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VIA EMAIL AND U.S. MAIL

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Re: Draft NPDES Wastewater Permit – Roxboro Steam Station, # NC0003425

Dear Mr. Zimmerman:

On behalf of the Roanoke River Basin Association (the "Association"), we submit the following comments on the draft National Pollutant Discharge Elimination System ("NPDES") permit noticed for public comment by the North Carolina Department of Environmental Quality ("DEQ "), Division of Water Resources ("DWR"), which purports to allow Duke Energy Progress LLC ("Duke Energy") to discharge unlimited pollution into Hyco Lake, tributary streams, and waters of North Carolina and the United States.

In 2016, we submitted comments on a previous version of this permit, and the comments we submitted then remain applicable to this new draft of the permit, except as modified below. This letter repeats those comments where appropriate and adds additional comments on the new draft.

As set forth below, the proposed permit violates the Clean Water Act ("CWA") because, among other things: it allows unlimited pollution of Hyco Lake by a host of coal ash pollutants; it authorizes a wastewater treatment facility to malfunction and leak wastewater; it illegally turns North Carolina streams, a river, and a part of Hyco Lake into wastewater ditches with no clean water protections; it puts in place overly lax and ineffective limits for some toxic pollutants; and it reduces substantially clean water protections that have been contained in NPDES permits for the Roxboro facility for years.

This proposed permit tries to allow Duke Energy to dump the water out of its Roxboro coal ash lagoons into Hyco Lake without adequate protections for many toxic substances; to legalize Duke Energy's longstanding violations of the Clean Water Act and North Carolina law;

and to allow Duke Energy leave its coal ash in unlined pits that will pollute Person County for decades to come.

Over 160 commenters submitted written comments on the earlier draft NPDES permits for Roxboro and Duke's nearby Mayo coal ash sites, over 98% of which called for stricter standards and more cleanup at these sites, in addition to the scores of citizens who commented at the public hearing. DEQ should heed the clear message of these commenters and the specific points raised in RRBA's comments on the 2016 and 2017 draft permits, to require Duke Energy to remove its coal ash from the unlined, leaking pits at these sites and impose stricter, technology-based limits on coal ash pollutants until all the ash can be removed.

I. Introduction

At Roxboro, Duke Energy stores approximately 19.5 million tons of coal ash in two unlined lagoons – the East and West Ash Basins – and millions more in unlined landfill and fill areas, all on the banks of Hyco Lake in Person County. This coal ash pollutes the groundwater at the site, and according to the data in Duke Energy's Comprehensive Site Assessment (CSA) and Corrective Action Plans (CAP), it sits up to 73 feet below the groundwater table in the West Ash Basin and up to 79 feet below the groundwater table in the East Ash Basin. The East Ash Basin is 50 years old, and the West Ash Basin is over 40 years old. Their waters are held back only by leaking dikes made of earth. The coal ash lagoons are authorized to discharge wastewater only through a single outlet into Hyco Lake.

The East Ash Basin impounds and partially buries two unnamed tributary streams that flow to Hyco Lake. The waste boundary of the East Ash Basin does not include the area now referred to by Duke Energy as the "Eastern Extension" – this is an impounded stream outside the berm of the ash basin and outside the basin's waste boundary. Duke Energy employees have confirmed under oath that this "Extension" area plays no role in the wastewater treatment system at Roxboro.

The West Ash Basin impounds and partially buries Sargents River (also called Sargents Creek), which has been rerouted and wrongly labeled as a discharge canal, and which carries pollutants from the West Ash Basin and dumps them into Hyco Lake. Duke Energy has also wrongly appropriated a portion of Hyco Lake – like Sargents River, a water of the United States and of North Carolina – into its wastewater treatment system. The West Ash Basin does not include the "Extension" area south of the filter dike; this is an impounded portion of Sargents River that is not part of the waste treatment system at Roxboro.

Hyco Lake is an important water, recreational, fishing, and economic resource for North Carolina, the region, and Person County. Families live along the lake. Local residents, people who live in surrounding communities, and visitors from other areas fish, swim, and boat in and on the Lake. Hyco Lake provides habitat for bald eagles and other wildlife.

However, Hyco Lake has been seriously harmed by the pollution from Duke Energy's coal ash lagoon. Over the years, 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, and others.

The contaminated groundwater at Roxboro flows directly into Hyco Lake, making it an additional source of unpermitted surface water pollution. Since at least 2010, DEQ has known of contaminated groundwater discharging "heavy metals" to surface waters at Roxboro. *See* Email from J. Zimmerman to D. Watts (Mar. 10, 2010), Attachment 1.

Moreover, as set out above, Duke Energy has illegally taken Sargents River and a bay of Hyco Lake and made them part of its wastewater treatment system. As a result, untreated coal ash polluted water flows directly into the River from the coal ash basins and then into the Lake. This unlawful design denies Hyco Lake and Sargents River the protections of the Clean Water Act and North Carolina law.

On August 16, 2013, DEQ filed a verified complaint with the Wake County Superior Court which set out that Duke Energy is discharging pollutants without authorization from unpermitted discharges it constructed at Roxboro. Further, it has been discovered that Duke Energy's Roxboro coal ash lagoons have additional illegal leaks. DEQ's complaint also set out under oath that Duke Energy has violated groundwater standards at Roxboro.

DEQ stated – under oath – that Duke Energy's unpermitted engineered discharges at Roxboro violate state law and that "without . . . taking corrective action," these seeps "pose[] a serious danger to the health, safety and welfare of the people of the State of North Carolina and serious harm to the water resources of the State." Verified Complaint & Motion for Injunctive Relief, *State of North Carolina* ex rel. *N.C. DENR, DWQ v. Duke Energy Progress, LLC*, No. 13 CVS 11032 (Wake Co., August 16, 2013) (Attachment 2), at ¶ 204. As a result, DEQ asked the court to enter a permanent injunction requiring Duke "to abate the violations of N.C. Gen. Stat. § 143-215.1, [and] NPDES Permits" at Roxboro. *Id.* Prayer for Relief ¶ 2. Since filing this complaint, however, DEQ has done nothing to require Duke Energy to stop violating the law and its permit at Roxboro. Further, DEQ's action proposes nothing to protect Sargents River or the bay of Hyco Lake from Duke Energy's coal ash pollution.

Rather than following through on its sworn statements and publicly-announced intention to obtain injunctive relief and corrective action, DEQ is now proposing to grant Duke amnesty for the leaks emerging from its coal ash wastewater treatment lagoon.

Duke Energy has faced extensive public pressure and litigation by the Association and other community organizations in North Carolina to force Duke Energy to address its primitive unlined and leaking coal ash storage in North Carolina. In May of 2015, Duke Energy operating companies, including the owner of the Roxboro coal ash lagoons, pleaded guilty 18 times to 9 coal ash crimes across North Carolina. These crimes included unpermitted coal ash lagoon discharges very much like those flowing from the Roxboro coal ash lagoons. Duke Energy operating companies paid a $102 million fine, and they are under nationwide criminal probation. Under court orders, the criminal plea agreement, statutes, regulatory requirements, and settlement agreements with conservation groups, Duke Energy is now required to excavate all

the coal ash from unlined coal ash pits at 8 of its 14 coal ash storage sites in North Carolina, plus all its sites in South Carolina. In addition, in response to this intense public and legal pressure and stronger legal and regulatory requirements, Duke Energy will empty the water, to the extent that can be done, from all its coal ash lagoons in North Carolina.

However, at Roxboro and five other coal ash storage sites in North Carolina, Duke Energy has refused to commit to removing the ash from its unlined, leaking, polluting, and dangerous primitive coal ash pits. Instead, Duke Energy hopes to be able to pump the coal ash polluted water out of its leaking lagoons into nearby lakes and rivers and then leave its polluting coal ash in the groundwater in unlined pits near waterbodies, where the coal ash will continue to pollute the state's waters forever.

Duke Energy cannot leave its polluting coal ash in place at Roxboro under the terms of its existing NPDES permit. The Roxboro coal ash pits leak, and they pollute Hyco Lake and its tributary waterways – all in open violation of the Clean Water Act and the NPDES permit.

DEQ has allowed this illegal pollution to continue without taking any effective action to stop it. Instead, DEQ now proposes to change Duke Energy's NPDES permit to legalize coal ash pollution that has been illegal for decades. At the same time, DEQ tries to give Duke Energy a pass on complying with the Clean Water Act when it pumps its coal ash polluted water into Hyco Lake by imposing **no limits on many toxic pollutants** for the millions of gallons of coal ash polluted water Duke Energy will pump out of its coal ash lagoons to then flow into Hyco Lake.

