

IN THE UNITED STATES DISTRICT COURT
FOR THE MIDDLE DISTRICT OF NORTH CAROLINA
No. 1:17-cv-452

ROANOKE RIVER BASIN)	
ASSOCIATION,)	
)	
Plaintiff,)	
)	
v.)	COMPLAINT
)	(JURY TRIAL DEMANDED)
DUKE ENERGY PROGRESS, LLC)	
)	
Defendant.)	

NATURE OF THE CASE

1. This citizen enforcement action challenges ongoing, unlawful discharges of toxic metals and other pollutants by Defendant Duke Energy Progress, LLC (“Duke Energy”) and other violations of law at its Roxboro Steam Station coal-fired electricity generating plant (“Roxboro”) in Person County, North Carolina, in violation of the Clean Water Act (“CWA”), 33 U.S.C. §§ 1251-1376.

2. At Roxboro, 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.

3. 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, which empties into Hyco Lake – to be parts of its coal ash wastewater pollution system.

4. Second, 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, including another tributary stream of Hyco Lake to the east of its East Ash Basin, in addition to Hyco Lake and Sargents River.

5. Third, Duke Energy is failing to properly operate and maintain its Roxboro coal ash site by allowing these violations to continue; by storing coal ash in the groundwater; in the case of the West Ash Basin, by storing coal ash within the floodplain, increasing the long-term risk of catastrophic failure; and by operating a wastewater treatment facility that leaks into ground and surface waters.

6. As a result, 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.

7. This ongoing pollution is contaminating not only these waters but also the waters of the Roanoke and Dan River Basins downstream in North Carolina and Virginia.

8. As long as coal ash and other wastes remain in these leaking, unlined pits, they will continue to discharge pollutants into the groundwater and surface waters in violation of the Clean Water Act. These discharges will continue to place Hyco Lake, Sargents River, tributary streams, groundwater, the Dan River and Roanoke River Basins,

and people who use these resources at risk of groundwater contamination, surface water contamination, and potential catastrophic failure of the coal ash impoundments.

9. In a blatant attempt to forum shop and avoid justice in this Court, Duke Energy has commenced an action in a federal district court in Virginia seeking a declaratory judgment that Duke's activities at Roxboro in North Carolina, as set forth in the Clean Water Act Notice sent by the Roanoke River Basin Association ("the Association"), do not violate the Clean Water Act. The Association's Notice is attached hereto as Exhibit 1 and Duke Energy's Virginia action is attached as Exhibit 2. The Clean Water Act requires suits respecting the illegal discharge of pollution to be filed in the district where the alleged source of the pollution is located. 33 U.S.C. § 1365(c)(1). On May 11, 2017 – just days before the Clean Water Act's 60-day notice period expired for the Association to be able to file this action – Duke Energy instead chose to file in a different state, claiming it could "waive" the express requirement of the Clean Water Act. The Clean Water Act does not provide for the "waiver" of this express requirement, and, of course, Duke Energy, as the instigator of the Virginia action, does not in any event have the right to waive this mandatory requirement of the Clean Water Act. The source of Duke Energy's coal ash pollution challenged in the Association's Notice is the Roxboro site in Person County, N.C., in the Middle District of North Carolina, and that is where these issues must be resolved.

JURISDICTION, VENUE, AND NOTICE

10. The Association brings this enforcement action under the citizens' suit provision of the Clean Water Act. 33 U.S.C. § 1365. This court has jurisdiction over this action pursuant to 28 U.S.C. § 1331 and has jurisdiction over the parties.

11. Venue is proper in this court pursuant to 28 U.S.C. § 1391(b) and 33 U.S.C. § 1365(c)(1). All the challenged discharges and permit violations are located and are occurring in Person County, North Carolina.

12. In compliance with 33 U.S.C. § 1365(b)(1)(A), and 40 C.F.R. § 135.2, on March 13, 2017, the Association gave Duke Energy, the Administrator of the United States Environmental Protection Agency ("EPA"), and the North Carolina Department of Environmental Quality ("DEQ") notice of the violations specified in this complaint and of the Association's intent to file suit after sixty days should those violations continue. A copy of the notice letter with documentation of its receipt is attached as Exhibit 1.

