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March 13, 2017

***Via Certified Mail – Return Receipt Requested***

Mr. Michael S. Regan, Secretary
N.C. Department of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

Ms. Lynn J. Good, President and Chief Executive Officer
Duke Energy Progress, LLC
P. O. Box 1771
Raleigh, NC 27602

**Notice of Intent to Sue**
**Clean Water Act Section 505 - 33 U.S.C. § 1365**

RE: 60-Day Notice of Violations by Duke Energy Progress, LLC
Roxboro Steam Station
NPDES Permit # NC0003425

To Whom It May Concern:

Pursuant to Section 505(b) of the Clean Water Act (33 U.S.C. §1365 (b)), the Roanoke River Basin Association, through its undersigned counsel, provides notice of the violations of effluent standards and limitations and the Clean Water Act set forth below. 33 U.S.C. § 1365(f). After the expiration of sixty (60) days, the Roanoke River Basin Association intends to bring suit for these violations pursuant to the citizen suit provision of the Clean Water Act, Section 505(a), 33 U.S.C. §1365(a).

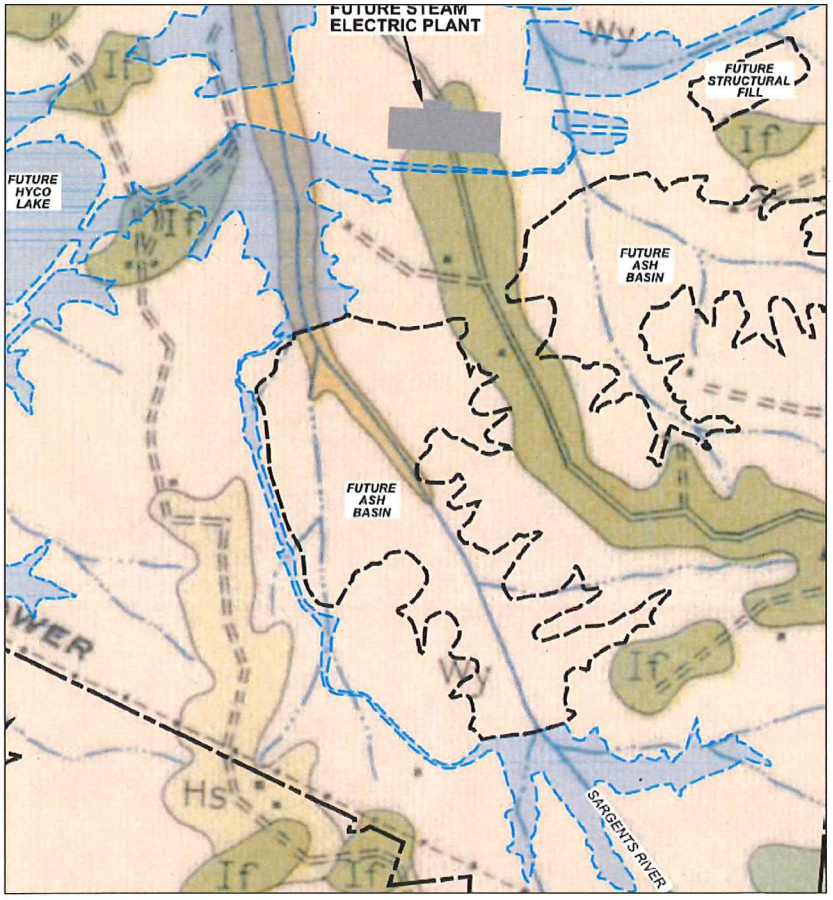
As set out below, Duke Energy Progress, LLC ("Duke Energy") is dumping untreated coal ash pollution directly into waters of the United States without a permit authorizing the discharge under the Clean Water Act and also in violation of its existing permit. First, Duke Energy has unlawfully appropriated public waters and waters of the United States – an arm of Hyco Lake and a large flowing waterbody, Sargents River (sometimes also referred to as Sargents Creek), which empties into Hyco Lake – to be parts of its coal ash wastewater pollution system. Second, Duke Energy is also illegally polluting another tributary stream of Hyco Lake to the east of its East Ash Basin, a water of the United States, by discharging coal ash pollutants into this stream without any authorization under its existing Clean Water Act permit. Third, Duke Energy is violating an express provision of its Clean Water Act permit which requires it to prevent pollutants and other materials removed during wastewater treatment from entering

groundwater or surface waters; instead, Duke Energy has allowed coal ash, coal ash pollutants, and other materials removed during its wastewater treatment to enter into the groundwater and surface waters at Roxboro. As a result, all of Hyco Lake, Sargents River, tributary streams, and groundwater are being polluted by the unpermitted and forbidden discharges of coal ash; raw, untreated coal ash water; leachate; heavy metals; and other contaminants. This ongoing pollution is contaminating not only these waters but the waters of the Roanoke and Dan River Basins downstream in North Carolina and Virginia.

## Background & Location of Violations

### Roxboro Coal Ash Pollution

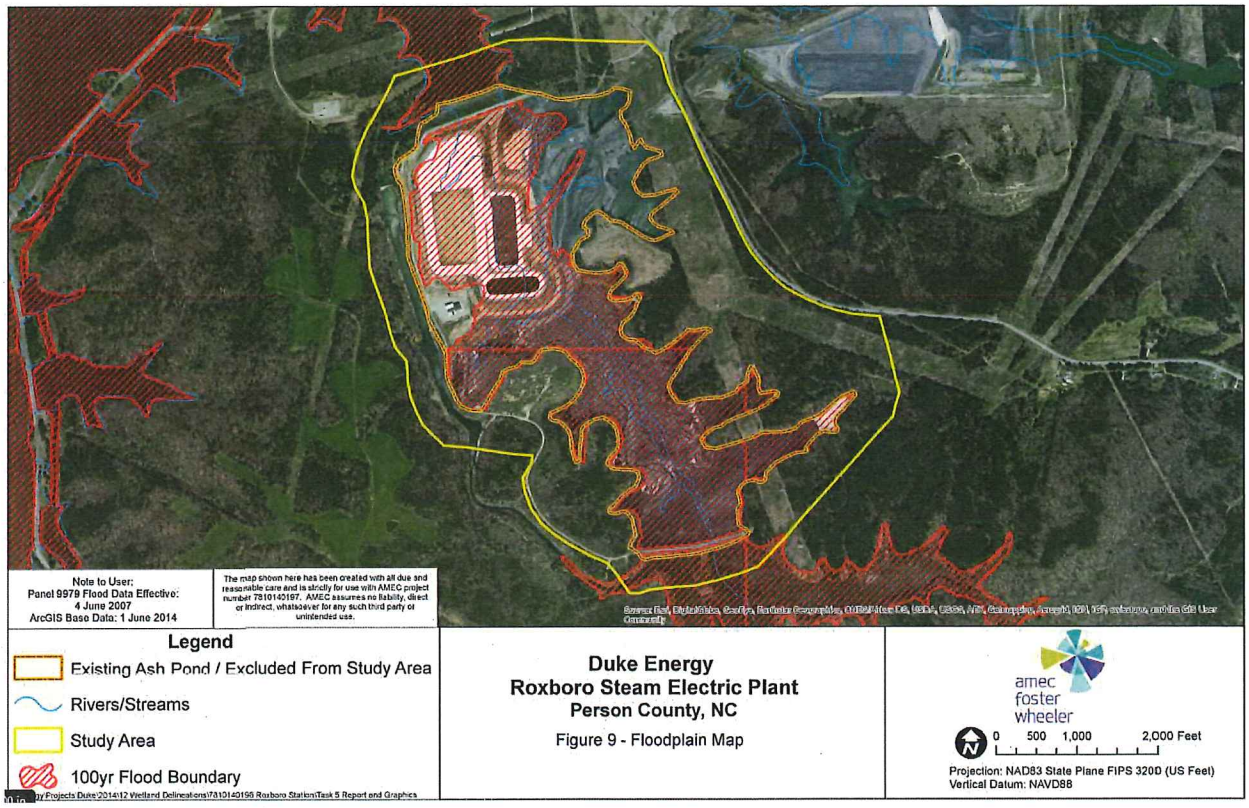
Duke Energy owns and operates the Roxboro Steam Station ("Roxboro"), a coal-fired electricity generating plant in Semora, Person County, North Carolina. At Roxboro, Duke Energy's unlined storage and unlawful management of millions of tons of coal ash and polluted wastewater are contaminating waters of the United States and of North Carolina, including Hyco Lake, Sargents River, other tributary streams, and groundwater.




Duke Energy has taken for its private use part of Hyco Lake, a public lake, and Sargents River, both of which it uses to collect polluted wastewater. In addition, the coal ash in the unlined Roxboro impoundments sits more than 70 feet deep in the groundwater, allowing pollutants to leach out into the groundwater and surrounding environment. This contaminated groundwater also flows directly into these jurisdictional surface waters. Duke Energy is also polluting streams with unpermitted, illegal flows of coal ash pollution, and these streams flow into Hyco Lake.

Duke Energy operates two unlined coal ash lagoons at Roxboro, known as the East and West Ash Basins. These coal ash lagoons are outlined in dashed black lines in Figure 2-2 from Duke Energy's Comprehensive Site Assessment ("CSA"),[1] reproduced on page 2 above, which depicts the original hydrology of the site overlaid with outlines showing Duke Energy's power plant and coal ash infrastructure. Sargents River is shown to the south of the West Ash Basin, and blue shading indicates where today the river has been impounded and rerouted along the west side of the West Ash Basin. A bay of Hyco Lake in the original channel of Sargents River is shown to the north of the West Ash Basin.

North Carolina and FEMA flood maps as well as Duke Energy's own reports confirm that the West Ash Basin is located in the 100-year floodplain. *See* Comprehensive Site Assessment, Appendix I (Natural Resources Technical Report), Fig. 9, reproduced here.




Duke Energy (then called Carolina Power & Light) created the East Ash Basin lagoon in 1966, and the West Ash Basin lagoon in 1973, by damming waterways and sluicing wet coal ash and other substances from the burning of coal into the impounded stream valleys. These lagoons also receive other industrial waste streams, including: ash landfill leachate and runoff, dry-ash handling system wash water, cooling tower blowdown, coal mill rejects and pyrites, sewage treatment plant effluent, low volume waste consisting of boiler blowdown, chemical metal cleaning wastes, reverse-osmosis reject wastewater and floor drains, and overflow from the flue

[1] *Available at* http://edocs.deq.nc.gov/WaterResources/0/fol/305358/Row1.aspx.

gas desulfurization ("FGD") system blowdown. In addition, groundwater and rain water flow into these pits. Duke Energy has dumped over 19 million tons of coal ash and other wastes into the unlined coal ash lagoons.

