**IN THE UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF SOUTH CAROLINA**
**COLUMBIA DIVISION**

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S.C. SUPREME COURT

Clyde Marcus Jones, II, *on behalf of himself and all others similarly situated*,

Plaintiffs,

v.

Duke Energy Corporation and Duke Energy Carolinas, LLC,

Defendants.

Case No. 3:24-cv-01281-MGL

**DUKE ENERGY CORPORATION AND DUKE ENERGY CAROLINAS, LLC'S MOTION FOR SUMMARY JUDGMENT**

Defendants Duke Energy Corporation and Duke Energy Carolinas, LLC (collectively, "Duke Energy") by and through undersigned counsel, hereby submit their Motion for Summary Judgment in accordance with Fed. R. Civ. P. 56. In support thereof, Duke Energy states as follows:

1. Plaintiff Clyde Marcus Jones, II ("Plaintiff" or "Jones") asserts that his property has been damaged as a result of PCBs in Lake Wateree. He attributes those PCBs to a mosquito-control public health program carried out by Duke Energy from 1923 until 2016.

2. After the Court's ruling on Duke Energy's Motion to Dismiss the First Amended Complaint [ECF No. 55], Plaintiff has four surviving claims: trespass, nuisance, strict liability and negligence/gross negligence. None can survive summary judgment.

3. All four of Plaintiff's claims are subject to a three-year statute of limitations that accrued no later than 2010, when Plaintiff learned of the fish advisory issued by the state of South Carolina for PCBs in Lake Wateree fish. Although Jones survived Duke Energy's Rule 12(b)(6) motion on the statute of limitations by asserting equitable estoppel, discovery has shown no basis

to estop Duke Energy from raising the statute of limitations. Summary judgment dismissing the First Amended Complaint is required for that reason alone.

4. In addition to being time-barred, each of Plaintiff's tort claims suffers from a second fatal flaw. Jones cannot show any physical impact to his Property from the alleged PCB contamination. Neither his Property (nor the property of any putative class member) has been shown to contain any PCBs whatsoever.

5. Plaintiff's claims also individually fail on their merits for the following reasons:

a. Nuisance law is clear that a private plaintiff cannot sue for a public nuisance. Instead, a private plaintiff must instead show that he has suffered "special injury" in the use and enjoyment of his property. Jones's nuisance claim rests upon a fish advisory that, if it impacts anyone, would impact all who desire to fish on the public lake. That is at best a public nuisance for which Jones has no standing.

b. Plaintiff's nuisance and negligence claims require him to prove that the alleged injury (PCBs in Lake Wateree's fish) was caused by some unreasonable action by Duke Energy. But Jones has no forensic evidence connecting PCBs in Lake Wateree to the larvicides used on the lake in the Mosquito Control Program and he has no evidence that any PCB-contaminated transformer oil was ever sprayed on Lake Wateree.

c. Finally, each of Jones's claims fails for lack of proof on an essential element: damages. The only damages recoverable for Jones would be for loss of rental value. But Jones provides no evidence on this—much less evidence of any other type of damage recoverable under South Carolina law.

For these reasons, and based on the arguments and citation of authority contained in the accompanying Memorandum of Law, Duke Energy requests that the Court grant its Motion for Summary Judgment, dismiss the First Amended Complaint in its entirety, and grant any further relief that the Court deems just and proper.

Dated: May 8, 2026

Respectfully Submitted,

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May 8, 2026

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**IN THE UNITED STATES DISTRICT COURT**
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| Clyde Marcus Jones, II, *on behalf of himself and all others similarly situated*,<br><br>Plaintiffs,<br><br>v.<br><br>Duke Energy Corporation and Duke Energy Carolinas, LLC,<br><br>Defendants. | Case No. 3:24-cv-01281-MGL |

**DUKE ENERGY CORPORATION AND DUKE ENERGY CAROLINAS, LLC'S MEMORANDUM IN SUPPORT OF MOTION FOR SUMMARY JUDGMENT**

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## I. INTRODUCTION

After seven months of written discovery, production of thousands of documents, and more than two dozen fact and expert depositions, the legal and factual flaws in this lawsuit previewed at the pleadings stage are now confirmed. The statute of limitations demands dismissal of these time-barred claims which, in any event, fail on the merits.

Plaintiff Clyde Marcus Jones, II ("Jones" or "Plaintiff") asserts in the First Amended Complaint ("FAC") that his property has been damaged as a result of PCBs in Lake Wateree's fish. He attributes those PCBs to a mosquito-control public health program carried out by defendants Duke Energy Corporation and Duke Energy Carolinas LLC (hereinafter, "Duke Energy") or their predecessors from 1923 until 2016. But by the time Jones's family purchased the property in 2001, the presence of PCBs in Lake Wateree's fish was already public knowledge. Public speculation about Duke Energy's possible role was documented by regional media and investigated by state agencies in 1997. Moreover, by the time he bought out his brother-in-law's share in the property in 2020, Jones had specifically known of the contamination at issue for at least 10 years due to his awareness of the state's PCB fish consumption advisory. Yet he waited until 2024 to bring his claims.

And those untimely claims lack any merit. Jones has no evidence that any PCBs are on his property, or the property of any putative class member. Instead, his alleged injury stems solely from the 2010 fish consumption advisory, which he cites as the reason he is no longer able to fish in Lake Wateree as he once did. But Jones has no evidence that Duke Energy is responsible for any PCBs found in these fish. Moreover, because any member of the public or visitor to Lake Wateree could claim precisely the same harm, Jones has not been injured in any manner that is unique to him as a property owner. This fact, acknowledged by Plaintiff's own expert, dooms his

nuisance claim. With respect to property damages, Jones simply alleges none. Nor could he, as there is no evidence that the rental value, usable value, or market value of his property has diminished in the last 25 years. To the contrary, his property value has increased substantially.

In short, Plaintiff's case is both "too little" and "too late." The Court should grant summary judgment in Duke Energy's favor and dismiss the FAC in its entirety, with prejudice.

## II. STATEMENT OF UNDISPUTED MATERIAL FACTS

### A. The Duke Energy Defendants

When James B. Duke and his partners undertook to electrify the Carolinas in the early 1900s, they began by harnessing the waterpower of the Catawba River to power the region's textile mills. Duke Power, which is today Duke Energy, took its first major step in 1904 when the Catawba Hydro Station began operating in South Carolina. In 1916, historic flooding along the Catawba River prompted engineers to consider a series of interlocked reservoirs to help manage water levels and produce hydroelectric power. Over the next 50 years, Duke Energy's predecessors created lakes along the Catawba and Wateree Rivers to generate electricity.[1] The southern-most reservoir in this chain, and the subject of this lawsuit, is Lake Wateree. Duke Energy's predecessors created Lake Wateree in October 1919 by construction of the dam and appurtenant facilities that comprise the Wateree Hydro Station.[2]

Today, the 11 lakes created by Duke Energy along the Catawba and Wateree Rivers, running from the mountains of North Carolina down to Lake Wateree, are operated by Duke Energy as the Catawba-Wateree Hydroelectric Project pursuant to a license granted by the federal

[1] *See generally* "Our History," Duke Energy, https://www.duke-energy.com/our-company/about-us/our-history (last accessed May 5, 2026).
[2] *See generally* "Historic hydropower station on the Catawba-Wateree River turns 100," Duke Energy, https://illumination.duke-energy.com/articles/historic-hydro-power-station-on-the-catawba-wateree-river-turns-100 (last accessed May 5, 2026).

government. *See* ECF 82-2 at PDF p. 7. The Catawba-Wateree Hydroelectric Project is the largest such project operated by Duke Energy, spanning more than 225 miles and covering another 1,800 miles of reservoir and island shoreline. *Id*. at PDF pp. 7–8. Lake Wateree is the second-largest reservoir in the Catawba-Wateree system, with a surface area of about 13,000 acres and over 200 shoreline miles. *Id*. at PDF p. 10.

In addition to electricity, the Catawba-Wateree Hydroelectric Project provides (1) a constant supply of cooling water for Duke Energy's fossil fuel and nuclear power plants (with combined capacity over 7,000 megawatts), (2) a reliable source of water for public drinking water and for industrial use, (3) diverse year-round public recreation opportunities, and (4) other environmental features such as wetlands and fish habitat. *See generally* ECF No. 82-2. The watershed that drains into the rivers and lakes making up the Catawba-Wateree Hydroelectric Project spans an area larger than Delaware and Rhode Island combined. Deposition of Jeff Lineberger, Mar. 20, 2026 ("Lineberger Dep.") (attached as Ex. 1) at 97:19–22.

### B. Duke Energy's Mosquito Control Program

#### *1. Background*

In the early 20th century, malaria transmission was becoming an increasingly significant public health risk in the southeastern United States. FAC [ECF No. 38] at ¶ 75; Ex. 2 at DUK_00003571. The disease was associated with the presence of indigenous mosquito species, including specifically the impounded water-breeding *Anopheles quadrimaculatus*. *Id*.; Ex. 3 at DUK_00000027. James B. Duke determined that it was necessary to proactively address the risk of malaria associated with mosquito-breeding on Duke Power's reservoirs. Ex. 2 at DUK_00003571. In 1923, he hired Dr. Frank Moon Boldridge, a South Carolina native and former U.S. Army doctor who had served in World War I. *Id*. at DUK_00003571–3572. That wartime

service had made Dr. Boldridge a leading U.S. malaria expert—expertise that he then applied to advance public health as an employee of the U.S. Public Health Service before joining Duke Power. *Id*. Dr. Boldridge came recommended to James Duke by the U.S. Surgeon General. *Id*.

The Mosquito Control Program ("MCP") that Dr. Boldridge developed for Duke Power began on Lake James in early summer 1923, with a focus on the reduction of mosquito breeding habitat and the control of mosquitoes using larvicide. *Id*. at DUK_00003572. Areas that would be shorelines for future lakes were cleared of vegetation to improve water flow in future breeding areas and allow larviciding access. *Id.* Larviciding activities at Lakes Wateree and Wylie were added by the end of the 1920s, and the MCP ultimately expanded to two other Duke Power reservoirs in later decades: Lake Norman (1963) and Lake Keowee (1973). *Id*. at DUK_00003574.