13. More than sixty days have passed since the notice was given pursuant to law and regulation, and the violations identified in the notice letter are continuing at this time and reasonably likely to continue in the future.

14. EPA and DEQ have not commenced and are not diligently prosecuting a civil or criminal action to redress the violations asserted in this citizen enforcement action.

15. 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>.

16. 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.), Exhibit 3. As to Roxboro, DEQ set out, under oath, that Duke Energy had unpermitted discharges in violation of state law prohibitions on unpermitted discharges. *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.

17. However, unlike the Association's complaint in this action, DEQ has brought no claim that Duke Energy's Roxboro Permit does not validly authorize its

discharges of pollution into Sargents River and Hyco Lake. DEQ is not seeking recognition of these waters as jurisdictional and subject to the protections of the Clean Water Act or any other water quality law. On the contrary, DEQ issued the permit that purports to authorize Duke Energy to treat these waterbodies as its private wastewater system, and DEQ's currently proposed draft NPDES permit for Roxboro does the same. The currently operative NPDES permit for Roxboro is attached as Exhibit 4, and the most recent proposed draft NPDES permit is attached as Exhibit 5.

18. Thus, the Association's claims in this action are outside the scope of the state action. DEQ's complaint does not recognize that the bay of Hyco Lake and Sargents River are jurisdictional waters subject to the protections of the anti-pollution laws. The state complaint alleges that the coal ash lagoon discharges and other wastewater discharges at Roxboro enter Hyco Lake only at Outfall 003, an arbitrary point within Hyco Lake, ignoring the fact that these pollutant discharges enter and contaminate Sargents River and the bay of Hyco Lake prior to reaching Outfall 003. *Id.* ¶ 69. The state complaint identifies the points at which Duke Energy dumps coal ash and FGD wastes into Sargents River and the bay of Hyco Lake as "internal" outfalls, meaning that it considers these waters to be components of Duke Energy's wastewater system that are not subject to state water quality protections, and it erroneously identifies both these waters as a "heated water discharge canal." *Id.* ¶¶ 71, 75. For example, the complaint mentions the seven engineered drains discharging from the West Ash Pond dam, but identifies these drains as discharging into "the heated water discharge canal," not Hyco Lake. *Id.* ¶ 86. Therefore, it is evident from the face of DEQ's complaint that DEQ does

not recognize that the bay of Hyco Lake and Sargents River are state and U.S. waters, and thus does not seek to protect these waters with its enforcement of state prohibitions against unpermitted discharges.

19. Because DEQ and its state complaint do not recognize the bay of Hyco Lake and Sargents River as jurisdictional waters, the state action cannot encompass the Association's claims in this action for unpermitted discharges of pollution into these waters. For the same reason, the state action does not include Duke Energy's violation of the Clean Water Act due to its unpermitted and illegal pollution of the bay of Hyco Lake and Sargents River by coal ash pollution conveyed through groundwater in close hydrologic connection to waters of the United States.

20. 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 below.

21. The North Carolina groundwater statutes and regulations alleged in DEQ's Complaint govern generally the contamination of groundwater in North Carolina. The Removed Substances provision of the Permit, on the other hand, is a standard, limitation, condition, and requirement of operating a wastewater treatment facility, such as the Roxboro coal ash pits, which Duke Energy is allowed to operate in accordance with the terms of the NPDES permit. DEQ's Complaint does not seek to enforce the Removed Substances provision, as this Court has affirmed in other recent Clean Water Act citizen suits. *See Roanoke River Basin Ass'n v. Duke Energy Progress, LLC*, No. 1:16-cv-607,

slip op. at 9 (M.D.N.C. April 26, 2017) (attached as Exhibit 6); *Yadkin Riverkeeper v. Duke Energy Carolinas, LLC*, 141 F. Supp. 3d. 428, 446 (M.D.N.C. 2015). The Permit's Removed Substances provision requires that the operator of a wastewater treatment facility ensure that the substances it removes during the treatment process (in this instance, settling) do not enter the waters of North Carolina or the navigable waters of the United States. Otherwise, the wastewater *treatment* facility is not a wastewater treatment facility at all, but instead is a wastewater *transmission* facility and a wastewater *pollution* facility, because it simply moves the removed substances from the wastewater into the waters of North Carolina or navigable waters of the United States and thereby pollutes those waters. That is exactly what Duke Energy has done and is doing at its Roxboro coal ash pits.

