12.12	74.76	-96.47
On-Site Landfills		24.93							24.93	216.06
On-Site Fill Projects **Silo Ash**							43.05		43.05	983.40
SEP Total Ash Utilized	**0.00**	**27.72**	**0.00**	**5.22**	**0.00**	**0.00**	**3.71**	**0.00**	**36.65**	**300.99**
OCT Coal Consumption	**228.75**	**473.86**	**68.59**	**132.23**	**24.51**	**46.81**	**494.19**	**52.09**	**1,521.026**	**13,893.530**
OCT % Ash	11.37	11.14	15.51	8.92	8.07	9.67	10.99	11.85	**11.06%**	
OCT Ash Produced	**26.01**	**52.79**	**10.64**	**11.80**	**1.98**	**4.53**	**54.31**	**6.17**	**168.22**	**1,572.20**
Utilization: Concrete		24.85		5.62					30.47	308.03
Mineral Filler							0.36		0.36	3.81
Structural Fill									0.00	0.00
Charah Bottom Ash							2.14		2.14	22.12
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	26.01	1.20	10.64	6.17	1.98	4.53	0.04	6.17	56.74	-39.73
On-Site Landfills		26.74							26.74	242.80
On-Site Fill Projects **Silo Ash**							51.77		51.77	1035.17
OCT Total Ash Utilized	**0.00**	**24.85**	**0.00**	**5.62**	**0.00**	**0.00**	**2.50**	**0.00**	**32.97**	**333.95**
NOV Coal Consumption	**160.74**	**558.22**	**31.97**	**123.49**	**4.69**	**19.06**	**369.78**	**37.51**	**1,305.451**	**15,198.981**
NOV % Ash	10.97	11.25	16.68	8.54	8.01	7.94	10.74	12.91	**10.94%**	
NOV Ash Produced	**17.63**	**62.80**	**5.33**	**10.55**	**0.38**	**1.51**	**39.71**	**4.84**	**142.76**	**1,714.95**
Utilization: Concrete		21.29		5.67					26.96	334.99

Mineral Filler							0.45		0.45	4.26
Structural Fill									0.00	0.00
Charah Bottom Ash							1.90		1.90	24.02
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	17.63	5.90	5.33	4.87	0.38	1.51	1.93	4.84	42.40	2.67
On-Site Landfills		35.61							35.61	278.41
On-Site Fill Projects **Silo Ash**							35.44		35.44	1070.61
NOV Total Ash Utilized	**0.00**	**21.29**	**0.00**	**5.67**	**0.00**	**0.00**	**2.35**	**0.00**	**29.31**	**363.26**
DEC Coal Consumption	**116.17**	**583.72**	**34.33**	**86.19**	**9.83**	**13.05**	**445.23**	**29.02**	**1,317.533**	**16,516.514**
DEC % Ash	11.00	11.05	16.74	8.90	8.27	9.54	10.66	12.61	**10.92%**	
DEC Ash Produced	**12.78**	**64.50**	**5.75**	**7.67**	**0.81**	**1.25**	**47.46**	**3.66**	**143.88**	**1,858.83**
Utilization: Concrete		15.32		4.31					19.63	354.62
Mineral Filler							0.31		0.31	4.57
Structural Fill									0.00	0.00
Charah Bottom Ash							1.24		1.24	25.26
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	12.78	1.86	5.75	3.36	0.81	1.25	-0.72	3.66	28.74	31.42
On-Site Landfills		47.32							47.32	325.73
On-Site Fill Projects **Silo Ash**							46.62		46.62	1117.23
DEC Total Ash Utilized	**0.00**	**15.32**	**0.00**	**4.31**	**0.00**	**0.00**	**1.56**	**0.00**	**21.19**	**384.45**
Year to Date Coal Consumed	**2,029.357**	**6,155.169**	**576.965**	**1,086.559**	**221.403**	**412.722**	**5,317.948**	**716.391**		**16,516.514**
Year to Date % Ash	**11.79%**	**11.25%**	**16.27%**	**9.40%**	**8.68%**	**11.87%**	**10.85%**	**11.96%**		
Year to Date Ash Produced	**239.27**	**692.61**	**93.85**	**102.13**	**19.22**	**48.98**	**577.11**	**85.65**		**1,858.83**
Utilization: Concrete	0.00	311.81	0.00	42.81	0.00	0.00	0.00	0.00		354.62
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	4.57	0.00		4.57
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Charah Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	25.26	0.00		25.26
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other: Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Cenosphere Removal from Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Net Ash to Basins	239.27	55.08	93.85	59.32	-332.58	-178.55	9.38	85.65		31.42
On-Site Landfills	0.00	325.73	0.00	0.00	0.00	0.00	0.00	0.00		325.73
On-Site Fill Projects **Silo Ash**	0.00	0.00	0.00	0.00	351.80	227.53	537.90	0.00		1117.23
YTD Total Ash Utilized	**0.00**	**311.81**	**0.00**	**42.81**	**0.00**	**0.00**	**29.83**	**0.00**		**384.45**
YTD Percent Ash Utilized	**0.0%**	**45.0%**	**0.0%**	**41.9%**	**0.0%**	**0.0%**	**5.2%**	**0.0%**		**20.7%**
YTD + Projected Ash Production	239.27	692.61	93.85	102.13	19.22	48.98	577.11	85.65		1858.83
YTD + Projected Ash Utilization	0.00	311.81	0.00	42.81	0.00	0.00	29.83	0.00		384.45
YTD + Projected % Ash Utilization	0.0%	45.0%	0.0%	41.9%	0.0%	0.0%	5.2%	0.0%		20.7%

2003 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

AGO Exhibit 38

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption	**269.77**	**237.63**	**91.79**	**171.62**	**55.26**	**70.29**	**531.06**	**118.25**	**1,545.671**	**1,545.671**
JAN % Ash	11.34	11.91	17.36	10.07	7.71	9.99	10.38	12.73	**11.23%**	
JAN Ash Produced	**30.59**	**28.30**	**15.93**	**17.28**	**4.26**	**7.02**	**55.12**	**15.05**	**173.57**	**173.57**
Utilization: Concrete		16.17		4.32					20.48	20.48
Mineral Filler							0.02		0.02	0.02
Structural Fill									0.00	0.00
Charah Bottom Ash							4.13		4.13	4.13
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	30.59	-5.99	15.93	12.97	4.26	7.02	0.21	15.05	80.04	80.04
On-Site Landfills		18.12							18.12	18.12
On-Site Fill Projects **Silo Ash**							50.76		50.76	50.76
JAN Total Ash Utilized	**0.00**	**16.17**	**0.00**	**4.32**	**0.00**	**0.00**	**4.15**	**0.00**	**24.64**	**24.64**
FEB Coal Consumption	**242.64**	**276.94**	**87.64**	**161.67**	**49.20**	**70.64**	**474.16**	**107.74**	**1,470.637**	**3,016.308**
FEB % Ash	10.42	11.79	13.37	9.40	8.34	9.19	10.87	11.98	**10.87%**	
FEB Ash Produced	**25.28**	**32.65**	**11.72**	**15.20**	**4.10**	**6.49**	**51.54**	**12.91**	**159.89**	**333.46**
Utilization: Concrete		12.87		4.64					17.51	37.99
Mineral Filler							0.03		0.03	0.05
Structural Fill									0.00	0.00
Charah Bottom Ash							3.33		3.33	7.46
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	25.28	10.79	11.72	10.56	4.10	6.49	-1.95	12.91	79.91	159.95
On-Site Landfills		8.99							8.99	27.12
On-Site Fill Projects **Silo Ash**							50.13		50.13	100.90
FEB Total Ash Utilized	**0.00**	**12.87**	**0.00**	**4.64**	**0.00**	**0.00**	**3.35**	**0.00**	**20.86**	**45.50**
MAR Coal Consumption	**263.45**	**190.63**	**94.33**	**181.30**	**67.04**	**81.98**	**445.16**	**106.81**	**1,430.675**	**4,446.983**
MAR % Ash	10.35	11.71	13.80	10.16	8.92	9.39	10.73	11.75	**10.84%**	
MAR Ash Produced	**27.27**	**22.32**	**13.02**	**18.42**	**5.98**	**7.70**	**47.77**	**12.55**	**155.02**	**488.48**
Utilization: Concrete		21.62		6.26					27.88	65.87
Mineral Filler							0.00		0.00	0.05
Structural Fill									0.00	0.00
Charah Bottom Ash		0.05					1.57		1.62	9.08
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	27.27	-8.88	13.02	12.16	5.98	7.70	0.42	12.55	70.22	230.17
On-Site Landfills		9.53							9.53	36.65
On-Site Fill Projects **Silo Ash**							45.77		45.77	146.67
MAR Total Ash Utilized	**0.00**	**21.67**	**0.00**	**6.26**	**0.00**	**0.00**	**1.57**	**0.00**	**29.50**	**75.00**
APR Coal Consumption	**198.48**	**116.61**	**77.45**	**137.04**	**39.58**	**59.82**	**291.77**	**89.11**	**1,009.863**	**5,456.846**
APR % Ash	10.91	12.34	13.12	10.08	8.37	9.55	11.27	11.58	**11.12%**	
APR Ash Produced	**21.65**	**14.39**	**10.16**	**13.81**	**3.31**	**5.71**	**32.88**	**10.32**	**112.25**	**600.73**
Utilization: Concrete		23.11		5.77					28.88	94.75
Mineral Filler							0.71		0.71	0.76
Structural Fill									0.00	0.00
Charah Bottom Ash		0.30					2.18		2.48	11.56
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	21.65	-17.26	10.16	8.05	3.31	5.71	-0.57	10.32	41.37	271.54
On-Site Landfills		8.24							8.24	44.89
On-Site Fill Projects **Silo Ash**							30.56		30.56	177.23
APR Total Ash Utilized	**0.00**	**23.41**	**0.00**	**5.77**	**0.00**	**0.00**	**2.89**	**0.00**	**32.07**	**107.07**
MAY Coal Consumption	**195.01**	**277.07**	**50.72**	**67.93**	**22.22**	**34.85**	**433.93**	**50.85**	**1,132.580**	**6,589.426**
MAY % Ash	11.07	12.13	13.53	8.19	8.38	10.80	11.76	12.02	**11.51%**	
MAY Ash Produced	**21.59**	**33.61**	**6.86**	**5.56**	**1.86**	**3.76**	**51.03**	**6.11**	**130.39**	**731.12**
Utilization: Concrete		20.08		2.59					22.67	117.42
Mineral Filler							0.35		0.35	1.11
Structural Fill								16.05	16.05	16.05
Charah Bottom Ash							2.27		2.27	13.83

Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	21.59	12.84	6.86	2.97	1.86	3.76	0.75	-20.20	30.44	301.99
On-Site Landfills		0.69							0.69	45.58
On-Site Fill Projects **Silo Ash**							47.66	10.26	57.92	235.15
MAY Total Ash Utilized	**0.00**	**20.08**	**0.00**	**2.59**	**0.00**	**0.00**	**2.62**	**16.05**	**41.34**	**148.41**
JUN Coal Consumption	**214.78**	**323.52**	**68.23**	**126.53**	**34.72**	**41.08**	**460.10**	**76.71**	**1,345.656**	**7,935.082**
JUN % Ash	10.64	12.05	11.96	8.04	8.10	9.52	11.74	11.47	**11.13%**	
JUN Ash Produced	**22.85**	**38.98**	**8.16**	**10.17**	**2.81**	**3.91**	**54.02**	**8.80**	**149.71**	**880.82**
Utilization: Concrete		23.31		4.96					28.26	145.68
Mineral Filler							0.19		0.19	1.30
Structural Fill								16.05	16.05	32.11
Charah Bottom Ash		0.29					2.77		3.07	16.90
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	22.85	12.48	8.16	5.22	2.81	3.91	-0.89	-29.11	25.44	327.43
On-Site Landfills		2.90							2.90	48.48
On-Site Fill Projects **Silo Ash**							51.93	21.85	73.79	308.93
JUN Total Ash Utilized	**0.00**	**23.60**	**0.00**	**4.96**	**0.00**	**0.00**	**2.97**	**16.05**	**47.58**	**195.99**
JUL Coal Consumption	**179.51**	**335.24**	**87.65**	**172.02**	**52.75**	**62.75**	**482.93**	**115.38**	**1,488.225**	**9,423.307**
JUL % Ash	10.87	11.99	13.82	8.04	8.47	10.15	11.36	12.03	**11.10%**	
JUL Ash Produced	**19.51**	**40.20**	**12.11**	**13.83**	**4.47**	**6.37**	**54.86**	**13.88**	**165.23**	**1046.05**
Utilization: Concrete		25.31		6.86					32.16	177.85
Mineral Filler							0.22		0.22	1.52
Structural Fill								73.42	73.42	105.53
Charah Bottom Ash		0.40					3.49		3.89	20.79
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	19.51	8.00	12.11	6.97	4.47	6.37	-4.58	-59.54	-6.69	320.73
On-Site Landfills		6.49							6.49	54.97
On-Site Fill Projects **Silo Ash**							55.74		55.74	364.67
JUL Total Ash Utilized	**0.00**	**25.71**	**0.00**	**6.86**	**0.00**	**0.00**	**3.71**	**73.42**	**109.70**	**305.68**
AUG Coal Consumption	**112.64**	**558.05**	**99.79**	**189.31**	**59.26**	**70.95**	**493.60**	**109.34**	**1,692.947**	**11,116.254**
AUG % Ash	10.89	11.96	13.28	8.57	8.14	10.11	10.31	11.02	**10.83%**	
AUG Ash Produced	**12.27**	**66.74**	**13.25**	**16.22**	**4.82**	**7.17**	**50.89**	**12.05**	**183.42**	**1229.48**
Utilization: Concrete		30.58		7.18					37.76	215.61
Mineral Filler							0.46		0.46	1.98
Structural Fill								73.42	73.42	178.95
Charah Bottom Ash		0.12					4.89		5.01	25.80
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	12.27	11.59	13.25	9.05	4.82	7.17	-10.07	-61.37	-13.29	307.44
On-Site Landfills		24.45							24.45	79.42
On-Site Fill Projects **Silo Ash**							55.61		55.61	420.28
AUG Total Ash Utilized		**30.70**	**0.00**	**7.18**	**0.00**	**0.00**	**5.35**	**73.42**	**116.65**	**422.34**
SEP Coal Consumption	**136.97**	**513.22**	**76.90**	**146.73**	**39.72**	**54.42**	**497.95**	**95.69**	**1,561.598**	**12,677.852**
SEP % Ash	11.08	11.96	14.44	8.85	7.87	9.36	10.33	9.31	**10.84%**	
SEP Ash Produced	**15.18**	**61.38**	**11.10**	**12.99**	**3.13**	**5.09**	**51.44**	**8.91**	**169.21**	**1,398.69**
Utilization: Concrete		31.31		6.65					37.96	253.57
Mineral Filler							0.39		0.39	2.37
Structural Fill								73.42	73.42	252.37
Charah Bottom Ash		0.52					3.61		4.13	29.94
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins								0.06	0.06	0.06
Net Ash to Basins	15.18	5.10	11.10	6.34	3.13	5.09	-3.98	-64.46	-22.50	284.94
On-Site Landfills		24.45							24.45	103.86
On-Site Fill Projects **Silo Ash**							51.42		51.42	471.70
SEP Total Ash Utilized	**0.00**	**31.83**	**0.00**	**6.65**	**0.00**	**0.00**	**4.01**	**73.42**	**115.91**	**538.24**
OCT Coal Consumption	**226.30**	**300.71**	**64.55**	**99.37**	**3.85**	**18.04**	**456.90**	**68.24**	**1,237.954**	**13,915.806**
OCT % Ash	10.52	12.10	12.91	9.15	7.21	10.56	11.84	11.33	**11.44%**	
OCT Ash Produced	**23.81**	**36.39**	**8.33**	**9.09**	**0.28**	**1.90**	**54.10**	**7.73**	**141.63**	**1,540.32**
Utilization: Concrete		30.76		6.26					37.02	290.58
Mineral Filler							0.47		0.47	2.84