Although malaria was no longer considered a major disease threat in North America by the mid-to-late 20th century, various mosquito species breeding in and around Duke Energy's hydroelectric impoundments continued to have the potential to spread malaria, as well as other human diseases such as Dengue and yellow fever. Ex. 4 at DUK_00002582. Additionally, South Carolina—like other states—had promulgated a regulation that expressly identified mosquitoes as a public health nuisance and obligated impoundment operators to control mosquito populations.[3] Until its termination in 2016, the MCP was one of the longest-running environmental programs continuously operated by a corporation in the United States. Ex. 5 at DUK_00006812.

[3] South Carolina Code of Regulations 61-46—promulgated in 1946, last amended in 1972, and repealed in 2016—declared that the "accumulation of water in which mosquito larvae may breed" constituted a public health nuisance, and failure of the person(s), firm or corporation responsible for the continuance of a public health nuisance to abate it within a reasonable length of time following a written notification from the area's health director was a misdemeanor. S.C. Code Ann. Regs. 61-46, §§ 1(c), 4, 5 (2015); *see* 40 S.C. Reg. 4552 (April 22, 2016).

### *2. MCP Leadership*

Dr. Boldridge retired in 1963, but continued on as a periodic consultant to Duke Energy until his death in the early 1980s. Ex. 2 at DUK_00003574; Ex. 3 at DUK_00000028. Beginning in 1963, the MCP was briefly led by John Lyons. Ex. 2 at DUK_00003574. When Mr. Lyons passed away in 1966, George T. Swearingen, M.S., R.S., a former South Carolina county public health worker and Registered Sanitarian, was hired to lead the program. *Id*. at DUK_00003575. During his tenure with the MCP, Mr. Swearingen also served as president of the North Carolina Mosquito and Vector Control Association. *Id*. at DUK_00003576.

When Mr. Swearingen retired from Duke Power in 1988, Robert T. Barden, M.S., R.S. became the MCP's next leader. *Id*. Mr. Barden had originally joined Duke Power in 1973 as Assistant Manager of Environmental Health, and worked in the MCP under Mr. Swearingen. Deposition of Bob Barden, Mar. 13, 2026 ("Barden Dep.") (attached as Ex. 6) at 14:20–16:3. Like Mr. Swearingen, Mr. Barden was a former South Carolina county public health worker and Registered Sanitarian, and went on to serve as president of the North Carolina Mosquito and Vector Control Association. Ex. 2 at DUK_00003576; *see also* Barden Dep. at 10:21, 11:22–12:11, 13:13–14:23.

Following Mr. Barden's retirement in 1996, Ken Manuel, an aquatic entomologist who holds a Master of Science in Entomology from Auburn University, took over as leader of the MCP. Ex. 2 at DUK_00003577. Mr. Manuel had been employed by Duke Power since 1980. *Id*. He oversaw the MCP until Duke Energy made the carefully evaluated decision to permanently decommission the program at the end of the 2016 season, shifting focus to mosquito control education and outreach given the now dominant presence of container-breeding mosquito species found in standing water on private property/premises rather than along the reservoir shorelines.

Ex. 7 at DUK_00011453. The MCP's termination coincided with South Carolina's revocation of its public nuisance abatement rule. *See South Carolina Register*, Vol. 40, Issue 4 (Apr. 22, 2016) (repealing 61-46 (originally enacted in 1946); S.C. Code Regs. 61-46 (2015).

***3. MCP Operations***

Over the course of its 93-year lifespan, the MCP ran from May through October each year, corresponding to the annual mosquito season in the Carolinas. *E.g.*, Ex.8 at DUK_00004508. The program relied on temporary, seasonal employees, many of whom returned year after year. *Id*. The goal of the program was to kill the water-dwelling mosquito larvae before they matured into adults. Larvicide was applied to the water's surface in mosquito-breeding habitats (generally along the shoreline of reservoirs) on a 10-day cycle time to break the 10-day mosquito breeding cycle, although weather sometimes caused delays. *Id*. In addition to mosquito treatment responsibilities, MCP boat crews played an integral role in identifying, isolating, and removing floating hazards to navigation on the reservoirs, including trees, logs, litter, and other floating debris. Ex. 9 at DUK_00004366.

Lake Wateree residents were so familiar with and attentive to MCP operations that they would sometimes contact Duke Energy when they failed to see spraying occur as expected. Barden Dep. at 34:5–36:7. Residents often sought assistance from MCP employees in controlling mosquitoes on their own properties, *id*. at 28:8-10, and were outwardly appreciative of the MCP, *e.g.*, *id.* at 28:11–31:18.

***4. The MCP relied primarily on fuel oil for larvicide.***

Records from the MCP show that No. 2 fuel oil (practically equivalent to diesel fuel) was normally applied to the surface of Lake Wateree for mosquito control. *See* Lake Wateree Spray Logs, *e.g.*, DUK_00001825–1829 (attached as Ex. 10); Ex. 2 at DUK_00003572 (major

larviciding material used was fuel oil). This was a standard mosquito treatment that was recommended by public health experts and approved by the government. *See, e.g.*, Ex. 11 at DUK_00000164 ("No. 2 fuel oil has been found to be the killing agent in the oil mixtures recommended."); ECF No. 39-2 at PDF pp. 39, 130 (notations by North Carolina and Virginia government representatives that "No. 2 fuel oil is the larvicide of choice"). Lighter than water, No. 2 fuel oil would float on top of the water and suffocate mosquito larvae within a few minutes, before evaporating. Barden Dep. at 55:15–56:12.

From the beginning of the MCP, Duke Energy worked closely with public health officials in North Carolina and South Carolina to ensure the MCP used only approved larvicides. *E.g.*, Ex. 11 at DUK_00000164 (1943 letter from Don Ashton of the North Carolina State Board of Health to Dr. Boldridge confirming receipt of sample of mosquito oil for testing). During World War II, when rationing made No. 2 fuel oil scarce, Duke Energy collected used motor oil (or "crankcase oil") from local car repair shops for use at Lake Wateree. Ex. 3 at DUK_00000029.

Plaintiff does not contend that the fuel oil or motor oil used in the MCP contained PCBs. Instead, citing a 1970 document, he notes that Duke Power also used "transformer oil" in connection with the MCP. FAC ¶¶ 81–84. Plaintiff *assumes* that this "transformer oil" contained PCBs, citing an article that makes the same assumption. *Id*. ¶ 105. Understanding why Plaintiff is wrong about "transformer oil" requires an understanding of transformers, what was in them, and how Duke Power used and handled them.

### *5. Transformers at Duke Power*

An electric utility uses transformers in the distribution of the electricity it produces. A transformer changes voltage levels of the electric current as it travels from high-voltage power lines to lower-voltage transmission wires that connect to the end user. Throughout the 20th century,

there were generally two types of transformers used by electric utilities. The most common type (representing about 95 percent of the transformers in use) used mineral oil as the cooling and insulating fluid (sometimes called a dielectric fluid). Ex. 12 at DUK_00100961 (By 1976, PCBs were used "in about five percent of U.S.-built transformers; most are cooled with mineral oil"). These transformers were used outdoors (e.g., on the ubiquitous utility poles visible throughout neighborhoods). Indoors, however, where the risk of fire was greater, a different type of transformer was used. These specialty transformers came filled with a non-flammable dielectric fluid instead of mineral oil. Ex. JGL-1 to Lineberger 30(b)(6) Dep. (attached as Ex. 13) (excerpted for length) at Topics 10, 11. That fluid, under the generic name "askarel," contained PCBs.[4] No more than five percent of the transformers on the Duke Power system were filled with the askarel fluid. *Id*. at Topics 9, 10. Duke Power did not put askarel in its mineral-oil transformers. *Id*. Nor did Duke Power put mineral oil in the few askarel-based transformers. *Id*. The different types of transformers always used different insulating fluids because of the fire risks associated with transformers located indoors. Deposition of David Roche, Mar. 11, 2026 ("Roche Dep.") (attached as Ex. 14) at 57:11–15.

In addition to flammability, mineral oil and askarel have distinct characteristics relevant to this case. Critically, mineral oil is a petroleum-based product, made without PCBs. *Id*. at 91:8–12; 122:21–23. Askarels, by contrast, were manufactured with PCBs until EPA banned the use of PCBs in 1979.[5] *Id*. at 28:3–30:25. Further, mineral oil is lighter than water (meaning it will float on water and create a sheen, as needed for mosquito control). *Id*. at 163:14–164:4. Askarels are

[4] PCBs were manufactured by Monsanto as many different types of PCB mixtures, which were sold over the course of the 20th century under the "Aroclor" trademark. Before the PCB ban in 1979, different Aroclors were used in a wide variety of industrial applications because of their fire-resistant and other properties. FAC ¶ 32.

[5] PCBs were first regulated under the 1976 Toxic Substances Control Act. Roche Dep. at 28:3–6.

heavier than water and would sink to the bottom of any water body into which they are introduced. *Id*. at 101:13–18; 30(b)(6) Deposition of Jeff Lineberger, Apr. 20, 2026 ("Lineberger 30(b)(6) Dep.") (attached as Ex. 15) at 131:15–23. Askarels are also different in color from mineral oil and have a distinctive smell. Roche Dep. at 31:10–32:5. In general, the PCBs in askarel do not break down and would persist if released into the environment. *Id*. at 114:14–23.

Historically, discussion of "transformer oil" referred to the ordinary *mineral oil* that was (and still is) used in the vast majority of transformers. Roche Dep. at 55:1–13; Lineberger 30(b)(6) Dep. at 53:15–18. Askarels were not considered "oils" at all. Roche Dep. at 30:15–18.

***6. "Transformer oil" and the MCP***

Although there is some evidence that "transformer oil" (i.e., mineral oil) was used in the MCP prior to 1971, *there is no evidence that <u>any</u> askarel was ever used*. Specifically, the evidence shows that in 1968, Duke Power met with local and state public health officials, as well as Dr. Harold W. Brown of the Columbia University School of Medicine, to discuss the MCP. Duke Power regularly had Dr. Brown audit its MCP operations. Barden Dep. at 41:25–43:7. Dr. Brown's 1968 report on the MCP noted, without objection, that the MCP sprayed Lake Norman with a combination of No. 2 fuel oil, crankcase oil, and "transformer oil" to kill mosquito larvae. Ex. 16 at DUK_00000540. Similarly, at a 1970 conference on mosquito control attended by public health officials, George Swearingen stated that Duke Energy used a combination of No. 2 diesel fuel and "transformer oil" in the MCP. ECF No. 8-2 at PDF p. 48.[6] Mr. Swearingen confirmed that this "transformer oil" was mineral oil, and not askarel, by stating that Duke Energy did not use any chlorinated hydrocarbons (i.e., PCBs) in its larvicide. *Id*.; *see also* Ex. 17 at DUK_00000297 (handwritten note that "transformer oil" was "really about 99% mineral oil"); *see also* Lineberger

[6] Mr. Swearingen discussed the MCP generally and not Lake Wateree specifically.