22. DEQ also does not seek to enforce Duke Energy's failure to properly operate and maintain its facilities, as the Roxboro Permit requires. *See* Exhibit 6, at 9 (DEQ is not enforcing operation and maintenance permit provision with respect to Duke Energy's Mayo coal ash facility).

PARTIES AND STANDING

The Association and Its Members

23. The Roanoke River Basin Association is a § 501(c)(3) non-profit public interest organization with members in North Carolina and Virginia, operating in the Roanoke River Basin watershed. Its mission is to establish and carry out a strategy for the development, use, preservation, and enhancement of the resources of the Roanoke River basin in the best interest of present and future generations. The Association's

membership includes local governments, non-profit, civic and community organizations, regional government entities, businesses and individuals.

24. The Association and its members have been harmed by Duke Energy's unpermitted discharges and unlawful activities. They recreate, fish, and own property in the Roanoke River Basin, including in the vicinity of and downstream from Roxboro, including Hyco Lake, and the waterways into which Duke Energy discharges and into which its waters flow.

25. The Association and its members fear contamination of drinking water, wildlife, and river water, and damage to the value, use, and enjoyment of their property, by discharges from Duke Energy's coal ash lagoons.

26. 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, the waterways into which Duke Energy's waters flow, and their property.

27. These injuries will not be redressed except by an order from this court assessing civil penalties against Duke Energy and requiring Duke Energy to take immediate and substantial action to stop the flow of contaminated water and pollutants into Hyco Lake and Sargents River, to empty the unlined impoundments of all coal combustion byproducts, to move its storage of coal ash away from the public waters and floodplain at Roxboro, to remediate groundwater contamination, and to comply with other relief sought in this action.

Defendant

28. Duke Energy Progress, LLC, formerly known as Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc., is a North Carolina limited liability corporation with its headquarters in Raleigh, North Carolina. It is engaged in the generation, transmission, distribution, and sale of electricity. Duke Energy owns and operates the Roxboro Steam Station, where the violations that gave rise to this action occurred.

29. Duke Energy is a “person” within the meaning of section 502(5) of the Act, 33 U.S.C. § 1362(5).

STATUTORY BACKGROUND

30. The Clean Water Act seeks to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251(a). To accomplish that objective, Congress set the national goal that “the discharge of pollutants into the navigable waters be eliminated.” *Id.* Accordingly, the 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 NPDES permit issued pursuant to 33 U.S.C. § 1342. Each violation of a NPDES permit – and each discharge of a pollutant that is not authorized by the permit – is a violation of the Clean Water Act. 33 U.S.C. §§ 1311(a); 1342(a); 1365(f).

31. 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. “The term ‘point source’ has been taken beyond pipes and ditches and now includes less discrete conveyances, such as cesspools and ponds.” *N. Cal. River Watch v. City of Healdsburg*, No. C01-04686WHA, 2004 WL 201502, at *11 (N.D. Cal. Jan. 23, 2004) (citing *Cmty. Ass’n for Restoration v. Bosma Dairy*, 305 F.3d 943, 955 (9th Cir. 2002); *Wash. Wilderness Coal. v. Hecla Mining Co.*, 870 F. Supp. 983, 988 (E.D. Wash. 1994)), *aff’d*, 496 F.3d 993 (9th Cir. 2007). *Accord 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 that “discharges from coal preparation plant associated areas,” which included slurry ponds, drainage ponds, and coal refuse piles, were within Clean Water Act definition of point source), *rev’d on other grounds*, 449 U.S. 64 (1980).

32. 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, Inc. 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 natural-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 at 368 (unintentional discharges of pollutants from a mine system designed to catch runoff from gold leaching are point sources); *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).