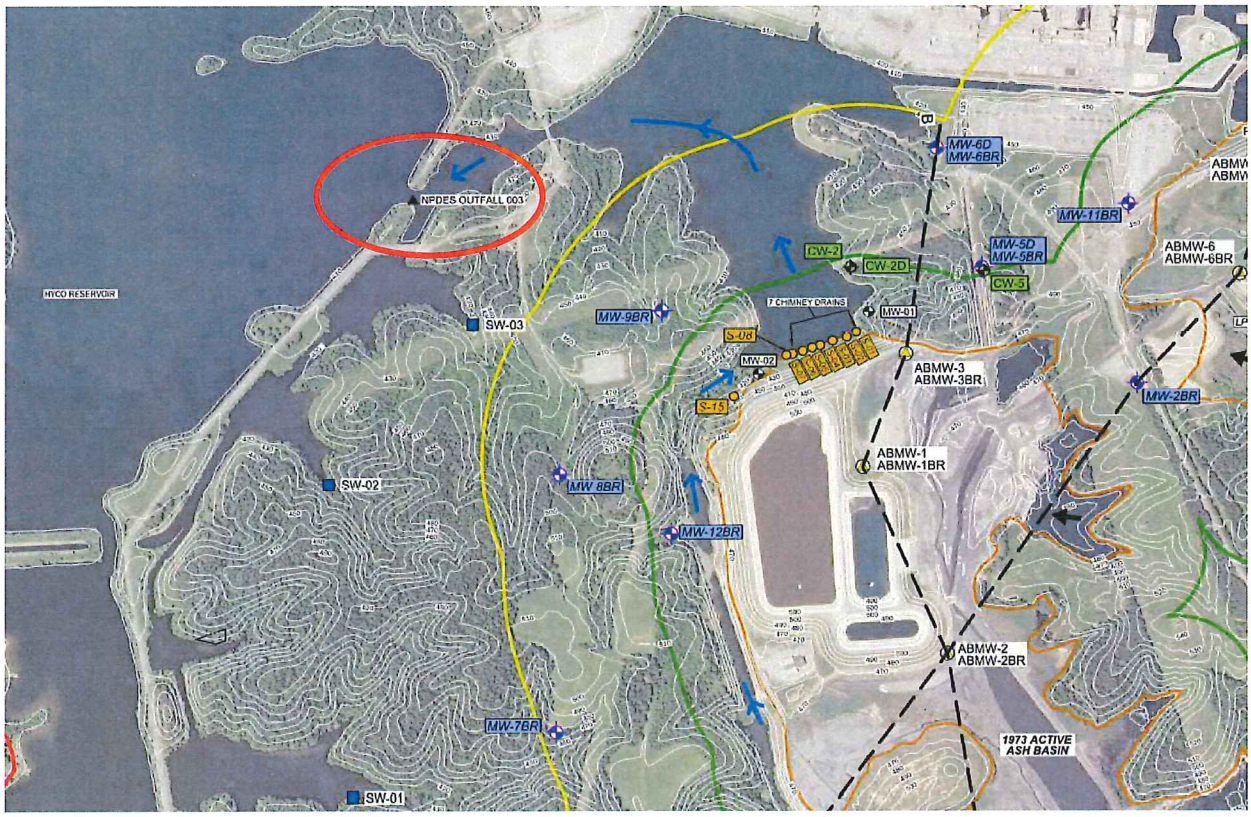
Duke Energy is authorized to operate the Roxboro coal ash lagoons as a wastewater treatment facility under a National Pollution Discharge Elimination System (NPDES) Permit issued by the North Carolina Department of Environmental Quality (DEQ), NPDES Permit # NC0003425. Attachment 1. Duke Energy committed to treat the wastewater through a settling process, in which sediments, solids, and other pollutants settle to the bottom of the pit. Then, supposedly treated wastewater is discharged through a permitted "outfall."

Ordinarily, a riser system would be used to skim the relatively cleaner wastewater from the top of a coal ash lagoon and then discharge it through a pipe to a jurisdictional waterbody, in some cases after additional wastewater treatment to remove pollutants. However, due to the serious and unlawful deficiencies in Duke Energy's operations, that is not how the Roxboro coal ash system operates.

Instead, coal ash wastes from the East and West Basin discharge through openings in a rock dam at the south end of the West Ash Basin, where they then flow through impounded and rerouted portions of Sargents River flowing into a bay of Hyco Lake. Seven engineered drains also discharge to the bay of Hyco Lake from the main ash pond dam at the north end of the West Ash Basin. The FGD waste system located within the West Ash Basin area discharges to the rerouted portion of Sargents River. In addition to these engineered discharge points, unengineered seeps and flows of contaminated groundwater also discharge into Sargents River and the bay of Hyco Lake. Despite these numerous points at which pollutants are discharged into these waterways, the sole external "outfall" from the coal ash lagoons identified in the permit is simply the opening of this bay of the lake (labeled as "NPDES Outfall 003" and circled in red on the figure on page 5 below). In other words, Duke Energy has arbitrarily chosen an area *within* a water of the United States as its fictional "outfall" to that same waterbody. Thus, Duke Energy is using part of one U.S. waterbody (Hyco Lake), as well as another jurisdictional water (Sargents River), as part of its private coal ash wastewater system.

This arrangement violates the Clean Water Act. The Act regulates "*any addition* of any pollutant ***to*** navigable waters ***from*** any point source." 33 U.S.C. § 1362(12) (emphasis added). A valid Clean Water Act discharge permit must regulate the discharge of pollutants at the point where they *enter* navigable waters, not at some other arbitrarily-chosen point *within* a jurisdictional waterbody. Confirming this understanding, the Supreme Court has explained repeatedly that the transfer of polluted water between two parts of the same water body does not constitute a discharge of pollutants under the Clean Water Act. *S. Florida Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 109-12 (2004); *Los Angeles Cty. Flood Control Dist.*

*v. Nat. Res. Def. Council, Inc.*, 133 S. Ct. 710, 713 (2013). Instead, the discharge occurs when pollutants are added to a jurisdictional waterbody. Because Outfall 003 at Roxboro is simply the mouth of a bay – that is, an arbitrary division between two parts of a single jurisdictional waterbody – it is not a valid point at which to regulate the addition of pollutants to navigable waters of the United States under the Clean Water Act. As a result, the current Roxboro NPDES permit does not validly authorize the discharge of pollutants into Hyco Lake or Sargents River.



Duke Energy, Site Layout Map, CSA Figure 2-1 (Attachment 2)

Duke Energy uses these jurisdictional waters to transport, absorb, and store pollutants before they reach Duke Energy's arbitrarily chosen "outfall" location. Duke Energy does not attempt to comply with the Clean Water Act for any of its discharges into these waters. In a number of ways, Duke Energy illegally treats these waters of the United States as wastewater dumps by discharging pollutants into them:

- It discharges into Sargents River through outlets in a rock "filter dike" constructed at the south end of the West Ash Basin, without any Clean Water Act authorization;
- It discharges highly toxic FGD wastes into the rerouted portion of Sargents River at "internal" Outfall 010, which is not regulated or authorized as an outfall to waters of the United States, and which lacks limits necessary to protect water quality in the river;

- Its unlined coal ash lagoons discharge by way of leaking streams of contaminated water, known as "seeps," from the East and West coal ash basins into the bay of Hyco Lake and Sargents River, at the locations identified by Duke Energy in its Comprehensive Site Assessment site layout map (Fig. 2-1, S-1 to S-17) (Attachment 2) and its Discharge Assessment Plan (April 29, 2016).
- Its unlined coal ash lagoons discharge unpermitted flows of pollutants via hydrologically connected groundwater from the unlined coal ash lagoons directly into the bay of Hyco Lake and Sargents River.
- It discharges the combined flows of coal ash and FGD wastes from the ash basins into Sargents River and the bay of Hyco Lake via "internal" Outfall 002, which is not regulated or authorized as an outfall to waters of the United States, and which lacks limits necessary to protect water quality in the river and Hyco Lake;
- It has created seven engineered "chimney drain" outlets in the West Ash Basin main dam (labeled S-01 through S-07 on the figure above and Attachment 2) that discharge into the bay of Hyco Lake, without any Clean Water Act authorization; and
- It discharges these combined flows to the rest of Hyco Lake via "external" Outfall 003, which is improperly located within Hyco Lake itself, where it cannot control or limit the discharge of pollutants *into* the lake.

In fact, there is no actual permitted outfall from an NPDES wastewater treatment facility at Roxboro into the receiving waters of the United States. The drains, dam openings, seeps, and groundwater conveyances set out above in fact are the outfalls for coal ash polluted water into waters of the United States, Hyco Lake and Sargents River. But these true outfalls are not recognized in the permit. Instead of these true outfalls, Duke Energy has identified a point in Hyco Lake in the mouth of the bay as the imaginary permitted "outfall" to Hyco Lake. The bay is not an "outfall" but is part of Hyco Lake itself. Nothing in Duke Energy's NPDES protects water quality in either the bay of Hyco Lake or Sargents River, nor does the permit authorize the coal ash discharges into these jurisdictional waters.

Duke Energy employed a similar arrangement at its Sutton coal ash facility in Wilmington, N.C. There, Duke Energy's coal ash impoundments discharged into a lake that had been created by impounding a jurisdictional stream in order to provide cooling water for the power plant, and that is managed as a public fishery – just like Hyco Lake.

At Sutton, Duke Energy had wrongly obtained an NPDES permit that purported to allow Duke Energy to treat this lake as an "internal" component of its wastewater system, with no water quality protections. Conservation groups represented by the Southern Environmental Law Center challenged Duke Energy's illegal pollution of Sutton Lake, and the U.S. District Court for the Eastern District of North Carolina ruled that the lake falls squarely within the "conventionally identifiable waters," of the United States protected by the Clean Water Act.

*Cape Fear River Watch, Inc. v. Duke Energy Progress, Inc.*, 25 F. Supp. 3d 798 (E.D.N.C. 2014), *amended,* No. 7:13-CV-200-FL, 2014 WL 10991530 (E.D.N.C. Aug. 1, 2014).

Duke Energy argued that its NPDES permit, which purported to allow the "internal" discharges to Sutton Lake, should shield it from liability under the Clean Water Act. The Court rejected that argument, stating that the permit itself "may violate the CWA" and ruling that the conservation groups were not required to administratively challenge the issuance of the NPDES permit "where the state agency fails to uphold fundamental requirements of the CWA." *Id.* at 811 (citing *Dubois v. United States Dep't of Agric.*, 102 F.3d 1273, 1300 (1st Cir.1996)).

The exact same problem exists at Roxboro, but the situation is worse. At Roxboro, Duke Energy has appropriated for its private use not one but at least two distinct jurisdictional waters: Hyco Lake and Sargents River. In addition, Duke Energy is polluting a third waterbody – that is a water of the United States and of North Carolina – by allowing leaking streams of wastewater, as well as ongoing contamination from old deposits of coal ash, to pollute the eastern tributary stream adjacent to the East Ash Basin.

At Sutton, the federal district court's ruling prompted DEQ to acknowledge that Sutton Lake was a water of the state and forced Duke Energy to obtain a new NPDES permit that recognizes Sutton Lake as a water of the United States. For the first time, the permit requires Duke Energy to treat its discharges into the lake by putting in place technology-based effluent limits and extensive wastewater treatment. Moreover, the North Carolina Superior Court issued an order directing Duke Energy to remove all the coal ash from the unlined impoundments at Sutton to dry, lined, landfill storage. Attachment 3. Excavation of the coal ash at Sutton is now well underway.

In addition to illegally treating Hyco Lake and Sargents River as wastewater dumps, Duke Energy is also illegally polluting an acknowledged water of the United States that even Duke Energy's permit does not treat as part of Duke Energy's wastewater treatment facility. On the east side of Duke Energy's East Ash Basin is a rerouted and impounded stream that is a water of the United States. Duke Energy discharges pollutants into it without permit authorization. As with Hyco Lake and Sargents River, Duke Energy's unlined coal ash lagoons discharge by way of leaking streams of contaminated water, known as "seeps," from the East coal ash basin into this waterway. And also as with Hyco Lake and Sargents River, Duke Energy's unlined coal ash lagoons discharge unpermitted flows of pollutants via hydrologically connected groundwater from the unlined coal ash lagoons directly into this impounded and rerouted stream on the east side of the East Ash Basin. These unpermitted discharges and their locations are described in more detail in the "Description of Violations" section below.