30(b)(6) Dep. at 147:24–148:13.

The use of "transformer oil" (mineral oil) appears to have been quite limited. Although daily logs of MCP activities on Lake Wateree have been found going back to the 1940s, none of them reflects that any transformer oil was ever applied to Lake Wateree, and there is certainly no evidence any ***used*** transformer oil was ever sprayed there. Lineberger 30(b)(6) Dep. at 104:10–25. And there is no evidence of any "transformer oil" being used anywhere as a larvicide by Duke Energy after 1970, when Congress amended the Clean Water Act to regulate the discharge of "oil" into waters of the United States.[7] Confirming the MCP's limited use of transformer oil, Bob Barden testified that from the time he was hired to work on the MCP in January 1973, the only larvicide used was No. 2 fuel oil. Barden Dep. at 110:7–11.

***7. Plaintiff's allegations***

Plaintiff's PCB contamination theory focuses entirely, and erroneously, on transformer oil. Again, Plaintiff does not contend that No. 2 fuel oil, crankcase oil, or any other oil used as larvicide on Lake Wateree contained PCBs. In focusing on "transformer oil," Plaintiff *simply assumes that all "transformer oil" was composed of PCBs* and claims that any use of "transformer oil" on Lake Wateree in the MCP means that Duke Energy polluted Lake Wateree with PCBs when the MCP sprayed the lake. FAC ¶¶ 95, 98. Plaintiff has no forensic evidence showing that any larvicide used on Lake Wateree contained any PCBs. Deposition of Robert Workman, Mar. 11, 2026 (Workman

[7] *See* Water Quality Improvement Act of 1970, Pub. L. No. 91-224, § 11(3), 84 Stat. 91, 92 (1970). These regulations prohibited discharging oil (including waste oil, fuel oil, petroleum, and more) that would result in a visible sheen or film upon or discoloration of the surface of the water. 40 C.F.R. §§ 110.1 (definitions), 110.3(b) (creation of sheen, film, or discoloration presumed harmful), 110.5 (oil discharge in harmful amounts prohibited). If a discharge violated the regulations, the discharging party was required to notify the U.S. Coast Guard. *Id.* at § 110.9. Notably, George Swearingen kept a letter from the Coast Guard in his car. Barden Dep. at 118:25-119:11

Dep.) (attached as Ex. 23), at 240:3–242:24. Instead, Plaintiff relies upon an article (the "Glover & Gunderson article") that assumes the "transformer oil" mentioned by George Swearingen during the 1970 mosquito control workshop referred to a PCB mixture (i.e., an askarel). FAC, Ex. C [ECF No. 38-3]. Neither the article's authors nor Plaintiff recognize the distinction between mineral oil and askarel and the separate use of each in different transformers. *Infra* § II(C)(1). But the evidence on that point is undisputed.

Further, as noted above, the undisputed facts show that the properties of askarels would have made them unsuitable for use in the MCP. Askarels were not physically suitable for treating water surfaces to kill mosquito larvae. Mineral oil is lighter than water, and thus can be used to create an appropriate surface treatment to smother mosquito larvae, whereas askarel fluids are significantly *denser* than water and would therefore sink, without preventing the larvae from breathing. Lineberger 30(b)(6) Dep. at 131:8–23. Finally, there was no ready supply of askarel fluids to be used for mosquito control. Askarels were very expensive compared to mineral oil, and were generally used only in indoor environments where the risk of fire was great. Roche Dep. at 33:13–16. Moreover, these askarel-filled transformers rarely failed and, if such failure occurred, the equipment would be shipped out to the manufacturer or a contractor for repair. Lineberger 30(b)(6) Dep. at 107:2–12. Ex. 13 at Topics 3, 10; Ex. 12 at DUK_00101047, -151. In light of these facts, it is hardly surprising that Plaintiff can point to *no evidence that a single drop of askarel was ever sprayed on Lake Wateree.*

With the FAC's foundational assumption contradicted by the facts, Plaintiff has pivoted. Arguing that *used* mineral "transformer oil" contained PCBs, Plaintiff claims that the MCP sprayed used mineral oil on Lake Wateree, and thus contaminated fish with PCBs. But the undisputed evidence forecloses this fallback argument. As a threshold matter, there is now reason

to think that *used* transformer oil (*i.e.*, transformer oil that has been drained from transformers) could contain traces of PCBs. Westinghouse was the first to discover, in 1976, that transformers filled with mineral oil might be cross-contaminated with trace amounts of askarels (and thus PCBs) during the manufacturing processes.[8] *See High v. Westinghouse Elec. Corp.*, 610 So. 2d 1259, 1260 (Fla. 1992).

But even if one assumes that the mineral "transformer oil" *in Duke Energy's transformers* might have been cross-contaminated with PCBs, there is no evidence that Duke Energy ever applied *used* transformer oil, rather than clean, new transformer oil, at any reservoir in its Catawba/Wateree system.[9] And even if Duke Energy had done so, for Duke Energy to be *culpable*, Plaintiff would have to show that Duke Energy sprayed used transformer oil *after 1976*, when Westinghouse first discovered the potential for PCB cross-contamination. There is no such evidence. On the contrary, and as noted above, Bob Barden testified that by 1973 the only larvicide in use was No. 2 fuel oil.

### C. PCBs in Lake Wateree

#### *1. Sampling of Lake Wateree for PCBs*

[8] Westinghouse issued a press release on November 24, 1976, stating that "recent tests it has conducted indicate that some oil-filled transformers may contain varying concentrations of PCB's," and that on "November 8, the National Electrical Manufacturers Association (NEMA) commissioned a special task force to study the possibility that PCBs may be present in detectable quantities in oil-filled electrical apparatus and oil-storage systems for electrical insulating oil." Ex. 38 (excerpted for length) at DUK_00102414–16 , -102437–39.

[9] Early in the case, Plaintiff submitted two affidavits from former seasonal employees of the MCP who worked on Lake Wateree—William and Henry Beckham—in an attempt to establish that the MCP sprayed used transformer oil on Lake Wateree. Subsequent depositions of the Beckhams told a different story. William Beckham testified that he believed the MCP spray was "burnt diesel fuel," but nobody from Duke Energy ever specifically told him what it was. Deposition of W. Beckham, Oct. 17, 2025 (attached as Ex. 42), at 47:23–48:22; 61:15–17. Although Henry Beckham testified that it was his "impression" that the spray was used transformer oil, he cannot say that this impression was based on any conversation with a Duke Energy representative, and he does not actually know what was in the spray. Deposition of H. Beckham, Oct. 14, 2025 (attached as Ex. 43), at 40:18–41:6; 50:5-11; 65:19–66:8.

No sampling of soil, sediment, or water has demonstrated the presence of any PCBs in Lake Wateree.[10] In 1997 a former seasonal employee of the MCP raised allegations that he had applied transformer oil to Lake Wateree in the 1940s. 30(b)(6) Deposition of Zachary Hall, Apr. 20, 2026 ("Hall 30(b)(6) Dep.") (attached as Ex. 18) at 27:1–28:2. Those allegations were investigated by both the South Carolina Law Enforcement Division ("SLED") and Department of Health and Environmental Control ("DHEC"), an investigation that included sampling of the soil and sediment at Duke Energy's mosquito control facility on Lake Wateree. *E.g.* Hall 30(b)(6) Dep. Ex. ZSH-1 (excerpted) (attached as Ex. 19). SLED found no wrongdoing by Duke Energy, and DHEC found no PCB contamination. Ex. 19. In fact, DHEC determined that the only remediation required for the MCP facility would be for diesel contamination of the soil. Hall 30(b)(6) Dep. at 32:1–23; Ex. 19. The terms of this DHEC-supervised remediation are consistent with all the evidence, including testimony by MCP leader Bob Barden that only diesel fuel had been applied to Lake Wateree since at least 1973, and the absence of any records showing the application of used transformer oil on Lake Wateree. *Supra* § II(B)(6).

More than 20 years after DHEC publicly investigated and dismissed allegations that the MCP had introduced PCBs to Lake Wateree, these allegations again surfaced in the 2021 Glover & Gunderson article published in the *Journal of South Carolina Water Resources*. ECF No. 38-3. Its lead author, James Glover, has no expertise in PCBs or utility operations. Deposition of James Glover, PhD, Mar. 27, 2026 ("Glover Dep.") (attached as Ex. 20) at 33:18–34:9; 60:3–4; 69:13–15. And his co-author, Deke Gunderson, the actual expert on PCBs, did not contribute

[10] A soil sampling event in August 1997 at the Lake Wateree Mosquito Control Facility produced initial inconclusive results for PCBs which subsequent testing confirmed to be false positives likely caused by interference from significant levels of diesel fuel contamination in the sample. Hall 30(b)(6) Dep. at 41:24-43:15.

substantively to the article. *Id*. at 130:8–9; Deposition of Deke Gunderson, PhD, Mar. 23, 2026 ("Gunderson Dep.") (attached as Ex. 21), at 20:4–21:13.

The Glover & Gunderson article does not analyze any sediment data to characterize the presence of PCBs in Lake Wateree or to relate those PCBs to Duke Energy operations. *E.g.*, Glover Dep. at 74:3–14; Deposition of Robert Workman, Mar. 11, 2026 (Workman Dep.) (attached as Ex. 22) at 248:11–249:9. Moreover, as noted above, Glover improperly assumes that all transformer oil contained PCBs, Glover Dep. at 59:4–60:10, a mistake reflecting Glover's complete lack of expertise on that subject.

***2. Fish Consumption Advisories***

The state studies conducted on fish tissues and the resulting state fish consumption advisories indicate PCBs in the Lake Wateree environment. *See, e.g.*, Deposition of Gretchen Greene, PhD, Mar. 9, 2026 ("Greene Dep.") (attached as Ex. 23), at 21:1–24. At least as early as 1997, PCBs were found in some species of Lake Wateree fish, but the amount was not high enough to prompt any health warnings by South Carolina authorities. Ex. 24, at DUK_00104377.