Structural Fill								73.42	73.42	325.80
Charah Bottom Ash		0.57					4.34		4.92	34.85
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.06
Net Ash to Basins	23.81	-10.85	8.33	2.83	0.28	1.90	-1.56	-65.69	-40.94	244.00
On-Site Landfills		15.90							15.90	119.77
On-Site Fill Projects **Silo Ash**							50.84		50.84	522.54
OCT Total Ash Utilized	**0.00**	**31.33**	**0.00**	**6.26**	**0.00**	**0.00**	**4.81**	**73.42**	**115.82**	**654.07**
NOV Coal Consumption	**242.33**	**317.68**	**60.04**	**134.23**	**24.28**	**29.67**	**453.81**	**74.83**	**1,336.862**	**15,252.668**
NOV % Ash	10.39	12.18	13.88	9.58	8.39	10.04	11.34	10.97	**11.20%**	
NOV Ash Produced	**25.18**	**38.69**	**8.33**	**12.86**	**2.04**	**2.98**	**51.46**	**8.21**	**149.75**	**1,690.07**
Utilization: Concrete		22.20		4.98					27.18	317.77
Mineral Filler							0.18		0.18	3.01
Structural Fill								73.42	73.42	399.22
Charah Bottom Ash		0.46					5.03		5.49	40.34
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins								0.01	0.01	0.07
Net Ash to Basins	25.18	11.42	8.33	7.88	2.04	2.98	0.78	-65.20	-6.60	237.40
On-Site Landfills		4.62							4.62	124.38
On-Site Fill Projects **Silo Ash**							45.48		45.48	568.02
NOV Total Ash Utilized	**0.00**	**22.66**	**0.00**	**4.98**	**0.00**	**0.00**	**5.21**	**73.42**	**106.27**	**760.34**
DEC Coal Consumption	**279.00**	**348.90**	**82.85**	**177.20**	**52.39**	**63.70**	**546.02**	**89.26**	**1,639.308**	**16,891.976**
DEC % Ash	11.23	12.13	13.57	9.17	7.95	9.62	10.79	10.56	**10.97%**	
DEC Ash Produced	**31.33**	**42.32**	**11.24**	**16.25**	**4.17**	**6.13**	**58.92**	**9.43**	**179.78**	**1,869.85**
Utilization: Concrete		19.75		4.27					24.02	341.79
Mineral Filler							0.22		0.22	3.24
Structural Fill								73.42	73.42	472.64
Charah Bottom Ash		0.60					5.19		5.79	46.13
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
Other: Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.07
Net Ash to Basins	31.33	14.06	11.24	11.97	4.17	6.13	-5.81	-64.00	9.09	246.49
On-Site Landfills		7.92							7.92	132.30
On-Site Fill Projects **Silo Ash**							59.31		59.31	627.32
DEC Total Ash Utilized	**0.00**	**20.35**	**0.00**	**4.27**	**0.00**	**0.00**	**5.42**	**73.42**	**103.46**	**863.80**
Year to Date Coal Consumed	**2,560.860**	**3,796.201**	**941.934**	**1,764.957**	**500.255**	**658.185**	**5,567.379**	**1,102.205**		**16,891.976**
Year to Date % Ash	**10.80%**	**12.01%**	**13.83%**	**9.16%**	**8.24%**	**9.76%**	**11.03%**	**11.43%**		
Year to Date Ash Produced	**276.51**	**455.98**	**130.23**	**161.69**	**41.23**	**64.25**	**614.02**	**125.94**		**1,869.85**
Utilization: Concrete	0.00	277.06	0.00	64.73	0.00	0.00	0.00	0.00		341.79
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	3.24	0.00		3.24
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	472.64		472.64
Charah Bottom Ash	0.00	3.32	0.00	0.00	0.00	0.00	42.82	0.00		46.13
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other: Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Cenosphere Removal from Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.07		0.07
Net Ash to Basins	276.51	43.30	130.23	96.96	41.23	64.25	-27.25	-378.73		246.49
On-Site Landfills	0.00	132.30	0.00	0.00	0.00	0.00	0.00	0.00		132.30
On-Site Fill Projects **Silo Ash**	0.00	0.00	0.00	0.00	0.00	0.00	595.22	32.11		627.32
YTD Total Ash Utilized	**0.00**	**280.38**	**0.00**	**64.73**	**0.00**	**0.00**	**46.05**	**472.64**		**863.80**
YTD Percent Ash Utilized	**0.0%**	**61.5%**	**0.0%**	**40.0%**	**0.0%**	**0.0%**	**7.5%**	**375.3%**		**46.2%**
YTD + Projected Ash Production	276.51	455.98	130.23	161.69	41.23	64.25	614.02	125.94		1869.85
YTD + Projected Ash Utilization	0.00	280.38	0.00	64.73	0.00	0.00	46.05	472.64		863.80
YTD + Projected % Ash Utilization	0.0%	61.5%	0.0%	40.0%	0.0%	0.0%	7.5%	375.3%		46.2%

2004 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption	**245.99**	**464.12**	**72.36**	**165.02**	**45.77**	**62.37**	**540.68**	**81.23**	**1,677.534**	**1,677.534**
JAN % Ash	11.61	12.10	13.35	9.44	8.14	9.40	11.33	11.96	**11.36%**	
JAN Ash Produced	**28.56**	**56.16**	**9.66**	**15.58**	**3.73**	**5.86**	**61.26**	**9.71**	**190.52**	**190.52**
Utilization: Concrete		17.43		3.20					20.64	20.64
Mineral Filler							0.24		0.24	0.24
Structural Fill									0.00	0.00
Charah Bottom Ash		0.30					2.96		3.27	3.27
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	28.56	11.38	9.66	12.38	3.73	5.86	1.82	9.71	83.10	83.10
On-Site Landfills		14.00							14.00	14.00
On-Site Fill Projects **Silo Ash**		13.05					56.24		69.28	69.28
JAN Total Ash Utilized	**0.00**	**17.74**	**0.00**	**3.20**	**0.00**	**0.00**	**3.20**	**0.00**	**24.14**	**24.14**
FEB Coal Consumption	**219.77**	**549.33**	**68.20**	**146.64**	**39.75**	**60.88**	**434.86**	**71.09**	**1,590.522**	**3,268.056**
FEB % Ash	11.68	11.71	14.83	9.54	9.69	9.26	10.40	11.80	**11.14%**	
FEB Ash Produced	**25.67**	**64.33**	**10.11**	**13.99**	**3.85**	**5.64**	**45.23**	**8.39**	**177.20**	**367.72**
Utilization: Concrete		15.72		2.84					18.56	39.19
Mineral Filler							0.30		0.30	0.54
Structural Fill									0.00	0.00
Charah Bottom Ash		0.28					4.66		4.94	8.21
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	25.67	5.35	10.11	11.15	3.85	5.64	-4.38	8.39	65.79	148.89
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**		42.97					44.64		87.61	156.89
FEB Total Ash Utilized	**0.00**	**16.00**	**0.00**	**2.84**	**0.00**	**0.00**	**4.96**	**0.00**	**23.80**	**47.94**
MAR Coal Consumption	**151.89**	**604.72**	**57.79**	**102.09**	**16.45**	**22.80**	**464.12**	**43.97**	**1,463.823**	**4,731.879**
MAR % Ash	12.69	12.08	16.72	9.93	8.62	8.69	11.41	14.11	**11.93%**	
MAR Ash Produced	**19.27**	**73.05**	**9.66**	**10.14**	**1.42**	**1.98**	**52.96**	**6.20**	**174.68**	**542.40**
Utilization: Concrete		30.45		3.72					34.17	73.36
Mineral Filler							0.38		0.38	0.92
Structural Fill									0.00	0.00
Charah Bottom Ash		0.61					6.62		7.22	15.43
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins								0.18	0.18	0.18
Net Ash to Basins	19.27	5.38	9.66	6.42	1.42	1.98	3.65	6.39	54.18	203.07
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**		36.61					42.31		78.92	235.81
MAR Total Ash Utilized	**0.00**	**31.06**	**0.00**	**3.72**	**0.00**	**0.00**	**7.00**	**0.00**	**41.77**	**89.71**
APR Coal Consumption	**198.94**	**401.35**	**69.60**	**76.09**	**29.75**	**47.54**	**408.75**	**81.43**	**1,313.446**	**6,045.325**
APR % Ash	13.11	12.27	17.37	9.70	8.44	8.38	11.88	14.01	**12.28%**	
APR Ash Produced	**26.08**	**49.25**	**12.09**	**7.38**	**2.51**	**3.98**	**48.56**	**11.41**	**161.26**	**703.66**
Utilization: Concrete		30.68		3.05					33.73	107.09
Mineral Filler							0.31		0.31	1.22
Structural Fill									0.00	0.00
Charah Bottom Ash		0.49					5.26		5.76	21.19
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	26.08	-6.53	12.09	4.33	2.51	3.98	1.68	11.41	55.55	258.62
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**		24.61					41.31		65.92	301.73
APR Total Ash Utilized	**0.00**	**31.17**	**0.00**	**3.05**	**0.00**	**0.00**	**5.57**	**0.00**	**39.79**	**129.50**
MAY Coal Consumption	**232.86**	**335.14**	**79.02**	**162.53**	**53.04**	**73.17**	**407.96**	**100.91**	**1,444.631**	**7,489.956**
MAY % Ash	12.93	11.64	17.04	10.24	9.45	9.31	11.38	11.86	**11.73%**	
MAY Ash Produced	**30.11**	**39.01**	**13.47**	**16.64**	**5.01**	**6.81**	**46.43**	**11.97**	**169.45**	**873.11**
Utilization: Concrete		34.40		5.93					40.33	147.42
Mineral Filler							0.34		0.34	1.56
Structural Fill									0.00	0.00
Charah Bottom Ash		0.43					5.05		5.48	26.67

Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	30.11	-5.50	13.47	10.71	5.01	6.81	-0.15	11.97	72.44	331.05
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**		9.68					41.18		50.86	352.59
MAY Total Ash Utilized	**0.00**	**34.83**	**0.00**	**5.93**	**0.00**	**0.00**	**5.39**	**0.00**	**46.15**	**175.65**
JUN Coal Consumption	**283.06**	**298.00**	**70.23**	**137.57**	**41.06**	**64.44**	**500.68**	**94.34**	**1,489.363**	**8,979.319**
JUN % Ash	12.34	12.58	13.11	9.84	8.30	9.29	10.86	11.58	**11.40%**	
JUN Ash Produced	**34.93**	**37.49**	**9.21**	**13.54**	**3.41**	**5.99**	**54.37**	**10.92**	**169.85**	**1042.96**
Utilization: Concrete		37.08		3.66					40.74	188.16
Mineral Filler							0.45		0.45	2.01
Structural Fill									0.00	0.00
Charah Bottom Ash		0.63					5.09		5.72	32.39
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	34.93	-4.68	9.21	9.88	3.41	5.99	-1.01	10.92	68.64	399.70
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**		4.46					49.84		54.30	406.89
JUN Total Ash Utilized	**0.00**	**37.71**	**0.00**	**3.66**	**0.00**	**0.00**	**5.54**	**0.00**	**46.91**	**222.56**
JUL Coal Consumption	**237.00**	**573.63**	**77.64**	**157.74**	**39.03**	**57.78**	**492.60**	**86.77**	**1,722.184**	**10,701.503**
JUL % Ash	13.31	12.61	14.53	9.75	8.66	9.70	11.10	13.03	**11.93%**	
JUL Ash Produced	**31.54**	**72.33**	**11.28**	**15.38**	**3.38**	**5.60**	**54.68**	**11.31**	**205.51**	**1248.47**
Utilization: Concrete		38.00		5.08					43.08	231.24
Mineral Filler							0.31		0.31	2.33
Structural Fill									0.00	0.00
Charah Bottom Ash		0.72					4.17		4.89	37.28
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	31.54	3.94	11.28	10.30	3.38	5.60	2.81	11.31	80.17	479.87
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**		29.68					47.38		77.06	483.95
JUL Total Ash Utilized	**0.00**	**38.72**	**0.00**	**5.08**	**0.00**	**0.00**	**4.49**	**0.00**	**48.28**	**270.84**
AUG Coal Consumption	**268.05**	**411.92**	**76.35**	**160.00**	**30.35**	**51.94**	**506.16**	**77.12**	**1,581.882**	**12,283.385**
AUG % Ash	13.34	12.19	14.31	10.09	8.59	9.87	11.04	12.72	**11.79%**	
AUG Ash Produced	**35.76**	**50.21**	**10.93**	**16.14**	**2.61**	**5.13**	**55.88**	**9.81**	**186.46**	**1434.93**
Utilization: Concrete		28.23		5.24					33.47	264.70
Mineral Filler							0.40		0.40	2.72
Structural Fill									0.00	0.00
Charah Bottom Ash		0.65					5.50		6.15	43.44
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	35.76	4.62	10.93	10.91	2.61	5.13	-0.63	9.81	79.12	558.99
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**		16.71					50.61		67.32	551.27
AUG Total Ash Utilized		**28.88**	**0.00**	**5.24**	**0.00**	**0.00**	**5.90**	**0.00**	**40.02**	**310.86**
SEP Coal Consumption	**190.84**	**358.73**	**34.67**	**127.67**	**2.61**	**13.64**	**437.06**	**30.68**	**1,195.895**	**13,479.280**
SEP % Ash	13.80	11.95	13.58	9.90	9.27	9.80	11.04	11.20	**11.69%**	
SEP Ash Produced	**26.34**	**42.87**	**4.71**	**12.64**	**0.24**	**1.34**	**48.25**	**3.44**	**139.82**	**1,574.75**
Utilization: Concrete		23.70		4.59					28.29	292.99
Mineral Filler							0.28		0.28	3.01
Structural Fill									0.00	0.00
Charah Bottom Ash		0.59					4.95		5.53	48.97
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	-3.63	13.32	4.71	8.05	0.24	1.34	-0.91	3.44	26.55	585.54
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**	29.97	5.27					43.93		79.16	630.43
SEP Total Ash Utilized	**0.00**	**24.28**	**0.00**	**4.59**	**0.00**	**0.00**	**5.23**	**0.00**	**34.10**	**344.97**
OCT Coal Consumption	**163.76**	**556.10**	**32.96**	**84.34**	**0.23**	**5.27**	**417.43**	**8.64**	**1,268.733**	**14,748.013**
OCT % Ash	14.04	12.26	16.58	10.19	9.27	11.84	11.39	11.80	**12.17%**	
OCT Ash Produced	**22.99**	**68.18**	**5.47**	**8.59**	**0.02**	**0.62**	**47.55**	**1.02**	**154.44**	**1,729.19**
Utilization: Concrete		33.91		4.18					38.09	331.08
Mineral Filler							0.31		0.31	3.32