33. This Court 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.

FACTS

34. Duke Energy owns and operates Roxboro.

35. 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.

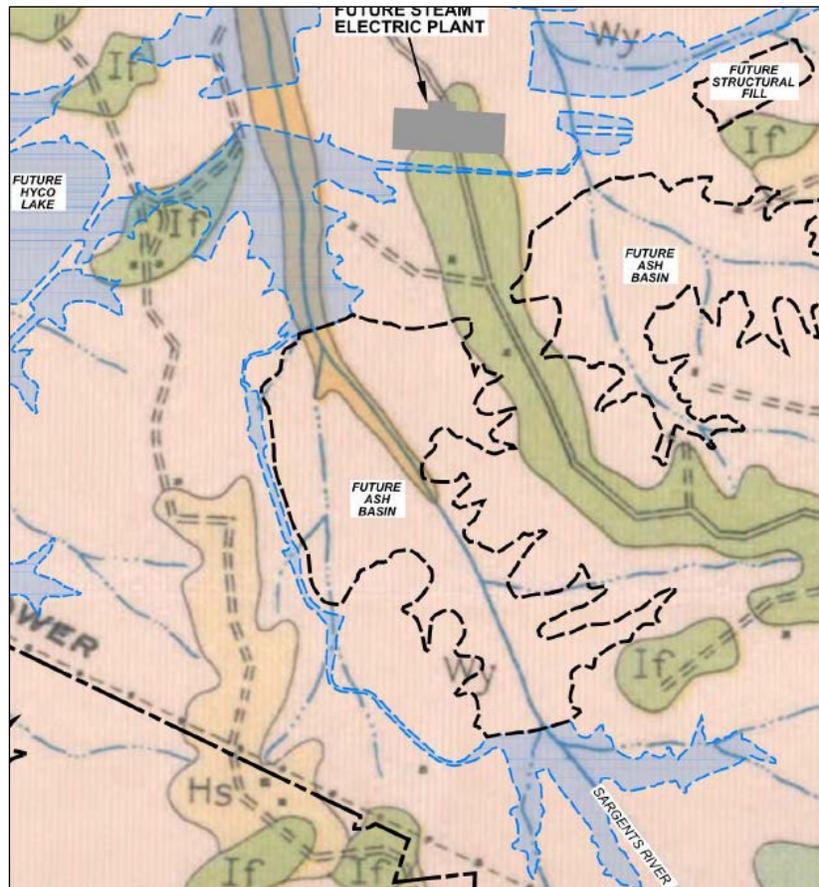
36. Duke Energy has taken for its private use part of Hyco Lake, a public lake, and Sargents River, both of which it uses to collect polluted wastewater.

37. In addition, the coal ash in the unlined Roxboro impoundments sits more than 70 feet deep beneath the water table, allowing pollutants to leach out into the groundwater and surrounding environment.

38. This contaminated groundwater also flows directly into these jurisdictional surface waters.

39. Duke Energy is also polluting streams with unpermitted, illegal flows of coal ash pollution, and these streams flow into Hyco Lake.

40. 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 here, 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 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.

¹ Available at <http://edocs.deq.nc.gov/WaterResources/0/fol/305358/Row1.aspx>.

41. North Carolina and Federal Emergency Management Agency 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, attached as Exhibit 7.

42. 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.

43. 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 gas desulfurization ("FGD") system blowdown.

44. In addition, groundwater and rain water flow into these pits.

45. Duke Energy has dumped over 19 million tons of coal ash and other wastes into the unlined coal ash lagoons.

46. Duke Energy operates 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. Exhibit 4. 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.”

47. 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.