In 2009, South Carolina biologists began preparing to test fish at Lake Wateree for PCBs following a study by the U.S. Environmental Protection Agency (EPA) that found PCBs in fish in 17 percent of lakes tested nationally, including Lake Wateree. Ex. 25 at DUK_00014149. In 2010, DHEC issued its first fish consumption advisory for Lake Wateree. Ex. 26 at DUK_00012100–12102.

Since implementation of the 2010 fish advisory on Lake Wateree, DHEC (now the South Carolina Department of Environmental Services, or "DES") has consistently posted information pertaining to the fish consumption advisories on signage at public access points along Lake Wateree, and also made such information available online. Deposition of Michael Tachovsky,

PhD, Mar. 2, 2026 ("Tachovsky Dep.") (attached as Ex. 27) at 52:4–18. Duke Energy cooperates with any requests by DHEC/DES relating to the placement of the signs. Lineberger 30(b)(6) Dep. at 205:6–20. The fish advisories do not ban all consumption of fish from Lake Wateree, but rather recommend "limit[ing] consumption of fish to one meal a month or one meal a week." Ex. 28 at DUK_00012111. The fish advisories have been covered repeatedly by the press, and known to Jones, since 2010. Deposition of Clyde Marcus Jones, II, Oct. 8, 2025 ("Jones Dep.") (attached as Ex. 29), at 135:17–136:8.

#### *3. Known Third-Party Sources of PCBs in Lake Wateree*

Plaintiff's failure to produce evidence of causation—to show that Duke Energy's MCP, through the alleged use of "transformer oil," somehow introduced PCBs into Lake Wateree—is dispositive. But this hole in Plaintiff's case is even worse than it first appears, given the *undisputed* evidence of *numerous* third-party sources of PCBs potentially impacting Lake Wateree. Those sources include "well characterized sites in both Brownfield and Superfund programs." Deposition of Eric Butler, PhD, Apr. 8, 2026 ("Butler Dep.") (attached as Ex. 30), at 69:24–70:18. Tellingly, there is no correlation between (a) PCB-contamination of water bodies in the region and (b) the operation of the MCP. Instead, PCB contamination of fish tends to be from waterbodies with known industrial sources. *Id*. at 143:21–145:3.

### D. Plaintiff's Property

#### *1. Location*

Jones is a co-owner of property located at 1778 Sailing Club Road in Camden, South Carolina (the "Property"). Jones Dep. at 8:14–21. The Property is not actually "waterfront," as it does *not* physically abut Lake Wateree. Instead, it is separated from the waters of Lake Wateree by a thin strip of land, beginning one vertical foot in elevation above the highest water level

possible at Lake Wateree before its dam would overtop. Ex. 31 at DUK_0010043 ("Note: A to B FOLLOW CONTOUR ELEVATION 226.5' U.S.G.S. SEA LEVEL DATUM AS SHOWN ON P.B. 36, AT PAGE 223."); Ex. 32 at DUK_00100439 (showing all lakeside boundaries "FOLLOW[] CONTOUR ELEV. 226.5 (U.S.G.S. SEA LEVEL DATUM)"). The top of the spillway at Lake Wateree's dam is 225.5 feet above U.S.G.S. sea level. ECF No. 82-2 at PDF p. 10 (Lake Wateree's Normal Full Pond Elevation is 225.5 feet above mean sea level (AMSL)); *id*. at PDF p. 171 ("Normal Full Pond Elevation" means "the level of a reservoir that corresponds to the point at which water would first begin to spill from the reservoir's dam(s) if the licensee [i.e., Duke Energy] took no action" and "corresponds to the lowest point along the top of the spillway" of the dam).

***2. Ownership History***

Jones's family purchased the Property in 2001 for $114,900. Jones Dep. at 24:14–25:2. Jones and his wife became sole owners in 2020, when they purchased the interest of Jones's sister and brother-in-law, Emily C. Jones and John Deal, Jr. ("Deal") for $46,000. Deposition of John Milton Deal, Jr., Mar. 25, 2026 ("Deal Dep.") (attached as Ex. 33), at 52:20–53:15. The Joneses and Mr. Deal did not consider the presence of PCBs in Lake Wateree when valuing Mr. Deal's share. *Id*. at 60:14–20. The Property was most recently appraised in April 2022 for $460,000. Ex. 34 at JONES_001252. In 2024, Jones and his wife gifted their daughter, Kathryn Demetri, a 25 percent ownership interest. Jones Dep. at 48:20–24.

***3. Use and Enjoyment***

Jones describes the Property, which is slightly less than an acre and includes two docks, as "a beautiful piece of property," and "a dream property." *Id*. at 88:14–89:17. The Jones family frequently uses the Property for family gatherings, particularly during the summer and holidays,

though Jones testified that he uses the Property all year round. Deal Dep. at 18:1–19:21, 27:7–20; Jones Dep. at 117:18–19. According to Deal, the entire family has fond memories of engaging in various recreational activities at the Property, including boating, water skiing, tubing, paddleboarding, kayaking, jet skiing, swimming, and creating bonfires on the beach. Deal Dep. 19:22–26:4, 27:7–12, 28:4–18, 29:16–30:4. As Deal testified, "[t]here's nobody that did not want to get in the water." *Id*. at 30:3–4.

Despite the Lake Wateree fish consumption advisories, Jones reports his family still gathers at and enjoys the Property. Jones Dep. at 93:9–25, 108:19–24, 117:20–118:2; *see also* Deposition of Martha Jones, Mar. 30, 2026 ("Martha Jones Dep.") (attached as Ex. 35), at 26:2–9, 32:10–13. He still takes his boat on the water, intends to renew his boating license this year, and occasionally swims in the lake. Jones Dep. at 117:20–118:2, 120:1–10, 124:15–125:8. Deal likewise testified that, even after selling his interest in the Property to Jones in 2020, he continues to visit the Property with the family and participates in the same activities as before. Deal Dep. at 27:7–20, 83:15–20. Deal further testified that he continues to see others on Lake Wateree water skiing, tubing, fishing, and swimming to date. *Id*. at 84:11–85:15.

Beyond his own personal use and enjoyment of the Property, Jones has rented it on VRBO since at least 2017, allowing others to use and enjoy the Property as well. *See* Ex. 5 to Jones Dep. ("VRBO Listing") (attached as Ex. 36) at 48. The VRBO listing, titled "Serenity with a Sunset," advertises the Property as a vacation home featuring a "large yard," a "large beach with shade," a "large dock," and an "AMAZING view of [the] lake." *Id.* at 7. Jones has never notified or warned renters about PCBs in Lake Wateree. Jones Dep. 189:7–15. In fact, Plaintiff has equipped the Property with numerous outdoor amenities designed to *encourage* use of the lake and surrounding

waterfront, including kayaks, a paddleboard, beach chairs, water sports gear, fishing equipment, and water toys and floats. Ex. 36 at 11, 13.

The VRBO reviews confirm that renters actively use and enjoy the Property for the same purposes Jones and his family do. As of October 2025, the listing had received 61 reviews, nearly all rating the Property 10 out of 10. *Id.* at 26–48. Renters repeatedly voiced that the Property was well-suited for family gatherings and highlighted activities such as fishing, swimming, boating, jet skiing, kayaking, and enjoying the beach and sunsets. *E.g., id.* at 44 ("The beach and dock are awesome! We swam and played all weekend in the water."); *id.* ("Both kids and adults agreed it was one of the best family trips! . . . . The kids had a blast in the sand and the guys fished day and night off the dock!"); *id.* at 48 ("My 7 year old son caught a catfish, blue gill, and yellow perch from the two docks on the property.").

#### *4. Sampling of the Property for PCBs*

*There is no evidence of PCB contamination on the Property.* And this lack of evidence is not for lack of investigation—the Property has in fact been tested for PCBs. Jones Dep. at 160:7–161:23. At his deposition, Jones claimed no knowledge of the results of this testing and objected to producing the results on the grounds that the testing was conducted by "third parties" and the results are not within his control. *Id*. at 162:20–163:1; Pl.'s Resp. to Defs.' Request for Production No. 32 (attached as Ex. 37).

### E. The Litigation

Jones filed this lawsuit eight years after the termination of the MCP, and 14 years after he learned of the alleged contamination to Lake Wateree that is at the center of his claims. Jones Dep. at 152:11–24; 158:14–159:2. Jones's delay in bring suit has resulted in significant difficulties to Duke Energy's defense of his allegations.

As noted above, the crux of each of Jones's claims is the allegation that Duke Energy used PCB-contaminated "transformer oil" on Lake Wateree at some point between 1923 and 1979. FAC ¶ 98. As a result, Duke Energy has been required to search for knowledge, information, and documentation dating back anywhere from 45 to 103 years. Due to the passage of time, documents regarding the MCP that once existed are no longer in Duke Energy's custody and control. *E.g.*, Lineberger 30(b)(6) Dep. at 69:24–70:8; Hall 30(b)(6) Dep. at 16:10–24; Ex. 13 at Topic 34. Employees with relevant knowledge, such as MCP leaders Dr. Boldridge, Mr. Lyons, and Mr. Swearingen, have passed away. Others, such as Mr. Manuel, the last MCP manager, are no longer available due to poor health. And even for former employees that are alive and available, their memories have faded. *E.g.*, Lineberger 30(b)(6) Dep. at 38:18–21; Hall 30(b)(6) Dep. at 17:18–18:17. As a result of Plaintiff's delay in bringing suit, there are several gaps in the record for the 93-year history of the MCP.

## III. LEGAL STANDARDS

Summary judgment shall be granted "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). "A fact is 'material' if proof of its existence or non-existence would affect disposition of the case under applicable law. An issue of material fact is 'genuine' if the evidence offered is such that a reasonable jury might return a verdict for the non-movant." *Wai Man Tom v. Hosp. Ventures LLC*, 980 F.3d 1027, 1037 (4th Cir. 2020) (citation omitted). When determining whether a genuine issue of material fact has been raised, the court must draw all reasonable inferences in favor of the nonmoving party. *Id.*

Where a defendant raises as a defense that the plaintiff's claims are time-barred, summary judgment is appropriate when there is no question of fact as to when the plaintiff's claim accrued

and the record shows no conduct on the part of the defendant establishing estoppel. *Wiggins v. Edwards*, 442 S.E.2d 169, 171 (S.C. 1994). "One purpose of a statute of limitations is to relieve the courts 'of the burden of trying stale claims when a plaintiff has slept on his rights.' Another purpose of a statute of limitations is to protect potential defendants from protracted fear of litigation." *Moates v. Bobb*, 470 S.E.2d 402, 404 (S.C. App. 1996) (citations omitted).