Structural Fill									0.00	0.00
Charah Bottom Ash		0.56					6.01		6.57	55.54
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	-32.97	16.84	5.47	4.42	0.02	0.62	12.33	1.02	7.74	593.28
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**	55.97	16.87					28.90		101.73	732.16
OCT Total Ash Utilized	**0.00**	**34.47**	**0.00**	**4.18**	**0.00**	**0.00**	**6.32**	**0.00**	**44.97**	**389.93**
NOV Coal Consumption	**159.01**	**501.91**	**37.49**	**34.94**	**2.49**	**4.59**	**406.27**	**1.65**	**1,148.338**	**15,896.351**
NOV % Ash	15.13	11.89	14.97	10.09	8.19	11.05	11.35	12.43	**12.18%**	
NOV Ash Produced	**24.06**	**59.68**	**5.61**	**3.53**	**0.20**	**0.51**	**46.11**	**0.21**	**139.90**	**1,869.09**
Utilization: Concrete		27.92		3.19					31.11	362.19
Mineral Filler							0.32		0.32	3.64
Structural Fill									0.00	0.00
Charah Bottom Ash		0.89					8.24		9.13	64.66
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	-8.96	3.15	5.61	0.33	0.20	0.51	2.01	0.21	3.06	596.34
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**	33.02	27.72					35.54		96.28	828.44
NOV Total Ash Utilized	**0.00**	**28.81**	**0.00**	**3.19**	**0.00**	**0.00**	**8.56**	**0.00**	**40.56**	**430.49**
DEC Coal Consumption	**172.65**	**532.45**	**42.94**	**60.34**	**10.34**	**11.43**	**469.67**	**19.36**	**1,319.178**	**17,215.529**
DEC % Ash	14.68	11.94	14.96	10.23	8.07	9.11	10.91	11.83	**11.90%**	
DEC Ash Produced	**25.34**	**63.57**	**6.42**	**6.17**	**0.83**	**1.04**	**51.24**	**2.29**	**156.92**	**2,026.01**
Utilization: Concrete		24.41		0.10					24.51	386.70
Mineral Filler							0.07		0.07	3.71
Structural Fill									0.00	0.00
Charah Bottom Ash		0.94					6.40		7.34	72.00
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
er: Canal Ash Removal									0.00	0.00
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	6.20	1.67	6.42	6.07	0.83	1.04	-1.55	2.29	22.98	619.32
On-Site Landfills									0.00	14.00
On-Site Fill Projects **Silo Ash**	19.14	36.57					46.32		102.02	930.47
DEC Total Ash Utilized	**0.00**	**25.34**	**0.00**	**0.10**	**0.00**	**0.00**	**6.47**	**0.00**	**31.91**	**462.41**
Year to Date Coal Consumed	**2,523.791**	**5,587.399**	**719.244**	**1,414.976**	**310.874**	**475.845**	**5,486.235**	**697.165**		**17,215.529**
Year to Date % Ash	**13.10%**	**12.10%**	**15.10%**	**9.87%**	**8.75%**	**9.35%**	**11.16%**	**12.43%**		
Year to Date Ash Produced	**330.65**	**676.12**	**108.61**	**139.72**	**27.22**	**44.50**	**612.51**	**86.67**		**2,026.01**
Utilization: Concrete	0.00	341.93	0.00	44.77	0.00	0.00	0.00	0.00		386.70
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	3.71	0.00		3.71
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Charah Bottom Ash	0.00	7.08	0.00	0.00	0.00	0.00	64.92	0.00		72.00
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
er: Canal Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.27	0.00		0.27
Cenosphere Removal from Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.18		0.18
Net Ash to Basins	192.55	48.94	108.61	94.95	27.22	44.50	15.69	86.86		619.32
On-Site Landfills	0.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00		14.00
On-Site Fill Projects **Silo Ash**	138.10	264.18	0.00	0.00	0.00	0.00	528.19	0.00		930.47
YTD Total Ash Utilized	**0.00**	**349.01**	**0.00**	**44.77**	**0.00**	**0.00**	**68.63**	**0.00**		**462.41**
YTD Percent Ash Utilized	**0.0%**	**51.6%**	**0.0%**	**32.0%**	**0.0%**	**0.0%**	**11.2%**	**0.0%**		**22.8%**
YTD + Projected Ash Production	330.65	676.12	108.61	139.72	27.22	44.50	612.51	86.67		2026.01
YTD + Projected Ash Utilization	0.00	349.01	0.00	44.77	0.00	0.00	68.63	0.00		462.41
YTD + Projected % Ash Utilization	0.0%	51.6%	0.0%	32.0%	0.0%	0.0%	11.2%	0.0%		22.8%

2005 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption	**177.38**	**482.04**	**45.04**	**81.01**	**24.07**	**34.45**	**523.95**	**57.52**	**1,425.458**	**1,425.458**
JAN % Ash	13.54	12.34	17.27	10.27	11.19	8.98	11.28	12.05	**12.03%**	
JAN Ash Produced	**24.02**	**59.48**	**7.78**	**8.32**	**2.69**	**3.09**	**59.10**	**6.93**	**171.42**	**171.42**
Utilization: Concrete		24.91		2.02					26.93	26.93
Mineral Filler							0.00		0.00	0.00
Structural Fill									0.00	0.00
Charah Bottom Ash		1.05					7.47		8.53	8.53
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							5.75		5.75	5.75
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	24.02	2.60	7.78	6.30	2.69	3.09	-6.80	6.93	46.62	46.62
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		30.92					52.68		83.60	83.60
JAN Total Ash Utilized	**0.00**	**25.97**	**0.00**	**2.02**	**0.00**	**0.00**	**7.47**	**0.00**	**35.46**	**35.46**
FEB Coal Consumption	**197.34**	**495.58**	**54.62**	**44.62**	**6.45**	**30.62**	**460.92**	**44.90**	**1,335.041**	**2,760.499**
FEB % Ash	12.47	11.92	16.46	9.80	10.53	9.74	11.12	12.23	**11.79%**	
FEB Ash Produced	**24.61**	**59.07**	**8.99**	**4.37**	**0.68**	**2.98**	**51.25**	**5.49**	**157.45**	**328.87**
Utilization: Concrete		21.62		2.22					23.85	50.78
Mineral Filler							0.26		0.26	0.26
Structural Fill									0.00	0.00
Charah Bottom Ash		1.22					8.12		9.34	17.86
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							1.86		1.86	7.61
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	24.61	7.94	8.99	2.15	0.68	2.98	-5.50	5.49	47.33	93.95
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		28.29					46.52		74.81	158.41
FEB Total Ash Utilized	**0.00**	**22.84**	**0.00**	**2.22**	**0.00**	**0.00**	**8.38**	**0.00**	**33.45**	**68.90**
MAR Coal Consumption	**250.07**	**336.00**	**68.93**	**137.91**	**27.10**	**72.14**	**485.40**	**94.85**	**1,472.386**	**4,232.885**
MAR % Ash	12.35	12.20	16.81	9.59	10.14	9.82	10.91	12.17	**11.62%**	
MAR Ash Produced	**30.88**	**40.99**	**11.59**	**13.23**	**2.75**	**7.08**	**52.96**	**11.54**	**171.02**	**499.89**
Utilization: Concrete		25.19		2.76					27.95	78.73
Mineral Filler							0.37		0.37	0.63
Structural Fill									0.00	0.00
Charah Bottom Ash		0.68					9.42		10.10	27.96
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							0.00		0.00	7.61
Cenosphere Removal from Basins								0.18	0.18	0.18
Net Ash to Basins	30.88	-5.73	11.59	10.46	2.75	7.08	-2.48	11.73	66.28	160.22
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		20.85					45.66		66.51	224.92
MAR Total Ash Utilized	**0.00**	**25.87**	**0.00**	**2.76**	**0.00**	**0.00**	**9.78**	**0.00**	**38.42**	**107.32**
APR Coal Consumption	**228.29**	**297.34**	**62.22**	**147.26**	**27.65**	**55.84**	**459.27**	**53.20**	**1,331.068**	**5,563.953**
APR % Ash	12.94	12.55	13.43	10.73	9.56	9.79	11.17	12.73	**11.81%**	
APR Ash Produced	**29.54**	**37.32**	**8.36**	**15.80**	**2.64**	**5.47**	**51.30**	**6.77**	**157.20**	**657.08**
Utilization: Concrete		34.41		8.35					42.75	121.48
Mineral Filler							0.34		0.34	0.97
Structural Fill									0.00	0.00
Charah Bottom Ash		1.00					6.21		7.21	35.17
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							0.00		0.00	7.61
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	29.54	-11.39	8.36	7.45	2.64	5.47	4.89	6.77	53.73	213.96
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		13.30					39.86		53.16	278.08
APR Total Ash Utilized	**0.00**	**35.41**	**0.00**	**8.35**	**0.00**	**0.00**	**6.55**	**0.00**	**50.30**	**157.62**
MAY Coal Consumption	**234.22**	**380.25**	**59.38**	**157.80**	**11.71**	**38.50**	**438.44**	**41.22**	**1,361.518**	**6,925.471**
MAY % Ash	13.94	12.11	17.79	10.61	9.39	10.93	11.68	11.02	**12.27%**	
MAY Ash Produced	**32.65**	**46.05**	**10.56**	**16.74**	**1.10**	**4.21**	**51.21**	**4.54**	**167.06**	**824.15**
Utilization: Concrete		38.05		9.75					47.80	169.28
Mineral Filler							0.40		0.40	1.37
Structural Fill									0.00	0.00
Charah Bottom Ash		2.46					6.45		8.92	44.09
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							0.00		0.00	7.61
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	32.65	-5.57	10.56	7.00	1.10	4.21	3.22	4.54	57.71	271.67
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		11.10					41.13		52.23	330.31
MAY Total Ash Utilized	**0.00**	**40.52**	**0.00**	**9.75**	**0.00**	**0.00**	**6.86**	**0.00**	**57.12**	**214.74**
JUN Coal Consumption	**221.41**	**533.33**	**63.32**	**151.14**	**25.03**	**49.99**	**479.60**	**79.15**	**1,602.980**	**8,528.431**
JUN % Ash	13.94	12.81	12.16	10.22	9.99	11.01	11.62	12.27	**12.21%**	
JUN Ash Produced	**30.86**	**68.32**	**7.70**	**15.45**	**2.50**	**5.50**	**55.73**	**9.71**	**195.77**	**1019.92**
Utilization: Concrete		37.97		8.87					46.84	216.12
Mineral Filler							0.35		0.35	1.72
Structural Fill									0.00	0.00
Charah Bottom Ash		1.67					6.33		8.00	52.08
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							0.00		0.00	7.61
Cenosphere Removal from Basins									0.00	0.18
Net Ash to Basins	30.86	24.99	7.70	6.58	2.50	5.50	5.34	9.71	93.19	364.86
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		3.69					43.71		47.40	377.71
JUN Total Ash Utilized	**0.00**	**39.64**	**0.00**	**8.87**	**0.00**	**0.00**	**6.67**	**0.00**	**55.18**	**269.93**
JUL Coal Consumption	**287.74**	**548.01**	**92.72**	**179.35**	**40.72**	**75.79**	**502.52**	**97.52**	**1,824.362**	**10,352.793**
JUL % Ash	13.58	12.24	12.87	11.81	9.38	10.07	11.84	11.77	**12.15%**	
JUL Ash Produced	**39.08**	**67.08**	**11.93**	**21.18**	**3.82**	**7.63**	**59.50**	**11.48**	**221.69**	**1241.62**
Utilization: Concrete		38.63		9.59					48.23	264.35
Mineral Filler							0.19		0.19	1.91
Structural Fill									0.00	0.00
Charah Bottom Ash		1.45					5.70		7.16	59.24
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal									0.00	7.61
Cenosphere Removal from Basins									0.00	0.18

Net Ash to Basins	39.08	14.31	11.93	11.59	3.82	7.63	7.71	11.48	107.55	472.41
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		12.68					45.89		58.57	436.28
JUL Total Ash Utilized	**0.00**	**40.09**	**0.00**	**9.59**	**0.00**	**0.00**	**5.89**	**0.00**	**55.57**	**325.50**
AUG Coal Consumption	**271.19**	**606.24**	**103.98**	**193.46**	**56.86**	**82.70**	**523.04**	**110.56**	**1,948.032**	**12,300.825**
AUG % Ash	14.76	12.09	17.25	11.07	9.38	10.50	12.10	11.16	**12.44%**	
AUG Ash Produced	**40.03**	**73.29**	**17.94**	**21.42**	**5.33**	**8.68**	**63.29**	**12.34**	**242.32**	**1483.94**
Utilization: Concrete		45.36		12.03					57.39	321.75
Mineral Filler							0.36		0.36	2.26
Structural Fill									0.00	0.00
Charah Bottom Ash		2.03					5.66		7.69	66.92
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							2.88		2.88	10.49
Cenosphere Removal from Basins	0.06								0.06	0.24
Net Ash to Basins	40.09	0.59	17.94	9.38	5.33	8.68	3.40	12.34	97.75	570.16
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		25.32					51.00		76.31	512.60
AUG Total Ash Utilized		**47.39**	**0.00**	**12.03**	**0.00**	**0.00**	**6.01**	**0.00**	**65.44**	**390.93**
SEP Coal Consumption	**226.09**	**551.91**	**84.62**	**166.68**	**35.72**	**68.04**	**485.15**	**95.02**	**1,715.222**	**14,016.047**
SEP % Ash	16.05	11.94	15.55	12.28	9.54	10.56	12.17	10.57	**12.58%**	
SEP Ash Produced	**36.29**	**65.90**	**13.16**	**20.71**	**3.41**	**7.19**	**59.04**	**10.04**	**215.74**	**1,899.67**
Utilization: Concrete		41.88		10.95					52.83	374.58
Mineral Filler							0.28		0.28	2.54
Structural Fill									0.00	0.00
Charah Bottom Ash		1.61					10.04		11.65	78.57
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							7.86		7.86	18.35
Cenosphere Removal from Basins	8.91								8.91	9.15
Net Ash to Basins	45.20	-3.12	13.16	9.76	3.41	7.19	-5.54	10.04	80.10	650.26
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		25.53					46.40		71.93	584.53
SEP Total Ash Utilized	**0.00**	**43.49**	**0.00**	**10.95**	**0.00**	**0.00**	**10.31**	**0.00**	**64.75**	**455.69**
OCT Coal Consumption	**203.48**	**493.60**	**53.87**	**90.59**	**13.72**	**43.58**	**457.98**	**59.78**	**1,416.585**	**15,432.632**
OCT % Ash	17.22	12.08	16.72	12.30	9.89	12.02	11.98	10.71	**12.90%**	
OCT Ash Produced	**35.04**	**59.63**	**9.01**	**11.14**	**1.36**	**5.24**	**54.87**	**6.40**	**182.68**	**1,882.35**
Utilization: Concrete		37.73		3.90					41.62	416.20
Mineral Filler							0.27		0.27	2.81
Structural Fill									0.00	0.00
Charah Bottom Ash		1.73					7.44		9.18	87.75
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							4.86		4.86	23.21
Cenosphere Removal from Basins									0.00	9.15
Net Ash to Basins	35.04	4.13	9.01	7.24	1.36	5.24	-2.47	6.40	65.94	716.20
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		16.04					44.77		60.81	645.33
OCT Total Ash Utilized	**0.00**	**39.46**	**0.00**	**3.90**	**0.00**	**0.00**	**7.71**	**0.00**	**51.07**	**506.76**
NOV Coal Consumption	**169.79**	**479.44**	**22.46**	**119.34**	**3.82**	**18.11**	**439.39**	**21.55**	**1,273.888**	**16,706.520**
NOV % Ash	17.64	10.99	17.38	13.26	9.30	9.80	12.28	9.89	**12.61%**	
NOV Ash Produced	**29.95**	**52.69**	**3.90**	**15.82**	**0.36**	**1.77**	**53.96**	**2.13**	**160.59**	**2,042.94**
Utilization: Concrete		35.92		5.94					41.87	458.07
Mineral Filler							0.24		0.24	3.05
Structural Fill									0.00	0.00
Charah Bottom Ash		1.34					8.55		9.89	97.64
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							6.88		6.88	30.09
Cenosphere Removal from Basins									0.00	9.15
Net Ash to Basins	-214.85	3.34	3.90	9.88	0.36	1.77	-3.79	2.13	-197.26	518.94
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**	244.80	12.09					42.08		298.97	944.30
NOV Total Ash Utilized	**0.00**	**37.26**	**0.00**	**5.94**	**0.00**	**0.00**	**8.79**	**0.00**	**51.99**	**558.75**
DEC Coal Consumption	**204.66**	**449.89**	**72.70**	**111.16**	**21.21**	**45.80**	**461.56**	**44.98**	**1,411.941**	**18,118.461**
DEC % Ash	17.21	12.31	15.11	13.40	8.74	10.24	11.56	11.11	**12.85%**	
DEC Ash Produced	**35.22**	**55.38**	**10.98**	**14.89**	**1.85**	**4.69**	**53.36**	**5.00**	**181.38**	**2,224.31**
Utilization: Concrete		25.20		5.80					31.00	489.07
Mineral Filler							0.17		0.17	3.22
Structural Fill									0.00	0.00
Charah Bottom Ash		2.21					7.02		9.22	106.86
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
or: Canal Ash Removal							0.00		0.00	30.09
Cenosphere Removal from Basins									0.00	9.15
Net Ash to Basins	35.22	9.26	10.98	9.09	1.85	4.69	5.26	5.00	81.37	600.31
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		18.72					40.91		59.62	1003.92
DEC Total Ash Utilized	**0.00**	**27.40**	**0.00**	**5.80**	**0.00**	**0.00**	**7.19**	**0.00**	**40.39**	**599.14**
Year to Date Coal Consumed	**2,671.655**	**5,653.629**	**783.844**	**1,582.294**	**294.047**	**615.542**	**5,717.211**	**800.240**		**18,118.461**
Year to Date % Ash	**14.53%**	**12.12%**	**15.55%**	**11.32%**	**9.69%**	**10.32%**	**11.64%**	**11.54%**		
Year to Date Ash Produced	**388.17**	**685.20**	**121.90**	**179.08**	**28.49**	**63.54**	**665.56**	**92.38**		**2,224.31**
Utilization: Concrete	0.00	406.87	0.00	82.19	0.00	0.00	0.00	0.00		489.07
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	3.22	0.00		3.22
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Charah Bottom Ash	0.00	18.47	0.00	0.00	0.00	0.00	88.39	0.00		106.86
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
or: Canal Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	0.31	0.00		0.31
Cenosphere Removal from Basins	8.97	0.00	0.00	0.00	0.00	0.00	0.00	0.18		9.15
Net Ash to Basins	152.34	41.35	121.90	96.89	28.49	63.54	3.24	92.57		600.31
On-Site Landfills	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
On-Site Fill Projects **Silo Ash**	244.80	218.51	0.00	0.00	0.00	0.00	540.61	0.00		1003.92
YTD Total Ash Utilized	**0.00**	**425.34**	**0.00**	**82.19**	**0.00**	**0.00**	**91.61**	**0.00**		**599.14**
YTD Percent Ash Utilized	**0.0%**	**62.1%**	**0.0%**	**45.9%**	**0.0%**	**0.0%**	**13.8%**	**0.0%**		**26.9%**
YTD + Projected Ash Production	388.17	685.20	121.90	179.08	28.49	63.54	665.56	92.38		2224.31
YTD + Projected Ash Utilization	0.00	425.34	0.00	82.19	0.00	0.00	91.61	0.00		599.14
YTD + Projected % Ash Utilization	0.0%	62.1%	0.0%	45.9%	0.0%	0.0%	13.8%	0.0%		26.9%