It should be noted that to avoid enforcement against this obvious violation of the Clean Water Act in the future, Duke Energy is seeking to do to this stream what it has done to the bay of Hyco Lake and Sargents River – to add this stream to its permit in an attempt to shield itself

from liability for ongoing, illegal pollution. Duke Energy is attempting to do this by seeking a new NPDES permit that treats the rerouted stream channel as an "internal" outfall, and is asking the state Department of Environmental Quality to allow it to expand its "waste boundary" to include the impounded area of this tributary, where coal ash from the basin has settled and its contaminating the surface water and sediments of the tributary. As set out above, however, that maneuver will not protect Duke Energy from its illegal pollution, because Duke Energy cannot deny a water of the United States and of North Carolina the protections of the Clean Water Act and turn that stream into a dump for its wastewater.

Apart from these unpermitted discharges of coal ash polluted water into waters of the United States, Duke Energy is also violating an express provision of its NPDES Permit for the Roxboro ash pits. The Removed Substances provision of that permit expressly requires Duke Energy to prevent pollutants and other materials removed during the course of wastewater treatment from entering waters of the state, including groundwater, and waters of the United States. The Removed Substances provision provides: "Solids, sludges, . . . or other pollutants removed during the course of treatment or control of wastewaters shall be utilized/disposed of . . . in a manner such as to prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States." Attachment 1, Part II, Section C.6.

In violation of this and other provisions of its permit, Duke Energy has for years been illegally polluting waters of North Carolina and the United States with pollutants from its Roxboro coal ash pits. The coal ash has contaminated the groundwater with elevated levels of numerous pollutants, including aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (both total and hexavalent chromium), cobalt, copper, iron, lead, manganese, nickel, nitrate, pH, selenium, strontium, sulfate, thallium, total dissolved solids (TDS), vanadium, and zinc. *E.g.*, Duke Energy, Corrective Action Plan Part 1 (December 1, 2015) ("CAP Pt. 1");[2] CSA Supplement 1 (August 1, 2016).[3]

This contaminated groundwater flows into Sargents River and Hyco Lake, which are in fact waters of the United States and North Carolina, and into the stream on the east side of the East Ash Basin, which is an acknowledged water of the United States. *E.g.*, CSA at 27; Figs. ES-1, 6-5, 6-8. There is also some radial flow outward from the coal ash basins (CSA at 27), which may be contaminating neighboring drinking wells on McGhees Mill Road and Dunnaway Road. In 2015, the owners of at least five drinking wells were told by the State not to use their water for drinking or cooking due to elevated levels of hexavalent chromium and vanadium, among other pollutants.

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[2] *Available at* http://edocs.deq.nc.gov/WaterResources/0/fol/321571/Row1.aspx.

[3] *Available at* http://edocs.deq.nc.gov/WaterResources/0/fol/398016/Row1.aspx.

If Duke Energy eliminated its unpermitted discharges into waters of the United States and complied with the Removed Substances provision of its existing permit, then the coal ash pollution of these waters – and of Hyco Lake in particular – would be dramatically reduced.

This pollution is currently contaminating the waters of the Roanoke River Basin, including a major downstream water supply, Kerr Lake. Coal ash and FGD wastes contain bromides, which interact with chlorine in water treatment plants to form brominated trihalomethanes, which are dangerous carcinogenic pollutants. Elevated levels of bromides have been detected in Hyco Lake near the Roxboro plant. Downstream of the Roxboro site, numerous water systems that withdraw water from Kerr Lake – including the Clarksville water system in Virginia and the Kerr Lake Regional Water System, which serves Henderson, Oxford, and other North Carolina communities – have experienced problems with elevated levels of trihalomethanes in their drinking water.

**State Court Enforcement Action**

In 2013, citizen conservation groups represented by the Southern Environmental Law Center sent to Duke Energy companies, the U.S. Environmental Protection Agency ("EPA"), and DEQ 60-Day Notices of Intent to Sue under the Clean Water Act. These notices set out violations of the Clean Water Act as a result of coal ash pollution by Duke Energy companies at their Asheville, Riverbend, and Sutton stations in North Carolina. In response to these notices, DEQ filed a series of enforcement actions in North Carolina Superior Court purporting to take enforcement action against Duke Energy companies for violating North Carolina anti-pollution laws through their coal ash pollution at every site in North Carolina where Duke Energy companies store coal ash. *See* Michael Biesecker and Mitch Weiss, *N.C. Regulators Shielded Duke's Coal Ash Pollution*, Associated Press (Feb. 9, 2014), *available at* http://bigstory.ap.org/article/nc-regulators-shielded-dukes-coal-ash-pollution.

In August 2013, DEQ filed an enforcement action against Duke Energy Progress, LLC, for violations of North Carolina's anti-pollution statutes at a number of its plants, including Roxboro. Complaint, *State of North Carolina* ex rel. *N.C. DEQ v. Duke Energy Progress*, No. 13-CVS-11032 (Wake Co.), Attachment 4. As to Roxboro, DEQ set out, under oath, that Duke Energy had illegal unpermitted discharges from the coal ash pits in violation of the NPDES Permit. *Id.* ¶¶ 84-88. DEQ also set out, under oath, that groundwater monitoring wells at the Roxboro coal ash site showed exceedances of state groundwater standards. *Id.* ¶¶ 89-96. DEQ stated under oath that Duke Energy's violations of law at Roxboro "pose[] a serious danger to the health, safety, and welfare of the people of North Carolina and serious harm to the water resources of the State." *Id.* ¶ 204.

However, DEQ's state court action does not recognize that the waters (Hyco Lake and Sargents River) being used improperly by Duke Energy are jurisdictional waters and thus it does

not recognize that they are protected by the prohibitions against unpermitted discharges at issue in the state court action. DEQ also did not take enforcement action against any of Duke Energy's violations of federal law at the Roxboro plant, and DEQ's state court enforcement action did not seek to enforce various specific provisions of the NPDES Permit, including the Removed Substances provision set out above. DEQ's action also did not take enforcement action against Duke Energy's violation of the Clean Water Act due to its unpermitted and illegal pollution of waters of the United States by coal ash pollution conveyed through groundwater in close hydrologic connection to waters of the United States.

Even as to the claims it did set out in the enforcement action, DEQ has not diligently prosecuted this action at all as to any site and specifically not as to Roxboro. DEQ's purported enforcement action as to Roxboro has been pending for well over three years. DEQ sought to stay its own enforcement action, but the Superior Court refused. Order Denying Plaintiff's Motion to Stay (Sept. 22, 2015), Attachment 5. DEQ entered into an agreement with Duke Energy to conduct no discovery for an extended period of time. It entered into a settlement agreement in another proceeding that purported to eliminate the pending enforcement of state groundwater laws. DEQ has not filed any motions to ask the Court to require Duke Energy to take any action as to any site or as to the Roxboro site in particular. And most recently, DEQ filed a brief in which it agreed with Duke Energy that its groundwater enforcement claims at Roxboro and other sites should be "terminated." In short, DEQ has done nothing over the ensuing years to pursue this enforcement action as to Roxboro – or any other site, for that matter – and in fact has actively attempted to hamper the enforcement of water pollution laws at these sites.

The United States District Court for the Middle District of North Carolina has concluded that DEQ has not diligently prosecuted its enforcement actions. In rejecting the motion of Duke Energy Carolinas, LLC, to dismiss a federal Clean Water Act suit over coal ash pollution at the Buck facility in Salisbury, North Carolina, the U.S. District Court found that in the year following the filing of the enforcement action, DEQ "appears to have done little, if anything, to move the case forward" and that "there appeared little likelihood that [DEQ's] action would proceed expeditiously to a final resolution." The Court ruled that it "is unable to find that [DEQ] was trying diligently or that its state enforcement action was calculated, in good faith, to require compliance with the Act." *Yadkin Riverkeeper, Inc. v. Duke Energy Carolinas, LLC*, 141 F.Supp.3d 428, 442 (M.D.N.C. Oct. 20, 2015).

Following this ruling, in 2016 Duke Energy settled the Buck federal action with conservation groups by agreeing to excavate all the coal ash from the Buck site and either recycle it for concrete or place it in a lined landfill separated from groundwater and surface waters.

As the Middle District found, DEQ is not enforcing at all and/or is not diligently enforcing any claims as to Duke Energy's coal ash pollution. The same is true at the Roxboro facility. In addition, as set out above, the state court enforcement action does not seek to enforce any federal claims and does not enforce the Removed Substances provision of the permit and other permit violations noticed in this letter. And it does not recognize as jurisdictional waters the bay of Hyco Lake or Sargents River which are being unlawfully used by Duke Energy as wastewater dumps.

**Toxic Effects of Pollutants**

According to the U.S. Agency for Toxic Substances and Disease Registry (ATSDR), some studies show that people exposed to high levels of aluminum may develop Alzheimer's disease. People with kidney disease have trouble removing aluminum from their system.

Arsenic is a known carcinogen that causes multiple forms of cancer in humans. It is also a toxic pollutant, 40 C.F.R. § 401.15, and a priority pollutant, 40 C.F.R. Part 423 App'x A. Arsenic is also associated with non-cancer health effects of the skin and the nervous system.

Antimony is listed as a toxic pollutant, 40 C.F.R. § 401.15, and is associated with reduced lifespan, decreased blood glucose, and altered cholesterol in rodents, and with vomiting and cardiac and respiratory effects in humans.

Barium can cause gastrointestinal disturbances and muscular weakness. Ingesting large amounts, dissolved in water, can change heart rhythm and can cause paralysis and possibly death. Barium can also cause increased blood pressure.

Drinking water containing beryllium in excess of the maximum contaminant level of 4 parts per billion (ppb) can lead to intestinal lesions, according to EPA. Beryllium in drinking water may also pose a cancer risk in humans. Beryllium is a toxic pollutant, 40 C.F.R. § 401.15.

Oral exposure to boron has led to developmental and reproductive toxicity in multiple species. Specific effects include testicular degeneration, reduced sperm count, reduced birth weight, and birth defects.

Chronic exposure to cadmium, a toxic pollutant, 40 C.F.R. § 401.15, can result in kidney disease and obstructive lung diseases such as emphysema. Cadmium may also be related to increased blood pressure (hypertension) and is a possible lung carcinogen. Cadmium affects calcium metabolism and can result in bone mineral loss and associate bone loss, osteoporosis, and bone fractures.

Chromium is a toxic pollutant, 40 C.F.R. § 401.15, and oral exposure to hexavalent chromium, a human carcinogen, has been found to cause cancers of the stomach and mouth. Exposure to the skin may cause dermatitis, sensitivity, and ulceration of the skin.

The International Agency for Research on Cancer (IARC) has determined that cobalt is possibly carcinogenic to humans. Short-term exposure of rats to high levels of cobalt in the food or drinking water resulted in effects on the blood, liver, kidneys, and heart. Longer-term exposure of rats, mice, and guinea pigs to lower levels of cobalt in the food or drinking water results in effects on the same tissues (heart, liver, kidneys, and blood) as well as the testes, and also caused effects on behavior. Sores were seen on the skin of guinea pigs following skin contact with cobalt for 18 days.

Copper is a toxic pollutant, 40 C.F.R. § 401.15, and according to EPA, people who consume drinking water with high levels of copper can experience gastrointestinal distress, and with long-term exposure may experience liver or kidney damage.

Iron can render water unusable by imparting a rusty color and a metallic taste and causing sedimentation and staining; to prevent these effects the EPA has set a secondary drinking water standard of 300 ug/L.

Lead is a very potent neurotoxicant that is highly damaging to the nervous system. Health effects associated with exposure to lead include, but are not limited to, neurotoxicity, developmental delays, hypertension, impaired hearing acuity, impaired hemoglobin synthesis, and male reproductive impairment. Importantly, many of lead's health effects may occur without overt signs of toxicity. Lead is also classified by the EPA as a "probable human carcinogen."