This proposed permit fails to protect the public and public waters, and it violates the Clean Water Act. DEQ should require that Duke adopt the best available technology to treat the coal ash polluted water before it is dumped into Sargents River and Hyco Lake, as DEQ has required at other coal ash sites in Wilmington and Charlotte; should require Duke Energy to stop the leaks and discharges of polluted wastewater; and should require Duke Energy remove the coal ash and wastewater from the lagoon, with adequate protections of Hyco Lake and its tributaries.

II. Permit Comments

A. The Proposed Permit Violates the Clean Water Act Because It Does Not Protect Hyco Lake and Is Inconsistent with Other Permits Issued by DEQ.

(1) Dumping Coal Ash pollution into Hyco Lake and Sargents River from Duke Energy's Coal Ash Lagoons

The proposed Roxboro permit is written to allow Duke Energy to pump all its coal ash polluted water from the Roxboro coal ash lagoons into Hyco Lake. Part I, Sections A. (2.) & (3.). Millions of gallons of coal ash polluted water will be pumped into Hyco Lake during the so-called "decanting" and "dewatering" phases, over a period of weeks or months.

The 2017 Draft Permit contains some improvements over the 2016 Draft Permit. The 2017 Draft requires that the decanting/dewatering of the Roxboro lagoons will include treatment by "physical-chemical treatment," but without defining what that term means. The 2017 Draft also requires monitoring – but places no limits – for arsenic, molybdenum, chromium, and turbidity during decanting/dewatering of the coal ash lagoons into Sargents River and the bay of Hyco Lake. Unlike the 2016 Draft Permit, there are limits for thallium where the bay of Hyco Lake (misleadingly referred to by Duke Energy as the heated water discharge canal) opens into the remainder of Hyco Lake (Outfall 003), but no limits for coal ash pollutants at Outfall 002, further along the rerouted portion of Sargents River, just before it joins the bay of Hyco Lake. The permit contains no monitoring or limits for the point source discharges of pollutants out of the south end of the West Ash Basin at the filter dike into Sargents River.

It is important to emphasize that Sargents River is part and parcel of the water system of Hyco Lake. It flows directly into Hyco Lake, and its waters are part of what creates the Lake. Therefore, when the coal ash polluted water is dumped into Sargents River, it has entered the water system that forms Hyco Lake.

Again, in stark contrast to permits DEQ has issued for other facilities for dewatering, the permit includes **NO LIMITS AT ALL** on toxic coal ash pollutants when the water polluted by coal ash is pumped from the coal ash lagoons into this water system at the filter dike, and again as it flows through Outfall 002 further along the rerouted Sargents River channel. The permit also contains no limits except for thallium when the coal ash pollution leaves the bay of Hyco Lake and flows into the rest of the Lake at Outfall 003. There are no limits for arsenic, mercury, lead, selenium, boron, barium, chloride, aluminum, copper, or any of the numerous other pollutants associated with coal ash contamination, including those found at elevated levels in Hyco Lake historically and today. Given the high levels of pollution in this wastewater – which has saturated and been steeping in the coal ash for years – and the history of coal ash contamination problems in Hyco Lake, this glaring lack of coal ash pollution limits is unacceptable.

Most disturbingly, there are no limits even during the removal of the so-called interstitial water – the water that is mixed in with coal ash. This water is permeated with coal ash and coal ash pollutants, and those pollutants will be further stirred up during the pumping of this water and the mechanical removal of the ash. To make matters worse, the 2017 Draft Permit ***doubles*** the amount of this highly polluted water that can be discharged into the Hyco Lake system every day – to 2 million gallons.

For this permit to have real meaning and for it to protect Hyco Lake and the waters of the Roanoke River Basin, there must be meaningful limits upon coal ash pollutants where they enter the water system at the filter dike, and at Outfall 002. And there must be effective limits both when the top layers of coal ash water are pumped out ***and*** when the heavily polluted bottom layers are forced out into Sargents River and Hyco Lake.

The design of this permit underscores the need for limits for the discharge from the coal ash lagoons into Sargents River. Even with the substantial dilution of the unprotected Sargents River and an entire bay of Hyco Lake, the calculations of DEQ require limits for thallium when

the bay of Hyco Lake joins the remainder of Hyco Lake (Outfall 003), and monitoring for a suite of toxic and heavy metal coal ash pollutants (arsenic, selenium, chloride, mercury, antimony, and molybdenum). These requirements for the entrance of the bay into Hyco Lake demonstrate that the coal ash lagoons will discharge large quantities of coal ash pollutants into these waterways, yet the limits and monitoring imposed at the bay entrance provide no protection for the bay itself and the waters flowing into it, and at that point cannot protect the Lake.,.

These are not substances that go away. They have for years been building up in the sediments and natural systems of Sargents River and Hyco Lake, and they will continue to do so while Duke Energy merely monitors for them. The only way to protect Hyco Lake, as well as Sargents River, is to impose meaningful limits at the point where these pollutants actually enter into the water system of Hyco Lake. Waiting to monitor or imposing limits where the bay enters the rest of Hyco Lake is simply monitoring and measuring the extent of pollution, after dilution, that should have been eliminated before the coal ash lagoons emptied into this water system. The harm has already been done. There is no treatment system and no reasonable opportunity for a treatment system at a point in the middle of the mouth of the bay (Outfall 003) where it joins the rest of Hyco Lake.

Further, to ensure that Hyco Lake is protected, there must also be meaningful limits for the full suite of coal ash pollutants at Outfall 003, where the bay empties into the rest of the Lake. Sampling by Duke Energy of the surface water, sediments, and fish tissue in Hyco Lake reveals elevated levels of coal ash pollutants, including chloride, sulfate, total dissolved solids (TDS), bromide, aluminum, boron, copper, iron, manganese, selenium, strontium, and zinc, among others.

Since Duke Energy is required to treat the coal ash polluted water by "physical/chemical treatment," presumably Duke Energy and DEQ believe that Hyco Lake and Sargents River do need protection from the coal ash lagoon water, and that this treatment will remove coal ash pollution to acceptable levels.

If so, then why does the draft permit not include express limits? The apparent reason is to deny the citizens of North Carolina, and perhaps DEQ itself, the ability to enforce this permit against Duke Energy if its undefined "physical/chemical treatment" malfunctions or does not remove coal ash pollutants to acceptable levels. **DEQ should not adopt a permit that is transparently drafted to deny the rights of North Carolina citizens and to deny even DEQ itself the ability to hold Duke Energy accountable for its pollution of Hyco Lake**.

(2) Selenium at Outfall 006

Selenium was detected above the water quality standard at Outfall 006, which discharges coal pile runoff into the Hyco Reservoir. In the 2017 Draft Permit, DEQ has improved over the 2016 Draft Permit by including limits for selenium. But while the other pollutants at Outfall 006 are measured twice a month, selenium – a harmful coal ash pollutant – is the sole pollutant measured only monthly. To make the selenium limits effective, Duke Energy should be required to test for selenium when it is testing for the other pollutants, twice a month.

Also, the 2017 Draft Permit allows Duke Energy to submit key portions of the NPDES application – detailing the pollutants in the discharge – six months after the issuance of the permit. This important information must be provided before a permit is issued.

(3) FGD Outfalls

Sections A. (10-11) contain provisions governing Duke Energy's internal outfalls for its flue gas desulfurization (FGD) scrubber waste (Outfalls 010-011). This waste contains high concentrations of the most toxic substances associated with coal ash.

The 2017 Draft Permit makes clear what may have been implied by the 2016 Draft Permit: there shall be no discharge of untreated FGD blowdown, and there will be collection of pH samples, with the limits for pH contained in a footnote.

These sections of the permit appear to contain limits on arsenic, mercury, selenium, and nitrate/nitrite. However, each of these apparent limits is qualified by a footnote, footnote 3. Footnote 3 provides that these limits do not apply until December 31, 2023 – the last possible day for compliance with the federal Effluent Limitation Guideline rule. This date is also beyond the expiration date of this permit, which is only valid for five years. During the intervening six years, in fact there are no limits for arsenic, mercury, and selenium, among other pollutants.

The permit's two-stage FGD requirements are nonsensical and ineffective. Section A (10) sets out limits for the ***existing*** treatment system. Yet, these limits are not effective until December 31, 2023, when Duke Energy represents it will have installed a **new** FGD system. Section A (11) sets out limits for a supposedly new and improved FGD system, but the permit limits remain the same.

Consequently, the limits for the existing system are meaningless, because they do not apply during the permit term, and the new system provides no improvements in the treatment limits.

There are several significant problems with the design of these limits.

First, there must be meaningful limits for the current operation of the FGD treatment system until the new system is installed. It makes no sense and denies Hyco Lake and Sargents River any Clean Water Act protections to have absolutely no effective limits for the existing treatment of FGD discharges. There is no reason to wait until the end of 2023 to put in place limits for the *currently operating* system.