Note: October and November Marshall percent of moisture figured at assumed 18.1%

2006 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total
JAN Coal Consumption	**94.94**	**541.56**	**13.20**	**49.55**	**2.53**	**5.13**	**517.54**	**4.84**	**1,229.297**	**1,229.297**
JAN % Ash	15.84	12.13	15.46	12.99	8.74	10.02	11.40	10.84	**12.16%**	
JAN Ash Produced	**15.04**	**65.69**	**2.04**	**6.44**	**0.22**	**0.51**	**59.00**	**0.52**	**149.47**	**149.47**
Utilization: Concrete		32.63		3.79					36.42	36.42
Mineral Filler							0.28		0.28	0.28
Structural Fill									0.00	0.00
Charah Bottom Ash		1.83					58.27		60.10	60.10
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal							3.47		3.47	3.47
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	15.04	0.23	2.04	2.65	0.22	0.51	-42.35	0.52	-21.14	-21.14
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		31.00					39.33		70.34	70.34
JAN Total Ash Utilized	**0.00**	**34.46**	**0.00**	**3.79**	**0.00**	**0.00**	**58.55**	**0.00**	**96.80**	**96.80**
FEB Coal Consumption	**226.58**	**382.11**	**57.78**	**105.97**	**36.38**	**33.69**	**467.06**	**51.42**	**1,360.993**	**2,590.289**
FEB % Ash	16.17	12.75	16.61	10.96	9.74	13.29	11.94	13.03	**13.01%**	
FEB Ash Produced	**36.64**	**48.72**	**9.60**	**11.61**	**3.54**	**4.48**	**55.77**	**6.70**	**177.06**	**326.52**
Utilization: Concrete		31.78		6.10					37.88	74.29
Mineral Filler							0.32		0.32	0.60
Structural Fill									0.00	0.00
Charah Bottom Ash		2.26					9.20		11.46	71.56
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal							3.91		3.91	7.38
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	36.64	-4.34	9.60	5.52	3.54	4.48	-1.71	6.70	60.43	39.29
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		19.01					44.05		63.06	133.40
FEB Total Ash Utilized	**0.00**	**34.04**	**0.00**		**0.00**	**0.00**	**9.52**	**0.00**	**43.56**	**140.36**
MAR Coal Consumption	**235.40**	**398.88**	**68.82**	**139.32**	**48.80**	**41.46**	**350.34**	**59.64**	**1,342.647**	**3,932.936**
MAR % Ash	16.16	12.31	15.54	11.29	10.24	11.85	12.34	10.61	**12.89%**	
MAR Ash Produced	**38.04**	**49.10**	**10.69**	**15.73**	**5.00**	**4.91**	**43.23**	**6.33**	**173.03**	**499.56**
Utilization: Concrete		44.21		9.40					53.61	127.90
Mineral Filler							0.38		0.38	0.98
Structural Fill									0.00	0.00
Charah Bottom Ash		1.89					10.67		12.55	84.12
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal							2.21		2.21	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	38.04	-1.13	10.69	6.33	5.00	4.91	5.38	6.33	75.55	114.84
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		4.14					24.59		28.73	162.13
MAR Total Ash Utilized	**0.00**	**46.09**	**0.00**	**9.40**	**0.00**	**0.00**	**11.05**	**0.00**	**66.54**	**206.90**
APR Coal Consumption	**192.51**	**320.17**	**83.88**	**99.38**	**58.28**	**51.06**	**291.52**	**93.42**	**1,190.215**	**5,123.151**
APR % Ash	14.51	11.30	16.27	12.46	10.40	11.79	12.13	10.10	**12.35%**	
APR Ash Produced	**27.93**	**36.18**	**13.65**	**12.38**	**6.06**	**6.02**	**35.36**	**9.43**	**147.02**	**646.58**
Utilization: Concrete		38.73		2.94					41.68	169.58
Mineral Filler							0.41		0.41	1.38
Structural Fill									0.00	0.00
Charah Bottom Ash		1.07					7.72		8.80	92.91
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	27.93	-7.36	13.65	9.44	6.06	6.02	3.61	9.43	68.79	183.63
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		3.73					23.62		27.35	189.49
APR Total Ash Utilized	**0.00**	**39.81**	**0.00**	**2.94**	**0.00**	**0.00**	**8.13**	**0.00**	**50.88**	**257.78**
MAY Coal Consumption	**180.02**	**592.31**	**56.21**	**142.52**	**36.31**	**46.83**	**418.20**	**59.91**	**1,532.307**	**6,655.457**
MAY % Ash	14.16	12.34	19.61	12.44	11.09	12.66	11.87	10.77	**12.62%**	
MAY Ash Produced	**25.49**	**73.09**	**11.02**	**17.73**	**4.03**	**5.93**	**49.64**	**6.45**	**193.38**	**839.96**
Utilization: Concrete		50.71		7.17					57.88	227.46
Mineral Filler							0.37		0.37	1.75
Structural Fill									0.00	0.00
Charah Bottom Ash		2.34					8.10		10.44	103.35

Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	25.49	6.23	11.02	10.56	4.03	5.93	4.77	6.45	74.48	258.11
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		13.81					36.40		50.21	239.70
MAY Total Ash Utilized	**0.00**	**53.06**	**0.00**	**7.17**	**0.00**	**0.00**	**8.46**	**0.00**	**68.68**	**326.46**
JUN Coal Consumption	**266.75**	**524.22**	**90.98**	**174.94**	**56.02**	**44.22**	**459.34**	**99.67**	**1,716.137**	**8,371.594**
JUN % Ash	13.90	12.04	18.56	12.43	9.51	14.23	11.82	10.87	**12.56%**	
JUN Ash Produced	**37.08**	**63.12**	**16.89**	**21.75**	**5.33**	**6.29**	**54.29**	**10.83**	**215.57**	**1055.53**
Utilization: Concrete		44.71		9.71					54.42	281.88
Mineral Filler							0.45		0.45	2.20
Structural Fill									0.00	0.00
Charah Bottom Ash		1.81					9.27		11.08	114.43
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	37.08	3.89	16.89	12.04	5.33	6.29	1.83	10.83	94.17	352.28
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		12.71					42.75		55.45	295.15
JUN Total Ash Utilized	**0.00**	**46.52**	**0.00**	**9.71**	**0.00**	**0.00**	**9.72**	**0.00**	**65.95**	**392.41**
JUL Coal Consumption	**253.46**	**481.21**	**95.17**	**199.58**	**67.32**	**65.56**	**490.01**	**116.79**	**1,769.094**	**10,140.687**
JUL % Ash	14.47	12.21	16.37	12.93	9.55	13.70	12.26	11.89	**12.79%**	
JUL Ash Produced	**36.68**	**58.76**	**15.58**	**25.81**	**6.43**	**8.98**	**60.07**	**13.89**	**226.19**	**1281.72**
Utilization: Concrete		43.19		9.75					52.94	334.82
Mineral Filler							2.43		2.43	4.63
Structural Fill									0.00	0.00
Charah Bottom Ash		1.84					7.85		9.69	124.13
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	36.68	3.04	15.58	16.06	6.43	8.98	1.69	13.89	102.34	454.62
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		10.68					48.11		58.78	353.94
JUL Total Ash Utilized	**0.00**	**45.04**	**0.00**	**9.75**	**0.00**	**0.00**	**10.28**	**0.00**	**65.07**	**457.48**
AUG Coal Consumption	**236.09**	**599.02**	**85.14**	**198.18**	**62.29**	**69.75**	**500.93**	**117.72**	**1,869.113**	**12,009.800**
AUG % Ash	16.48	12.18	11.64	13.37	11.00	11.93	12.26	11.85		
AUG Ash Produced	**38.91**	**72.96**	**9.91**	**26.50**	**6.85**	**8.32**	**61.41**	**13.95**	**238.81**	**1520.53**
Utilization: Concrete		47.76		11.65					59.41	394.23
Mineral Filler							3.44		3.44	8.07
Structural Fill									0.00	0.00
Charah Bottom Ash		1.51					7.69		9.20	133.33
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	-211.09	6.53	9.91	14.85	6.85	8.32	-2.16	13.95	-152.84	301.78
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**	250.00	17.15					52.44		319.59	673.53
AUG Total Ash Utilized		**49.28**	**0.00**	**11.65**	**0.00**	**0.00**	**11.13**	**0.00**	**72.06**	**529.53**
SEP Coal Consumption	**193.37**	**545.02**	**29.72**	**133.40**	**5.19**	**14.96**	**423.10**	**17.12**	**1,361.881**	**13,371.680**
SEP % Ash	13.91	12.35	10.36	10.93	12.08	12.36	11.65	11.86	**12.16%**	
SEP Ash Produced	**26.90**	**67.31**	**3.08**	**14.58**	**0.63**	**1.85**	**49.29**	**2.03**	**165.67**	**1,686.20**
Utilization: Concrete		36.85		8.66					45.50	439.74
Mineral Filler							0.33		0.33	8.40
Structural Fill									0.00	0.00
Charah Bottom Ash		1.17					27.52		28.69	162.02
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	26.90	10.93	3.08	5.92	0.63	1.85	-30.95	2.03	20.38	322.16
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		18.37					52.40		70.76	744.29
SEP Total Ash Utilized	**0.00**	**38.02**	**0.00**	**8.66**	**0.00**	**0.00**	**27.85**	**0.00**	**74.52**	**604.05**
OCT Coal Consumption	**305.68**	**474.05**	**45.05**	**199.70**	**27.29**	**70.48**	**248.81**	**64.16**	**1,435.215**	**14,806.895**
OCT % Ash	14.53	7.10	11.30	11.74	11.63	11.63	12.10	10.30	**10.78%**	
OCT Ash Produced	**44.42**	**33.66**	**5.09**	**23.45**	**3.17**	**8.20**	**30.11**	**6.61**	**154.69**	**1,840.89**
Utilization: Concrete		40.95		9.48					50.43	490.17
Mineral Filler							0.33		0.33	8.73

Structural Fill									0.00	0.00
Charah Bottom Ash		1.32					13.09		14.41	176.43
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	44.42	-16.76	5.09	13.97	3.17	8.20	-14.20	6.61	50.50	372.66
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		8.14					30.88		39.02	783.32
OCT Total Ash Utilized	**0.00**	**42.28**	**0.00**	**9.48**	**0.00**	**0.00**	**13.42**	**0.00**	**65.17**	**669.23**
NOV Coal Consumption	**327.89**	**421.35**	**73.86**	**167.86**	**28.51**	**69.02**	**259.25**	**70.74**	**1,418.482**	**16,225.377**
NOV % Ash	14.31	12.04	11.71	11.29	11.12	11.95	11.78	10.24	**12.30%**	
NOV Ash Produced	**46.92**	**50.73**	**8.65**	**18.95**	**3.17**	**8.25**	**30.54**	**7.24**	**174.45**	**2,015.34**
Utilization: Concrete		33.90		7.35					41.25	531.42
Mineral Filler									0.00	8.73
Structural Fill									0.00	0.00
Charah Bottom Ash		1.21					8.21		9.41	185.84
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	46.92	11.21	8.65	11.60	3.17	8.25	-4.62	7.24	92.42	465.08
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		4.42					26.96		31.37	814.69
NOV Total Ash Utilized	**0.00**	**35.10**	**0.00**	**7.35**	**0.00**	**0.00**	**8.21**	**0.00**	**50.66**	**719.89**
DEC Coal Consumption	**242.94**	**491.16**	**55.69**	**129.50**	**27.02**	**43.44**	**420.94**	**57.16**	**1,467.845**	**17,693.221**
DEC % Ash	13.91	12.64	10.42	11.84	10.39	12.01	11.42	10.66	**12.21%**	
DEC Ash Produced	**33.79**	**62.08**	**5.80**	**15.33**	**2.81**	**5.22**	**48.07**	**6.09**	**179.20**	**2,194.54**
Utilization: Concrete		33.30		4.05					37.35	568.76
Mineral Filler									0.00	8.73
Structural Fill								100.00	100.00	100.00
Charah Bottom Ash		1.08					5.52		6.61	192.45
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	0.00
ıer: Canal Ash Removal									0.00	9.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	33.79	22.26	5.80	11.28	2.81	5.22	2.49	-93.91	-10.25	454.83
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		5.45					40.05		45.50	860.19
DEC Total Ash Utilized	**0.00**	**34.38**	**0.00**	**4.05**	**0.00**	**0.00**	**5.52**	**100.00**	**143.95**	**863.84**
Year to Date Coal Consumed	**2,755.614**	**5,771.066**	**755.489**	**1,739.892**	**455.939**	**555.598**	**4,847.022**	**812.601**		**17,693.221**
Year to Date % Ash	**14.80%**	**11.81%**	**14.82%**	**12.08%**	**10.36%**	**12.41%**	**11.90%**	**11.09%**		
Year to Date Ash Produced	**407.83**	**681.40**	**112.00**	**210.25**	**47.24**	**68.96**	**576.79**	**90.09**		**2,194.54**
Utilization: Concrete	0.00	478.72	0.00	90.04	0.00	0.00	0.00	0.00		568.76
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	8.73	0.00		8.73
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00		100.00
Charah Bottom Ash	0.00	19.34	0.00	0.00	0.00	0.00	173.10	0.00		192.45
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
ıer: Canal Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	9.59	0.00		9.59
Cenosphere Removal from Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Net Ash to Basins	157.83	34.74	112.00	120.21	47.24	68.96	-76.23	-9.91		454.83
On-Site Landfills	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
On-Site Fill Projects **Silo Ash**	250.00	148.59	0.00	0.00	0.00	0.00	461.60	0.00		860.19
YTD Total Ash Utilized	**0.00**	**498.07**	**0.00**	**90.04**	**0.00**	**0.00**	**181.83**	**100.00**		**869.93**
YTD Percent Ash Utilized	**0.0%**	**73.1%**	**0.0%**	**42.8%**	**0.0%**	**0.0%**	**31.5%**	**111.0%**		**39.6%**
YTD + Projected Ash Production	407.83	681.40	112.00	210.25	47.24	68.96	576.79	90.09		2194.54
YTD + Projected Ash Utilization	0.00	498.07	0.00	83.94	0.00	0.00	181.83	100.00		863.84
YTD + Projected % Ash Utilization	0.0%	73.1%	0.0%	39.9%	0.0%	0.0%	31.5%	111.0%		39.4%