Manganese is known to be toxic to the nervous system. Manganese concentrations greater than 50 ug/L render water unusable by discoloring the water, giving it a metallic taste, and causing black staining. Exposure to high levels can affect the nervous system; very high levels may impair brain development in children.

According to EPA and ATSDR, nausea, vomiting, diarrhea and neurological effects have been reported in those who ingested water contaminated with nickel. Nickel is a toxic pollutant, 40 C.F.R. § 401.15. Exposure to nickel on the skin causes dermatitis. And animal studies have reported reproductive and developmental effects from ingestion of soluble nickel.

Selenium is an essential element, but it is also a toxic pollutant, 40 C.F.R. § 401.15, and excess exposure can cause a chemical-specific condition known as selenosis, with symptoms that include hair and nail loss.

Exposure to high levels of strontium during infancy and childhood can affect bone growth and cause dental changes. Infants and young children who ingest too much strontium can develop a condition called strontium rickets. Strontium rickets is a disease in which bones are thicker and shorter than normal and may be deformed.

High concentrations of sulfates in drinking water can cause diarrhea; the U.S. EPA has established a secondary maximum contaminant level ("MCL") of 250 mg/L and a health-based advisory of 500 mg/L. Groundwater with sulfate concentrations above the North Carolina groundwater standard of 250 mg/L is therefore unusable and potentially unsafe. Concentrations of 3400 mg/L have been found at Roxboro.

Thallium is a toxic pollutant, 40 C.F.R. § 401.15, and exposure to high levels of thallium can result in harmful health effects. Studies in rats have shown adverse developmental effects from exposure to high levels of thallium, and some adverse effects on the reproductive system after ingesting thallium for several weeks.

According to the ATSDR, vanadium can cause nausea, diarrhea, and stomach cramps. And IARC has determined that vanadium is possibly carcinogenic to humans.

Zinc is a toxic pollutant, 40 C.F.R. § 401.15, and according to ATSDR, ingesting high levels of zinc may cause stomach cramps, nausea, and vomiting. Ingesting high levels of zinc for several months may cause anemia, damage the pancreas, and decrease levels of high-density lipoprotein (HDL) cholesterol.

High concentrations of total dissolved solids can make drinking water unpalatable and can cause scale buildup in pipes, valves, and filters, reducing performance and adding to system maintenance costs.

Concurrent exposure to multiple contaminants may intensify existing effects of individual contaminants, or may give rise to interactions and synergies that create new effects. Where several coal ash contaminants share a common mechanism of toxicity or affect the same body organ or system, exposure to several contaminants concurrently produces a greater chance of increased risk to health.

## Description of Violations

### I. Unauthorized Surface Discharges to Waters of the United States

Section 301(a) of the Clean Water Act, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants from a point source to waters of the United States except in compliance with, among other conditions, a National Pollutant Discharge Elimination System ("NPDES") permit issued pursuant to § 402 of the Clean Water Act, 33 U.S.C. § 1342. Each violation of the permit – and each discharge that is not authorized by the permit – is a violation of the Clean Water Act.

The Clean Water Act defines a "point source" as "*any* discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, [or] container … from which pollutants are or may be discharged." 33 U.S.C. § 1362(14) (emphasis added). Under this broad definition, the discharge of pollutants from mining pits, slurry ponds, sediment basins, and mining leachate collection systems have been held to be point sources. *E.g.*, *U.S. v. Earth Sciences, Inc.*, 599 F.2d 368, 374 (10th Cir. 1979) ("[W]hether from a fissure in the dirt berm or overflow of a wall, the escape of liquid from the confined system is from a point source."); *Consolidation Coal Co. v. Costle*, 604 F.2d 239, 249-50 (4th Cir. 1979) (finding regulation of "discharges from coal preparation plant associated areas," which in turn included slurry ponds, drainage ponds, and coal refuse piles, was within Clean Water Act definition of point source), *rev'd on other grounds*, 449 U.S. 64 (1980).

In addition, a "point source need not be the original source of the pollutant; it need only convey the pollutant to 'navigable waters.'" *S. Fla. Water Mgmt. Dist. v. Miccosukee Tribe of Indians*, 541 U.S. 95, 105 (2004); *accord W. Va. Highlands Conservancy v. Huffman*, 625 F.3d 159, 168 (4th Cir. 2010) (permits are required for discharges from point sources that "merely convey pollutants to navigable waters"). Thus, ditches and channels that convey pollutants but are themselves not the original source constitute point sources. This includes unintentional conveyance of pollutants, for example, through naturally-formed ditches, gullies, or fissures. *See Sierra Club v. Abston Constr. Co.*, 620 F.2d 41, 45 (5th Cir. 1980) (discharge from mining pits and spoil piles through naturally formed ditches caused by gravity flow at a coal mining site are point sources); *Earth Sciences*, 599 F.2d 368 (holding unintentional discharges of pollutants from a mine system designed to catch runoff from gold leaching site during periods of excess melting met the statutory definition of a point source); *N.C. Shellfish Growers Ass'n v. Holly Ridge Assocs., LLC*, 278 F. Supp. 2d 654, 679 (E.D.N.C. 2003) ("Notwithstanding that it may result from such natural phenomena as rainfall and gravity, the surface run-off of contaminated waters, once channeled or collected, constitutes discharge by a point source."); *O'Leary v. Moyer's Landfill, Inc.*, 523 F. Supp. 642, 655 (E.D. Pa. 1981) (intent of the discharging entity is irrelevant).

The U.S. District Court for the Middle District of North Carolina recently confirmed that "[a]s confined and discrete conveyances, [coal ash] lagoons fall within the CWA's definition of 'point source.'" *Yadkin Riverkeeper*, 141 F.Supp.3d at 444.

The Roxboro coal ash pits are discharging in violation of the Clean Water Act because there are multiple unpermitted surface flows of wastewater leaving the pits and contaminating waters of the United States – both jurisdictional waters that are being improperly treated as part of Duke Energy's wastewater system (Sargents River and the bay of Hyco Lake), and also the rerouted and impounded stream that flows around the eastern side of the East Lagoon. These discharges include the seeps around the perimeter of the East and West Ash Basins (S-8 to S-12, S-15 to S-17) and the engineered "chimney drains" discharging from the West Basin dam to

Hyco Lake (S-1 to S-7). *See* Attachment 2. These unlawful discharges also include the discharges from the West Ash Basin filter dike, and the FGD system discharges into Sargents River. These surface flows are all point sources under the Clean Water Act that convey unpermitted discharges of pollutants into waters of the United States and of North Carolina.

At Roxboro, Duke Energy is unlawfully co-opting Sargents River and part of Hyco Lake as internal components of its wastewater treatment system. As a result, Duke Energy has no permit issued under the Clean Water Act for discharges into these waters of the United States. Duke Energy is also discharging pollutants into the rerouted and impounded stream east of the East Ash Basin without permit authorization. Accordingly, Duke Energy's point source discharges of toxic pollutants into these waters are unpermitted and do not comply with the Clean Water Act.

### A. Duke Energy Is Polluting Jurisdictional Waters by Treating Them as Part of Its Private Coal Ash Pollution System

Duke Energy is violating the Clean Water Act by using waters of the United States as its private coal ash wastewater system. These waters include part of Hyco Lake and Sargents River, which Duke Energy and DEQ are failing to protect as waters of the United States because Duke Energy is treating them as components of its coal ash wastewater system.

#### 1. Hyco Lake

Duke Energy has taken part of Hyco Lake for its private wastewater system, in violation of the Clean Water Act.

Hyco Lake was created in 1965 by damming the Hyco River, a navigable waterway. The entirety of Hyco Lake is therefore jurisdictional waters of the United States. 40 C.F.R. § 122.2; 33 C.F.R. § 328.3(a). It is also a water of North Carolina. N.C. Gen.Stat. 143–212(6).

Hyco Lake is classified by North Carolina as Class WS-V, B waters of the State. This classification protects water supplies and waters used for swimming and other uses involving frequent human body contact with water, as well as fishing, fish consumption, wildlife, aquatic life including propagation, survival and maintenance of biological integrity, and agriculture. This designation applies to the "Hyco River, including Hyco Lake below elevation 410" feet above mean sea level (msl), and it extends "[f]rom source in Hyco Lake to dam of Hyco Lake, including tributary arms below elevation 410" feet msl. NC Surface Water Classifications (Stream Index: 22-58-(0.5)).[4] This designation includes the bay of Hyco Lake currently being

[4] *Available at* https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=6e125ad7628f494694e259c80dd64265.

used by Duke Energy for its private wastewater pollution system, because this bay is an arm of the lake below elevation 410 msl.

Hyco Lake provides cooling water for the Roxboro power plant and is managed as a public recreation lake. To manage Hyco Lake, the North Carolina General Assembly created the Person-Caswell Lake Authority and specified that its duties include managing these waters "for public recreation." S.L. 1965-200 (Attachment 6).

In addition, the fish and wildlife of Hyco Lake are managed as a public resource by the North Carolina Wildlife Resources Commission. The lake features a 65-acre recreation park and campgrounds, a 30-acre Natural Learning Area, multiple boat ramps, a water skiing course, dedicated swimming areas, and numerous docks. Members of the Association own property on Hyco Lake and use the lake for swimming, fishing, boating, and waterskiing, among other uses.

Fishing is a particularly important attraction and public resource at Hyco Lake. The Person-Caswell Lake Authority states that "[f]ishing has always been and will always be one of the favorite pastimes on Hyco Lake. Avid fishermen can be seen during all types of weather, all seasons, and at all times of the day and night." Person-Caswell Lake Authority, http://hycolake.org/PCLAFishingonHyco.html. Numerous fishing tournaments are held throughout the year. *Id.*

Hyco Lake also provides habitat for bald eagles, which forage at the Roxboro coal ash site and are frequently observed in the vicinity. *See* Duke Energy CSA, Appendix I at 9, 11.

Hyco Lake has been seriously affected by Duke Energy's Roxboro coal ash pollution. In past decades, coal ash pollution from the Roxboro plant has devastated the fish population, requiring long-term fish consumption advisories and leading EPA to identify the site as a proven ecological damage case. In recent years, sampling of Hyco Lake's surface water, sediments, and fish tissue has continued to show elevated levels of coal ash contaminants including arsenic, boron, selenium, aluminum, copper, barium, strontium, and others. Attachments 7-9 (Duke Energy Environmental Monitoring Report data, 2013-15 and NC Division of Water Resources sampling data).

Sampling of Hyco Lake has also revealed elevated levels of bromide, the pollutant from coal ash and FGD wastes that causes the formation of dangerous trihalomethanes in drinking water systems. Attachment 9. Downstream water systems in North Carolina and Virginia have had problems with elevated levels of trihalomethanes for years. *E.g.*, Clarksville Water System Announcement (Jan. 4, 2017) (Attachment 10) (trihalomethanes above maximum contaminant level).

In addition, Duke Energy's Human Health Risk Assessment for the Roxboro coal ash site concluded that exposure to fish tissue caught from Hyco Reservoir and consumed under

recreational and subsistence fishing scenarios resulted in potentially unacceptable health risks. Duke Energy CAP Pt. 2,[5] Appendix D, at p. 5-16.

Contrary to the purposes for which Hyco Lake was created and is managed, Duke Energy is using part of Hyco Lake for its coal ash wastewater pollution. Duke Energy has fenced off a bay in the lake and wrongly labeled the mouth of this bay as its supposed permitted outfall for the discharge of pollutants into waters of the United States, with no water quality protections for the waters *within* the bay. The bay is plainly part of Hyco Lake.