## IV. SUMMARY OF ARGUMENT

After the Court's ruling on Duke Energy's Motion to Dismiss [ECF No. 55], Jones has four surviving claims: trespass, nuisance, strict liability and negligence/gross negligence. None can survive summary judgment. As an initial matter, all four claims are subject to a three-year statute of limitations that accrued no later than 2010, when Jones learned of the fish advisory issued by DES for PCBs in Lake Wateree fish. *Infra* § V(A)(1)–(3). Although Jones survived Duke Energy's Rule 12(b)(6) motion on the statute of limitations by asserting equitable estoppel, discovery has shown no basis to estop Duke Energy from raising the statute of limitations. *Infra* § V(A)(4). Summary judgment dismissing the FAC is required for that reason alone.

Moving beyond the statute of limitations, each of Plaintiff's tort claims has a second fatal flaw. Jones cannot show any physical impact to his Property from the alleged PCB contamination. Neither his Property (nor the property of any putative class member) has been shown to contain any PCBs whatsoever. *Supra* § II(D)(4). For the reasons set forth in Defendants' Motion to Certify Questions to the South Carolina Supreme Court ("Motion to Certify"), filed contemporaneously herewith, there should be no recovery for environmental torts under South Carolina law in the absence of a physical invasion of a plaintiff's property by the constituents of concern. Even if they were timely, each of Jones's claims would therefore fail for lack of proof. *Infra* § V(B).

Examining Plaintiff's claims individually also discloses other reasons each fails on the

merits. For example, nuisance law is clear that a private plaintiff cannot sue for a public nuisance. Instead, a private plaintiff must show that he has suffered "special injury" in the use and enjoyment of his property. *Infra* § V(C). Here, the gravamen of Jones's nuisance claim rests upon a fish advisory that, if it impacts anyone, would impact all who desire to fish on the public lake. That is at best a public nuisance for which Jones has no standing. *Infra* § V(C)(2). And with respect to the use and enjoyment of his Property, the evidence conclusively demonstrates that Jones's use and enjoyment is unchanged. *Infra* § V(C)(1). Jones has suffered no injury for which he can bring a nuisance claim.

Similarly, Plaintiff's nuisance and negligence claims require him to prove that the alleged injury (PCBs in Lake Wateree's fish) was caused by some unreasonable action by Duke Energy. *Infra* § V(D). But Jones has no forensic evidence connecting PCBs in Lake Wateree to the larvicides used on the lake in the Mosquito Control Program. He has no evidence that any PCB-contaminated transformer oil was ever sprayed on Lake Wateree. And even if Jones could cobble together some circumstantial evidence to suggest that some transformer oil was used on Lake Wateree, he has absolutely no evidence that Duke Energy would have been culpable for doing so. Jones therefore lacks the evidence on which a reasonable juror could find Defendants liable for nuisance or negligence. *Infra* § V(D).

Finally, each of Jones's claims fails for lack of proof on an essential element: damages. *Infra* § V(E).The only damages recoverable for Jones would be for loss of rental value. But Jones provides no evidence on this. Instead, he seeks damages in the form of diminution in market value, something available only for a permanent impairment that cannot be remediated—not the temporary injury he has pled. In any event, any diminution in market value absent physical impact is nothing other than "stigma" damages that are not recoverable under South Carolina law. Finally,

even if stigma damages were recognized under South Carolina law, Jones's attempt to prove them is wholly speculative and relies upon an expert who opines on diminution in market value without examining any real estate sales data in South Carolina. In fact, property values around Lake Wateree have increased, not decreased. *Infra* § V(E).

## V. ARGUMENT

### A. Plaintiff's Claims are Barred by the Statute of Limitations

At the pleadings stage, Jones argued that the FAC contained questions of fact as to when his claims accrued and that Duke Energy should be equitably estopped from raising the statute of limitations defense. Specifically, Jones argued that "disparate advisories and studies, including Defendants' own study assuring homeowners that the lake was not contaminated, coupled with Defendants' press releases and public filings, 'obfuscated the nature of the injury and concealed the cause, leading to misinformation about the impact of PCBs in Lake Wateree and whether the water has been appropriately managed by the Duke Energy Defendants.'" ECF No. 49 at 11–12 (citing FAC ¶ 69). The Court held that, while it was "unable to determine the veracity of Plaintiffs' allegations at [that] time…this defense...is better suited for summary judgment." ECF No. 55 at 8. After months of discovery, the record is clear: Plaintiff's claims accrued over a decade before he filed this lawsuit, and there is no evidence whatsoever that Duke Energy undertook any action to conceal information regarding the Lake Wateree fish consumption advisories or the MCP.

#### *1. A three-year statute of limitations applies to Plaintiff's claims.*

Jones seeks to recover for damage to real property and/or impairment of property rights. FAC at Prayer for Relief ¶ B.[11] South Carolina has adopted a three-year statute of limitations as

[11] Although Jones originally sought to recover natural resources damages, he has abandoned that claim.

to actions for damage to real property. S.C. Code Ann. § 15-3-530(3). Thus, each of Plaintiff's surviving claims needed to be brought within three years of the date on which such claims accrued. Jones failed to meet this deadline—by a considerable margin.

***2. Plaintiff's claims accrued no later than 2010, and the statute of limitations has been expired since at least 2013.***

Jones's claims accrued no later than 2010, when he learned of the Lake Wateree fish advisory. Jones Dep. at 135:17–136:8. Under South Carolina law,

> [t]he limitations period commences when the facts and circumstances of an injury would put a person of common knowledge and experience on notice that some claim against another party might exist . . . . Therefore, the statutory period of limitations begins to run when a person ***could or should have known***, through the exercise of reasonable diligence, that a cause of action might exist in his or her favor, rather than when a person obtains actual knowledge of either the potential claim or of the facts giving rise thereto.

*Stokes-Crave Holding Corp. v. Robinson*, 787 S.E.2d 485, 489–90 (S.C. 2016) (emphasis added). The "exercise of reasonable diligence" in this context means simply that "the injured party must act with some promptness where the facts and circumstances of an injury place a reasonable person of common knowledge and experience on notice that a claim against another party might exist." *Dean v. Ruscon Corp.*, 468 S.E.2d 645, 647 (S.C. 1996). "Moreover, the fact that the injured party may not comprehend the full extent of the damage is immaterial." *Id*. "[W]hether the particular plaintiff actually knew he had a claim is not the test. Rather, courts must decide whether the circumstances of the case would put a person of common knowledge and experience on notice that some right of his has been invaded, or that some claim against another party might exist." *Majstorich v. Gardner,* 604 S.E.2d 728, 732 (S.C. Ct. App. 2004).

The fish advisory is the only "detrimental condition" that Plaintiff's experts assert has caused an alleged diminution in property value. Greene Dep. at 21:1–24. But Jones's own experts testified that the Lake Wateree community has been aware of the fish consumption advisories since

at least 2010. Greene Dep. at 77:21–22 ("In my mind 2010 is a point of awareness…."); *id*. at 79:4–11 ("[T]he fish consumption advisories came out at that time, and so at least some of the homeowners would become aware."); Tachovsky Dep. at 107:14–109:5 (agreeing that a media report from 2010 analyzed in his expert report reflects awareness by the Wateree Homeowners Association of these issues as of the media report's date). Moreover, Jones testified unequivocally in his deposition that he had actual knowledge of the facts underlying his claims by 2010:

> Q. When you first learned about the fish advisory on Lake Wateree in 2010, did you express any concern about it to anyone?
> A. My family discussed it.
> …
> Q. And what, if anything, did you-all decide to do as a result of those discussions?
> A. Well, I can't speak for everybody, but I think it was universally accepted that we probably should not – we should adhere to exactly what the warnings were.

Jones Dep. at 152:11–24; *id*. at 158:14–159:2 (testimony that Jones knew that Lake Wateree was "contaminated" at least by 2010).

There can be no dispute: by 2010, Jones knew or should have known "that a cause of action might exist in his…favor." *Stokes-Crave*, 787 S.E.2d at 489–90. Whether he knew that the fish consumption advisories were based on PCBs, or how the PCBs had entered the environment, is immaterial. The test is whether circumstances would have placed "a person of common knowledge and experience on notice that *some* right of his has been invaded, or that *some* claim against another party might exist." *Majstorich,* 604 S.E.2d at 732 (emphasis added). Therefore, the statute of limitations for Jones to bring his claims expired by 2013—eleven years before he filed this lawsuit.

Although Plaintiff will likely point to the publication of the Glover & Gunderson article in 2021—over 10 years after Jones had notice of his alleged injury—as triggering the statute of limitations. But that article adds nothing of significance to the publicly-available information dating back to the last century. Allegations that Duke Energy used PCBs in the MCP had already

been raised and covered by the press as early as 1997—three years before the Jones and Deal families purchased the Property. *Supra* § II(C)(2). And the fact that PCBs were sufficient to limit fish consumption was public knowledge since 2010. *Supra* § II(C)(2). Jones therefore had all he needed to bring suit no later than 2010.

***3. Strong reasons exist to apply the statute of limitations in this case.***

Statutes of limitations "rest on public policy," *Wiggins*, 442 S.E.2d at 171, and are "fundamental to a well-ordered judicial system," *Stokes-Craven*, 787 S.E.2d at 489. "[T]hey stimulate activity, punish negligence, and promote repose by giving security and stability to human affairs." *Moates*, 470 S.E.2d at 404 ("We sympathize with the Moateses as they have suffered a terrible tragedy….[H]owever, we hold it would be highly unfair to expose Bobb now to the immense potential liability of this claim after they Moateses 'slept on their rights.'"). The Fourth Circuit has recognized that

> [s]tatutes of limitation represent a public policy judgment by a State as to the time at which an action becomes too stale to proceed in its courts. States rightly may be concerned about the prosecution of fraudulent claims and reliability of judgments rendered upon old claims, where memories may have faded, witnesses may have died, and evidence may have been lost. It has also been said that statutes of limitation also serve the interest of allowing defendants to rest assured that, after a certain period of time, their exposure to liability has ended.

*Goad v. Celotex Corp.*, 831 F.2d 508, 510 (4th Cir. 1987).