Note: October and November Marshall percent of moisture figured at assumed 18.1%

2007 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total	
JAN Coal Consumption	**147.15**	**539.53**	**22.81**	**80.46**	**21.64**	**25.98**	**442.19**	**45.41**	**1,325.168**	**1,325.168**	
JAN % Ash	15.03	12.96	10.62	12.09	11.82	12.35	11.55	11.76	**12.55%**		
JAN Ash Produced	**22.12**	**69.92**	**2.42**	**9.73**	**2.56**	**3.21**	**51.07**	**5.34**	**166.37**	**166.37**	
Utilization: Concrete		29.60		3.51					33.11	33.11	
Mineral Filler							0.36		0.36	0.36	year end 2006 project information not recorded in 2006
Structural Fill							60.00		60.00	60.00	
Charah Bottom Ash		1.79					5.88		7.67	7.67	
Duke Bottom Ash									0.00	0.00	
Mill Rejects									0.00	0.00	
ıer: Canal Ash Removal									0.00	0.00	
Waste Water Treatment Sludge							3.64		3.64	3.64	
Gypsum to National							7.63		7.63	7.63	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	22.12	6.93	2.42	6.22	2.56	3.21	-60.06	-94.66	-111.27	-111.27	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		31.61					44.89	100.00	176.50	176.50	
JAN Total Ash Utilized	**0.00**	**31.39**	**0.00**	**3.51**	**0.00**	**0.00**	**66.24**	**0.00**	**101.14**	**101.14**	
FEB Coal Consumption	**273.09**	**500.44**	**79.02**	**117.11**	**48.90**	**65.84**	**494.83**	**78.74**	**1,657.962**	**2,983.130**	
FEB % Ash	14.35	12.60	12.23	11.66	10.44	12.47	11.86	11.64	**12.47%**		
FEB Ash Produced	**39.19**	**63.05**	**9.66**	**13.66**	**5.10**	**8.21**	**58.69**	**9.17**	**206.73**	**373.10**	
Utilization: Concrete		28.53		5.35					33.88	66.99	
Mineral Filler							0.32		0.32	0.69	
Structural Fill					240.00				240.00	300.00	
Charah Bottom Ash		1.08					7.78		8.86	16.53	
Duke Bottom Ash									0.00	0.00	
Mill Rejects		0.91					0.91		1.83	1.83	
ıer: Canal Ash Removal									0.00	0.00	
Waste Water Treatment Sludge							2.10		2.10	2.10	
Gypsum to National							116.64		116.64	116.64	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	39.19	4.79	9.66	8.30	-234.90	8.21	1.66	-190.83	-353.92	-465.19	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		27.74					48.01	200.00	275.75	452.25	
FEB Total Ash Utilized	**0.00**	**30.53**	**0.00**		**240.00**	**0.00**	**9.02**	**0.00**	**279.54**	**380.68**	
MAR Coal Consumption	**238.95**	**471.74**	**48.38**	**111.45**	**21.34**	**30.00**	**463.80**	**45.30**	**1.430.942**	**4,414.071**	
MAR % Ash	14.61	12.63	13.21	11.72	11.47	12.10	11.59	10.55	**12.48%**		
MAR Ash Produced	**34.91**	**59.58**	**6.39**	**13.06**	**2.45**	**3.63**	**53.75**	**4.78**	**178.55**	**551.65**	
Utilization: Concrete		44.13		5.31					49.45	116.44	
Mineral Filler							0.35		0.35	1.04	
Structural Fill									0.00	300.00	
Charah Bottom Ash		1.67					7.50		9.16	25.69	
Duke Bottom Ash									0.00	0.00	
Mill Rejects		1.50					1.50		2.99	4.82	
ıer: Canal Ash Removal									0.00	0.00	
Waste Water Treatment Sludge							3.22		3.22	3.22	
Gypsum to National							17.38		17.38	17.38	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	34.91	-2.33	6.39	7.75	2.45	3.63	0.63	-95.22	-41.79	-506.98	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		14.61					43.78	100.00	158.39	610.64	
MAR Total Ash Utilized	**0.00**	**47.30**	**0.00**	**5.31**	**0.00**	**0.00**	**9.35**	**0.00**	**61.95**	**442.64**	
APR Coal Consumption	**194.65**	**392.69**	**64.57**	**141.99**	**37.85**	**55.96**	**432.73**	**73.23**	**1,393.667**	**5,807.738**	
APR % Ash	15.59	11.97	13.55	12.53	11.40	11.67	10.85	11.12	**12.19%**		
APR Ash Produced	**30.35**	**47.01**	**8.75**	**17.79**	**4.31**	**6.53**	**46.95**	**8.14**	**169.83**	**721.48**	
Utilization: Concrete		36.50		8.47					44.97	161.41	
Mineral Filler							0.47		0.47	1.51	
Structural Fill									0.00	300.00	
Charah Bottom Ash		1.27					7.23		8.50	34.19	
Duke Bottom Ash									0.00	0.00	
Mill Rejects									0.00	4.82	
ıer: Canal Ash Removal									0.00	0.00	
Waste Water Treatment Sludge							4.62		4.62	4.62	
Gypsum to National							24.53		24.53	24.53	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	30.35	-0.33	8.75	9.32	4.31	6.53	1.12	-91.86	-31.81	-538.79	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		9.56					38.13	100.00	147.70	758.34	

APR Total Ash Utilized	**0.00**	**37.77**	**0.00**	**8.47**	**0.00**	**0.00**	**7.70**	**0.00**	**53.94**	**496.58**
MAY Coal Consumption	**231.13**	**574.64**	**76.62**	**172.72**	**48.18**	**70.92**	**444.35**	**91.92**	**1,710.471**	**7,518.209**
MAY % Ash	16.04	12.69	12.39	11.18	10.92	11.58	10.72	11.72	**12.32%**	
MAY Ash Produced	**37.07**	**72.92**	**9.49**	**19.31**	**5.26**	**8.21**	**47.63**	**10.77**	**210.68**	**932.16**
Utilization: Concrete		43.35		11.42					54.77	216.18
Mineral Filler							0.37		0.37	1.87
Structural Fill									0.00	300.00
Charah Bottom Ash		1.11					6.57		7.68	41.87
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	4.82
ıer: Canal Ash Removal									0.00	0.00
Waste Water Treatment Sludge							5.18		5.18	5.18
Gypsum to National							30.01		30.01	30.01
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	37.07	14.31	9.49	7.89	5.26	8.21	13.96	-49.23	46.98	-491.81
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		14.16					26.73	60.00	100.89	859.23
MAY Total Ash Utilized	**0.00**	**44.45**	**0.00**	**11.42**	**0.00**	**0.00**	**6.94**	**0.00**	**62.81**	**559.39**
JUN Coal Consumption	**272.03**	**514.88**	**77.34**	**115.43**	**51.34**	**46.92**	**482.77**	**86.16**	**1,646.869**	**9,165.077**
JUN % Ash	15.68	12.93	13.65	11.28	11.93	12.09	11.01	12.13	**12.64%**	
JUN Ash Produced	**42.65**	**66.57**	**10.56**	**13.02**	**6.12**	**5.67**	**53.15**	**10.45**	**208.21**	**1140.37**
Utilization: Concrete		36.34		7.78					44.12	260.30
Mineral Filler							0.40		0.40	2.27
Structural Fill									0.00	300.00
Charah Bottom Ash		1.11					7.35		8.45	50.32
Duke Bottom Ash									0.00	0.00
Mill Rejects		0.14					0.14		0.27	5.09
ıer: Canal Ash Removal									0.00	0.00
Waste Water Treatment Sludge							6.72		6.72	6.72
Gypsum to National							30.70		30.70	30.70
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	42.65	17.89	10.56	5.24	6.12	5.67	12.90	10.45	111.50	-380.31
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		11.10					32.37		43.47	902.70
JUN Total Ash Utilized	**0.00**	**37.58**	**0.00**	**7.78**	**0.00**	**0.00**	**7.88**	**0.00**	**53.24**	**612.64**
JUL Coal Consumption	**260.98**	**557.04**	**88.79**	**102.41**	**48.24**	**62.69**	**407.13**	**104.33**	**1,631.604**	**10,796.681**
JUL % Ash	16.21	12.12	13.21	11.11	11.27	11.01	11.12	11.80	**12.43%**	
JUL Ash Produced	**42.30**	**67.51**	**11.73**	**11.38**	**5.44**	**6.90**	**45.27**	**12.31**	**202.85**	**1343.21**
Utilization: Concrete		41.11		1.98					43.10	303.40
Mineral Filler							0.33		0.33	2.60
Structural Fill									0.00	300.00
Charah Bottom Ash		1.90					7.08		8.99	59.31
Duke Bottom Ash									0.00	0.00
Mill Rejects		1.66					1.66		3.32	8.41
ıer: Canal Ash Removal									0.00	0.00
Waste Water Treatment Sludge							7.98		7.98	7.98
Gypsum to National							38.12		38.12	38.12
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	42.30	2.72	11.73	9.39	5.44	6.90	-2.14	12.31	88.67	-291.65
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		20.11					38.33		58.45	961.14
JUL Total Ash Utilized	**0.00**	**44.68**	**0.00**	**1.98**	**0.00**	**0.00**	**9.07**	**0.00**	**55.73**	**668.37**
AUG Coal Consumption	**228.22**	**582.13**	**57.49**	**155.19**	**40.26**	**60.26**	**504.66**	**111.23**	**1,739.421**	**12,536.102**
AUG % Ash	16.65	12.34	12.86	11.53	12.19	11.66	10.96	11.40		
AUG Ash Produced	**38.00**	**71.83**	**7.39**	**17.89**	**4.91**	**7.03**	**55.31**	**12.68**	**215.04**	**1558.26**
Utilization: Concrete		44.71		8.13					52.85	356.25
Mineral Filler							0.30		0.30	2.90
Structural Fill									0.00	300.00
Charah Bottom Ash		1.32					9.94		11.26	70.57
Duke Bottom Ash									0.00	0.00
Mill Rejects		0.41					0.41		0.81	9.22
ıer: Canal Ash Removal									0.00	0.00
Waste Water Treatment Sludge							9.80		9.80	9.80
Gypsum to National							40.59		40.59	40.59
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	38.00	5.20	7.39	9.76	4.91	7.03	-8.33	12.68	76.64	-215.01
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		20.19					52.99		73.18	1034.33
AUG Total Ash Utilized		**46.44**	**0.00**	**8.13**	**0.00**	**0.00**	**10.65**	**0.00**	**65.22**	**733.59**
SEP Coal Consumption	**269.72**	**492.59**	**67.66**	**164.67**	**25.58**	**48.90**	**392.43**	**85.18**	**1,546.714**	**14,082.816**
SEP % Ash	17.03	12.22	12.66	11.40	12.01	11.43	11.20	11.90	**12.69%**	
SEP Ash Produced	**45.93**	**60.19**	**8.57**	**18.77**	**3.07**	**5.59**	**43.95**	**10.14**	**196.21**	**1,754.47**
Utilization: Concrete		37.33		8.09					45.42	401.66

Mineral Filler							0.33		0.33	3.23
Structural Fill									0.00	300.00
Charah Bottom Ash		1.27					6.36		7.62	78.20
Duke Bottom Ash									0.00	0.00
Mill Rejects		1.44							1.44	10.66
ıer: Canal Ash Removal							25.95		25.95	25.95
Waste Water Treatment Sludge							11.06		11.06	11.06
Gypsum to National							25.95		25.95	25.95
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	45.93	3.34	8.57	10.69	3.07	5.59	-26.03	10.14	61.29	-153.72
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		16.82					37.35		54.17	1088.50
SEP Total Ash Utilized	**0.00**	**40.03**	**0.00**	**8.09**	**0.00**	**0.00**	**6.69**	**0.00**	**54.81**	**788.40**
OCT Coal Consumption	**313.28**	**397.02**	**68.94**	**162.35**	**36.75**	**41.13**	**503.99**	**74.12**	**1,597.568**	**15,680.383**
OCT % Ash	17.01	12.43	14.78	12.35	12.37	11.41	11.28	11.70	**13.00%**	
OCT Ash Produced	**53.29**	**49.35**	**10.19**	**20.05**	**4.55**	**4.69**	**56.85**	**8.67**	**207.64**	**1,962.11**
Utilization: Concrete		38.49		8.34					46.83	448.50
Mineral Filler							0.33		0.33	3.56
Structural Fill									0.00	300.00
Charah Bottom Ash		2.60					5.49		8.09	86.29
Duke Bottom Ash									0.00	0.00
Mill Rejects		1.30					1.30		2.59	13.25
ıer: Canal Ash Removal							0.38		0.38	26.33
Waste Water Treatment Sludge							9.94		9.94	9.94
Gypsum to National							26.58		26.58	26.58
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	53.29	0.97	10.19	11.71	4.55	4.69	1.56	8.67	95.62	-58.10
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		5.99					47.80		53.79	1142.28
OCT Total Ash Utilized	**0.00**	**42.39**	**0.00**	**8.34**	**0.00**	**0.00**	**7.12**	**0.00**	**57.85**	**846.25**
NOV Coal Consumption	**309.61**	**284.13**	**82.58**	**178.52**	**42.24**	**80.89**	**495.76**	**88.21**	**1,561.950**	**17,242.333**
NOV % Ash	16.88	11.86	14.49	11.09	12.57	11.20	11.13	12.32	**12.69%**	
NOV Ash Produced	**52.26**	**33.70**	**11.97**	**19.80**	**5.31**	**9.06**	**55.18**	**10.87**	**198.14**	**2,160.25**
Utilization: Concrete		36.44		6.36					42.79	491.29
Mineral Filler							0.34		0.34	3.91
Structural Fill									0.00	300.00
Charah Bottom Ash		1.33					6.83		8.16	94.45
Duke Bottom Ash									0.00	0.00
Mill Rejects							1.30		1.30	14.55
ıer: Canal Ash Removal									0.00	26.33
Waste Water Treatment Sludge							0.70		0.70	0.70
Gypsum to National							31.87		31.87	31.87
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	52.26	-4.07	11.97	13.44	5.31	9.06	-0.19	10.87	98.64	40.54
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**							46.91		46.91	1189.19
NOV Total Ash Utilized	**0.00**	**37.77**	**0.00**	**6.36**	**0.00**	**0.00**	**8.46**	**0.00**	**52.59**	**898.84**
DEC Coal Consumption	**248.76**	**252.29**	**64.67**	**172.79**	**53.72**	**72.53**	**514.08**	**80.74**	**1,459.577**	**18,701.910**
DEC % Ash	15.65	11.68	13.21	10.32	12.22	10.79	11.66	12.44	**12.27%**	
DEC Ash Produced	**38.93**	**29.47**	**8.54**	**17.83**	**6.56**	**7.83**	**59.94**	**10.04**	**179.15**	**2,339.40**
Utilization: Concrete		29.01		4.68					33.69	524.98
Mineral Filler							0.31		0.31	4.21
Structural Fill									0.00	300.00
Charah Bottom Ash		0.68					5.00		5.68	100.13
Duke Bottom Ash									0.00	0.00
Mill Rejects							2.61		2.61	17.16
ıer: Canal Ash Removal							0.16		0.16	26.48
Waste Water Treatment Sludge							0.70		0.70	0.70
Gypsum to National							32.54		32.54	32.54
Cenosphere Removal from Basins		0.10							0.10	0.10
Net Ash to Basins	38.93	-0.32	8.54	13.15	6.56	7.83	24.55	10.04	109.29	149.83
On-Site Landfills									0.00	0.00
On-Site Fill Projects **Silo Ash**		0.21					27.31		27.51	1216.70
DEC Total Ash Utilized	**0.00**	**29.68**	**0.00**	**4.68**	**0.00**	**0.00**	**7.92**	**0.00**	**42.29**	**941.13**
Year to Date Coal Consumed	**2,987.556**	**5,559.116**	**798.871**	**1,675.078**	**476.023**	**662.005**	**5,578.704**	**964.558**		**18,701.910**
Year to Date % Ash	**15.97%**	**12.43%**	**13.23%**	**11.48%**	**11.69%**	**11.56%**	**11.25%**	**11.75%**		
Year to Date Ash Produced	**477.01**	**691.12**	**105.66**	**192.29**	**55.65**	**76.56**	**627.76**	**113.36**		**2,339.40**
Utilization: Concrete	0.00	445.55	0.00	79.43	0.00	0.00	0.00	0.00		524.98
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	4.21	0.00		4.21
Structural Fill	0.00	0.00	0.00	0.00	240.00	0.00	60.00	0.00		300.00
Charah Bottom Ash	0.00	17.12	0.00	0.00	0.00	0.00	83.01	0.00		100.13
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	7.34	0.00	0.00	0.00	0.00	9.81	0.00		17.16