Second, the new, improved FGD system should have *improved* limits. That is the point of installing it, according to the Fact Sheet accompanying the 2017 Draft Permit.

Third, by choosing the absolute last day to make limits effective, the 2017 Draft Permit puts the schedule of Duke Energy ahead of the protection of Hyco Lake and Sargents River. The Fact Sheet itself simply adds in an additional six months of delay in case of unforeseen and unspecified permitting delays. Duke Energy and DEQ should ensure that no such delays occur,

for the benefit of these important waterways. Further, the Fact Sheet accepts Duke Energy's proposed timeline – a proposal that happens to consume all the time legally available – with only conclusory justifications for these delays. DEQ should require a tighter timeline for Duke Energy that is both reasonable and also protective of these waterways.

Fourth, the mercury limits for this FGD waste are unjustifiably high, regardless of when they go into effect. They are 1000% to 1500% higher than comparable mercury limits for the NPDES permits recently issued by DEQ for Duke Energy's Riverbend plant in Charlotte and its Sutton plant in Wilmington. DEQ is simply not providing the same protections to Person County that it is providing to the metropolitan communities of Charlotte and Wilmington. This permit for this rural community should contain the same mercury limits as those permits for major cities.

(4) Lack of Clean Water Act Protections

These failures to require effective limits on Duke Energy's coal ash pollution betray the public's interest in Hyco Lake and violate the Clean Water Act.

Under the Clean Water Act, polluters must control their discharges of pollutants using the best available technology economically achievable ("BAT"): "such effluent limitations shall require the *elimination of discharges of all pollutants* if the Administrator finds . . . that such elimination is technologically and economically achievable." 33 U.S.C. § 1311(b)(2)(A). The EPA requires that "[t]echnology-based effluent limitations shall be established under this subpart for solids, sludges, filter backwash, and other pollutants removed in the course of treatment or control of wastewaters in the same manner as for other pollutants." 40 C.F.R. § 125.3(g).

In the absence of promulgated effluent limitation guidelines, the NPDES permit writer must use best professional judgment ("BPJ") to determine the BAT standard applicable to the coal ash discharges at Roxboro. 33 U.S.C. § 1342(a)(1)(B); 40 C.F.R. § 125.3; 15A N.C. Admin. Code 2H .0118. When applying BPJ, "[i]ndividual judgments []take the place of uniform national guidelines, but the technology-based standard remains the same." *Texas Oil & Gas Ass'n v. EPA*, 161 F.3d 923 (5th Cir. 1998). In other words, the DWR must operate within strict limits when identifying BAT based on BPJ.

The first step in identifying BAT is identifying available technologies. At a minimum, technological availability is "based on the performance of the single best-performing plant in an industrial field." *Chem. Mfrs. Ass'n v. EPA,* 870 F.2d 177, 226 (5th Cir.) *decision clarified on reh'g*, 885 F.2d 253 (5th Cir. 1989); *see Am. Paper Inst. v. Train*, 543 F.2d 328, 346 (D.C. Cir. 1976) (BAT should "at a minimum, be established with reference to the best performer in any industrial category"). In other words, if the technology is being applied by any plant in the industry, it is achievable. *See Kennecott v. EPA*, 780 F.2d 445, 448 (4th Cir. 1985) ("In setting BAT, EPA uses not the average plant, but the optimally operating plant, the pilot plant which acts as a beacon to show what is possible").

But determination of technological availability is not limited to a single industrial field. "Congress contemplated that EPA might use technology from other industries to establish the

[BAT]." 780 F.2d at 453. International facilities can also be used to define BAT. *Am. Frozen Food Inst. v. Train*, 539 F.2d 107, 132 (D.C. Cir. 1976). EPA's NPDES Permit Writers' Manual states that "BAT limitations may be based on effluent reductions attainable through changes in a facility's processes and operations. . . . even when those technologies are not common industry practice."[1] Even pilot studies and laboratory studies can be used to establish BAT; the technology need not be in commercial use to be considered available. *See Am. Paper Inst. v. Train*, 543 F.2d 328, 353 (D.C. Cir. 1976).

In sum, BAT requires "***a commitment of the maximum resources economically possible to the ultimate goal of eliminating all polluting discharges***." *EPA v. National Crushed Stone Ass'n*, 449 U.S. 64, 74 (1980) (emphasis added).

There can be no doubt that there are technologies available so that Duke Energy can remove large amounts of pollutants from its coal ash polluted water before it is discharged into Hyco Lake. The 2017 Draft Permit recognizes this fact by requiring "physical/chemical treatment," but the Draft Permit does not provide any other definition of what that treatment will be. Without meaningful limits accompanying this unspecified treatment method, the Draft Permit puts in place only a hope that the undefined treatment system will protect the Hyco Lake water system.

In fact, DEQ has already imposed such limits for Duke Energy's "decanting" and "dewatering" of its Sutton (Wilmington) facility and its Riverbend (Charlotte) facility. Attachments 3 and 4. Duke Energy is using wastewater treatment technologies to achieve those limits at those locations. These same limits can and should be used for Roxboro.

At Roxboro, the same limits that protect the waters of Charlotte and Wilmington should be in this permit to protect the waters of Person County.

As well, Dominion Energy in Virginia has in place wastewater treatment facilities at its Bremo facility on the James River and its Possum Point facility on the Potomac, where it is pumping out water from coal ash lagoons. Under agreements with a conservation group and a local county, express limits are in place for the operation of those facilities. Limits should be put in place at Roxboro, also.

B. The Proposed Permit Abandons Tributary Streams to Duke Energy's Coal Ash Pollution, in Violation of the Clean Water Act.

At Roxboro, an unnamed tributary stream that flows to Hyco Lake is being contaminated with seeps emerging from the east side of the East Ash Basin. This stream is not part of Duke Energy's wastewater treatment system at Roxboro. It is not an authorized outfall or effluent channel in the current NPDES permit, because it is not part of the coal ash wastewater system. *See, e.g.*, Roxboro CSA, Fig. 2-1 (showing that waste boundary for East Ash Basin does not extend into this area, and it is not an outfall).

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[1] EPA, NPDES Permit Writers' Manual (Sept. 2010) at p. 5-16, *available at:* http://water.epa.gov/polwaste/npdes/basics/upload/pwm_2010.pdf.

Consequently, there is no conceivable justification to designate this pollution of a tributary of Hyco Lake as a supposed "outfall." This flow of pollution is not part of wastewater treatment; it is not a discharge of treated effluent. It is simply a flow of polluted water into a stream that is not part of any wastewater treatment system.

The Fact Sheet acknowledges that this "outfall" has not been permitted in recent years and that this is where an old outfall "used to discharge[]." But for years, since there is no wastewater treatment system operating there, this flow of polluted water has not been designated a permitted "outfall."

However, now that Duke Energy has had to acknowledge its coal ash pollution of this stream and the seeps flowing into it, and faces liability for this pollution, DEQ is attempting to legalize Duke Energy's illegal pollution of this stream by arbitrarily designating it as Outfall 001, without any justification other than to legalize this pollution that is unrelated to any wastewater treatment. Duke Energy cannot be allowed to take a free-flowing stream as part of its coal ash discharge system, and DEQ cannot designate such a stream as an outfall.

Similarly, the portions of Sargents River south of the West Ash Basin filter dike are not part of the waste treatment system at Roxboro and seep pollution of this river is not authorized by the permit. CSA Fig. 2-1 (showing waste boundary for West Ash Basin).

The permit's attempt to legalize the seeps and designate a stream as a wastewater outfall is a clear example of a proposed permit that illegally eliminates or reduces the protections of the nation's waters from pollution. The Clean Water Act's NPDES permitting program is structured around progressive improvements in pollution control over time. The Clean Water Act permit is a National Pollutant Discharge ***Elimination*** System permit that is required to make progress towards Congress's "national goal" of eliminating discharges of pollutants to waters of the United States. 33 U.S.C. §§ 1251(a)(1).

For this reason, the CWA includes anti-backsliding requirements to ensure that the limits and conditions imposed new or modified NPDES permits for a facility are at least as stringent as those in previous permits. 33 U.S.C. § 1342(o); 40 C.F.R. § 122.44(l)(1) ("[W]hen a permit is renewed or reissued, interim effluent limitations, standards or conditions must be ***at least as stringent*** as the final effluent limitations, standards, or conditions in the previous permit . . . .").

The CWA's anti-backsliding requirements apply to *all* NPDES permit provisions, not just effluent limits based on BPJ. 40 C.F.R. § 122.44(l)(1); *In the Matter of Star-Kist Caribe, Inc., Petitioner*, 2 E.A.D. 758 at *3 (E.P.A. Mar. 8, 1989). EPA, NPDES Permit Writers' Manual Chapter 7, § 7.2.2, p. 7-4 (Sept. 2010), *available at* http://water.epa.gov/polwaste/npdes/basics/upload/pwm_chapt_07.pdf.