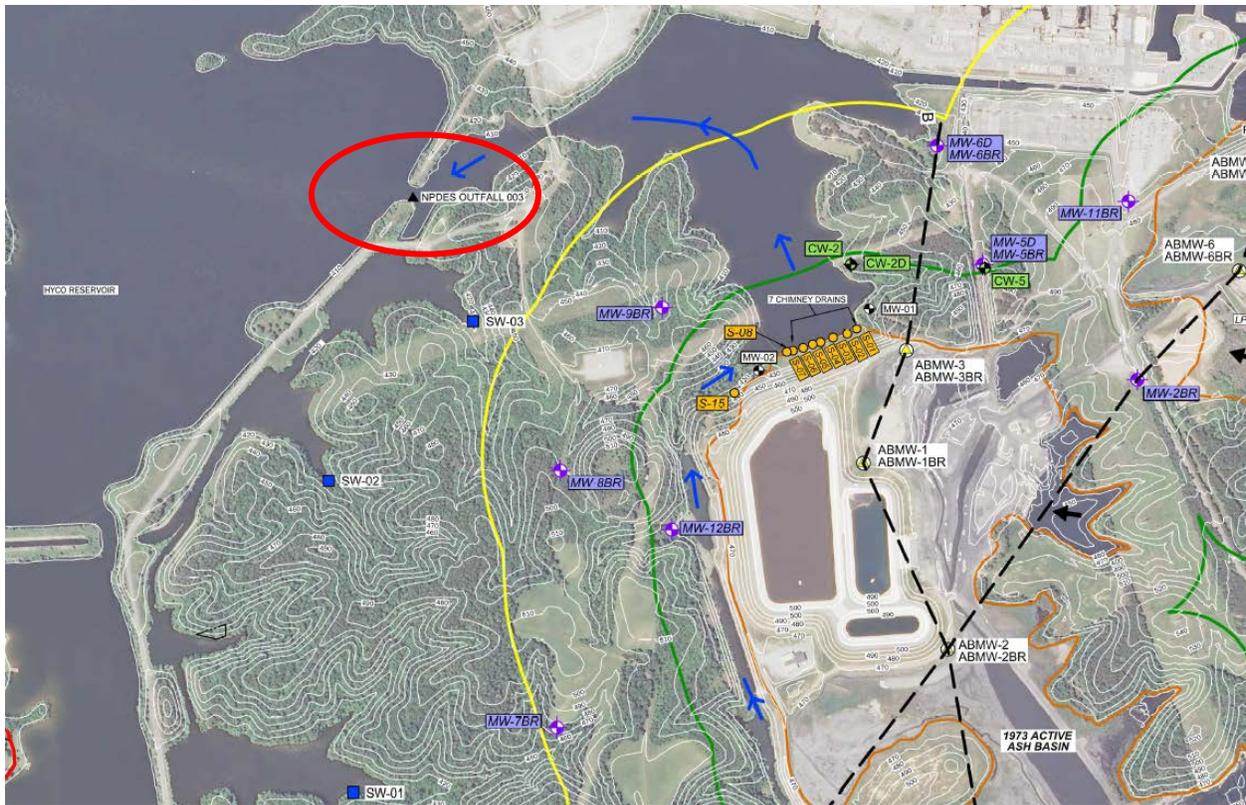
48. Instead, coal ash wastes from the East and West Basin discharge through openings in a rock dam at the south end of the West Ash Basin, where they then flow through impounded and rerouted portions of Sargents River flowing into a bay of Hyco Lake. Seven engineered drains also discharge to the bay 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.

49. 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.

50. 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 in paragraph 53 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.

51. 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.

52. 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.



Duke Energy, Site Layout Map, CSA Figure 2-1 (Exhibit 8)

53. Because Outfall 003 at Roxboro (circled in red on the figure above) 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.

54. As a result, the current Roxboro NPDES permit does not validly authorize the discharge of pollutants into Hyco Lake or Sargents River.

55. 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.

56. In a number of ways, Duke Energy illegally treats these waters of the United States as wastewater dumps by discharging pollutants into them:
- a. 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;
 - b. 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;
 - c. 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) (Exhibit 8) and its Discharge Assessment Plan (April 29, 2016).
 - d. 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.
 - e. 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;

- f. 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 Exhibit 8) that discharge into the bay of Hyco Lake, without any Clean Water Act authorization; and
- g. 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.

57. 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.

58. 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).

59. 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)).

60. 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.

61. 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. Exhibit 9. Excavation of the coal ash at Sutton is now well underway.

62. 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.

63. 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.