ıer:											
Canal Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	26.48	0.00		26.48
Waste Water Treatment Sludge	0.00	0.00	0.00	0.00	0.00	0.00	65.66	0.00		65.66
Gypsum to National	0.00	0.00	0.00	0.00	0.00	0.00	422.54	0.00		422.54
Cenosphere Removal from Basins	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00		0.10
Net Ash to Basins	477.01	49.09	105.66	112.86	-184.35	76.56	-40.36	-446.64		149.83
On-Site Landfills	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
On-Site Fill Projects **Silo Ash**	517.66	172.11	0.00	0.00	0.00	140.00	484.59	560.00		1874.37
YTD Total Ash Utilized	**0.00**	**470.01**	**0.00**	**79.43**	**240.00**	**0.00**	**157.04**	**0.00**		**946.48**
YTD Percent Ash Utilized	**0.0%**	**68.0%**	**0.0%**	**41.3%**	**431.3%**	**0.0%**	**25.0%**	**0.0%**		**40.5%**
YTD + Projected Ash Production	477.01	691.12	105.66	192.29	55.65	76.56	627.76	113.36		2339.40
YTD + Projected Ash Utilization	0.00	470.01	0.00	74.08	240.00	0.00	157.04	0.00		941.13
YTD + Projected % Ash Utilization	0.0%	68.0%	0.0%	38.5%	431.3%	0.0%	25.0%	0.0%		40.2%

Note: October and November Marshall percent of moisture figured at assumed 18.1%

2008 Monthly Ash Production & Utilization

(Quantites are in 1000's of dry tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total	
JAN Coal Consumption	**301.41**	**308.72**	**81.99**	**186.75**	**55.06**	**73.75**	**506.56**	**81.04**	**1,595.297**	**1,595.297**	
JAN % Ash	15.69	11.88	12.54	10.60	12.22	11.35	10.99	11.43	**12.17%**		
JAN Ash Produced	**47.29**	**36.68**	**10.28**	**19.80**	**6.73**	**8.37**	**55.67**	**9.26**	**194.08**	**194.08**	
Utilization: Concrete		26.43		4.89					31.32	31.32	
Mineral Filler							0.32		0.32	0.32	
Structural Fill									0.00	0.00	
Charah Bottom Ash		1.26					3.93		5.19	5.19	
Duke Bottom Ash									0.00	0.00	
Mill Rejects									0.00	0.00	
ıer: Canal Ash Removal							1.01		1.01	1.01	
Waste Water Treatment Sludge							1.02		1.02	1.02	
Gypsum to National							32.22		32.22	32.22	
CBO Feed Ash									0.00	0.00	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	47.29	-13.95	10.28	14.91	6.73	8.37	0.20	9.26	83.09	83.09	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		22.93					50.22		73.15	73.15	
JAN Total Ash Utilized	**0.00**	**27.69**	**0.00**	**4.89**	**0.00**	**0.00**	**4.24**	**0.00**	**36.83**	**36.83**	
FEB Coal Consumption	**226.30**	**530.58**	**36.43**	**148.70**	**42.67**	**52.76**	**399.90**	**70.43**	**1,507.778**	**3,103.074**	
FEB % Ash	16.71	12.27	13.50	10.04	12.22	11.70	11.56	12.83	**12.56%**		
FEB Ash Produced	**37.82**	**65.10**	**4.92**	**14.93**	**5.21**	**6.17**	**46.23**	**9.04**	**189.42**	**383.50**	
Utilization: Concrete		27.48		5.26			0.41		33.15	64.46	
Mineral Filler									0.00	0.32	
Structural Fill	60.72								60.72	60.72	
Charah Bottom Ash		1.27					5.37		6.64	11.83	
Duke Bottom Ash									0.00	0.00	
Mill Rejects									0.00	0.00	
ıer: Canal Ash Removal							7.80		7.80	8.81	
Waste Water Treatment Sludge		0.56					0.63		1.19	1.19	
Gypsum to National							35.56		35.56	35.56	
CBO Feed Ash									0.00	0.00	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	-29.58	9.63	4.92	9.67	5.21	6.17	-4.91	9.04	10.15	93.24	
On-Site Landfills	6.68								6.68	6.68	
On-Site Fill Projects **Silo Ash**		26.72					37.56		64.28	137.44	
FEB Total Ash Utilized	**60.72**	**28.75**	**0.00**	**5.26**	**0.00**	**0.00**	**5.78**	**0.00**	**100.51**	**137.33**	
MAR Coal Consumption	**215.08**	**544.42**	**52.31**	**184.37**	**60.04**	**81.32**	**370.49**	**90.78**	**1,598.792**	**4,701.866**	
MAR % Ash	17.50	11.62	13.47	11.10	12.22	10.99	10.71	12.00	**12.21%**		
MAR Ash Produced	**37.64**	**63.26**	**7.05**	**20.46**	**7.34**	**8.94**	**39.68**	**10.89**	**195.26**	**578.75**	
Utilization: Concrete		31.96		7.82					39.78	104.24	Transferred ash to Wateree from Marshall 46.43 tons
Mineral Filler							0.14		0.14	0.46	
Structural Fill	9.50								9.50	70.22	
Charah Bottom Ash		1.33					4.87		6.20	18.03	
Duke Bottom Ash									0.00	0.00	
Mill Rejects							0.71		0.71	0.71	
ıer: Canal Ash Removal							0.47		0.47	9.28	
Waste Water Treatment Sludge		0.56					0.80		1.35	1.35	
Gypsum to National		5.19					23.12		28.31	28.31	
CBO Feed Ash									0.00	0.00	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	-5.73	8.84	7.05	12.65	7.34	8.94	-1.33	10.89	48.64	141.88	
On-Site Landfills	33.86								33.86	40.54	
On-Site Fill Projects **Silo Ash**		21.13					34.82		55.94	193.38	
MAR Total Ash Utilized	**9.50**	**33.29**	**0.00**	**7.82**	**0.00**	**0.00**	**5.72**	**0.00**	**56.34**	**193.67**	
APR Coal Consumption	**195.97**	**310.54**	**61.79**	**99.51**	**62.36**	**78.18**	**383.94**	**111.37**	**1,303.644**	**6,005.510**	
APR % Ash	18.39	11.90	12.59	11.34	13.36	12.24	10.85	11.90	**12.65%**		
APR Ash Produced	**36.04**	**36.95**	**7.78**	**11.28**	**8.33**	**9.57**	**41.66**	**13.25**	**164.87**	**743.62**	
Utilization: Concrete		33.82		2.45					36.27	140.51	
Mineral Filler							0.15		0.15	0.61	
Structural Fill	33.04								33.04	103.26	
Charah Bottom Ash		1.38					4.05		5.43	23.46	
Duke Bottom Ash									0.00	0.00	
Mill Rejects									0.00	0.71	
ıer: Canal Ash Removal							1.43		1.43	10.71	
Waste Water Treatment Sludge		0.56					5.71		6.27	6.27	
Gypsum to National		4.61					28.18		32.79	32.79	
CBO Feed Ash							1.14		1.14	1.14	

Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	-39.48	0.72	7.78	8.83	8.33	9.57	-0.60	13.25	8.40	150.28
On-Site Landfills	42.48								42.48	83.02
On-Site Fill Projects **Silo Ash**		1.04					36.63		37.66	231.04
APR Total Ash Utilized	**33.04**	**35.20**	**0.00**	**2.45**	**0.00**	**0.00**	**4.20**	**0.00**	**74.89**	**268.56**
MAY Coal Consumption	**276.87**	**535.90**	**74.60**	**126.32**	**43.47**	**69.56**	**492.63**	**96.48**	**1,715.830**	**7,721.340**
MAY % Ash	17.33	11.37	12.49	11.28	10.92	11.92	11.38	11.83	**12.41%**	
MAY Ash Produced	**47.98**	**60.93**	**9.32**	**14.25**	**4.75**	**8.29**	**56.06**	**11.41**	**212.99**	**956.61**
Utilization: Concrete		39.83		6.18					46.01	186.52
Mineral Filler							0.27		0.27	0.89
Structural Fill	13.31								13.31	116.57
Charah Bottom Ash		1.43					21.37		22.81	46.27
Duke Bottom Ash									0.00	0.00
Mill Rejects							0.64		0.64	1.35
ıer: Canal Ash Removal							0.25		0.25	10.96
Waste Water Treatment Sludge		0.56					0.77		1.33	1.33
Gypsum to National		4.24					30.47		34.71	34.71
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	15.67	19.67	9.32	8.07	4.75	8.29	2.35	11.41	79.53	229.81
On-Site Landfills	19.01								19.01	102.03
On-Site Fill Projects **Silo Ash**							31.18		31.18	262.22
MAY Total Ash Utilized	**13.31**	**41.27**	**0.00**	**6.18**	**0.00**	**0.00**	**22.28**	**0.00**	**83.03**	**351.60**
JUN Coal Consumption	**268.89**	**523.68**	**77.42**	**176.76**	**62.58**	**50.84**	**471.53**	**117.43**	**1,749.137**	**9,470.476**
JUN % Ash	16.10	11.71	12.79	11.95	11.40	12.07	11.00	12.19	**12.30%**	
JUN Ash Produced	**43.29**	**61.32**	**9.90**	**21.12**	**7.13**	**6.14**	**51.87**	**14.31**	**215.09**	**1171.71**
Utilization: Concrete		41.07		7.75					48.82	235.35
Mineral Filler							0.19		0.19	1.07
Structural Fill	50.28								50.28	166.85
Charah Bottom Ash		1.00					3.15		4.15	50.42
Duke Bottom Ash									0.00	0.00
Mill Rejects							0.48		0.48	1.83
ıer: Canal Ash Removal									0.00	10.96
Waste Water Treatment Sludge		0.56					0.67		1.23	1.23
Gypsum to National		1.97					36.12		38.09	38.09
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	-12.56	9.43	9.90	13.37	7.13	6.14	16.87	14.31	64.61	294.41
On-Site Landfills	5.57								5.57	107.60
On-Site Fill Projects **Silo Ash**		9.81					47.86		57.67	319.89
JUN Total Ash Utilized	**50.28**	**42.08**	**0.00**	**7.75**	**0.00**	**0.00**	**3.82**	**0.00**	**103.93**	**455.52**
JUL Coal Consumption	**275.99**	**551.87**	**74.69**	**163.94**	**61.97**	**46.17**	**483.27**	**95.61**	**1,753.502**	**11,223.978**
JUL % Ash	16.05	12.13	12.86	12.16	11.97	10.65	10.77	11.98	**12.35%**	
JUL Ash Produced	**44.30**	**66.94**	**9.61**	**19.93**	**7.42**	**4.92**	**52.05**	**11.45**	**216.61**	**1388.32**
Utilization: Concrete		36.63		8.81					45.44	280.79
Mineral Filler							0.16		0.16	1.24
Structural Fill	81.66								81.66	248.51
Charah Bottom Ash		1.10					4.34		5.44	55.86
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	1.83
ıer: Canal Ash Removal									0.00	10.96
Waste Water Treatment Sludge		0.56					0.59		1.14	1.14
Gypsum to National		3.15					36.61		39.77	39.77
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	-64.66	5.92	9.61	11.13	7.42	4.92	2.61	11.45	-11.61	282.81
On-Site Landfills	27.29								27.29	134.89
On-Site Fill Projects **Silo Ash**		23.29					44.94		68.23	388.12
JUL Total Ash Utilized	**81.66**	**37.74**	**0.00**	**8.81**	**0.00**	**0.00**	**4.50**	**0.00**	**132.70**	**588.22**
AUG Coal Consumption	**239.78**	**601.64**	**60.79**	**145.99**	**35.85**	**30.43**	**482.32**	**78.74**	**1,675.545**	**12,899.522**
AUG % Ash	16.38	11.61	12.18	11.65	10.58	10.52	11.18	12.46	**12.19%**	
AUG Ash Produced	**39.28**	**69.85**	**7.40**	**17.01**	**3.79**	**3.20**	**53.92**	**9.81**	**204.27**	**1592.59**
Utilization: Concrete		34.52		7.24					41.76	322.55
Mineral Filler							0.19		0.19	1.43
Structural Fill									0.00	248.51
Charah Bottom Ash		1.05					4.39		5.43	61.29
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	1.83
ıer: Canal Ash Removal							0.99		0.99	11.95
Waste Water Treatment Sludge		0.56					0.77		1.33	1.33
Gypsum to National		8.05					27.32		35.38	35.38
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00