The draft permit wrongly abandons the streams at Roxboro to Duke Energy's coal ash pollution. This backsliding is even more egregious because these streams are part of the Dan River and Roanoke River Basins. These waterways have suffered the most from Duke Energy's coal ash pollution. The Dan River catastrophe dumped over 20 million gallons and 39,000 tons of coal ash into these waterways. Bromide from Duke Energy's coal ash caused carcinogens to

enter drinking water systems in these watersheds. The Roanoke River Basin has more leaking Duke Energy coal ash sites than any other part of North Carolina – Belew's Creek, Roxboro, Mayo, and Dan River. It is inexcusable for DEQ to remove protections from the Dan River and the Roanoke River Basins.

Moreover, Section A (1) of the 2017 Draft Permit purports to permit this Outfall 001, but allows Duke Energy six months ***after*** the issuance of the permit to submit parts of the permit application. DEQ cannot issue a valid permit for coal ash pollution before Duke Energy has submitted a complete application. Moreover, the sections of the application at issue are Items V and VI, which detail the pollutants being discharged. This qualification of the 2017 Draft Permit indicates that Duke Energy and DEQ do not now know what pollutants this "outfall" will discharge into Hyco Lake, and that DEQ would issue this permit before either DEQ or Duke Energy have that knowledge.

There are these additional problems with this portion of the permit. There are no limits for a wide range of coal ash pollutants. Such an extraordinary permit provision should at a minimum include strict limits on all coal ash pollutants. As well, without any justification, the permit provides that monthly sampling will fall to quarterly sampling after a year. Any reduction in the frequency of sampling should be based on the facts gathered over the first year of the permit's operation, and should not be automatically assumed.

C. The "Extension" Areas Adjacent to the East and West Ash Basins Are Not Permitted.

DEQ's NPDES permit scheme includes the monitoring of compliance boundaries for groundwater contamination around the treatment facility. Duke Energy is now attempting to change its waste boundary and the delineation of its "waste treatment units" to encompass the "extension" areas outside its West and East Ash Basins in order to get the benefit of a compliance boundary around them to authorize unlimited groundwater contamination in these areas. Duke Energy, Ash Basin Extension Impoundments and Discharge Canals Assessment Work Plan (August 2016), at Fig. 1-2. Duke Energy has identified coal ash outside its permitted waste treatment facility, but rather than clean up this unpermitted source of groundwater and surface water pollution, Duke Energy is requesting that DEQ redraw its boundaries to incorporate and legalize this unpermitted coal ash waste and pollution. *Id.* at 2-4.

There is no justification for such a request. These areas have been separated from the ash basins for decades. *Id.* at ES-1. They play no role in the waste treatment system at Roxboro, as a Duke Energy employee has testified under oath. Nor are they included within the waste boundary in Duke Energy's Comprehensive Site Assessments, Corrective Action Plans, and other CAMA filings. In other words, Duke Energy has acknowledged repeatedly that these areas are not part of its coal ash impoundments and the waste treatment system at Roxboro. Thus, there is no justification for weakening the permit by arbitrarily redrawing the waste boundaries, treatment unit boundaries, and/or compliance boundaries at Roxboro to allow unlimited pollution of these waters.

D. The Draft Permit Would Give Duke Energy Amnesty for Its Unlawful Activity and Illegally Authorize the Roxboro Waste Water Treatment Plant to Leak.

The Roxboro coal ash lagoons are permitted as a wastewater treatment facility. They are required to contain and treat wastewater and to discharge the treated water (presumably with pollutants removed) from a defined and designed outfall. In this case, the Roxboro wastewater treatment facility malfunctions by leaking and discharging untreated polluted wastewater from undesigned holes in the wastewater treatment facility.

These leaks violate the basic purpose and basic provisions of the existing and all prior permits, even provisions that remain in the draft permit. This draft permit authorizes the operation of an "ash pond treatment system" that must be "properly operated and maintained." Draft Permit Section I.A. (2-3); II.C. (2). Of course, a properly operated and maintained wastewater treatment plant discharges only as designed and does not spring leaks from its sides and bottom.

In other words, a wastewater *treatment* facility cannot operate properly or legally if it receives wastewater and then spews it into the environment, and into the waters of the state and the United States, outside the designed treatment system. By malfunctioning in that way, a wastewater treatment facility would be a wastewater *transmission* facility, leaking and disposing of dirty wastewater into the surrounding environment.

But that is what this draft permit tries to allow. It tries to legalize defects in the wastewater treatment facility – flows of untreated wastewater containing coal ash pollutants – that have been illegal since the first NPDES permit was issued for this facility. Draft Permit Section A. (1.). And it even proposes to legalize future failures in the wastewater treatment facility, if it cracks or springs a leak in the future. Section A. (15.) ("Discharge from Seepage").

There is no justification for these changes. No aspect of Duke Energy's wastewater treatment system requires a new outfall to Hyco Lake that legalizes the seeps; on the contrary, its system is leaking in the same way it has illegally leaked for years. DEQ is simply attempting to legalize Duke Energy's ongoing, illegal discharges.

As set out above, this attempt violates the anti-backsliding requirements of the Clean Water Act.

As set out below, this attempt violates the Clean Water Act requirement that Duke Energy use the best available technology to eliminate its pollution of United States and North Carolina waters, because it does not require excavation of the coal ash. This approach further violates the BAT requirement, in that the draft permit would allow Duke Energy to *avoid* using key components of even its existing, minimal treatment technology of settling out pollutants in the lagoons and skimming discharge water from the top and/or using a filter dike prior to discharge from the permitted outfalls. This is an impermissible step backwards from using available treatment technology, and accordingly it violates the CWA's BAT requirements.

The Fact Sheet for the 2016 Draft Permit asserted without any justification that "precipitation, adsorption, and settling" – that is, the use of an unlined coal ash lagoon that is intended to contain the ash and accompanying pollutants, but that has failed and is failing to do so – **"has been determined by NC to be BAT for this facility."** Fact Sheet at 2. A lagoon that has contaminated the groundwater for years, and is known to leak and seep, could not possibly represent BAT for this facility. DEQ made the same statement in its fact sheet for the H.F. Lee draft NPDES wastewater permit in 2013, yet Duke Energy subsequently determined that – far from being BAT– the H.F. Lee coal ash lagoons were "not suited" for the long-term storage of coal ash and needed to be fully excavated. Duke Energy, Safe Basin Closure Update, https://www.duke-energy.com/Assets/apps/map-ash-management/img/pdf/SafeBasinClosureUpdate_HFLee.pdf. Moreover, the West Ash Basin at Roxboro is located in a flood plain, just like the H.F. Lee basins.

The Fact Sheet for the 2017 Draft Permit deletes this statement regarding BAT. It is now recognized that operation of these coal ash lagoons is not BAT for this facility, but instead is an antiquated and failing way to store coal ash and to deal with coal ash pollution. Indeed, Duke Energy has in effect recognized this fact by agreeing to cease operating and to excavate the ash from 10 of its 16 coal ash sites in the Carolinas. Moreover, the closing of all coal ash lagoons and the excavation of 10 of them (to date) have been required by the North Carolina Superior Court, South Carolina's Department of Health and Environmental Quality, and/or the North Carolina Legislature.

Here, there is no evidence that DEQ has analyzed the available technology to control the ash pond discharges, though DEQ now recognizes that the existing facility is not the best available technology. Without the required BPJ analysis and imposition of meaningful BAT standards, the permit cannot comply with the requirements of the CWA.

Further, the permit's attempt to authorize the ongoing leaks of pollution from the Roxboro lagoons violates the basic requirements of the Clean Water Act and North Carolina law, because it purports to issue a permit for a malfunctioning wastewater treatment facility that leaks in undesigned ways and pollutes the surrounding environment with untreated wastewater, rather than treating wastewater before discharge into the environment.

A wastewater treatment lagoon contained only by leaking, earthen impoundments is not BAT under any circumstances, and this violation of the requirements of the Clean Water Act is even worse at Roxboro because DEQ is proposing to allow such a primitive facility, the West Ash Basin, to operate entirely within the 100 year flood plain of Hyco Lake, placing the public and our water resources at risk in perpetuity.

E. Permitting Waters of the United States as Components of Duke Energy's Private Wastewater System Violates the Clean Water Act and North Carolina Law.

DEQ's draft permit for Roxboro designates the stream east of the East Ash Basin as a permitted outfall, Outfall 001. To the extent this Roxboro permit contemplates allowing Duke Energy to take public waters for its private use – either by designating jurisdictional streams as "effluent channels" or otherwise – such an approach is illegal. As jurisdictional waters, such

streams cannot be permitted as components of Duke Energy's private wastewater treatment system.