64. In an attempt 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 is 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.

65. All of these discharges of coal ash polluted water into waters of the United States and groundwater violate an express provision of Duke Energy’s 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.” Exhibit 4, Part II, Section C.6.

66. 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

67. 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 also a water of the United States. *E.g.*, CSA at 27; Figs. ES-1, 6-5, 6-8.

68. There is also some radial flow outward from the coal ash basins (CSA at 27), which may be contaminating neighboring properties and 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.

69. If Duke Energy eliminated its unpermitted discharges into waters of the United States and complied with the Removed Substances provision of its existing

² Available at <http://edocs.deq.nc.gov/WaterResources/0/fo1/321571/Row1.aspx>.

³ Available at <http://edocs.deq.nc.gov/WaterResources/0/fo1/398016/Row1.aspx>.

permit, then the coal ash pollution of these waters – and of Hyco Lake in particular – would be dramatically reduced.

70. This pollution is currently contaminating the waters of the Roanoke River Basin, including a major downstream water supply, Kerr Lake.

71. Coal ash and FGD wastes contain bromides, which interact with chlorine in water treatment plants to form brominated trihalomethanes, which are dangerous carcinogenic pollutants.

72. Elevated levels of bromides have been detected in Hyco Lake near the Roxboro plant. Downstream of the Roxboro site and Hyco Lake, 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.

Toxic Effects of Pollutants

73. 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.

74. 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.

75. 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.

76. 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.

77. 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.

78. 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.

79. EPA has recognized that bromide discharges from coal-fired power plants can contribute to the formation of carcinogenic trihalomethanes in public drinking water systems, and studies indicate that exposure to trihalomethanes in treated drinking water is associated with human bladder cancer. U.S. EPA, Effluent Limitations Guidelines and Standards for the Steam Electric Power Generating Point Source Category, 80 Fed. Reg. 67,838, 67,872, 67,886 (Nov. 3, 2015). Drinking water contaminated with trihalomethanes can also cause liver, kidney, and central nervous system problems in addition to an increased risk of cancer, according to the Massachusetts Office of Energy and Environmental Affairs.

80. 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.

81. 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.

82. 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.

83. 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.

84. 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.

85. 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."

86. 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.

87. 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.

88. 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.

89. 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.

90. 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.

91. 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.

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

93. 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.

94. 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.

95. 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.

CLAIMS FOR RELIEF

96. The allegations of the preceding paragraphs are incorporated by reference as if repeated and set forth herein.

I. Unauthorized Discharges to Surface Waters of the United States

97. As explained above, any point source discharge that is not authorized by a NPDES permit is a violation of the Clean Water Act. 33 U.S.C. § 1311(a).

98. 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.

99. 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 jurisdictional waters of the United States that are being improperly treated as part of Duke Energy’s wastewater system (Sargents River and the bay of Hyco Lake). These discharges include the seeps around the perimeter of the West Ash Basin

(S-8, 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* Exhibit 8. These unlawful discharges also include additional engineered and unengineered 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.

100. 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 its discharges into these waters of the United States. 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

101. 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

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

103. 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).

104. 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

105. This designation includes the bay of Hyco Lake currently being used by Duke Energy for its private wastewater pollution system, because this bay is an arm of the lake below elevation 410 msl.

106. 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

⁴ Available at

<https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=6e125ad7628f494694e259c80dd64265>.

Assembly created the Person-Caswell Lake Authority and specified that its duties include managing these waters “for public recreation.” S.L. 1965-200 (Exhibit 10).

107. 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.

108. Members of the Association own property on Hyco Lake and use the lake for swimming, fishing, boating, and waterskiing, among other uses.

109. 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.”⁵ Numerous fishing tournaments are held throughout the year. *Id.*

110. 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.

111. 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

⁵ Person-Caswell Lake Authority, <http://hycolake.org/PCLAFishingonHyco.html>.

coal ash contaminants including arsenic, boron, selenium, aluminum, copper, barium, strontium, and others. Exhibits 11-13 (Duke Energy Environmental Monitoring Report data, 2013-15 and NC Division of Water Resources sampling data).