Net Ash to Basins	27.29	16.50	7.40	9.77	3.79	3.20	11.67	9.81	89.45	372.25
On-Site Landfills									0.00	134.89
On-Site Fill Projects **Silo Ash**		17.78					36.68		54.46	442.58
AUG Total Ash Utilized		**35.57**	**0.00**	**7.24**	**0.00**	**0.00**	**4.58**	**0.00**	**47.39**	**635.61**
SEP Coal Consumption	**249.14**	**538.56**	**35.92**	**143.98**	**13.12**	**19.41**	**410.62**	**42.14**	**1,452.878**	**14,352.400**
SEP % Ash	16.96	11.92	13.83	12.47	10.00	9.61	11.10	11.54	**12.60%**	
SEP Ash Produced	**42.25**	**64.20**	**4.97**	**17.95**	**1.31**	**1.86**	**45.58**	**4.86**	**182.99**	**1,775.58**
Utilization: Concrete		34.95		8.53					43.47	366.02
Mineral Filler							0.22		0.22	1.65
Structural Fill									0.00	248.51
Charah Bottom Ash									0.00	61.29
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	1.83
ıer: Canal Ash Removal							1.09		1.09	13.03
Waste Water Treatment Sludge		0.56					0.71		1.27	1.27
Gypsum to National		3.68					37.99		41.67	41.67
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	-19.22	1.59	4.97	9.43	1.31	1.86	4.42	4.86	9.23	381.48
On-Site Landfills	61.47								61.47	196.37
On-Site Fill Projects **Silo Ash**		27.65					39.86		67.51	510.09
SEP Total Ash Utilized	**0.00**	**34.95**	**0.00**	**8.53**	**0.00**	**0.00**	**0.22**	**0.00**	**43.69**	**679.31**
OCT Coal Consumption	**153.51**	**589.26**	**6.69**	**122.84**	**5.41**	**11.03**	**281.50**	**9.57**	**1,179.814**	**15,532.213**
OCT % Ash	17.16	11.82	12.61	12.24	6.99	8.37	10.90	11.69	**12.29%**	
OCT Ash Produced	**26.34**	**69.65**	**0.84**	**15.04**	**0.38**	**0.92**	**30.68**	**1.12**	**144.98**	**1,920.55**
Utilization: Concrete		38.34		7.28					45.63	411.65
Mineral Filler							0.28		0.28	1.93
Structural Fill									0.00	248.51
Charah Bottom Ash		2.16					5.54		7.70	69.00
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	1.83
ıer: Canal Ash Removal							0.64		0.64	13.67
Waste Water Treatment Sludge		0.50					0.56		1.06	1.06
Gypsum to National									0.00	0.00
CBO Feed Ash										
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	-62.48	7.08	0.84	7.75	0.38	0.92	-2.60	1.12	-46.98	334.50
On-Site Landfills	88.82								88.82	285.19
On-Site Fill Projects **Silo Ash**		22.07					26.82		48.89	558.98
OCT Total Ash Utilized	**0.00**	**40.50**	**0.00**	**7.28**	**0.00**	**0.00**	**5.82**	**0.00**	**53.60**	**732.91**
NOV Coal Consumption	**203.97**	**581.90**	**16.05**	**144.48**	**14.08**	**26.36**	**311.51**	**35.24**	**1,333.605**	**16,865.818**
NOV % Ash	16.69	11.84	13.13	11.79	11.24	8.76	10.79	10.74	**12.25%**	
NOV Ash Produced	**34.04**	**68.90**	**2.11**	**17.03**	**1.58**	**2.31**	**33.61**	**3.79**	**163.37**	**2,083.93**
Utilization: Concrete		24.65		5.08					29.73	441.38
Mineral Filler							0.14		0.14	2.06
Structural Fill									0.00	248.51
Charah Bottom Ash		1.04					5.10		6.14	75.14
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	1.83
ıer: Canal Ash Removal							0.61		0.61	14.28
Waste Water Treatment Sludge		0.50					0.59		1.09	1.09
Gypsum to National		28.34					18.93		47.26	47.26
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins								0.10	0.10	0.10
Net Ash to Basins	-32.11	8.33	2.11	11.95	1.58	2.31	1.86	3.89	-0.09	334.42
On-Site Landfills	66.15								66.15	351.34
On-Site Fill Projects **Silo Ash**		34.88					25.91		60.79	619.77
NOV Total Ash Utilized	**0.00**	**25.69**	**0.00**	**5.08**	**0.00**	**0.00**	**5.23**	**0.00**	**36.01**	**768.92**
DEC Coal Consumption	**171.57**	**531.82**	**29.88**	**113.33**	**10.58**	**27.61**	**300.39**	**32.51**	**1,217.694**	**18,083.511**
DEC % Ash	16.72	11.12	12.31	11.98	11.24	11.46	10.88	10.88	**11.96%**	
DEC Ash Produced	**28.69**	**59.14**	**3.68**	**13.58**	**1.19**	**3.16**	**32.68**	**3.54**	**145.65**	**2,229.58**
Utilization: Concrete		17.17		4.38					21.56	462.94
Mineral Filler							0.17		0.17	2.23
Structural Fill									0.00	248.51
Charah Bottom Ash		1.19					4.92		6.10	81.24
Duke Bottom Ash									0.00	0.00
Mill Rejects									0.00	1.83
ıer: Canal Ash Removal									0.00	14.28
Waste Water Treatment Sludge		0.55					1.33		1.88	1.88
Gypsum to National		10.15					23.09		33.24	33.24
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.10
Net Ash to Basins	28.69	0.23	3.68	9.19	1.19	3.16	-12.46	3.54	37.22	371.64

Totals need to be worked on as Gypsum pulling from the monthly pd

On-Site Landfills									0.00	351.34
On-Site Fill Projects **Silo Ash**		40.54					40.06		80.60	700.37
DEC Total Ash Utilized	**0.00**	**18.36**	**0.00**	**4.38**	**0.00**	**0.00**	**5.09**	**0.00**	**27.83**	**796.75**
Year to Date Coal Consumed	**2,778.489**	**6,148.887**	**608.555**	**1,756.962**	**467.186**	**567.430**	**4,894.654**	**861.349**		**18,083.511**
Year to Date % Ash	**16.73%**	**11.76%**	**12.79%**	**11.52%**	**11.81%**	**11.25%**	**11.03%**	**11.93%**		
Year to Date Ash Produced	**464.96**	**722.92**	**77.85**	**202.39**	**55.16**	**63.86**	**539.69**	**102.74**		**2,229.58**
Utilization: Concrete	0.00	386.85	0.00	75.68	0.00	0.00	0.41	0.00		462.94
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	2.23	0.00		2.23
Structural Fill	248.51	0.00	0.00	0.00	0.00	0.00	0.00	0.00		248.51
Charah Bottom Ash	0.00	14.22	0.00	0.00	0.00	0.00	67.02	0.00		81.24
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Rejects	0.00	0.00	0.00	0.00	0.00	0.00	1.83	0.00		1.83
ıer: Canal Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	14.28	0.00		14.28
Waste Water Treatment Sludge	0.00	6.01	0.00	0.00	0.00	0.00	14.15	0.00		20.16
Gypsum to National	0.00	69.39	0.00	0.00	0.00	0.00	329.61	0.00		399.00
CBO Feed Ash	0.00	0.00	0.00	0.00	0.00	0.00	1.14	0.00		1.14
Cenosphere Removal from Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10		0.10
Net Ash to Basins	-146.88	74.00	77.85	126.71	55.16	63.86	18.08	102.84		371.64
On-Site Landfills	351.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00		351.34
On-Site Fill Projects	0.00	247.84	0.00	0.00	0.00	0.00	452.52	0.00		700.37
YTD Total Ash Utilized	**248.51**	**401.07**	**0.00**	**75.68**	**0.00**	**0.00**	**71.49**	**0.00**		**796.75**
YTD Percent Ash Utilized	**53.4%**	**55.5%**	**0.0%**	**37.4%**	**0.0%**	**0.0%**	**13.2%**	**0.0%**		**35.7%**
YTD + Projected Ash Production	464.96	722.92	77.85	202.39	55.16	63.86	539.69	102.74		2229.58
YTD + Projected Ash Utilization	248.51	401.07	0.00	75.68	0.00	0.00	71.49	0.00		796.75
YTD + Projected % Ash Utilization	53.4%	55.5%	0.0%	37.4%	0.0%	0.0%	13.2%	0.0%		35.7%

Note: October and November Marshall percent of moisture figured at assumed 18.1%

2009 Monthly Ash
Production & Utilization
(Quantites are in 1000's of drv tons)

Month	Allen	Belews Creek	Buck	Cliffside	Dan River	Lee	Marshall	Riverbend	Incremental Total	Cumulative Total	
JAN Coal Consumption	**186.77**	**551.22**	**41.33**	**144.66**	**21.12**	**28.25**	**479.66**	**55.25**	**1,482.280**	**1,482.280**	
JAN % Ash	13.03	11.16	12.76	11.23	11.59	11.48	10.71	11.90	**11.39%**		
JAN Ash Produced	**24.80**	**61.52**	**5.27**	**16.25**	**2.45**	**3.24**	**50.73**	**3.96**	**168.01**	**168.01**	
Utilization:		17.51		4.16					21.67	21.67	
Concrete											
Mineral Filler							0.24		0.24	0.24	Wateree fr Wateree fr Wateree from Marshall 0 tons
Structural Fill									0.00	0.00	
Charah Bottom Ash		0.77					2.24		3.01	3.01	
Duke Bottom Ash									0.00	0.00	
Mill Reiects									0.00	0.00	
Other: Canal Ash Removal									0.00	0.00	
Waste Water Treatment Sludge		0.56					0.09		0.65	0.65	
Gypsum to National		15.16					28.423		43.59	43.59	
CBO Feed Ash							0.00		0.00	0.00	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	24.60	1.53	5.27	12.08	2.45	3.24	11.23	3.96	64.36	64.36	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		41.70					37.02		78.72	78.72	
JAN Total Ash Utilized	**0.00**	**18.29**	**0.00**	**4.16**	**0.00**	**0.00**	**2.48**	**0.00**	**24.93**	**24.93**	
FEB Coal Consumption	**94.48**	**44.65**	**18.44**	**74.06**	**7.63**	**12.72**	**393.00**	**19.35**	**664.520**	**2,116.800**	
FEB % Ash	14.61	11.10	12.75	11.73	18.78	11.63	10.74	11.83	**11.66%**		
FEB Ash Produced	**13.80**	**4.96**	**2.35**	**8.69**	**1.43**	**1.48**	**38.09**	**2.29**	**74.01**	**242.02**	
Utilization:		21.83		3.47					25.30	46.97	
Concrete											
Mineral Filler							0.12		0.12	0.36	Wateree fr Wateree fr Wateree from Marshall 0 tons
Structural Fill									0.00	0.00	
Charah Bottom Ash		1.27					2.16		3.43	6.44	
Duke Bottom Ash									0.00	0.00	
Mill Reiects									0.00	0.00	
Other: Canal Ash Removal									0.00	0.00	
Waste Water Treatment Sludge		0.44					1.11		1.55	1.55	
Gypsum to National		17.05					28.42		45.48	45.48	
CBO Feed Ash							0.00		0.00	0.00	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	13.80	-43.24	2.35	5.22	1.43	1.48	-1.30	2.29	-17.97	46.39	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		25.12					38.01		63.13	141.86	
FEB Total Ash Utilized	**0.00**	**23.10**	**0.00**	**3.47**	**0.00**	**0.00**	**2.26**	**0.00**	**28.84**	**58.77**	
MAR Coal Consumption	**160.31**	**394.21**	**13.46**	**32.65**	**8.97**	**21.06**	**422.33**	**13.78**	**1,066.887**	**3,183.467**	
MAR % Ash	13.46	11.71	11.76	9.81	14.38	11.43	11.63	9.28	**11.57%**		
MAR Ash Produced	**21.58**	**46.16**	**1.59**	**3.20**	**1.29**	**2.41**	**49.12**	**1.28**	**126.61**	**368.62**	
Utilization:		25.17		0.45					25.62	72.60	s/ McMeeki s/ McMeeki s/ McMeekin from Marshall 327.78 tons
Concrete											
Mineral Filler							0.02		0.02	0.38	
Structural Fill									0.00	0.00	
Charah Bottom Ash		1.72					2.78		4.50	10.94	
Duke Bottom Ash									0.00	0.00	
Mill Reiects									0.00	0.00	
Other: Canal Ash Removal									0.00	0.00	
Waste Water Treatment Sludge		0.47					0.80		1.26	1.26	
Gypsum to National		22.21					28.53		50.74	50.74	
CBO Feed Ash							0.33		0.33	0.33	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	21.58	11.46	1.59	2.75	1.28	2.41	7.67	1.28	50.01	96.40	
On-Site Landfills									0.00	0.00	
On-Site Fill Projects **Silo Ash**		7.80					38.65		46.45	188.31	
MAR Total Ash Utilized	**0.00**	**28.69**	**0.00**	**0.45**	**0.00**	**0.00**	**2.80**	**0.00**	**30.15**	**69.91**	
APR Coal Consumption	**190.02**	**293.95**	**13.44**	**118.99**		**5.50**	**301.57**	**3.89**	**927.356**	**3,980.543**	
APR % Ash	12.32	11.08	13.31	10.55		9.38	11.37	10.14	**11.39%**		
APR Ash Produced	**16.02**	**25.92**	**1.79**	**12.55**	**0.00**	**0.50**	**34.29**	**0.39**	**91.46**	**460.09**	
Utilization:		29.70		4.97					34.67	107.26	s/ McMeeki s/ McMeeki s/ McMeekin from Marshall 433.47 tons
Concrete											
Mineral Filler							0.07		0.07	0.45	
Structural Fill									0.00	0.00	
Charah Bottom Ash		2.06					2.85		4.90	15.84	
Duke Bottom Ash									0.00	0.00	
Mill Reiects									0.00	0.00	
Other: Canal Ash Removal							11.65		11.65	11.65	
Waste Water Treatment Sludge	0.01	0.23					0.20		0.43	0.43	
Gypsum to National		12.23					22.55		34.78	34.78	
CBO Feed Ash							0.43		0.43	0.43	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	11.02	-12.99	1.79	7.59	0.00	0.50	-15.15	0.39	-6.86	89.54	
On-Site Landfills	5.00								5.00	5.00	
On-Site Fill Projects **Silo Ash**		7.16					34.88		42.03	230.34	
APR Total Ash Utilized	**0.00**	**31.78**	**0.00**	**4.97**	**0.00**	**0.00**	**2.91**	**0.00**	**39.84**	**133.95**	
MAY Coal Consumption	**63.15**	**364.57**	**4.92**	**106.32**		**1.79**	**376.46**	**0.35**	**916.469**	**4,910.112**	
MAY % Ash	11.58	11.54	12.22	11.03		9.38	11.42	11.05	**11.49%**		
MAY Ash Produced	**7.31**	**42.07**	**0.60**	**12.06**	**0.00**	**0.16**	**42.88**	**0.04**	**105.12**	**565.20**	
Utilization:		30.55		4.53					35.09	142.35	Marshall 1 Marshall 1 Marshall 110.38 tons from Allen to Wateree 73.33 tons
Concrete											
Mineral Filler							0.02		0.02	0.47	
Structural Fill									0.00	0.00	
Charah Bottom Ash		1.61					2.21		3.82	19.67	
Duke Bottom Ash									0.00	0.00	
Mill Reiects									0.00	0.00	
Other: Canal Ash Removal									0.00	11.65	
Waste Water Treatment Sludge	0.10	0.28					1.72		2.10	2.10	
Gypsum to National		11.30					25.30		36.60	36.60	
CBO Feed Ash	0.07						0.11		0.18	0.18	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	-2.19	-3.95	0.60	7.52	0.00	0.16	3.32	0.04	5.51	95.05	
On-Site Landfills	9.50								9.50	14.50	
On-Site Fill Projects **Silo Ash**		13.86					37.32		51.18	281.52	
MAY Total Ash Utilized	**0.00**	**32.16**	**0.00**	**4.53**	**0.00**	**0.00**	**2.24**	**0.00**	**36.98**	**162.49**	
JUN Coal Consumption	**220.36**	**413.62**	**33.76**	**126.51**	**25.52**	**36.47**	**390.79**	**45.45**	**1,294.480**	**6,204.591**	
JUN % Ash	10.39	11.36	12.39	10.74	13.76	11.36	10.92	11.95	**11.09%**		
JUN Ash Produced	**22.89**	**46.99**	**4.19**	**13.60**	**3.51**	**4.37**	**42.67**	**5.19**	**143.52**	**708.82**	
Utilization:		34.68		5.21					39.89	182.24	t:\Meekin fn t:\Meekin fn t:\Meekin from Marshall 26 tons
Concrete											
Mineral Filler							0.05		0.05	0.52	
Structural Fill									0.00	0.00	
Charah Bottom Ash									0.00	19.67	
Duke Bottom Ash									0.00	0.00	
Mill Reiects									0.00	0.00	
Other: Canal Ash Removal									0.00	11.65	
Waste Water Treatment Sludge	0.21	0.39					1.50		2.10	2.10	
Gypsum to National	9.30	6.20					25.11		40.60	40.60	
CBO Feed Ash							0.26		0.26	0.26	
Cenosphere Removal from Basins									0.00	0.00	
Net Ash to Basins	0.89	-7.07	4.19	8.59	3.51	4.37	5.32	5.19	24.99	120.04	
On-Site Landfills	22.00						37.31		59.31	73.81	
On-Site Fill Projects **Silo Ash**		19.38							19.38	300.89	
JUN Total Ash Utilized	**0.00**	**34.68**	**0.00**	**5.21**	**0.00**	**0.00**	**0.05**	**0.00**	**39.94**	**202.42**	
JUL Coal Consumption	**152.47**	**531.27**	**8.12**	**124.96**	**7.40**	**16.70**	**441.50**	**29.78**	**1,312.223**	**7,516.814**	
JUL % Ash	11.22	11.52	13.52	11.37	15.09	11.38	11.04	12.24	**11.39%**		
JUL Ash Produced	**17.11**	**61.20**	**1.10**	**14.21**	**1.12**	**1.90**	**48.74**	**3.65**	**149.02**	**857.84**	
Utilization:		33.27		5.72					38.99	221.23	
Concrete											
Mineral Filler							0.05		0.05	0.56	
Structural Fill									0.00	0.00	
Charah Bottom Ash		2.13					3.90		6.03	25.69	
Duke Bottom Ash									0.00	0.00	
Mill Reiects									0.00	0.00	
Other: Canal Ash Removal									0.00	11.65	