The bay receives coal ash pollutants from Duke Energy's coal ash impoundments in several ways. Duke Energy has constructed seven unauthorized "chimney drain" discharge points at the base of the West Ash Basin Dam. These illegal discharge points allow polluted wastewater to discharge into the bay, despite the fact that Roxboro NPDES permit has never purported to allow these discharges. Unengineered seeps also discharge into the bay, as shown on Attachment 2. The bay also receives all of the West Ash Basin coal ash discharge and FGD discharge, via the flow of the rerouted Sargents River. Duke Energy CSA, Fig. 2-7 (Attachment 11) (showing bay of Hyco Lake labeled as "Effluent Channel" receiving wastewater flows). And the bay also receives discharges of pollutants from the coal ash lagoons via hydrologically connected groundwater.

Recent sampling found elevated levels of boron, strontium, vanadium, and other coal ash pollutants in the waters of the bay. The sample results (labeled "DC Bay" for a sampling location at the south end of the bay and "Roxboro 003" for a sampling location at the mouth of the bay where the permit identifies Outfall 003) are attached as Attachment 12.

In its permitting materials, Duke Energy sometimes calls this part of Hyco Lake a "discharge canal," "cooling pond," or "effluent channel," and its NPDES permit treats this bay of Hyco Lake as a component of the coal ash wastewater system at Roxboro.

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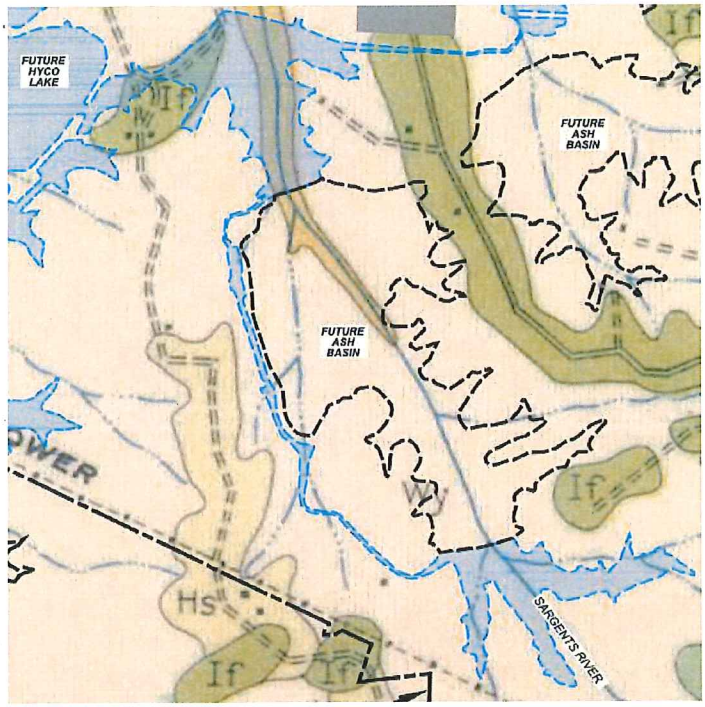
[5] *Available at* http://edocs.deq.nc.gov/WaterResources/0/fol/366752/Row1.aspx.


However, Duke Energy's own survey of jurisdictional waters in its Natural Resources Technical Report identifies this bay as part of the jurisdictional "Lake." The portions of the bay within the red "Study Area" boundary on the jurisdictional waters map above are shaded light blue for a jurisdictional "Lake" (labelled "AA"). Plainly, the rest of the bay outside the "Study Area" boundary is jurisdictional waters as well. Confirming this identification by Duke Energy, numerous maps in Duke Energy's Comprehensive Site Assessment for Roxboro label this bay as being part of Hyco Lake. *E.g.*, CSA Fig. 5-1 (Attachment 13).

## 2. Sargents River




As shown in the Historical Survey Map from Duke Energy's CSA, Fig. 2-2, reproduced here, Sargents River originates south of the Roxboro property, and historically it flowed north to through the now-impounded stream valley of the West Ash Basin to join the Hyco River. After Hyco Lake was created in 1965, Sargents River flowed into Hyco Lake.

Sargents River is a water of the United States. 40 C.F.R. § 122.2; 33 C.F.R. § 328.3(a). It is also a water of North Carolina. N.C. Gen.Stat. 143–212(6). Sargents River (also called "Sargents Creek") is classified as Class C waters of North Carolina, which protects state waters for uses including secondary recreation, fishing, wildlife, fish consumption, aquatic life including propagation, survival and maintenance of biological integrity, and agriculture. This state water quality classification extends along the entire length of Sargents River, from the "source to Hyco Lake, Hyco River."[6]

In 1973, Duke Energy created the West Ash Basin by constructing a dam across the mouth of Sargents River, which was then part of Hyco Lake. U.S. EPA, CCW Impoundments Inspection Report (2009). Duke Energy sluiced and deposited coal ash and other industrial wastes into this basin in the impounded Sargents River.

In 1986, Duke Energy constructed a rock dike in Sargents River at the south end of the West Ash Basin, referred to as the filter dike. The filter dike allows coal ash pollutants and wastewater to pass through openings in the dam and discharge to the south into Sargents River. When the filter dike was constructed, Duke Energy also rerouted Sargents River to run along the west side of the West Ash Basin, where it flows into Hyco Lake.

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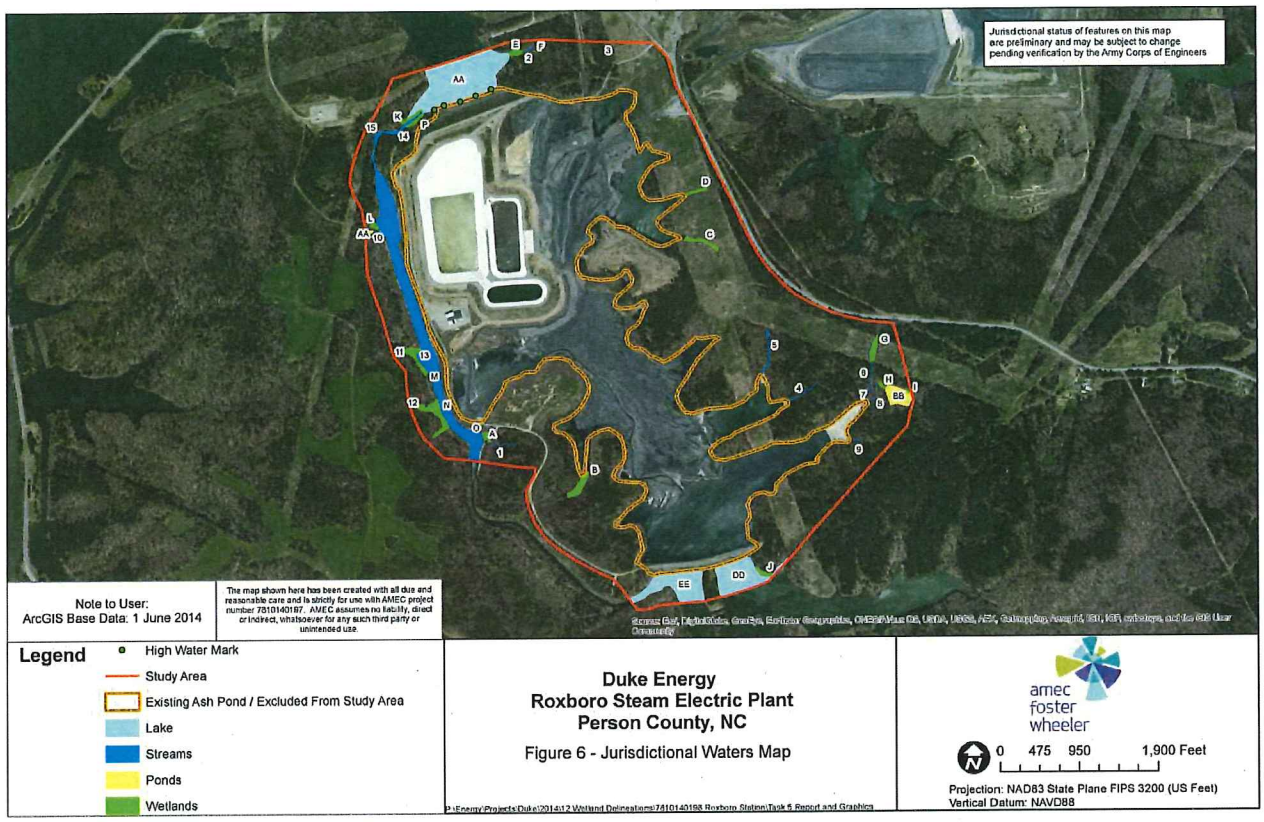
[6] DEQ, NC Surface Water Classifications, https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=6e125ad7628f494694e259c80dd64265 (search "Sargents Creek").

Duke Energy now discharges coal ash pollutants and wastewater through the filter dike into the impounded portion of Sargents River south of the West Ash Basin. These pollutants and wastewater then flow through the rerouted portion of Sargents River on the west side of the West Ash Basin. Along the way, Duke Energy discharges additional wastes into Sargents River, including the wastes from its highly toxic FGD system via "internal" outfall 010, which is not subject to limits to protect water quality in the river. The rerouted portion of Sargents River then passes through "internal" outfall 002 (which also has no limits to protect water quality in the river) and rejoins its original channel north of the West Ash Basin, an area that is now the bay of Hyco Lake discussed above.

Recent sampling of the portion of Sargents River rerouted by Duke Energy reveals elevated levels of mercury, boron, hexavalent chromium, strontium, vanadium, and other coal ash pollutants. The sample results (labeled "DC Near 002") are attached as Attachment 12.

Duke Energy and its NPDES permit treat Sargents River as part of its coal ash wastewater system, as explained above. This includes the impounded portion of the river south of the West Ash Basin, the rerouted channel through which Sargents River flows west of the West Ash Basin, and the former stream channel north of the West Ash Basin that is now part of Hyco Lake.

However, the entirety of Sargents River is and remains waters of North Carolina and the United States, as is all of Hyco Lake. Duke Energy has never obtained a Clean Water Act Section 404 permit authorizing the destruction of this river or its temporary removal from the definition of waters of the United States. The Fourth Circuit has affirmed that waters of the United States remain waters of the United States even if they are impounded for waste treatment – which has not occurred for these portions of Sargents River. *West Virginia Coal Ass'n v. Reilly*, 932 F.2d 964 (4th Cir. 1991), *aff'g* 728 F. Supp.1276, 1290 (S.D. W.Va. 1989) (waste treatment exception to definition of waters of the United States does not apply to treatment ponds constructed in United States waters). In addition, rerouting Sargents River does not change its status as waters of the United States. *See Treacy v. Newdunn Assoc., LLP*, 344 F.3d 407, 417 (4th Cir. 2003) (man-made ditch replacing natural hydrologic connection is tributary and water of United States).




In accordance with these controlling authorities, Duke Energy's own "Natural Resources Technical Report" included in its Comprehensive Site Assessment identifies Sargents River as jurisdictional waters. Within the red "Study Area" boundary on this map, the impounded portions of the river to the south of the West Ash Basin that are within the boundary are shaded light blue, designating a jurisdictional "Lake" (labeled "EE" and "DD"), while the rerouted portion of the river within the "Study Area" boundary is shaded dark blue, for a jurisdictional "Stream." Thus, this map depicts Duke Energy's own identification of the portions of Sargents River within its "Study Area" as being jurisdictional waters. Plainly, the rest of the river outside the "Study Area" boundary is jurisdictional waters as well. Duke Energy illegally discharges into Sargents River at the following locations:

- Discharges from the filter dike into Sargents River south of the West Ash Basin, as identified on Attachment 2, plus additional unengineered discharges coming through this filter dike along its length and discharging into Sargents River;
- "Internal" outfall 010, discharging highly toxic FGD waste pollution into the rerouted portion of Sargents River;
- Seep discharges from the West Ash Basin into the rerouted section of Sargents River, at the locations identified on Attachment 2;

- Engineered chimney drains and unengineered seeps discharging into Sargents River where it joins the bay of Hyco Lake north of the West Ash Basin, at the locations identified in Attachment 2; and
- Discharges of pollutants from the unlined West Ash Basin via direct groundwater flows into Sargents River.