112. 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. Exhibit 13. 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) (Exhibit 14) (trihalomethanes above maximum contaminant level).

113. 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. 2,⁶ Appendix D, at p. 5-16.

114. 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.

115. The bay receives coal ash pollutants from Duke Energy's coal ash impoundments in several ways. Duke Energy has constructed seven unauthorized

⁶ Available at <http://edocs.deq.nc.gov/WaterResources/0/fol/366752/Row1.aspx>.

“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 Exhibit 8. 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 (attached as Exhibit 15) (NPDES Flow Diagram 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 flows. These are all unpermitted point source discharges of pollutants into waters of the United States, in violation of the Clean Water Act.

116. 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 Exhibits 16-17.

117. 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.

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.

120. 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.”⁷

121. 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.

122. 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

⁷ DEQ, NC Surface Water Classifications, <https://ncdenr.maps.arcgis.com/apps/webappviewer/index.html?id=6e125ad7628f494694e259c80dd64265> (search “Sargents Creek”).

rerouted Sargents River to run along the west side of the West Ash Basin, where it flows into Hyco Lake.

123. 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.

124. 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 Exhibits 16-17.

125. 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.

126. 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’d* 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).

127. 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. Exhibit 18 and paragraph 118, *supra*. 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.

128. Duke Energy illegally discharges into Sargents River at the following locations:

- a. Discharges from the filter dike into Sargents River south of the West Ash Basin, at the sampling locations identified on Exhibit 8, plus additional unengineered discharges coming through this filter dike along its length and discharging into Sargents River;
- b. “Internal” outfall 010, discharging highly toxic FGD waste pollution into the rerouted portion of Sargents River;
- c. Seep discharges from the West Ash Basin into the rerouted section of Sargents River, at the locations identified on Exhibit 8;
- d. 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 Exhibit 8; and
- e. Discharges of pollutants from the unlined West Ash Basin via direct groundwater flows into Sargents River.

B. Duke Energy’s NPDES Permit Does Not Authorize Discharges Into These Waters of the United States

129. The Roxboro NPDES permit authorizes only one point source discharge for its coal ash pollution into waters of the United States: Outfall 003.⁸ Exhibit 4, Permit No. NC0003425 at Part I.A.(2).

130. Accordingly, Duke Energy’s point source discharges from its coal ash lagoons into Sargents River and the bay of Hyco Lake are not authorized under the Clean Water Act. These unauthorized discharges consist of coal ash and coal ash sluice water,

⁸ The only other permitted outfall to waters of the United States is Outfall 006, for coal pile runoff from the Roxboro power plant.

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.

131. 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.

132. 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).

133. An NPDES permit cannot deliberately fail to protect water quality by erroneously declaring waters of the United States – including blue-line streams and 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).

134. 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.

135. As described above, the Roxboro coal ash basins and FGD basins, their dams, their leaks, hydrologically connected groundwater 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.

II. Violations of Removed Substances Permit Provision

136. 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.

137. 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 . . .*" Exhibit 4 (emphasis added).

138. 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.*" Exhibit 4 (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.

139. This permit 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.

140. 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 eastern tributary stream, and they are also navigable waters of the United States.

141. 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.

142. 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. Duke Energy is also violating this provision by allowing contamination to escape from its unlined lagoons via seeps and surface flows, and via discharges of pollutants into surface waters through hydrologically connected groundwater.

143. 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. Env'tl. 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”).

A. Duke Energy Is Violating the Removed Substances Provision by Storing Its Coal Ash in Groundwater

144. 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, the settled coal ash in Duke Energy’s lagoons has been placed in state waters, in violation of this permit provision.

B. Duke Energy Is Violating the Removed Substances Provision by Allowing Coal Ash Pollutants to Escape from Its Unlined Lagoons Into the Groundwater

145. 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, in violation of this permit provision.

C. Duke Energy Is Violating the Removed Substances Provision By Discharging Pollutants to Surface Waters Through the Groundwater

146. 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.

147. 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.

148. 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.

149. These hydrologically connected discharges to jurisdictional waters constitute an additional violation of the Removed Substances provision of the Roxboro NPDES permit.