Jones's claims are precisely the type of stale claims the statute of limitations is intended to prevent. His allegations pertain to a nearly century-long environmental public health program that ended almost a decade before this lawsuit was filed. *Supra* § II(B)(1). A majority of the individuals who led the MCP over its 93-year lifespan have passed away. Information those individuals possessed that might be relevant to Duke Energy's defenses was lost with their passing. And even Ken Manuel, who led the MCP at the time of its termination in 2016, is unavailable due to his ill

health. *Supra* § II(E). Various other categories of documents which may have once existed were not required to be maintained by Duke Energy indefinitely and are now lost to the passage of time. *Supra* § II(E). Plaintiff sat on his rights for at least 14 years—possibly more. He should not be permitted to pursue these claims now.

***4. No facts in the record support the application of equitable estoppel.***

"In South Carolina, a defendant may be estopped from claiming the statute of limitation as a defense if some conduct or representation by the defendant has induced the plaintiff to delay in filing suit." *Hedgepath v. AT&T*, 559 S.E.2d 327 (S.C. Ct. App. 2011). "An inducement for delay may consist either of an express representation that the claim will be settled without litigation or other conduct that suggests a lawsuit is not necessary." *Id*. at 328. Estoppel may be found "if the plaintiff reasonably relied upon the words or conduct of the defendant in allowing the limitations period to expire." *Id*. There is no evidence in this case that Duke Energy engaged in any conduct that induced Plaintiff to delay in bringing this lawsuit.

Although Plaintiff alleged generally that Duke Energy "obfuscated the nature of the injury and concealed the [alleged] cause," ECF No. 49 at 11–12, such unsupported allegations cannot withstand summary judgment. Jones's knowledge of the nature of his alleged injury was established by 2010. *Supra* § II(C)(2). Neither has Jones pointed to any facts in the record from which a reasonable juror could conclude that Duke Energy "concealed the [alleged] cause" of the 2010 PCB fish advisory. Duke Energy conducted the MCP in full view of the public and state regulators. State and federal officials were aware of and approved the specific larvicides used in the MCP. *Supra* § II(B)(4). The 1970 workshop document that the Glover & Gunderson article relied upon to (mistakenly) point the finger at Duke Energy was a public record of a public workshop attended by public health officials. *Supra* § II(C)(1). Discovery has shown no evidence

that Duke Energy applied any PCB-containing larvicide to Lake Wateree and no evidence that Duke Energy knowingly lied about whether that ever occurred. And for his part, Jones offers nothing to tie his delay in bringing suit to any statement or conduct by Duke Energy. Plaintiff cannot carry his burden to establish equitable estoppel. The Court should therefore grant summary judgment in favor of Duke Energy.

### B. Each of Plaintiff's Claims Also Independently Fails Because PCBs Have Not Physically Impacted Plaintiff's Property

Each of Jones's claims fails for a second, independent reason: there are no PCBs on his Property, or for that matter, on any putative class member's property. *Supra* § II(D)(4). Jones has not presented any evidence of PCB contamination *to the Property*. Jones testified that the Property has been tested for PCBs, but denied knowledge of the results of this testing and objected to producing the results. *Supra* § II(D)(4). Clearly, the reason Jones refused to produce the results is because they do not show PCBs. There is no evidence of PCBs outside of certain species of fish found in Lake Wateree. *Supra* II(C)(2). But any evidence of PCBs in Lake Wateree fish cannot be used to establish the presence of PCBs on Plaintiff's property. Even if Jones could show PCBs in the water, the waters of Lake Wateree do not touch his Property. *Supra* § II(D)(1).

These facts are clearly fatal to Jones's strict liability and trespass claims. "The South Carolina Supreme Court has held that claims of . . . strict liability and trespass cannot be maintained when there is no evidence that alleged contamination has physically impacted plaintiffs' properties." *Chestnut v. AVX Corp*., No. 2007-CP-26-7459, 2012 WL 10646711, at *1 (S.C. Com. Pl. Mar. 9, 2012), *aff'd and rev'd in part*, 776 S.E.2d 82 (S.C. 2015) (citing *Clark v. Greenville Cty.*, 437 S.E.2d 117 (S.C. 1993) (affirming summary judgment for defendant where plaintiffs failed to produce any evidence of the presence of contamination on their properties caused by defendant's landfill), and *Ravan v. Greenville Cnty.*, 434 S.E.2d 296, 306 (S.C. Ct. App. 1993)

(upholding directed verdict in favor of defendants on trespass claim where there was no unauthorized entry onto plaintiffs' property)).

Jones's nuisance and negligence claims also fail because, as noted in Duke Energy's Motion to Certify, filed contemporaneously herewith, there can be no recovery for such environmental torts in the absence of a physical invasion of the plaintiff's property by the constituents of concern. Thus, for this reason as well, the Court should grant summary judgment in Duke Energy's favor and dismiss the FAC in its entirety, with prejudice.

### C. Plaintiff's Nuisance Claim Fails for a Further Independent Reason: Lack of "Special Injury" to Plaintiff

Notwithstanding his use of private nuisance terminology, FAC ¶ 182, Jones's nuisance claim is at most a public nuisance, which he does not have standing to bring because he has not suffered any injury that is different in "degree [or] kind, from that suffered by the public generally." *Belton v. Wateree Power Co.*, 115 S.E. 587, 589 (S.C. 1922).

#### *1. There is no evidence of a nuisance impacting Plaintiff's use and enjoyment of his Property.*

A private nuisance requires a showing of "interference with the use and enjoyment of [the plaintiffs'] properties [that] is unreasonable under the circumstances." *Ravan*, 434 S.E.2d at 306; *see also Shaw v. Coleman*, 645 S.E.2d 252, 258 (S.C. Ct. App. 2007) ("[N]uisance requires a landowner to demonstrate that the defendant unreasonably interfered with his ownership or possession of the land." (quotation marks and citation omitted)). Jones has presented no evidence of any interference with the use and enjoyment of his Property—much less an unreasonable interference. *Infra* § V(D). "Use and enjoyment" refers to the "pleasure, comfort and enjoyment that a person normally derives from the occupancy of land." *Babb v. Lee County Landfill SC, LLC*, 747 S.E.2d 468, 473 (S.C. 2013) (citation omitted); *see also Lever v. Wilder Mobile Homes,*

*Inc*., 322 S.E.2d 692, 694 (S.C. Ct. App. 1984) (finding a loss of use and enjoyment where leaking sewage contaminated the plaintiff's fish pond and caused "offensive odors" that "precluded [the plaintiff] from continuing to host family picnics and church groups"); *Davis v. Palmetto Quarries Co.*, 48 S.E.2d 329, 330–31 (S.C. 1948) (loss of use and enjoyment resulting from work at a nearby quarry that cause plaintiff's home to vibrate and threw dust and dirt onto the property).

None of the factors identified in the above-cited cases is present here. Despite the alleged PCB contamination of Lake Wateree, Plaintiff still gathers with family at the Property, takes his boat on the water, and swims in the lake. *Supra* § II(D)(3). The only "interference" he cites is the DHEC/DES fish advisory. *Supra* § V(A)(II). But as discussed below, he cannot pursue that claim.

***2. Plaintiff's claim is for public nuisance, which he cannot assert.***

In pointing to the DHEC/DES fish advisory, Plaintiff seeks to recover for a public nuisance. But Plaintiff does not have standing to bring such a claim. The South Carolina Supreme Court held definitively over a century ago that complaints like Jones's about the condition of Lake Wateree are public nuisance claims. In *Belton v. Lake Wateree*, the plaintiff alleged that the damming of Lake Wateree caused the formation of pools and stagnant water on or near plaintiff's land that provided a breeding place for malaria-bearing mosquitoes. 115 S.E. at 588. Testimony demonstrated that "far from showing an injury peculiar to the plaintiff…the whole neighborhood for miles around was similarly affected" and thus the nuisance was a public nuisance. *Id*. at 591; *State v. Head*, 498 S.E.2d 389, 394–95 (S.C. Ct. App. 1997) ("Artificial lakes along navigable streams are generally open to public uses…, even if they were created by an authorized private entity an cover part of privately owned land."); ECF 82-2 at PDF p. 152 ("Public Access…. anyone may fish around/under structures built by others, may walk/wade/fish within the FERC Project

Boundaries or any Duke Energy-owned peripheral strip, boat in the lake's waters, etc., without having to obtain permission to do so.").

Thus, even if the presence of PCBs may limit Plaintiff's right to consume fish caught at Lake Wateree, his alleged injury is no different in kind from any harm to other anglers in the general public. The testimony of Jones's own expert, Dr. Greene, emphatically confirms this. She calculated fishing-related damage to members of the public in the counties surrounding Lake Wateree (i.e., people who are not waterfront property owners and therefore not class members) and found that those members of the public were damaged in precisely the same way, and in precisely the same amount, as Lake Wateree property owners. Greene Dep. at 22:11–24:3; 27:21–28:19 (noting that the only difference between class member anglers and angling members of the public is where they live—the two groups experienced the same type of damage, at the same rate, and in the same amounts).

Under South Carolina law, Jones does not have standing to sue for a public nuisance—only the state does. As the Supreme Court observed in *Belton*, "[n]o person can maintain a private action for a mere public or common nuisance, for the reason that the exercise of such a right would lead to the great multiplicity of suits, and endless interminable litigation." 115 S.E. at 591; *id*. at 590 (The "test of a public nuisance is… the possibility of annoyance to the public by invasion of its rights, the fact that it is in a public place and annoying to all who come within its sphere." (citation omitted)); *id*. at 589 ("If the act claimed to have been noxious to the plaintiff constituted a public nuisance, the plaintiff can recover damages only upon the theory that the injury sustained by him was different not only in degree, but in kind, from that suffered by the public generally."). "While a public nuisance cause of action can be used to remedy harms suffered by the public generally, typically only the State may assert this cause of action." *Carnival*

*Corp. v. Historic Ansonborough Neighborhood Ass'n*, 753 S.E.2d 847, 852 (S.C. 2014). Because Jones has presented evidence of nothing more than a possible public nuisance, summary judgment should be granted in Duke Energy's favor.