### B. Duke Energy Is Polluting the Eastern Tributary Stream with Unpermitted Discharges of Coal Ash Pollution

Several unnamed tributaries of the Hyco River flow through the eastern portion of Duke Energy's Roxboro property. *See* CSA Fig. 2-2, Attachment 14. Like Sargents River, these streams are waters of the United States and North Carolina. Duke Energy has impounded and rerouted these tributary flows into a single channel that flows along the east side of the East Ash Basin. Under Duke Energy's existing Clean Water Act permit, the rerouted eastern tributary stream channel (and the streams that flow into it) is not now treated as part of Duke Energy's wastewater treatment system. Moreover, there is no permitted discharge into the eastern tributary under Duke Energy's existing Clean Water Act permit.

In 1966, Duke Energy created the East Ash Basin by constructing a dam in several of the original tributary streams and filling the impounded streams with coal ash. After the East Ash Basin was filled to capacity with coal ash, it was abandoned in 1985, according to company records. In the late 1980s, Duke Energy constructed an unlined coal ash landfill on top of the East Ash Basin. In 2004, Duke Energy constructed a lined coal ash landfill on top of this unlined landfill. The eastern slope of the landfill now blocks off the tributary stream flow on the east side of the East Ash Basin area. The stream has been rerouted to flow along the east side of the East Ash Basin, where it flows north into the cooling water intake channel for the power plant and is discharged to Hyco Lake.

Duke Energy is polluting this eastern tributary stream (and thereby Hyco Lake, into which it flows) with coal ash and other pollutants in several ways:

- It has dumped coal ash into the impounded stream area east of the East Ash Basin and allowed wind-blown coal ash to be deposited there; this coal ash is a continuing source of ongoing pollution. *See* CSA Supplement 1 at 3-8 to 3-9. Sampling by Duke Energy of the water within this area has revealed that coal ash has polluted the water with elevated levels of aluminum, arsenic, barium, boron, chloride, copper, iron, lead, manganese, mercury, selenium, strontium, sulfate, TDS, vanadium, and zinc; sampling of the sediments at the bottom of this area revealed arsenic, barium, copper, iron, and manganese concentrations above ecological screening values. *See* CSA Supplement 1 at ES-5-6, 3-8 to 3-9, Table 3-1, 3-2; Spreadsheet compiling additional sampling results

submitted to DEQ by Duke Energy (Oct. 2016) (hereinafter, "October 2016 Sampling Spreadsheet").[7]

- It is also allowing leaking streams of polluted wastewater to flow out of the East Ash Basin area into the rerouted stream. These seeps are identified in Duke Energy's Comprehensive Site Assessment, *e.g.*, Fig. 2-1 (seep locations S-9 through S-12). They are discharging pollutants to the eastern tributary, including aluminum, arsenic, barium, boron, chloride copper, iron, manganese, mercury, molybdenum, nickel, selenium, sulfate, strontium, TDS, vanadium, and zinc. *See* CAP 1, Table 1-3; October 2016 Sampling Spreadsheet.

- In addition, coal ash pollutants flow into the stream via hydrologically connected groundwater, which contains elevated levels of coal ash pollutants including aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (both total and hexavalent chromium), cobalt, copper, iron, lead, manganese, nickel, nitrate, pH, selenium, strontium, sulfate, thallium, TDS, vanadium, and zinc.

Thus, there are at least three types of unpermitted point source pollution contaminating this stream: the continuing discharges of pollutants from the coal ash deposited in the impounded area of the tributary, the seeps discharging from the East Ash Basin into the tributary, and the flows of pollutants from the East Ash Basin into the tributary via hydrologically connected groundwater.

As a result of these discharges, this stream is highly contaminated. Duke Energy's own sampling of this stream at the point where it joins the cooling water intake canal for the power plant (sampling location S-13 on map attached as Attachment 2) reveals that it contains all of the pollutants listed above that are being illegally discharged from the coal ash basin, including levels above water quality criteria for aluminum, arsenic, boron, cobalt, iron, manganese, mercury, sulfate, TDS, and vanadium. *See* sampling results for location S-13, *e.g.*, CAP Pt. 1, Table 1-3; October 2016 Sampling Spreadsheet.

This eastern tributary stream is not part of Duke Energy's permitted wastewater system. *See* Attachment 11 (NPDES Flow Diagram). However, now that Duke Energy is facing increased scrutiny for its coal ash pollution at Roxboro, it is seeking to try to legalize its ongoing pollution of these areas. Duke Energy has applied for and DEQ has issued a draft NPDES permit that treats the rerouted tributary stream east of the East Ash Basin as a permitted outfall, despite the fact that it is a jurisdictional stream. This stream was identified as a permitted outfall decades earlier, but it has been excluded from the permit since at least 1994. There has never been a valid justification for incorporating this jurisdictional water and water of the United States into an NPDES permit, and there is certainly no justification for adding it to a new permit today.

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[7] *Available at* http://edocs.deq.nc.gov/WaterResources/0/edoc/490711/Roxboro_2016-10.xlsx.

This is a blatant and illegal attempt to shield Duke Energy from liability for its ongoing pollution of this stream, which is a water of the United States, via seeps and contaminated groundwater flow.

There is nothing in the Clean Water Act that would allow a jurisdictional stream to be labeled by the polluter and a compliant state agency as an outfall and somehow removed from the definition of waters of the United States. Duke Energy cannot paper over its ongoing, illegal pollution of jurisdictional waters. By a DEQ permit or otherwise, Duke Energy cannot remove this stream from the waters of the United States.

In addition to its efforts to rewrite its NPDES permit, Duke Energy is also seeking to expand the "waste boundary" of the East Ash Basin to try to incorporate what it calls the "Eastern Extension" area where the tributary stream is impounded east of the East Ash Basin. *See* Ash Basin Extension Impoundment and Discharge Canals Assessment Work Plan.[8] Again, this area is not part of Duke Energy's permitted wastewater system; instead, it is a jurisdictional stream being polluted illegally by Duke Energy's improper storage and management of its coal ash.

However, under Duke Energy's permit as it now exists, these maneuvers have not been put into place and this waterway remains a protected water of the United States and of North Carolina under the Clean Water Act. Moreover, if Duke Energy and DEQ subsequently issue a renewed permit that attempts to make this waterway part of Duke Energy's wastewater treatment facility, that attempt will be unlawful and this waterway will remain protected by the Clean Water Act as a water of the United States and of North Carolina.

These waters are plainly subject to the jurisdiction of the Clean Water Act. 40 C.F.R. 122.2 ("Waters of the United States" at (1)(iv), (v)). And Duke Energy's Comprehensive Site Assessment clearly delineates the "Eastern Extension" area and rerouted stream east of the East Ash Basin as waterbodies that are not part of the ash basin, and also identify the rerouted tributary as a stream. *E.g.*, CSA Figs. 2-1 (Attachment 2), 5-1 (Attachment 13).

Consequently, unpermitted discharges into this waterway violate the Clean Water Act, regardless of whether Duke Energy and its permit treat this stream as a water of the United States and of North Carolina.

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[8] *Available at* http://edocs.deq.nc.gov/WaterResources/0/doc/404808/Page1.aspx.

### C. Duke Energy's NPDES Permit Does Not Authorize Discharges Into These Waters of the United States.

The Roxboro NPDES permit authorizes only one point source discharge for its coal ash pollution into waters of the United States: Outfall 003.[9] Attachment 1, Permit No. NC0003425 at Part I.A.(2).

Accordingly, Duke Energy's point source discharges from its coal ash lagoons into Sargents River, the bay of Hyco Lake, and the tributary stream east of the East Ash Basin are not authorized under the Clean Water Act. These unauthorized discharges consist of coal ash and coal ash sluice water, ash landfill leachate and runoff, dry-ash handling system wash water, cooling tower blowdown, coal mill rejects and pyrites, sewage treatment plant effluent, low volume waste consisting of boiler blowdown, chemical metal cleaning wastes, reverse-osmosis reject wastewater and floor drains, FGD wastes, and FGD system blowdown overflow, and they contain pollutants including aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium including hexavalent chromium, cobalt, copper, iron, lead, manganese, mercury, molybdenum, nickel, pH, selenium, strontium, sulfate, thallium, TDS, vanadium, and zinc.

The Roxboro NPDES permit identifies no authorized discharge point for the discharges from the coal ash lagoons into Sargents River. And the permit treats the FGD discharges into Sargents River and the flow of the river into the bay of Hyco Lake as "internal" outfalls within a waste treatment system, so they lack limits to protect water quality in these waterbodies. The permit contains no limits for toxic pollutants discharging from the lagoons via these "internal" outfalls, including arsenic, mercury, lead, selenium, chromium, and many others.

The permit does not protect these jurisdictional waters because it treats them as components of a wastewater treatment system. As a result, it does not and cannot validly authorize Duke Energy's highly contaminated toxic discharges to these waters of the United States. *Cape Fear River Watch, Inc. v. Duke Energy Progress, Inc.*, 25 F. Supp. 3d 798, 810-11 (E.D.N.C. 2014) (NPDES permit does not shield polluter for use of jurisdictional waters as component of private coal ash wastewater system). Where the permitting authority "has failed to fulfill its duties under the Act by issuing NPDES permits that do not comply with the Clean Water Act and its implementing regulations," the permit is not valid. *Miccosukee Tribe of Indians of Fla. v. U.S.*, 706 F. Supp. 2d 1296, 1302 (S.D. Fla. 2010), *aff'd* 498 Fed. App'x 899 (11th Cir. 2012) (per curiam).

It is beyond dispute that an NPDES permit cannot deliberately fail to protect water quality by erroneously declaring waters of the United States – including blue-line streams and

[9] The only other permitted outfall to waters of the United States is Outfall 006, for coal pile runoff from the Roxboro power plant.

part of a public fishing and recreational lake – to be a waste treatment facility. Such an absurd result would directly contradict the Clean Water Act's objective of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters and the NPDES permitting program's goal of eliminating discharges of pollutants into navigable waters. 33 U.S.C. § 1251(a).

The ash pits at Roxboro have received coal ash and other substances from the burning of coal, ash landfill leachate and runoff, dry-ash handling system wash water, cooling tower blowdown, coal mill rejects and pyrites, sewage treatment plant effluent, low volume waste consisting of boiler blowdown, chemical metal cleaning wastes, reverse-osmosis reject wastewater and floor drains, and overflow from the FGD system blowdown. These substances contain metals and pollutants including aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium including hexavalent chromium, cobalt, copper, iron, lead, manganese, mercury, nickel, pH, selenium, strontium, sulfate, thallium, TDS, vanadium, and zinc. When the ash comes into contact with water, these metals and pollutants leach or dissolve into the water and are discharged from the ash basins.

As described above, the Roxboro coal ash basins and FGD basins, their dams, their leaks, flows, streams, and seeps are all unpermitted point sources under the Clean Water Act. These unauthorized point sources discharge pollutants without water quality protections into Sargents River and the bay of Hyco Lake, despite their status as waters of the United States.