D. Duke Energy Is Violating the Removed Substances Provision By Contaminating the Eastern Tributary Stream

150. Several unnamed tributaries of the Hyco River flow through the eastern portion of Duke Energy's Roxboro property. See CSA Fig. 2-2, Exhibit 20. 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.

151. 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.

152. 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:

- a. 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”).⁹
- b. 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, Exhibit 8 (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,

⁹ Available at http://edocs.deq.nc.gov/WaterResources/0/edoc/490711/Roxboro_2016-10.xlsx.

strontium, TDS, vanadium, and zinc. *See* CAP 1, Table 1-3; October 2016 Sampling Spreadsheet.

- c. 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.

153. 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 Exhibit 8) 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.

154. This eastern tributary stream is not part of Duke Energy's permitted wastewater system. *See* Exhibit 15 (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. 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 North Carolina and the United States, via seeps and contaminated groundwater flow.

155. 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 State and 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 State and the United States.

156. 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.¹⁰ 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.

157. 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

¹⁰ Available at <http://edocs.deq.nc.gov/WaterResources/0/doc/404808/Page1.aspx>.

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.

158. 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 (Exhibit 8), 5-1 (Exhibit 19).

159. Consequently, Duke Energy's pollution of this waterway violates the Removed Substances provision, regardless of whether Duke Energy and its permit treat this stream as a water of the United States and of North Carolina.

III. Failure to Properly Operate and Maintain the Roxboro Facility

160. 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." Exhibit 4.

161. 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 unpermitted discharges and permit violations set out above are also violations of these basic permit requirements to properly operate and maintain a wastewater facility and systems.

162. All violations of the Clean Water Act alleged above are continuing violations.

PRAYER FOR RELIEF

WHEREFORE, the Association respectfully requests that this court:

A. Issue a declaratory judgment recognizing that Sargents River and the bay of Hyco Lake are waters of the United States protected by the Clean Water Act, and stating that Duke Energy is violating the Clean Water Act with its ongoing discharges into Hyco Lake and Sargents River, and by allowing and causing the entering of removed substances into the groundwater and into Hyco Lake, Sargents River, and the eastern tributary in violation of its Permit and the CWA, and by failing to properly operate and maintain its Roxboro facility and otherwise violating prohibitions and requirements of its Permit;

B. Enter appropriate preliminary and permanent injunctive relief to ensure that Duke Energy:

- i. Prevents the coal ash impoundments from allowing or causing the entering of removed substances, including coal ash and other solids,

sludges, materials, substances, and pollutants, into groundwater, Hyco Lake, Sargents River, and the eastern tributary;

- ii. Removes all existing coal combustion byproducts in the Roxboro coal ash pits from the groundwater; separates them from groundwater so that they do not allow coal ash pollutants to enter the groundwater or surface waters; and eliminates all seeps and flows of coal ash, coal ash pollutants, and coal ash polluted water into surface waters;
- iii. Removes all existing coal combustion byproducts from the Roxboro coal ash pits within a reasonable amount of time and stores them in an appropriately lined industrial solid waste landfill facility away from Hyco Lake, Sargents River, and the eastern tributary, and separated from the groundwater, with appropriate monitoring;
- iv. Remediates the groundwater beneath the Roxboro site resulting from its unpermitted discharges;
- v. Removes from Hyco Lake, Sargents River, and the eastern tributary the pollutants it has illegally allowed to enter and discharged into these water bodies;

C. Assess civil penalties against Duke Energy of up to \$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, pursuant to 33 U.S.C. §§ 1319(d), 1365(a); 74 Fed. Reg. 626, 627 (Jan. 7, 2009); and 82 Fed. Reg. 3633 (January 12, 2017);

D. Award the Association the costs of this action, including reasonable attorney and expert fees, as authorized by 33 U.S.C. § 1365(d); and

E. Grant the Association such further and additional relief as the Court deems just and proper.

THE ASSOCIATION HEREBY DEMANDS A TRIAL BY JURY.

This 16th day of May, 2017.

/s/ Frank S. Holleman III

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