DEQ has no legal authority to convert a stream – a water of the United States and of North Carolina – into a Duke Energy wastewater ditch with no clean water protections.

The Clean Water Act provides no mechanism to convert jurisdictional waters *into* point source discharges. The Clean Water Act "requires permits for the discharge of 'pollutants' *from* any 'point source' *into* 'waters of the United States.'" 40 C.F.R. § 122.1(b)(1)(emphasis added). By definition, a "point source" cannot be a "water of the United States"; a point source conveys pollutants *to* a water of the United States. In sum, jurisdictional waters cannot be point sources. Instead, water quality standards must be met in the jurisdictional waterbody – here, the streams flowing into Hyco Lake.

North Carolina law incorporates the same foundational assumption that a point source cannot be a stream, that is, a water of the United States or of North Carolina. "Effluent channel means a discernable confined and discrete conveyance which is used for transporting treated wastewater *to* a receiving stream or other body of water." 15A N.C. Admin. Code 2B.0202 (emphasis added). Restated, an effluent channel conveys wastewater to a receiving stream or body of water; the effluent channel cannot itself be the receiving stream.

North Carolina law makes this point doubly clear by prohibiting designation of an effluent channel if that channel "contain[s] natural waters except when such waters occur in direct response to rainfall events by overland runoff." 15A N.C. Admin. Code 2B.0228(2). "Natural waters" include ground and surface waters, as does the Clean Water Act. North Carolina law prohibits designation of an effluent channel if that channel contains natural, jurisdictional surface waters. North Carolina law also prohibits designation of an effluent channel if that channel contains groundwater. In other words, an effluent channel can only be designated if that channel would be dry except during rainfall events and as a result of transporting waste water. Streams or seeps that are jurisdictional surface water tributaries and/or are influenced by natural ground water cannot be designated as "effluent channels." This approach cannot be implemented consistent with federal and state law.

The 2017 Draft Permit also violates the Clean Water Act by treating Sargents River and the bay of Hyco Lake as part of Duke Energy's coal ash waste water treatment system. These bodies of water are waters of the United States and North Carolina. Sargents River is a free-flowing water body that existed prior to Duke Energy's Roxboro coal ash facility, and Hyco Lake was formed by damming numerous waters of the United States and North Carolina, including Hyco River and Sargents River. This Draft Permit does not treat these waterways as waters of the United States and waters of North Carolina entitled to the protections of the Clean Water Act and North Carolina law. Discharges into them are not "internal" outfalls into parts of a wastewater system, but instead unpermitted discharges into waters of the United States and North Carolina.

This permit must also give these waterways the full protections of the Clean Water Act and North Carolina law.

F. The Coal Ash Must Be Removed from the Roxboro Unlined Pits to Prevent Illegal Pollution.

DEQ is engaging in these illegal contortions in the draft permit in an attempt to dodge its basic responsibility to require Duke Energy to stop its coal ash pollution of waters of North Carolina and the United States. Moreover, there is no excuse for DEQ allowing Duke Energy to continue to operate such a waste treatment system within the 100-year flood plain of Hyco Lake. Instead of stopping the ongoing pollution and safeguarding the public water resources of North Carolina, DEQ is engaging in various awkward and illegal permit drafting to avoid the obvious solution: to stop the ongoing illegal water pollution from the Roxboro unlined pits and remove the threat of catastrophic failure, Duke Energy must remove its coal ash to its very nearby lined, modern landfill.

That is the solution that is being implemented at ***every*** utility-owned waterfront coal ash storage site in South Carolina. That is the solution being implemented at eight other Duke Energy coal ash storage sites in North Carolina. At Roxboro and Duke Energy's nearby Mayo facility, Duke has existing lined landfills whose planned capacity would hold the coal ash without any separate landfill construction and with minimal transportation. Moreover, there is ample space for an additional lined landfill on Duke Energy's 6,095 acre parcel at Roxboro.

Any NPDES permit issued by DEQ for the Roxboro facility must incorporate the Clean Water Act's requirement of best available technology to eliminate discharges if the facility is capable of achieving such elimination. In this case, all the utilities in the Carolinas, including Duke Energy itself, are already implementing a guaranteed approach to eliminating their discharges: removal of their unlined coal ash to dry, lined landfill storage or recycling.

(1) SCE&G

In South Carolina, SCE&G had unpermitted seeps and groundwater contamination at its Wateree Station facility on the portion of the Catawba River called the Wateree River. Today, SCE&G is in the midst of removing all its coal ash from unlined lagoons at Wateree Station to safe, dry, lined storage in a landfill away from the Wateree River. SCE&G has already removed over 1 million tons of coal ash from its Wateree facility. In filings with the South Carolina Public Service Commission, SCE&G has publicly stated its commitment to clean up the coal ash at its other facilities in South Carolina as well. Attachment 5, at 26. SCE&G has also stated publicly that its cleanup has had no effect on customer rates. Eric Connor, "Coal ash cleanup: Someone will pay; will it be customers?" *Greenville News* (Apr. 28, 2014). At the same time, groundwater contamination has dropped by 60 to 90%.

(2) Santee Cooper

South Carolina's Public Service Authority utility, known as Santee Cooper, has also committed to excavate its coal ash from unlined lagoons and store it in dry, lined landfills or recycle it for concrete. Santee Cooper's Executive Vice President of Corporate Services described the removal and recycling of the unlined coal ash from the lagoons as "cost-effective"

and a "triple win" for the utility's customers, the environment, and the local economy. Attachment 6. At last report, Santee Cooper has already removed over 700,000 tons from its Grainger Generating Station in Conway, SC, where unlined coal ash had contaminated the groundwater and adjacent wetlands with arsenic and other pollutants. Attachment 7. Santee Cooper is also moving ahead with excavation from its Jefferies Generating Station in Moncks Corner, SC. David Wren, "Coal ash removal at Santee Cooper's power plants years ahead of schedule," *Post & Courier* (Jan. 26, 2015). A concrete recycling facility has been built at its Winyah facility to remove and reprocess ash, and a new modern lined landfill is being built to hold ash that is not recycled. *Id.* Santee Cooper also states that its actions to eliminate the unlined storage of coal ash will have no effect on its rates. Jim Pierobon, "Smart Utilities Know There Are Responsible Solutions for Their Coal Ash Waste," *The Energy Fix* (Jan. 12, 2015).

(3) Duke Energy – South Carolina

In April 2015, conservation groups signed an agreement with Duke Energy for Duke to remove all the coal ash from its W.S. Lee facility on the Saluda River in Anderson County, South Carolina. Attachment 8. Duke will remove all the coal ash to dry, lined storage away from the river, including the ash from two leaking lagoons and in an ash storage area near the lagoons. In September 2014, the South Carolina Department of Health and Environmental Control entered into a consent enforcement agreement with Duke Energy in which Duke was required to remove coal ash from two other storage areas on the Saluda River's banks at the Lee facility. Attachment 9. Since then, Duke Energy has begun removing ash from the site and has permitted a new, lined landfill for removed ash.

Duke Energy's other coal ash site in South Carolina is the H.B. Robinson facility on Lake Robinson and Black Creek in Darlington County, SC. On April 30, 2015, after months of public pressure from conservation groups calling for a cleanup, Duke publicly committed to excavating all the coal ash at Robinson and storing it in a dry, lined landfill on site. Sammy Fretwell, "Duke to clean up toxin-riddled waste pond in Hartsville," *The State* (Apr. 30, 2015). Duke Energy has moved forward with permitting and constructing a lined landfill to hold the excavated ash.

(4) Duke Energy – North Carolina

Duke Energy is now required by court order and legislation to remove the ash from seven sites across the state. Recently, after insisting that it had to leave the coal ash in unlined pits at its Buck facility, Duke Energy entered into a settlement agreement with conservation groups requiring it to excavate all the coal ash from the Buck site, either to a lined landfill or to be recycled into concrete.

Duke Energy's excavation of 10 sites in two states, totaling approximately 48 million tons of coal ash, is proof positive that dewatering and ash removal are achievable as BAT to stop the ongoing discharges of coal ash pollutants from the Roxboro lagoons. Accordingly, ash removal should be required in the NPDES permit for Roxboro in order to ensure the discharges are stopped.

In sum, excavation and dry, lined storage of coal ash formerly stored in unlined, leaking lagoons is already standard practice among all the major utilities in the Carolinas, and Duke Energy is now required to excavate the ash from 10 of its coal ash sites in the Carolinas. Removal of the ash to dry, lined storage or concrete recycling is not only economically achievable but cost effective, according to the utilities putting these cleanup methods into practice. And it eliminates the continuing seepage into groundwater and surface waters, as well as the risk of a catastrophic dam failure or spill, such as Duke Energy's Dan River spill in February 2014.