**D. Plaintiff's Nuisance and Negligence Claims Fail for a Further Independent Reason: Lack of Evidence that Duke Energy Caused Any PCBs to be Present in Lake Wateree's Fish**

Both negligence and nuisance require proof of an unreasonable act taken by the defendant that caused the plaintiff's injury. *E.g., Hernandez v. Trawler Miss Vertie Mae, Inc.*, 187 F.3d 432, 437 (4th Cir. 1999) (Drawing on common law principles to guide in the requirement of proving negligence, it is well understood that negligence is conduct which falls below the standard established by law for the protection of others against unreasonable risk of harm. (quotation marks and citation omitted)); *Babb*, 747 S.E.2d at 476 ("In order to rise to the level of an actionable nuisance, the interference or inconvenience must be unreasonable. The unreasonableness requirement reflects the unavoidable reality that persons must suffer some inconvenience and annoyance from their neighbors for modern life to carry on." (quotation marks and citation omitted)).

Here, no evidence whatsoever exists to support a finding that any unreasonable conduct by Duke Energy caused the PCBs in Lake Wateree's fish. And Jones has no evidence that Duke Energy was aware, prior to the late 1970s, that mineral oil used in transformers could have been contaminated with PCBs. *Supra* § II(B)(7). Moreover, Jones has no evidence that *any* transformer oil was sprayed on Lake Wateree after 1970. *Supra* § II(B)(6).

Indeed, Jones has no evidence of causation generally, a fact that is fatal even to his strict liability claim. Specifically, Jones has no forensic evidence connecting PCBs in Lake Wateree to any of the larvicides used (or allegedly used) on the lake in the Mosquito Control Program. *Supra*

§ II(B)(7). In particular, he has no evidence that any askarel or any PCB-contaminated transformer oil was ever sprayed on Lake Wateree. *Supra* § II(B)(6). Nor can Jones argue that any PCBs "must" have come from Duke Energy's MCP, since there are numerous known sources of PCBs in the area. *Supra* § II(C)(3). Because the evidence does not establish that Jones's alleged injury (PCBs in Lake Wateree's fish) was caused by any act attributable to Duke Energy—much less an unreasonable or negligent act—the Court should grant summary judgment in favor of Duke Energy as to the nuisance, negligence, and strict liability claims.

### E. All Claims Fail for a Final, Independent Reason: Plaintiff has no Evidence of Damages

The record is bereft of any evidence of damages—an indispensable element of each of Jones's claims. "As a general rule, the evidence should allow the court or jury to determine the amount of damages with reasonable certainty or accuracy." *Griffin v. Giovino*, 920 S.E.2d 418, 431 (S.C. App. 2025) (quoting *Gauld v. O'Shaughnessy Realty Co*., 671 S.E.2d 79, 85 (S.C. App. 2008) (quotation marks omitted)).

#### *1. There is no evidence of lost rental or usable value of the Property, as required by South Carolina law.*

Under South Carolina law, Plaintiff can recover only lost rental value or usable value to the Property. Where pollution "results in a *temporary or nonpermanent* injury to real property, *the injured landowner can recover the depreciation in the rental or usable value* of the property caused by the pollution." *Gray v. Southern Facilities, Inc*., 256 S.C. 558, 559 (1971) (emphasis added); *see also Babb*, 747 S.E.2d at 476 (holding that the lost rental value of property is the sole measure of temporary trespass and nuisance damages)

The FAC alleges that Duke Energy has failed to remediate the presence of PCBs in Lake Wateree, and seeks "[a]n Order directing Defendants to provide funds to effectively monitor,

analyze and remediate continuing contamination throughout the impacted area." FAC ¶¶ 24, 49, 103, 104, Prayer for Relief ¶ D. And Jones has not presented any evidence that the alleged contamination cannot be remediated. There is no issue of fact here: any alleged injuries are temporary in nature. *See AVX Corp. v. Horry Land Co., Inc.*, 686 F. Supp. 2d 621, 626 (D.S.C. 2010). But Jones has not presented any evidence that the rental value of the Property has diminished nor that it is less usable than when he purchased it. To the contrary, Jones testified that no person has ever expressed to him that they would not rent the Property because of PCB contamination in Lake Wateree. Jones Dep. 77:21–24.

Jones testified that he purchased the Property with the intent to use it for family gatherings, recreation, and fishing. *Id*. at 237:25–239:5. He further testified that the Property is *still being used* for family gatherings and some forms of recreation, including boating. *Id*. at 239:6–11, 18–20. Jones has not fished in Lake Wateree since around 2021, when he read the Glover & Gunderson article. *Id*. at 133:20–23. However, he has continued to offer fishing equipment at the Property to his renters, *id*. at 190:14–191:4, and thus profits from the Property's ongoing use for fishing. Jones has not presented any evidence that he has been damaged by his Property's decrease in rental or usable value. Because Plaintiff has no evidence of the only damages recoverable for the temporary nuisance he has pled, summary judgment is required.

***2. Stigma damages are not recoverable under South Carolina law.***

Instead of presenting evidence of lost rental or usable value, Jones relies on his experts to calculate a diminution in market value across the market generally. In the absence of physical impact to Jones's Property or any required remediation of the Property, that diminution in market value is nothing other than alleged "stigma" arising from PCBs in the lake. Dr. Greene opined that "on average" the value of real property fronting Lake Wateree has declined by 12 percent.

Greene Dep. at 113:11–114:16. In the absence of physical impact to the Property, or any required remediation of the Property, the purported diminution in market value is nothing other than alleged "stigma" arising from PCBs in the lake. Stigma damages should not be recoverable under South Carolina law, as explained in Duke Energy's Motion to Certify.

***3. Plaintiff's diminution in value claim is also highly speculative.***

Even if Jones had presented evidence of a permanent injury—which he has not—he would not be entitled to damages because he has not presented any evidence that the market value of his Property has diminished. In fact, property values have gone up. The Property was purchased by the Jones and Deal families in 2001 for $114,900. *Supra* § II(D)(2). It was subsequently appraised in April 2020 for $460,000. *Supra* § II(D)(2). Deborah and Dennis Phillips, former co-plaintiffs in this action, sold their Lake Wateree home in May 2025 for $635,000—more than twice what they paid for it in 2014—even with a disclosure to potential purchases regarding the Lake Wateree fish advisories. Deposition of Deborah Phillips, Mar. 27, 2026 (attached as Ex. 39), at 43:21–44:12; Deposition of Dennis Phillips, Mar. 27, 2026 (attached as Ex. 40), at 47:7–48:11; Tachovsky Expert Report (attached as Ex. 41) (excerpted) at 19-20 (graphs showing market trends for Kershaw and Fairfield Counties); Tachovsky Dep. at 58:19-60:13.

As noted above, Dr. Greene provided an opinion that "on average," the value of real property fronting Lake Wateree has declined by 12 percent, but she developed that estimate not on the basis of any market data for real property around Lake Wateree. Instead, she reviewed studies performed by others on real property values at other sites across the country. *E.g.*, *id*. at 68:15–71:14. Dr. Greene unequivocally testified at her deposition that she had not provided any opinion as to the actual damages amount suffered by Jones, or any other specific property owner. *Id*. at 114:3–16; *see also id*. at 155:3–8 ("I'm not here to talk about any individual property

owner."). Moreover, Greene's testimony underscores the substantial amount of property and owner-specific information that would be needed to determine Jones's—or any other owner's—piece of the pie, even if Plaintiff's damages theory were tenable. *Id*. at 103:7–24 (confirming numerous facts she would require in order to determine any individual owner's property value damages).

"Neither the existence, causation nor amount of damages can be left to conjecture, guess or speculation." *Gauld*, 671 S.E.2d at 85 (internal citation and quotation marks omitted). Jones has not presented any evidence that his Property's value has actually diminished as a result of PCBs in Lake Wateree's fish. For this reason as well, the Court should grant Duke Energy's Motion for Summary Judgment and dismiss the FAC in its entirety.

## VI. CONCLUSION

For the foregoing reasons, Duke Energy respectfully requests that the Court grant its Motion for Summary Judgment, dismiss Plaintiff's First Amended Complaint in its entirety, with prejudice, and grant such other and further relief as the Court deems just and proper.

Dated: May 8, 2026

Respectfully Submitted,

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**IN THE UNITED STATES DISTRICT COURT**
**FOR THE DISTRICT OF SOUTH CAROLINA**
**COLUMBIA DIVISION**

| | |
|---|---|
| Clyde Marcus Jones, II, *on behalf of himself and all others similarly situated*,<br><br>Plaintiffs,<br><br>v.<br><br>Duke Energy Corporation and Duke Energy Carolinas, LLC,<br><br>Defendants. | Case No. 3:24-cv-01281-MGL |

**DUKE ENERGY CORPORATION AND DUKE ENERGY CAROLINAS, LLC'S MOTION FOR SUMMARY JUDGMENT**

**EXHIBIT LIST**

| Exhibit | Title/Description |
|---|---|
| **1** | Deposition of Jeff Lineberger, Mar. 20, 2026 |
| **2** | "Duke Power Company Reservoir Mosquito Control Program, 1923-1998: A Brief History," DUK_00003571 |
| **3** | "A Brief Summary of Duke Power Company's WWII (1942-1943) Mosquito Control," DUK_00000027 |
| **4** | "Duke Power Company Impoundment Mosquito Control Program," DUK_00002581 |
| **5** | "The Duke Power Company Reservoir Mosquito Control Program: Seventy Five Years of Service," DUK_00006812 |
| **6** | Deposition of Bob Barden, Mar. 13, 2026 |
| **7** | "Termination of Duke Energy's Mosquito Control Program \| November 2016," DUK_00011453 |
| **8** | "Duke Power Mosquito Control Program: Approximate Program Costs and Cost Reduction Options," DUK_00004508 |