The same is true for the tributary stream on the east side of the East Basin. It is a water of the United States, and the unpermitted discharges into it are violations of the Clean Water Act.

**Because these discharges are continuous and ongoing, they will continue after the date of this letter and the subsequent filing of a lawsuit.**

## II. Unauthorized Discharges to State Waters and Navigable Waters and Violations of NPDES Permit Conditions

### A. Violations of Removed Substances Permit Provision

Duke Energy has violated the CWA by violating an express condition in its NPDES permit for Roxboro requiring that Duke Energy prevent the pollutants from the coal ash lagoons from entering North Carolina waters and navigable waters. Duke Energy's NPDES permit, Part II.B.1, states that "[t]he Permittee must comply with all conditions of this permit. *Any permit noncompliance constitutes a violation of the CWA* . . . and is grounds for enforcement action . . . ." Attachment 1.

Duke Energy has violated "an effluent standard or limitation," as defined under Clean Water Act § 505(f), 33 U.S.C. § 1365(f), by violating an express condition of the NPDES permit for the Roxboro Plant. Duke Energy has violated the provision of its NPDES permit requiring Duke Energy to prevent the entrance of pollutants from the coal ash lagoons into North Carolina waters or navigable waters. Part II.C.6 of the permit requires that:

> Solids, sludges . . . or other pollutants removed in the course of treatment or control of wastewaters shall be utilized/disposed of . . . in a manner such as to *prevent any pollutant from such materials from entering waters of the State or navigable waters of the United States*."

Attachment 1 (emphasis added). The ash basins receive and treat various waste streams, including coal ash and other substances from the burning of coal, ash landfill leachate and runoff, dry-ash handling system wash water, cooling tower blowdown, coal mill rejects and pyrites, sewage treatment plant effluent, low volume waste consisting of boiler blowdown, chemical metal cleaning wastes, reverse-osmosis reject wastewater and floor drains, and overflow from the FGD system blowdown. These waste streams are treated by sedimentation in the ash basins. Pollutants that have been removed in the course of treatment are stored in the Roxboro coal ash basins.

This provision requires the permittee to prevent coal ash contaminants removed in the course of treatment (*i.e.*, settling) as well as coal ash and other substances from the burning of coal, ash landfill leachate and runoff, dry-ash handling system wash water, cooling tower blowdown, coal mill rejects and pyrites, sewage treatment plant effluent, low volume waste consisting of boiler blowdown, chemical metal cleaning wastes, reverse-osmosis reject wastewater and floor drains, and overflow from the FGD system blowdown – and pollutants, solids, sediments, and sludge from them – from entering the waters of North Carolina and navigable waters of the United States. Groundwater is included in North Carolina's definition of waters of the state. N.C. Gen. Stat. § 143-212(6). So are Hyco Lake, Sargents River, and the other unnamed tributary streams on the property, and they are also navigable waters of the United States.

Far from preventing the entrance of these pollutants into state and United States waters, for years Duke Energy has knowingly discharged pollutants, solids, and sludges from its Roxboro coal ash lagoons into State waters and navigable waters. For years, pollutants from coal ash have been found in ground water under, at, and around the Roxboro site. In addition, for years, coal ash, sediments, sludges, and pollutants actually have been disposed of in the groundwater at Roxboro. Measurements of the groundwater table elevation and surveys of the depth of the coal ash in both ash basins at Roxboro reveal that the coal ash sits approximately 70 feet below the groundwater table.

Thus, coal ash itself has been placed in groundwater, in violation of this permit provision. In addition, monitoring well data from the site show Duke Energy's storage of coal ash in the unlined lagoons has caused at least aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (both total and hexavalent chromium), cobalt, copper, iron, lead, manganese, nickel, nitrate, pH, selenium, strontium, sulfate, thallium, TDS, vanadium, and zinc to enter the groundwater.

This contaminated groundwater in turn flows to tributary streams and Hyco Lake. Sampling results for these waters, as well as sediments and fish tissue in Hyco Lake, show elevated levels of coal ash pollutants including aluminum, arsenic, copper, mercury, boron, cobalt, chromium, hexavalent chromium, iron, manganese, selenium, strontium, sulfate, TDS, and vanadium.

The coal ash settling basins at Roxboro are a wastewater treatment system; its purpose is to treat and remove solids, sludges, and pollutants and keep them out of public waters. As a result, Duke Energy has an express permit obligation to prevent these materials and pollutants from entering public waters after they have been removed during the course of treatment. Instead, Duke Energy has been and is allowing the unpermitted and uncontrolled entrance of solids, sludges, and pollutants into the waters of the State and navigable waters of the United States. Duke Energy's actions and failures are a straightforward violation of this straightforward provision of the permit.

Accordingly, by not preventing the entrance of its removed solids, sludges, and pollutants to State waters and of the United States (including the groundwater of North Carolina, Hyco Lake, Sargents River, and other unnamed streams around and beneath the ash basins), Duke Energy has violated and is violating its NPDES permit and thus the Clean Water Act. This permit requirement to prevent the entrance of pollutants into navigable waters and State waters, including ground waters of the State, is enforceable through a citizen suit under the Clean Water Act. *See* 33 U.S.C. § 1370 (allowing states to adopt and enforce more stringent limitations in CWA permits than the federal government); 33 U.S.C. § 1311(b)(1)(B) (stating that more stringent state limitations in furtherance of the objective of the CWA include "those necessary to meet water quality standards"); *Sierra Club v. Virginia Elec. & Power Co.*, No. 2:15CV112, 2015 WL 6830301, at *6-7 (E.D. Va. Nov. 6, 2015) (allowing citizen suit claims for violation of Removed Substances permit provision for surface and groundwater discharges); *Yadkin Riverkeeper v. Duke Energy Carolinas*, 141 F.Supp.3d at 446-47 (allowing citizen suit claims for violation of Removed Substances permit provision for surface and groundwater discharges); *Cape Fear River Watch, Inc. v. Duke Energy Progress, Inc.*, 25 F. Supp. 3d 798, 810-11 (E.D.N.C. 2014) *amended,* No. 7:13-CV-200-FL, 2014 WL 10991530 (E.D.N.C. Aug. 1, 2014) (allowing citizen suit claims for violation of Removed Substances permit provision for surface and groundwater discharges). *See also Friends of the Earth, Inc. v. Gaston Copper Recycling*

*Corp.*, 204 F.3d 149, 152 (4th Cir. 2000) (confirming citizens are "authorized to bring suit against any NPDES permit holder who has allegedly violated its permit."); *Nw. Envtl. Advocates v. City of Portland*, 56 F.3d 979, 986 (9th Cir. 1995) ("The plain language of CWA § 505 authorizes citizens to enforce all permit conditions"); *Culbertson v. Coats Am.*, 913 F. Supp. 1572, 1581 (N.D. Ga. 1995) (holding that "[t]he CWA authorizes citizen suits for the enforcement of all conditions of NPDES permits").

**Because these permit violations and entrance of pollutants from the unlined coal ash lagoons to the waters of the State and to navigable waters of the United States are continuous and ongoing, they will continue after the date of this letter and the subsequent filing of a lawsuit.**

### B. Failure to Properly Operate and Maintain the Roxboro Coal Ash Lagoons

Part II, Section C.2 of the NPDES permit provides: "The Permittee shall at all times provide the operation and maintenance resources necessary to operate the existing facilities at optimum efficiency. The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Permittee to achieve compliance with the conditions of this individual permit." Attachment 1.

As set out above, Duke Energy has repeatedly and in a variety of ways violated the NPDES permit. Its wastewater treatment facility and systems improperly store coal ash in state waters, leak, malfunction, pollute, and otherwise violate the conditions of the permit. All the permit violations set out above are also violations of these basic permit requirements to properly operate and maintain a wastewater facility and systems.

**Because these violations are continuous and ongoing, they will continue after the date of this letter and the subsequent filing of a lawsuit.**

## III. Illegal Discharges Through Close Hydrologic Flow into Waters of the United States

According to documents prepared by Duke Energy's own consultant, and the testimony of Duke Energy's own expert witness, the contaminated groundwater at Roxboro flows directly into the bay of Hyco Lake north of the West Ash Basin. The contaminated groundwater also flows into Sargents River and the tributary east of the East Ash Basin. These groundwater flows into surface waters contain numerous pollutants from the Roxboro coal ash lagoons, including aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium (both total and hexavalent chromium), cobalt, copper, iron, lead, manganese, nickel, nitrate, pH, selenium, strontium, sulfate, thallium, TDS, vanadium, and zinc.

These unpermitted discharges of pollutants via hydrologically connected groundwater from the Roxboro coal ash lagoons to navigable surface waters constitute additional violations of the Clean Water Act.

First, these hydrologically connected discharges to jurisdictional waters constitute an additional violation of the "Removed Substances" provision of the Roxboro NPDES permit addressed in Part I.D.1 of the Notice.

In addition, these discharges via hydrologically connected groundwater from the ash basins to navigable surface waters of the United States are unpermitted point source discharges of pollutants and thus constitute an additional, independent violation of the Clean Water Act.

As discussed above, the Clean Water Act prohibits "any addition of any pollutant to navigable waters from any point source." 33 U.S.C. § 1362(12)(A). "[T]he touchstone for finding a point source is the ability to identify a discrete facility from which pollutants have escaped." *Wash. Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 987 (E.D. Wash. 1994).

Because there is a direct hydrologic connection between the coal ash lagoons and Hyco Lake, Sargents River, and the eastern tributary, Duke Energy's discharges from the lagoons via the groundwater to these waters, as well as the lagoons themselves, are point sources that violate the Clean Water Act.

In a virtually identical case, the United States District Court for the Middle District of North Carolina held that the Clean Water Act applies to Duke Energy's coal ash pollution of hydrologically connected groundwater discharges. *Yadkin Riverkeeper, Inc. v. Duke Energy Carolinas, LLC*, 141 F.Supp.3d 428 (M.D.N.C. 2015).

EPA has stated repeatedly that the CWA applies to such hydrologically connected groundwater discharges. 66 Fed. Reg. 2960, 3015 (Jan. 12, 2001) ("EPA is restating that the Agency interprets the Clean Water Act to apply to discharges of pollutants from a point source via ground water that has a direct hydrologic connection to surface water."). *Accord* 56 Fed. Reg. 64876-01, 64892 (Dec. 12, 1991) ("the Act requires NPDES permits for discharges to groundwater where there is a direct hydrological connection between groundwaters and surface waters."); 55 Fed. Reg. 47990, 47997 (Nov. 16, 1990) (announcing stormwater runoff rules and explaining that discharges to groundwater are covered by the rule where there is a hydrological connection between the groundwater and a nearby surface water body).

In a 1998 site report, EPA stated that "[a] documented ground water hydrological connection between a source and surface water discharge may be viewed as a conduit; or a

discernible, confined, and discrete conveyance," *i.e.*, a point source. U.S. EPA, Report on Hydrological Connection Associated with Molycorp Mining Activity, Questa, New Mexico, at 3 (Feb. 13, 1998). As a result, EPA has identified and regulated as point sources impoundments leaching into groundwater that discharge directly to a neighboring river, exactly as with the situation at Roxboro.

In its response to a comment questioning EPA's jurisdiction to regulate such discharges, EPA stated, "*[t]hat a point source may transmit the pollutants to those surface waters through directly connected groundwater does not deprive EPA of jurisdiction over that addition . . . . to protect jurisdictional surface waters from discharges through groundwater, not to protect groundwater quality per se.*" U.S. EPA, Response to Comments on the Proposed National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Concentrated Animal Feeding Operations (CAFOs) in New Mexico (NMG010000) (emphasis added).