Accordingly, DEQ must incorporate into the NPDES permit provisions requiring the dewatering and excavation of the unlined coal ash from the leaking unlined pit at Roxboro, in combination with a reasonable schedule of compliance to achieve the Clean Water Act's goal of eliminating the discharge of pollutants to public waters.

G. DEQ Has Acknowledged that Zero Discharge Is Attainable for Seeps But Fails to Require that Solution or to Impose Corresponding TBELS or Any Schedule of Completion.

DEQ's fact sheet for a draft NPDES permit at another Duke Energy coal ash site, Riverbend, conceded that a zero discharge technological solution is available to Duke Energy to address coal ash seeps, but DEQ has failed to impose TBELs based on that technology.

The Riverbend Fact Sheet acknowledged, with respect to seeps, that "[r]eleases of this nature would typically be addressed through an enforcement action requiring their elimination . . . ." Attachment 10, at 3. The draft permit originally proposed by DEQ for Riverbend further recognized the availability of a zero discharge solution – collection and "rerouting the discharge" and "discontinuing the discharge" are available solutions for meeting technology-based effluent limits. Attachment 11, at Condition A(5) n.4. Nonetheless, DEQ requires no action from Duke Energy at Roxboro to address the seeps, but instead proposes in the draft permit simply to allow them to continue. This complete disregard of an acknowledged solution to these uncontrolled discharges does not satisfy the requirements of the federal Clean Water Act.

Indeed, DEQ *must* require compliance with the discharge limits achievable by the implementation of the best available technology *now*, just as it has in the Sutton NPDES permit. EPA defines a compliance schedule as "a schedule of remedial measures, . . . including an enforceable sequence of interim requirements (for example, actions, operations, or milestone events) . . . ." 40 C.F.R. § 122.2. Under EPA regulations, DWQ may use compliance schedules to achieve "compliance with CWA [Clean Water Act] and regulations . . . as soon as possible, *but not later than the applicable statutory deadline under the CWA*." 40 C.F.R. § 122.47(a)(1)(emphasis added). The Clean Water Act requires dischargers of color pollution to comply with BAT-based effluent limits by March 31, 1989. 33 U.S.C. §1311(b)(2)(A), (F). Thus, "a permit writer may not establish a compliance schedule in a permit for TBELs [technology-based effluent limits] because the statutory deadlines for meeting technology standards . . . have passed." EPA Permit Writers Manual, Section p. 9-8 (2010); *see also* EPA Permit Writers Manual, Section 9.1.3 p. 148 (1996).

H. The Draft Permit Should Promptly Require Dry Handling of All Coal Ash at Roxboro.

The permit improperly allows Duke Energy to continue sluicing bottom ash at Roxboro until 2021. Sections A. (2) and (3). The Roxboro facility has utilized dry handling of fly ash since the 1980s, and there is no reason why it needs five additional years to implement dry handling of bottom ash. At other facilities, including Duke Energy's nearby Mayo facility, the dry handling requirement for bottom ash becomes effective in 2018.

The 2017 Fact Sheet includes Duke Energy's proposed timeline, including an added six-month delay for unforeseen permitting delays, as well as other general delays. Since Duke Energy has implemented dry ash handling in many places in its system, including at Roxboro, it is not clear why this long timeline is needed to do something that Duke Energy must have been contemplating for years. DEQ should re-examine and shorten this timeline.

I. DEQ Cannot Permit the Existing Seeps or Permit In Advance Unidentified and Thus Unpermitted Discharges.

As set out above, not only does the draft permit attempt to authorize the existing seeps and leaks from the coal ash lagoon, it also attempts to put in place in advance a procedure for seeps that have not yet occurred and whose nature is unknown. Draft Permit Section A. (15.). The draft permit refers to modifying the permit to include the new seep, but it does not specify what public notice and comment procedures, if any, will be used for such "modification." In other words, the draft permit tries to give Duke Energy amnesty in advance for these malfunctions of its unlined Roxboro coal ash lagoon.

(1) The Draft Permit Violates the CWA's Prohibition on Unpermitted Point Source Discharges.

Any non-jurisdictional stream of contaminated water discharging from the Roxboro coal ash lagoons to surface waters of the United States is a point source discharge. Rather than stopping the unlawful discharge, the draft permit impermissibly designates the free-flowing stream that receives these seep discharges as itself being a permitted outfall. Thus, the proposed permit purports to authorize unspecified point source discharges, in violation of the CWA, 33 U.S.C. § 1311(a).

Under the CWA, "*Every identifiable point* that emits pollution is a point source which must be authorized by a NPDES permit . . . ." *U.S. v. Tom-Kat Dev., Inc.*, 614 F. Supp. 613, 614 (D. Alaska 1985) (citing 40 C.F.R. § 122.1(b) (1). *Accord U.S. v. Earth Sciences, Inc.*, 599 F.2d 368, 373 (10th Cir. 1979); *Legal Envtl Assistance Found., Inc. v. Hodel*, 586 F. Supp. 1163, 1168 (E.D. Tenn. 1984); *U.S. v. Saint Bernard Parish*, 589 F. Supp. 617 (E.D. La. 1984)). The "NPDES program requires permits for the discharge of 'pollutants' from *any* 'point source' into 'waters of the United States.'" 40 C.F.R. § 122.1(b)(1) (emphasis added).

Rather than complying with this straightforward requirement of the CWA, the proposed permit instead tries to legalize the existing illegal seeps by creating a single, fictional outfall

(001). And while the 2017 Draft Permit adds monitoring for a number of coal ash pollutants, there still are no limits on many toxic pollutants from these seeps, including lead, mercury, chloride, and many others. Draft Permit Section A. (1.). The permit also attempts to legalize in advance now nonexistent but future occurring unpermitted discharges.

The draft permit's authorization of the seeps violates the most basic principles of the Clean Water Act. DEQ itself acknowledges in the Riverbend Fact Sheet that "[t]he CWA NPDES permitting program does not normally envision permitting of *uncontrolled releases* from treatment systems" and "[r]eleases of this nature would typically be addressed through an *enforcement action requiring their elimination* rather than permitting." Attachment 10, at 3 (emphasis added).

Indeed, DEQ has pending an enforcement action that has identified illegal drains and other unpermitted seep discharges at Roxboro – an enforcement action that DEQ has not diligently prosecuted. Yet, in this draft permit, DEQ attempts to legalize what it has already stated, under oath, is illegal and a serious threat to North Carolina's people and their water quality.

(2) The Proposed Permit Attempts to Shield Duke from Further Legal Violations

The seeps are prohibited under Duke Energy's current NPDES permit. These "uncontrolled releases" of leaking wastewater should be the subject of an enforcement action requiring their elimination. Indeed, DEQ has filed such an action in state Superior Court for the engineered drains and other identified seeps. Duke Energy's operating companies have pleaded guilty to criminal violations of the Clean Water Act for exactly such unpermitted discharges.

DEQ's proposed permit purports to legalize these previously illegal discharges with the stroke of a pen, rather than requiring Duke Energy to take any action to remedy the violations. Even more shockingly, DEQ is proposing to grant Duke amnesty for unknown numbers of *future* violations of the Clean Water Act as well. This is nothing more than an attempt to shield Duke Energy from having to comply with the laws it has been violating for years.

(3) The Draft Permit's Authorization of Future Seeps Violates the CWA's Public Participation Requirements.

The draft permit would allow Duke to evade public notice and comment and the opportunity for a public hearing and for judicial review, along with all the other requirements of the state NPDES permitting program, 33 U.S.C. § 1342(b). While the draft permit vaguely states that the permit would be "modified," there is no indication that public notice and comment would be required. Further, the draft permit purports to set out that any new seep would be handled in the same way as the existing seeps – without knowledge as to the nature or circumstances of the new seep.

It is beyond the authority of DEQ to authorize new point source discharges without the full procedures of a modification of the NPDES permit with public comment and EPA oversight. EPA's regulations authorize limited administrative changes to an active permit through minor

modifications, 40 U.S.C. § 122.63, none of which condone the administrative addition of a new point source discharge, which must be permitted as an NPDES outfall. Nor can DEQ prejudge the way a new point source discharge would be addressed, by simply adding the seep to a list to be addressed in the same way as it proposes to address the existing seeps. This scheme is inconsistent with the requirements of the Clean Water Act.