Waste Water Treatment Sludge	0.15	0.00					1.54		1.69	1.69
Gypsum to National	9.56						23.51		33.08	33.08
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	5.11	0.29	1.10	8.48	1.12	1.90	-1.73	3.65	19.92	139.96
On-Site Landfills	12.00	20.00					46.52		78.52	152.33
On-Site Fill Projects **Silo Ash**		5.52							5.52	306.41
JUL Total Ash Utilized	**0.00**	**35.39**	**0.00**	**5.72**	**0.00**	**0.00**	**3.95**	**0.00**	**45.06**	**247.49**
AUG Coal Consumption	**204.91**	**546.28**	**39.10**	**139.04**	**12.01**	**39.31**	**467.40**	**44.56**	**1,492.008**	**9,009.421**
AUG % Ash	11.36	10.84	13.14	11.17	16.22	11.25	11.01	11.87	**11.149%**	
AUG Ash Produced	**23.28**	**59.22**	**5.14**	**15.53**	**1.95**	**4.42**	**51.46**	**5.29**	**166.28**	**1024.13**
Utilization:		29.69		3.51					33.20	254.43
Concrete										
Mineral Filler							0.04		0.04	0.61
Structural Fill									0.00	0.00
Charah Bottom Ash		1.68					4.47		6.15	31.85
Duke Bottom Ash									0.00	0.00
Mill Reiects									0.00	0.00
Other: Canal Ash Removal									0.00	11.65
Waste Water Treatment Sludge	0.36	0.47					2.03		2.87	2.87
Gypsum to National	9.96						23.05		33.01	33.01
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	4.43	17.95	5.14	12.02	1.95	4.42	0.08	5.29	51.28	191.24
On-Site Landfills	18.85	9.89					46.87		75.61	227.95
On-Site Fill Projects **Silo Ash**									0.00	306.41
AUG Total Ash Utilized		**31.57**	**0.00**	**3.61**	**0.00**	**0.00**	**4.51**	**0.00**	**39.39**	**286.86**
SEP Coal Consumption	**64.70**	**498.59**	**18.54**	**118.32**	**0.00**	**7.69**	**514.69**	**6.11**	**1,647.028**	**10,656.447**
SEP %Ash	11.84	11.64	13.61	10.30	0.00	11.52	11.23	13.19	**11.429%**	
SEP Ash Produced	**10.03**	**58.08**	**2.31**	**12.19**	**0.00**	**0.88**	**35.34**	**0.81**	**119.59**	**1,143.71**
Utilization:									0.00	254.43
Concrete										
Mineral Filler							0.08		0.08	0.69
Structural Fill									0.00	0.00
Charah Bottom Ash									0.00	31.85
Duke Bottom Ash									0.00	0.00
Mill Reiects									0.00	0.00
Other: Canal Ash Removal									0.00	11.65
Waste Water Treatment Sludge	0.13	0.43					1.86		2.42	2.42
Gypsum to National									0.00	0.00
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	0.47	49.72	2.31	12.19	0.00	0.88	0.01	0.81	66.38	257.61
On-Site Landfills	9.56	8.32					35.25		53.13	281.07
On-Site Fill Projects **Silo Ash**									0.00	306.41
SEP Total Ash Utilized	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.08**	**0.00**	**0.08**	**286.97**
OCT Coal Consumption									**0.000**	**10,656.447**
OCT %Ash									**#DIV/0!**	
OCT Ash Produced	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1,143.71**
Utilization:									0.00	254.43
Concrete										
Mineral Filler									0.00	0.69
Structural Fill									0.00	0.00
Charah Bottom Ash									0.00	31.85
Duke Bottom Ash									0.00	0.00
Mill Reiects									0.00	0.00
Other: Canal Ash Removal									0.00	11.65
Waste Water Treatment Sludge									0.00	0.00
Gypsum to National									0.00	0.00
CBO Feed Ash										
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	257.61
On-Site Landfills									0.00	281.07
On-Site Fill Projects **Silo Ash**									0.00	306.41
OCT Total Ash Utilized	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**286.97**
NOV Coal Consumption									**0.000**	**10,656.447**
NOV %Ash									**#DIV/0!**	
NOV Ash Produced	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1,143.71**
Utilization:									0.00	254.43
Concrete										
Mineral Filler									0.00	0.69
Structural Fill									0.00	0.00
Charah Bottom Ash									0.00	31.85
Duke Bottom Ash									0.00	0.00
Mill Reiects									0.00	0.00
Other: Canal Ash Removal									0.00	11.65
Waste Water Treatment Sludge									0.00	0.00
Gypsum to National									0.00	0.00
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	257.61
On-Site Landfills									0.00	281.07
On-Site Fill Projects **Silo Ash**									0.00	306.41
NOV Total Ash Utilized	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**286.97**
DEC Coal Consumption									**0.000**	**10,656.447**
DEC %Ash									**#DIV/0!**	
DEC Ash Produced	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**1,143.71**
Utilization:									0.00	254.43
Concrete										
Mineral Filler									0.00	0.69
Structural Fill									0.00	0.00
Charah Bottom Ash									0.00	31.85
Duke Bottom Ash									0.00	0.00
Mill Reiects									0.00	0.00
Other: Canal Ash Removal									0.00	11.65
Waste Water Treatment Sludge									0.00	0.00
Gypsum to National									0.00	0.00
CBO Feed Ash									0.00	0.00
Cenosphere Removal from Basins									0.00	0.00
Net Ash to Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	257.61
On-Site Landfills									0.00	281.07
On-Site Fill Projects **Silo Ash**									0.00	306.41
DEC Total Ash Utilized	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**286.97**
Year to Date Coal Consumed	**1,298.189**	**3,676.640**	**192.884**	**990.808**	**82.881**	**171.212**	**3,880.402**	**194.924**		**10,656.447**
Year to Date %Ash	**12.09%**	**11.39%**	**12.59%**	**10.99%**	**14.21%**	**11.31%**	**11.10%**	**11.77%**		
Year to Date Ash Produced	**156.62**	**406.09**	**24.33**	**108.47**	**11.73**	**19.37**	**394.21**	**22.99**		**1,143.71**
Utilization:	0.00	222.40	0.00	32.02	0.00	0.00	0.00	0.00		254.43
Concrete										
Mineral Filler	0.00	0.00	0.00	0.00	0.00	0.00	0.69	0.00		0.69
Structural Fill	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Charah Bottom Ash	0.00	11.24	0.00	0.00	0.00	0.00	20.61	0.00		31.85
Duke Bottom Ash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Mill Reiects	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Other: Canal Ash Removal	0.00	0.00	0.00	0.00	0.00	0.00	11.65	0.00		11.65
Waste Water Treatment Sludge	0.96	3.28	0.00	0.00	0.00	0.00	10.84	0.00		15.08
Gypsum to National	28.82	84.15	0.00	0.00	0.00	0.00	204.90	0.00		317.87
CBO Feed Ash	0.07	0.00	0.00	0.00	0.00	0.00	1.13	0.00		1.20
Cenosphere Removal from Basins	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00
Net Ash to Basins	79.70	13.70	24.33	76.45	11.73	19.37	9.45	22.89		257.61
On-Site Landfills	76.91	38.21	0.00	0.00	0.00	0.00	165.95	0.00		281.07
On-Site Fill Projects	0.00	120.54	0.00	0.00	0.00	0.00	185.87	0.00		306.41
YTD Total Ash Utilized	**0.00**	**293.64**	**0.00**	**32.02**	**0.00**	**0.00**	**21.30**	**0.00**		**286.97**
YTD Percent Ash Utilized	**0.0%**	**57.5%**	**0.0%**	**29.5%**	**0.0%**	**0.0%**	**5.4%**	**0.0%**		**25.1%**
YTD + Projected Ash Production	156.62	406.09	24.33	108.47	11.73	19.37	394.21	22.99		1143.71
YTD + Projected Ash Utilization	0.00	233.64	0.00	32.02	0.00	0.00	21.30	0.00		286.97
YTD + Projected % Ash Utilization	0.0%	57.5%	0.0%	29.5%	0.0%	0.0%	5.4%	0.0%		25.1%

Note:

CONVERT.XLS

Duke Power Company
Coal Ash Volume to Weight Conversion Data

1 Bottom Ash

Numerous density tests performed indicate the average dry density of bottom ash is approximately 50 pounds per cubic foot (PCf).

Example: sale 2,342 cubic yards of bottom ash during the month

Therefore, utilization = 2,342 Cu yds X (27 Cu. n.h Cu. yd.) X 50 lbs./cu. ft. X (1 tonl2ooo lbs.) = 1,581 tons.

2 ESS Marshall Bottom Ash

Estimates by ESS 1997 result in similar dry densities to those obtained (50 Pc).

Example: Duke sells 1500 cubic yards of bottom ash during the month

Therefore, utilization = 1,500 Cu yds X (27 Cu. ft/ Cu. yd.) X 50 lbs./cu. ft. X (1 tonl2OOo lbs.) = 1,018 tons.

1 Boral Fly Ash to Concrete

All quantities of fly ash that Boral sells to the concrete industry are measured directly in dry tons.

Example: Boral sells 25,000 tons of fly ash during the month Therefore utilization = 25,000 tons.

2 Boral Flyash to Flowable Fill

All quantities of fly ash that Boral supplies to batch Flowable fill are measured directly in dry tons.

Example: Boral supplies 2,000 tons of fly ash during the month to make Flowable fill Therefore, utilization = 2,000 tons.

3 Boral Flyash to Structural Fill

All quantities of fly ash that Boral supplies as structural fill are measured in moist tons. Boral samples moist fly ash and performs moisture tests when fly ash is being supplied as structure fill.

Example: Boral supplies 15,000 tons of fal ash for structural fill and the moisture content is 18%.

Therefore, utilization =moist tonnage/{1+(moisture content)) = 15,000 tons/(1+o.18) = 12,712 tons.

Example for Pond Curve Conversions from acres to tons

1484.1 AC. FT
X 1613.33333333333 CU YD PER ACRE FT

2,394,348 CU YDS
X 1620 LBS PER CU YD (60LBS X27)

3,878,843,760 LBS
*** 2000 LBS PER TON**

ANSWER IS 1,939,421.88 TONS AVAILABLE

4 Flyash to Disposal in Landfill

All quantities of fly ash that Boral supplies as structural fill are measured in moist tons. Boral samples moist fly ash and performs moisture tests when fly ash is being disposed of in a landfill.
Example: Boral disposes 10,000 tons of fly ash in the landfill and the moisture content is 18%.

Therefore, disposal moist tonnage/(1+(moisture content/100)} = 10,000 tons 1(1+0.18) = 8,475 tons.

**** Updated 11/11/02 Marshall wet in place cubic yards weights 85 to 90lbs per cubic foot**
Belews Creek wet in place cubic yards weight 95 to 98 lbs per cubic foot in place

***** Marshall dry denisty information show 70 to 75 lbs per cubic foot**
Belews Creek dry density information show 75 to 80 lbs per cubic foot in place

Structural from Pond Ash

Based on density testing performed at the fill site, an in-place dry density of sluiced ash in the pond is estimated. The dry density of pond ash is likely to be less than the in-place dry density at the fill site. To determine the final volume of ash excavated from the pond, a topographical survey is usually performed. Intermittent payments to the contractor are usually based on truck counts; the topographical survey is used to reconcile the final volume of pond ash removal.

Example: Based on a topographical survey of an excavated area in an ash pond, a structural fill project requires I 75~000 Cu. yds. Proctor tests and field density tests at the fill site indicate the maximum dry density of the material is 80 PCf and that the average in plane dry density of the material is 75 PCf. Use a dry density of 70 PCf for ash excavated from the pond.

Therefore, utilization = 175,000 Cu. yds. X (27 Cu. fticu. yd.) X 70 pcf X (lton/2,000 lbs) = 165,375 tons.

Ash production, utilization, and disposal is typically reported in dry tonnage.

Buck formula in SYSASH off due to the receipt of ash from Color Tex beginning in 1999.
Buck ash in landfills include the ash received from Color Tex which began in Feb. of 1999.

BELEWS CREEK DOME YEAR END 1998 =40,000 TONS
BELEWS CREEK DOME YEAR END 1999 =38,000 TONS
BELEWS CREEK DOME YEAR END 2000 =38,000 TONS
BELEWS CREEK DOME YEAR END 2001 =38,619 TONS
BELEWS CREEK DOME YEAR END 2002 = 38,000 TONS
BELEWS CREEK DOME YEAR END 2003 = 38,000 TONS
BELEWS CREEK DOME YEAR END 2004 = 33,182 TONS
BELEWS CREEK DOME YEAR END 2005 = 42,313 TONS

Current year projections based on most recent month's PROMOD calculation

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			Corrected Allen basin names 03/15/18		

Ash Basin Information

Site	Basin	When constructed	Ash in Tons as of 8/7/17 (Millions)	When closed if applicable	CCR Applicable?
DEC					
Allen	Retired basin	1957	6.2	1973	Y
	Active Basin	1972	10.4	n/a	Y
Belews Creek	Active basin	1972	12.2	n/a	Y
Buck	Basin #1	1957	3.6	2013	Y
	Basin #2	1977	2	2013	Y
	Basin #3	1977	0.9	2013	Y
Cliffside	U1-4 inactive basin	1957	0	1977	Y
	U5 inactive basin	1970	2.4	1980	Y
	Active basin	1980	5	n/a	Y
Dan River	Primary basin	1956	1.2	2012	Y
	Secondary basin	1977	0.4	2012	Y
Marshall	Active basin	1965	16.7	n/a	Y
Riverbend	Primary basin	1957	1.1	2014	N
	Secondary basin	1957	1	2014	N
WS Lee	Primary basin	1974	2.2	2014	Y
	Secondary basin	1978	0.03	2014	Y
	1951/1959 inactive basin	1951	0.07	1974	N