In its fact sheet for another NPDES permit, EPA explained, "[i]n most surface waters flow is sustained throughout much of the year by groundwater inflow. As a result, pollutants which may leak from containment structures . . . to the groundwater will typically move toward nearby surface waters where they will be discharged and [a]ffect water quality in the receiving waters." U.S. EPA, NPDES Permit # LA0068420 Statement of Basis. As a result, EPA reiterated its authority to regulate such groundwater discharges "[t]o *protect surface water quality* from the deleterious effects of these discharges." *Id.* (emphasis added).

Moreover, because the Clean Water Act prohibits "*any* addition of any pollutant to navigable waters from any point source," 33 U.S.C. § 1362 (12) (emphasis added), EPA has exercised its Clean Water Act authority to regulate the leaching of contaminants from impoundments to hydrologically connected groundwater even where the receiving surface water did not exceed applicable surface water quality standards ("WQS") and insufficient information existed to document that direct discharges to those surface waters exceeded the applicable WQS. *See* U.S. EPA, Report on Hydrological Connection Associated with Molycorp Mining Activity, *supra*, at 3.

EPA's interpretation of the scope of the Clean Water Act is entitled to deference. *Chevron U.S.A. Inc. v. Natural Res. Def. Council*, 467 U.S. 837 (1984); *U.S. v. Mead*, 533 U.S. 218, 226-28 (2001); *accord U.S. v. W.R. Grace & Co.*, 429 F.3d 1224, 1237 (9th Cir. 2005).

In addition to EPA, "[t]he majority of courts have held that groundwaters that are hydrologically connected to surface waters are regulated waters of the United States, and that unpermitted discharges into such groundwaters are prohibited under section 1311." *Friends of Santa Fe County v. LAC Minerals, Inc.*, 892 F. Supp. 1333, 1358 (D.N.M. 1995).

These rulings include three recent decisions of United States District Courts in the Fourth Circuit. *Sierra Club v. Virginia Elec. & Power Co.*, 145 F. Supp. 3d 601 (E.D. Va. Nov. 6, 2015); *Yadkin Riverkeeper, Inc. v. Duke Energy Carolinas, LLC*, 141 F. Supp. 3d 428 (M.D.N.C. Oct. 20, 2015); *Ohio Valley Envtl. Coal. Inc. v. Pocahontas Land Corp.*, No. CIV.A. 3:14-11333, 2015 WL 2144905 (S.D.W. Va.) (May 7, 2015).

Numerous courts nationwide support this reasoning. *Waterkeeper All., Inc. v. U.S. E.P.A.*, 399 F.3d 486, 515 (2d Cir. 2005) (upholding EPA's case-by-case approach to regulating feedlot pollutant discharges to surface waters through connected groundwater); *Quivira Mining Co. v. U.S. EPA*, 765 F.2d 126, 130 (10th Cir. 1985) (finding CWA coverage where discharges ultimately affected navigable-in-fact streams via underground flows); *U.S. Steel Corp. v. Train*, 556 F.2d 822, 852 (7th Cir. 1977) (CWA "authorizes EPA to regulate the disposal of pollutants into deep wells, at least when the regulation is undertaken in conjunction with limitations on the permittee's discharges into surface waters."); *San Francisco Herring Ass'n v. Pac. Gas & Elec. Co.*, 81 F. Supp. 3d 847, 863 (N.D. Cal. 2015) (CWA jurisdiction over pollutant discharges through groundwater conduit to navigable waters); *Hawai'i Wildlife Fund v. Cty. of Maui*, 24 F. Supp. 3d 980, 996 (D. Haw. 2014) (where groundwater acts as a conduit conveying point source pollution, discharge "is functionally one into navigable water" subject to CWA liability); *Raritan Baykeeper, Inc. v. NL Indus., Inc.*, No. 09-CV-4117 JAP, 2013 WL 103880, at *15 (D.N.J. Jan. 8, 2013) (CWA covers hydrologically connected groundwater); *Ass'n Concerned Over Res. & Nature, Inc. v. Tennessee Aluminum Processors, Inc.*, No. 1:10-00084, 2011 WL 1357690, at *17 (M.D. Tenn. Apr. 11, 2011) (groundwater impacting federal waters is subject to the CWA); *Greater Yellowstone Coal. v. Larson*, 641 F. Supp. 2d 1120, 1138 (D. Idaho 2009) ("there is little dispute that if the ground water is hydrologically connected to surface water, it can be subject to" the CWA); *Nw. Envtl. Def. Ctr. v. Grabhorn, Inc.*, 2009 U.S. Dist. LEXIS 101359, *34 (D. Or. 2009) ("In light of the EPA's regulatory pronouncements, this court concludes that . . . the CWA covers discharges to navigable surface waters via hydrologically connected groundwater."); *Hernandez v. Esso Std. Oil Co. (P.R.)*, 599 F. Supp. 2d 175, 181 (D.P.R. 2009) ("the CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States"); *Coldani v. Hamm*, 2007 U.S. Dist. LEXIS 62644, *25 (E.D. Cal. Aug. 14, 2007) (a claim that pollution of groundwater that is hydrologically connected to navigable surface waters falls within the purview of the CWA); *N. Cal. Riverwatch v. Mercer Fraser Co.*, 2005 U.S. Dist. LEXIS 42997, *7 (N.D. Cal. Sept. 1, 2005) ("the regulations of the CWA do encompass the discharge of pollutants from wastewater basins to navigable waters via connecting groundwaters"); *Sierra Club, Mineral Policy Ctr. v. El Paso Gold Mines, Inc.*, No. CIV.A.01 PC 2163 OES, 2002 WL 33932715, at *10 (D. Colo. Nov. 15, 2002) (citing EPA policy statement that "discharges from mine adits at historic or active mines [including seeps and other groundwater discharges hydrologically connected to surface water from mines] are point sources subject to CWA liability for any amount of unpermitted

discharge); *Idaho Rural Council v. Bosma*, 143 F. Supp. 2d 1169, 1180 (D. Idaho 2001) ("the CWA extends federal jurisdiction over groundwater that is hydrologically connected to surface waters that are themselves waters of the United States"); *Williams Pipe Line Co. v. Bayer Corp.*, 964 F. Supp. 1300, 1319-20 (S.D. Iowa 1997) (where groundwater flows toward surface waters, there is "more than the mere possibility that pollutants discharged into groundwater will enter 'waters of the United States,'" and discharge of petroleum into this hydrologically connected groundwater violates the CWA); *Wash. Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 990 (E.D. Wash. 1994) ("since the goal of the CWA is to protect the quality of surface waters, any pollutant which enters such waters, whether directly or through groundwater, is subject to regulation" under the CWA); *Sierra Club v. Colo. Ref. Co.*, 838 F. Supp. 1428, 1434 (D. Colo. 1993) ("discharge of any pollutant into 'navigable waters' includes such discharge which reaches 'navigable waters' through groundwater"); *McClellan Ecological Seepage Situation v. Weinberger*, 707 F. Supp. 1182, 1195-96 (E.D. Cal. 1988) (groundwater that is "naturally connected to surface waters that constitute 'navigable waters'" is covered by CWA)), *vacated on other grounds*, 47 F.3d 325 (9th Cir. 1995); *State of N.Y. v. United States*, 620 F. Supp. 374, 381 (E.D.N.Y. 1985) (groundwater discharges threatening navigable waters subject to CWA).

The reasoning behind these decisions is straightforward:

> Congress has explicitly stated that the objective of the CWA "is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." Therefore, *it would hardly make sense for the CWA to encompass a polluter who discharges pollutants via a pipe running from the factory directly to the riverbank, but not a polluter who dumps the same pollutants into a man-made settling basin some distance short of the river and then allows the pollutants to seep into the river via the groundwater.*

*N. Cal. Riverwatch*, 2005 U.S. Dist. LEXIS 42997 at *7-8 (internal citation omitted) (emphasis added). That is precisely the situation at Roxboro, and accordingly the Clean Water Act applies to Duke Energy's unpermitted discharges from the Roxboro coal ash lagoons that discharge contaminated groundwater into Hyco Lake, Sargents River, and the eastern tributary.

**Because these hydrologically connected discharges from the unlined coal ash lagoons to navigable waters of the United States are continuous and ongoing, they will continue after the date of this letter and the subsequent filing of a lawsuit.**

**Persons Responsible for Violations**

Roxboro is owned and operated by Duke Energy, a North Carolina corporation. Duke Energy is responsible for all violations at Roxboro.

**Person Giving Notice**

The Roanoke River Basin Association (the "Association") is a § 501(c)(3) non-profit public interest organizations with members in North Carolina and Virginia operating in the Roanoke River Basin watershed.

The Association and its members have been harmed by Duke Energy's unpermitted discharges and unlawful activities. They swim, fish, boat, and own property in the Roanoke River Basin, including at and around Hyco Lake and Kerr Lake. They fear contamination of drinking water, wildlife, and surface waters, by discharges from Duke Energy's coal ash lagoons. Duke Energy's discharges of pollutants and contaminants from the Roxboro coal ash lagoons are reducing the use and enjoyment by the Association and its members of the Roanoke River Basin, Hyco Lake, and the waterways into which its waters flow.

The name, address, and phone number of the person giving notice are:

Mike Pucci, President
Roanoke River Basin Association
150 Slayton Avenue
Danville, Virginia 24540
(434) 766-6727.

The Association believes that a negotiated settlement of these violations, codified through a court-approved consent decree, would be preferable to protracted litigation. However, if we are unable to reach an enforceable settlement agreement, the Association is prepared to file suit in the United States District Court for the Middle District of North Carolina, or other appropriate court, pursuant to § 505(a) of the Clean Water Act. 33 U.S.C. § 1365(a)(1), after sixty days from the date of this letter. This lawsuit will seek injunctive relief, appropriate monetary penalties, fees and costs of litigation, and such other relief as the Court deems appropriate.

If you have any questions concerning this letter or the described violations, or if you believe this notice is incorrect in any respect, please contact the undersigned counsel, the Southern Environmental Law Center, at (919) 967-1450 (tel.), (919) 929-9421 (fax). During the notice period, we are available to discuss this matter with you, but suggest if you desire to institute negotiations in lieu of a civil action that you do so immediately as we do not intend to delay prosecution of this suit once the notice period has expired. Please be advised that the failure to remedy any of the violations set forth in this letter can result in a court order enjoining further violations and imposing civil penalties of $37,500 per violation per day for each violation of the Clean Water Act occurring on or before November 2, 2015, and $52,414 per violation per day for each violation of the Clean Water Act occurring after November 2, 2015.. In addition,

upon the successful prosecution of this suit, the Conservation Groups intend to seek compensation for attorneys' fees and the costs of litigation under the citizen suit provisions of the Clean Water Act, 33 U.S.C. § 1365.

Thank you for your prompt attention to this matter.

Sincerely,

Frank S. Holleman III
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Nicholas S. Torrey
ntorrey@selcnc.org

Leslie Griffith
lgriffith@selcnc.org

Enclosures

cc:
*Via certified mail – return receipt requested (w/encl.)*:

Scott Pruitt, Administrator, U.S. EPA
V. Anne Heard, Acting Regional Administrator, U.S. EPA, Region 4
Josh Stein, North Carolina Attorney General
CT Corporation System

*Via e-mail (w/encl.)*:

Mary Wilkes, U.S. EPA, Region 4
Mark Nuhfer, U.S. EPA, Region 4
Karrie-Jo Shell, U.S. EPA, Region 4
Gina Fonzi, U.S. EPA, Region 4
Matthew Hicks, U.S. EPA, Region 4
Bill Lane, North Carolina DEQ General Counsel