The existing permit and all prior ones are the result of the full agency process, public review, public comment, and the procedures required by the Clean Water Act and North Carolina law. These illegal flows of polluted water into tributary streams and Hyco Lake, prohibited by the existing permit, cannot be made legitimate by totally changing the permit to allow contaminated water to pop out of this purported wastewater treatment facility and flow into these waterways. It is inconceivable that a permitted wastewater treatment facility would be allowed to repeatedly open up leaks and discharge polluted water from the supposed wastewater treatment lagoons into a public waterway. This proposed option is not law enforcement or pollution elimination at all, but instead an option for the law enforcement agency to try to find a way to make unlawful and polluting activities "permitted" and avoid dealing with the risks to the public. This stratagem should not be adopted by a state agency that has the responsibility of enforcing the law and protecting the State's natural resources and the public interest.

Instead, this permit should require the implementation of the proven method of eliminating seeps from these defective wastewater treatment systems – removal of the ash to safe, dry lined storage and appropriate dewatering of the lagoons.

J. The Draft Permit is Inconsistent with the Removed Substances Provision.

For the same reasons, the proposed permit's attempt to authorize the seeps violates the Clean Water Act's anti-backsliding provisions because it is inconsistent with the Removed Substances provision of the current Roxboro NPDES permit, which provides an important limitation in the permit to prevent the entrance of pollutants removed in the course of settling treatment from entering State and navigable waters.

The State of North Carolina has included an important standard condition in its NPDES permits for waste treatment systems like the Roxboro lagoon, known as the Removed Substances provision. The Removed Substances provision of the Roxboro permit, Part II.C.6, provides:

> "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.*" (emphasis added)

This is a common-sense provision to prevent pollutants removed by waste treatment facilities from escaping out into the environment. The Removed Substances provision is an important component of the Clean Water Act's protections, and prevents waters of the United States from being polluted by waste treatment facilities such as the Roxboro coal ash settling lagoon. *In the Matter of: 539 Alaska Placer Miners*, Nos. 1085-06-14-402C & 1087-08-03-402C, 1990 WL 324284 at *8 (EPA 1990) (inclusion of Removed Substance provision "is based

on the simple proposition that there is no way one can protect the water quality of the waters of the U.S if the [polluter] is allowed to redeposit the pollutants collected in his settling ponds"); 40 C.F.R. § 440.148(c) (Removed Substances provisions ensure that "measures shall be taken to assure that pollutants materials removed from the process water and waste streams will be *retained in storage areas"*) (emphasis added).

In the context of the Roxboro permit, the Removed Substances provision is also the implementation of a required permit component under the implementing regulations of the Clean Water Act. The implementing regulations for the Clean Water Act require that "[t]echnology-based effluent limitations shall be established under this subpart for solids, sludges, filter backwash, and other pollutants removed in the course of treatment or control of wastewaters in the same manner as for other pollutants." 40 C.F.R. § 125.3(g). Under the existing permit issued to Duke Energy for the Roxboro plant, DEQ did not set individual TBELs for seeps from the ash basin but rather took the only responsible step, of treating zero liquid discharge as the BAT for contaminated seeps from a coal ash impoundment. That is, consistent with the requirement to set TBELs for pollutants removed by the wastewater treatment ash ponds, the existing permit prohibits *any* discharge of removed substances to waters of the United States or of North Carolina.

DEQ itself has cited Duke Energy for violating the Removed Substances provision by allowing pollutants to enter waters of the State and navigable waters due to uncontrolled releases from Duke Energy's coal ash lagoons at its Dan River facility. In a February 28, 2014 Notice of Violation, DEQ cites the discharge "of coal combustion residuals from the ash pond to the Dan River, class C waters of the State" as violating the Removed Substances provision: "Failure to utilize or dispose solids removed from the treatment process in such a manner as to prevent pollutants from entering waters of the State (Part II, Section C. 6. of NPDES permit)." Part II.C.6 of the Dan River NPDES Permit contains the Removed Substances permit provision.

At Roxboro, the draft permit purports to allow pollutants removed in the course of treatment to enter waters of the State and United States via uncontrolled releases that have sprung and that may spring out of the lagoon and start discharging to public waters at any time. As such, the proposed permit violates the Clean Water Act's anti-backsliding requirements in this additional way by attempting to authorize illegal discharges prohibited by the existing permit's Removed Substances Provision.

Indeed, there is no indication that DEQ is eliminating the Removed Substances provision from the draft permit; the Removed Substances provision is part of the standard conditions for all NPDES permits in North Carolina. Consequently, this aspect of the draft permit is contrary to this fundamental condition, applicable to all NPDES permits and all wastewater treatment facilities in North Carolina.

K. The Draft Permit Threatens the Safety of the Roxboro Dam.

By allowing seeps to continue, DEQ is threatening the safety of the Roxboro coal ash dam. DEQ itself has previously acknowledged the danger of seeps for earthen dams at Roxboro.

In 2010, DEQ issued a dam safety Notice of Inspection of another earthen dam at Roxboro and warned:

> Two of the more common types of earth dam failures are caused or influenced by excessive seepage. Excessive seepage can produce progressive internal erosion of soil from the downstream slope of the dam or foundation toward the upstream side to form an open conduit or "pipe." ***Seepage pressures decrease the strength characteristics of the embankment soil.*** *The resulting reduction in embankment stability* ***can produce a slide failure of the downstream slope.***

Attachment 12, at 2 (emphasis added). The Roxboro coal ash dams are high hazard dams. DEQ is ignoring its own warnings by trying to allow the Roxboro seeps to continue and by purporting to allow future, unknown seeps, without any knowledge of their future effects on the Roxboro coal ash dams.

L. The Department Cannot Issue a Permit to a Facility that is Violating Surface Water Standards.

Hyco Lake has a long history of serious contamination from Duke Energy's Roxboro coal ash facility. As recently as this year, Duke Energy's own human Health Risk Assessment study concluded that exposure to fish tissue caught from Hyco Reservoir and consumed under recreational and subsistence fishing scenarios resulted in potentially unacceptable noncarcinogenic health risk. CAP Pt. 2, Appendix D, p. 5-16. The ongoing contamination of Hyco Lake and its tributaries means that the draft permit cannot be validly issued.

NPDES permits control pollution by setting (1) limits based on the technology available to treat pollutants ("technology based effluent limits") and (2) any additional limits necessary to protect water quality ("water quality-based effluent limits") on the wastewater dischargers. 33 U.S.C. §§ 1311(b), 1314(b); 40 C.F.R. § 122.44(a)(1), (d). An NPDES permit must assure compliance with all statutory and regulatory requirements, including state water quality standards. 33 U.S.C. § 1342(a)(1)(A); 40 C.F.R. § 122.43(a); 15A N.C. Admin. Code 2H .0118.

Similarly, North Carolina law provides that "[n]o permit may be issued when the imposition of conditions cannot reasonably ensure compliance with applicable water quality standards." 15A N.C. Admin. Code 2H.0112(c); *see also* N.C. Gen. Stat. §§ 143-215.6a-c (authorizing civil and criminal penalties and injunctive relief for violations of surface water standards).

At Roxboro, Duke Energy is violating surface water criteria in jurisdictional waters at Roxboro, including Hyco Lake and Sargents River. *E.g.*, Corrective Action Plan Pt. 1, at Tables 1-3, 2-11. In addition, Duke Energy is violating water quality criteria in the unnamed stream running along the east side of the East Ash Basin. This stream discharges at the location

identified in Duke Energy's CAMA reports as S-13; the results from this sampling location show violations of water quality criteria for at least aluminum, boron, cobalt, iron, manganese, sulfate, TDS, and vanadium. CAP Pt. 1, Fig. 1-2; Table 1-3.

DEQ can remedy an ongoing violation of surface water quality standards and "ensure compliance with applicable water quality standards" in these waters only by requiring that the source of the pollution, the coal ash, be removed; that the seeps of coal ash polluted water into these waters be stopped; and that the coal ash be removed from the unlined pits, where it contaminates groundwater and the seeps/streams that flow into Hyco Lake and its tributaries, directly or indirectly.

These discharges cannot be permitted as long as surface water quality standards are being violated at Roxboro.

M. The Draft Permit Fails to Account for Discharges of Wastewater Through Hydrologically Connected Groundwater.

The Clean Water Act is a strict liability statute prohibiting the discharge of any pollutant to a water of the United States without a permit. 33 U.S.C. § 1311(a). The Roxboro coal ash pond discharges significant quantities of contaminated wastewater to Hyco Lake and its tributaries through groundwater via a direct hydrologic connection to the Lake and streams. Indeed, DEQ has known of contaminated groundwater discharging "heavy metals" to surface waters at Roxboro since at least 2010, yet has not taken action to monitor, control, or stop this discharge. Attachment 1. That discharge is not included in the current permit, and attempting to add it now would violate the anti-backsliding provision of the Clean Water Act. 33 U.S.C. § 1342(o); 40 C.F.R. § 122.44(l)(1) ("[W]hen a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit . . . .").

The United States Department of Justice ("DOJ") recently emphasized "EPA's longstanding position [] that a discharge from a point source to jurisdictional surface waters that moves through groundwater with a direct hydrological connection" comes under the purview of the CWA. *See* Amicus Brief, *Hawaii Wildlife Fund v. County of Maui* (No. 15-17447, 9th Cir.), at 5 (Attachment 13). As expressed by DOJ, "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." *Id.* at 16 (quoting *N. Cal. River Watch v. Mercer Fraser Co.*, No. 04-4620, 2005 WL 2122052, at *2 (N.D. Cal. Sept. 1, 2005)). The same reasoning applies here. As discharges to Hyco Lake and nearby streams via hydrologically connected groundwater were not authorized

and therefore prohibited under the current permit, they cannot be authorized in the draft permit, and they are not in the draft permit.

Consequently, DEQ must require Duke Energy to stop the discharge of contaminated wastewater to Hyco Lake and its tributaries via hydrologically connected groundwater by removing the source of contamination – Duke Energy's coal ash – from the unlined storage areas at Roxboro.

N. The Draft Permit Has Inadequate Monitoring.

During decanting and dewatering, Duke Energy should be required to take daily samples. These activities are not part of the normal operation of the plant because they are not part of its wastewater treatment function. Special care needs to be taken to ensure the limits in the permit are enforced. As discussed above, the draft permit has no limits for toxic pollutant discharges into Hyco Lake, and even the monitoring of these substances is mainly quarterly, while the rest are monthly (with the exception of pH and ammonia). The internal outfall from the coal ash lagoons still contains only weekly monitoring for the dumping of the interstitial water, and monitoring only once every three months when the water more than three feet above the ash is being pumped into the Hyco Lake water system. During the dumping of millions of gallons of coal ash polluted water into Hyco Lake – an important regional water resource – daily sampling is essential for limits to have real meaning.

DEQ also only imposes quarterly monitoring requirements at Outfall 010 for effluent limitations that apply on a daily and monthly basis. 2017 Draft Permit at 15. At Outfall 001, to be used for certain previously unpermitted seeps, the Draft Permit only requires monthly monitoring for the first year, after which time monitoring is only required quarterly. Draft Permit at 4.

These lax monitoring requirements are clearly insufficient to ensure compliance with effluent limitations and provide critical information on the discharge of pollutants, especially during ash pond closure. Any final permit must be corrected accordingly and include much more robust monitoring requirements.

O. The Proposed Permit Violates North Carolina's Groundwater Rules.

Because of the groundwater contamination at and beyond the compliance boundary at Roxboro, the state groundwater rules prohibit DEQ from issuing the proposed NPDES permit for the Roxboro coal ash lagoon.

North Carolina's groundwater rules state that "the [Environmental Management] Commission will not approve any disposal system subject to the provisions of G.S. 143-215.1 which would result in a violation of a groundwater quality standard beyond a designated compliance boundary." 15A N.C.A.C. 2L .0103(b)(2). The draft permit states on its face that it is issued under the authority of "North Carolina General State 143-215.1." The Roxboro coal ash lagoons are disposal systems for purposes of the 2L groundwater rules, with compliance

boundaries set by the rules. 15A N.C.A.C. 2L .0107. Because DEQ issues this permit under authority delegated by the Environmental Management Commission, this prohibition applies to DEQ as well.

There is no question that the disposal system authorized by this permit will result in a violation of a groundwater quality standard at a designated compliance boundary. It already has. Groundwater contamination at Roxboro has been documented for years. Indeed, DEQ has ordered Duke Energy to undertake assessment activities and filed an enforcement case in Superior Court seeking injunctive relief to abate groundwater contamination at the site, identifying at least one violation of groundwater standards already. Duke Energy's own studies and its expert witnesses confirm that Duke Energy has contaminated the groundwater with elevated levels of pollutants at levels above both state groundwater standards and Duke Energy's own proposed background concentrations. *See, e.g.*, Corrective Action Plan Part 1, at Tables 2-10 to 2-11.

The groundwater violations at and beyond the compliance boundary will only continue, in violation of the state groundwater rules, if the ash is allowed to remain in the unlined lagoon where it will continue leaching pollutants into the groundwater. Because this disposal system has already resulted in violations of groundwater quality standards and will continue to do so, DEQ cannot issue the proposed NPDES permit without imposing conditions sufficient to ensure these violations will cease. A requirement for final closure of the Roxboro coal ash impoundments and removal of the ash to dry, lined storage is the only assured solution to stop ongoing violations of quality standards at the compliance boundary. Accordingly, the permit should require removal of the ash to safe, dry lined storage.

P. DEQ Fails to Exercise Its Best Professional Judgment to Establish BTA under 316(b).

DEQ is permitted to allow Roxboro until the next permitting cycle to provide sufficient information to establish final impingement mortality and entrainment BTA. 40 C.F.R. § 125.98(b)(6) However, DEQ must still "establish *interim* BTA requirements in the permit on a site-specific basis based on the Director's best professional judgment." *Id.* (emphasis added). There is no indication that DEQ has engaged in such analysis in this proceeding. Rather, the Fact Sheet simply states: "The permittee shall comply with the Cooling Water Intake Structure Rule per 40 CFR 125.95. The Division approved the facility request for an alternative schedule in accordance with 40 CFR 125.95(a)(2). The permittee shall submit all the materials required by the Rule with the next renewal application." Fact Sheet at 3.

Roxboro first applied for its renewed permit in 2011, and the EPA's final rule regarding 316(b) was released two full years ago. DEQ has had more than sufficient time to assess at least interim BTA for Roxboro. As such, any final permit must include, at minimum, interim BTA standards based on DEQ's best professional judgment and consideration of the factors and technologies specified at 40 C.F.R. §§ 125.94 and 125.98.

Q. Duke Energy's New Treatment System Will Pollute Hyco Lake and Sargents River.

The draft permit sets up a new treatment system to address pollution from the Roxboro facility after the coal ash lagoon operation is abandoned. A new retention basin will be constructed, discharging into Hyco Lake by way of Sargents River through new Outfalls 0012A, 0012B, and 0012C. Page 2 and 3 and Section (A.) (12) to (14).

This new retention basin will receive streams of highly polluted water, including leachate from the Roxboro coal ash landfill, coal pile runoff, and other industrial wastes. Yet, the draft permit contains no limits for the coal ash and other toxic and heavy metal pollutants (other than ammonia and only for Outfall 0012C) that this retention basin will dump into Hyco Lake and Sargents River.

The Roxboro coal ash landfill is receiving coal ash and in the future will receive all of Duke Energy's fly and bottom ash. It should be expected that the leachate from this landfill will be highly polluted with toxins and heavy metals from coal ash. The draft permit would allow this highly polluted leachate to go directly to Hyco Lake after being dumped into Sargents River, after passing through only the newly constructed retention basin.

There is no requirement for any real treatment of this leachate. It will simply be dumped into the retention basin, with a host of other industrial and coal ash wastes, and then discharged into Hyco Lake after being dumped into Sargents River. There is no requirement for any kind of physical or chemical treatment facility. There are no limits for coal ash pollutants discharged from the retention basin into Sargents River and thus into Hyco Lake.

This is a recipe for yet another coal ash scandal at Roxboro. After all the failures of DEQ and Duke Energy in their management of coal ash and coal ash pollution, the public has a right to expect that going forward both DEQ and Duke Energy will make every effort to protect North Carolina's waters from coal ash pollution. Instead, the draft permit would abdicate DEQ's responsibility to put in place protective and meaningful pollution limits, and would also give the public every reason not to trust Duke Energy's handling of this pollution.

There must be meaningful and enforceable limits for the coal ash pollutants in Duke Energy's coal ash landfill leachate, when it enters the retention basin and when it leaves the basin and flows into Sargents River and thereby into Hyco Lake.

This permit is an opportunity for Duke Energy and DEQ to set a new path for protecting Hyco Lake and Sargents River from the continuing pollution by Duke Energy's coal ash and its operation of the Roxboro facility. But instead of putting in place protections for the public and Hyco Lake and Sargents River, once more DEQ and Duke Energy propose to make Hyco Lake a

dumping ground for Duke Energy's coal ash and other pollution, without limits for the discharge into Sargents River which would protect the waters of the Lake and the river.

For all the reasons given above, this disturbing approach violates the Clean Water Act and North Carolina law.

R. Additional Points

The months for acute toxicity testing are missing in the first paragraph of Section A. (16).

Section A. (15) refers to the Catawba River; we believe the intended reference is either the intake canal or Hyco Lake.

Under the Clean Water Act, DEQ and Duke Energy cannot render a portion of a permit unenforceable by citizens by inserting the phrase "State Enforceable Only," as has been done on Attachment 2 of the draft permit. That phrase should be deleted.

Thank you for your consideration of these comments.

Sincerely,

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