| | |
|---|---|
| **9** | "Invasive Aquatic Plant (weed) and Mosquito Control Services," DUK_00004366 |
| **10** | Examples of Lake Wateree Mosquito Control Program Spray Logs, DUK_00001825 |
| **11** | 1943 Letter from D. F. Ashton to F. M. Boldridge, DUK_00000164 |
| **12** | EPA Final Report, Feb. 25, 1976, "PCBs in the United States Industrial Use and Environmental Distribution," DUK_00100922 |
| **13** | Exhibit JGL-1 to 30(b)(6) Deposition of Jeff Lineberger (excerpted) |
| **14** | Deposition of David Roche, Mar. 11, 2026 |
| **15** | 30(b)(6) Deposition of Jeff Lineberger, Apr. 20, 2026 |
| **16** | Report of Harold W. Brown, MD, Aug. 12, 1968, DUK_00000536 |
| **17** | Draft: "Present Approaches to Mosquito Control on Duke Power Company Impoundments," DUK_00000295 |
| **18** | 30(b)(6) Deposition of Zachary Hall, Apr. 20, 2026 |
| **19** | Ex. ZSH-1 to 30(b)(6) Deposition of Zachary Hall (excerpted) |
| **20** | Deposition of James Glover, PhD, Mar. 27, 2026 |
| **21** | Deposition of Deke Gunderson, PhD, Mar. 23, 2026 |
| **22** | Deposition of Robert Workman, PhD, Mar. 11, 2026 |
| **23** | Deposition of Gretchen Greene, PhD, Mar. 9, 2026 |
| **24** | "1940s tales, risk of PCBs spur probe at Wateree," *The State*, Aug. 9, 1997 |
| **25** | "State will test for PCBs in Lake Wateree fish," *The State*, Dec. 13, 2009 |
| **26** | "Toxic chemicals in popular S.C. lake," *The State*, Aug. 25, 2010 (at DUK_00012100) |
| **27** | Deposition of Michael Tachovsky, PhD, Mar. 2, 2026 |
| **28** | Greenville, S.C. news report, July 8, 2014, DUK_00012110 |
| **29** | Deposition of Plaintiff Clyde Marcus Jones, II, Oct. 8, 2025 |
| **30** | Deposition of Eric Butler, PhD, Apr. 8, 2026 |
| **31** | Plat of 1778 Sailing Club Road, DUK_00100431 |

| | |
|---|---|
| **32** | Property Records for 1778 Sailing Club Road, DUK_00100433 |
| **33** | Deposition of John Milton Deal, Jr., Mar. 25, 2026 |
| **34** | Certificate of Appraiser and Uniform Residential Appraisal Report, JONES_001249 |
| **35** | Deposition of Martha Jones, Mar. 30, 2026 |
| **36** | VRBO Listing and Reviews for 1778 Sailing Club Road (Ex. 5 to Plaintiff's Deposition) |
| **37** | Plaintiff's Response to Duke Energy's Request for Production No. 32 |
| **38** | Westinghouse Electric Corporation 1979 correspondence, DUK_00102413 |
| **39** | Deposition of Deborah Phillips, Mar. 27, 2026 |
| **40** | Deposition of Dennis Phillips, Mar. 27, 2026 |
| **41** | Tachovsky Expert Report (excerpted) |
| **42** | Deposition of William Beckham, Oct. 17, 2025 |
| **43** | Deposition of Henry Beckham, Oct. 14, 2025 |

# Exhibit 1

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
COLUMBIA DIVISION

Clyde Marcus Jones, II; Dennis Phillips, and Deborah Phillips, on behalf of themselves and all others similarly situated,

Plaintiff,

v. Civil Action No. 3:24-cv-1281-MGL

Duke Energy Corporation and Duke Energy Carolinas, LLC,

Defendants.

VIDEOTAPE
DEPOSITION OF: JEFF LINEBERGER

DATE: Friday, March 20, 2026

TIME: 9:41 a.m. through 11:56 a.m.

TAKEN BY: Attorneys for the Plaintiff(s)

COURT REPORTER: MADONNA M. FARRELL
Registered Professional Reporter
CaseViewNet Realtime Reporter

NOTE: This transcript was not produced by artificial intelligence.

Duke Energy has discharged PCBs into Lake Wateree. I do not believe Duke Energy has done that.

BY MR. SHEHEEN:

Q. Understood.

A. Duke Energy is accountable for our actions underneath our licenses and permits. We are accountable to comply with those licenses and permits; no more, no less than what those permits say.

Q. So if -- and bear with me, please. I'm trying to understand this hypothetical.

If they were responsible for putting the PCBs there, would they be responsible for mitigating any associated harm?

MS. DURANTE: Object to form.

THE DEPONENT: PCBs are in our environment from many, many different potential uses. And you're talking about a watershed at Lake Wateree that's 4,750 square miles. That's bigger than Rhode Island and Delaware added together.

So Duke Energy is accountable and responsible for its permits and its licenses and the things we do thereunder.

CERTIFICATE OF REPORTER

I, Madonna M. Farrell, Registered Professional Reporter and Notary Public in and for the State of North Carolina, do hereby certify that the deponent was duly sworn by me to testify to the truth, and that the above deposition was recorded stenographically by me and transcribed through computer-aided transcription by me to the best of my ability.

I FURTHER CERTIFY that the foregoing transcript is a true and correct transcript of the testimony given by the said witness at the time and place specified.

I FURTHER CERTIFY that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action in which this deposition is taken, or financially interested in this action.

IN WITNESS WHEREOF, I have set my hand and seal this 25th of March, 2026.

Madonna Farrell

Madonna M. Farrell
Registered Professional Reporter
Notary Public
My commission expires
January 21, 2029

NOTE: This transcript was not produced by artificial intelligence.

# Exhibit 2

# DUKE POWER COMPANY RESERVOIR MOSQUITO CONTROL PROGRAM, 1923-1998: A BRIEF HISTORY

## Introduction

I'm writing this account in April 1999, prior to the opening of the 76th operational year of the DPC mosquito control program. A few months ago, September 11, 1998 we celebrated the 75th Anniversary of the program and at the celebration luncheon dedicated the new Lake Norman Mosquito Control Facility to Frank Moon Boldridge, Jr.,M.D. Dr. Boldridge developed and was the first director (1923-1966) of the Duke Power Reservoir Mosquito Control Program.

You are opening this time capsule that contains this information at the 90th Anniversary of the program in 2013, and again at the 100th Anniversary in 2023. Maybe some of us will make the 90th opening. Think about us in 2023 when you again open the capsule.

We want to give you (all the folks associated with the mosquito program) the opportunity to take a moment and reflect on the contribution of your efforts and also to consider the value of the efforts of those who came before you. You continue to provide a service that has a serious role protecting the health and safety of those citizens associated with Duke Power reservoirs. On the larger stage of life this may be small stuff. But this stuff has absorbed the professional talents of many folks over seven decades in a manner usually unnoticed (and for the most part unappreciated) by public and management alike. The following is a brief and in many ways an unsatisfactory account of how you managed to get where you are now, so you will have a small idea of the professional legacy passed on to you and to those that follow you.

## The Beginning and Early Years

Malaria was a serious problem in the Southeastern US up until WWII. In the early part of the 20th Century, the Southern Power Company (by 1924 known as Duke Power Company) was building dams along the Catawba River and was continually having to deal with legal and health problems associated with the transmission of malaria by the permanent impounded water breeding mosquito Anopheles quadrimaculatus. Southern Power Company (SPC) was spending considerable amounts of money on studies by public health consultants to demonstrate that SPC was not contributing to the existing malaria problem by building dams or from reservoir operations. Although successful in court cases, SPC and other utilities were being pressured by state and federal public health officials to be proactive about the malaria/reservoir question (See page 8 in Malaria Control on Impounded Water, cited below).

Convinced the problem was going to get larger and potentially more expensive as legal cases continued to sap company officials time and energies, James B. Duke resolved to take action and hires a medical doctor working as a county public health inspector/doctor in South Carolina. This doctor, South Carolina native Dr. Frank Moon Boldridge, Jr.,

MD, was familiar with malaria from his work as a young U.S. Army medical doctor in WWI Europe dealing with the effects of malaria on military personal.

Boldridge had done some malaria consultation for SPC and through his friendship with an Assistant US Surgeon General and others in the southeastern public health sector, Boldridge was recommended to J.B. Duke to develop a malaria control program for SPC. Good professional networking and being at the right place at the right time hasn't changed much.

Years later, Doc Boldridge told the story in a more colorful form, " J.B. Duke called the US Surgeon General and asks to speak to his best man working on malaria. Duke is told that fellow was Frank Boldridge. Duke calls Boldridge and tells him, "I'm James Duke, you now work for me. Please be in my office Monday." This wonderful story fits the colorful image of James Duke, captain of industry and the charismatic personality of Boldridge.

Boldridge started to work for Duke by early summer 1923 and began an aggressive program of mosquito larviciding on Lake James and probably other mosquito breeding hot spots associated with company worker villages located near its power dams.

The program then, in concept, is the same program that is now in place 75 years later. In effect we (and you) conduct mosquito larviciding within reservoir project boundaries using standard state of the art control techniques. In 1923, the major larviciding material was fuel oil. This was the standard practice for DPC until 1989 when liquid Bti replaced the use of fuel oil.

In those early years fuel oil was delivered to the various lake "mosquito camps" in 55 gallon barrels. Hundreds of 55 gallon barrels! The barrels when needed were man-handled aboard worker made barges made from 2" thick rough cut tongue and grove lumber. The oil was sprayed along the shoreline in likely mosquito breeding habitat. Barrels were also placed at the mouths of selected streams entering the reservoirs and allowed to continuously drip-apply oil in to the slowly moving current (pers.com. Ruben Swafford, Lake James. In 1999, Ruben began his 50th year with the program as a boat spray crew member). At times, several hundred full and empty oil drums accumulated at the field camps.

Crews, at the more remote reservoir program staging areas lived in tent camps along the shoreline (program supply records). In addition to larviciding, crews cut back shoreline vegetation to allow larviciding access, improving water flow in breeding areas, and increasing sunlight penetration by streamside brush coppicing. Early barges may have been poled to some extent but early out-board motors were probably also used. Seven or eight men labored through each hot summer on each of the program reservoirs.

Pre-War Depression and WWII Years.

Oral tradition says the mosquito program began on L. James. Not long after, Lakes Wylie and Wateree were added. Fuel oil was still the standard larvicide. There is every indication Boldridge also tried any cost effective, research suggested innovations that became available in mosquito control including trial use of other larvicide's, draining low areas, shoreline vegetation reduction, reservoir surcharge, stocking of mosquito fish (program records - order for mosquito fish from the US Bureau of Fisheries). An indicator of Boldridge's interest in technical matters is that he learned to fly in the late 20's and for several decades gave leadership in a Charlotte aviation association.

Soon after the beginning of WWII, Boldridge could no longer obtain adequate supplies of fuel oil, most of which was being directed to the war effort. Program records indicate contract trucks collected used crank case oil purchased from scattered regional auto service stations. In addition, drip oil from turbine bearings and by product oil from company run manufactured gas plants was also used (program records). The human side of the program was that members of larviciding crews were enlisting and being drafted into military service.

Bill Lee (CEO in the 1980's) said Boldridge mentioned to him that he never used DDT. DDT was not generally available during the war because of its use in overseas combat areas. Following the war, although DDT was common, it was considered more effective against adult mosquitoes in residential dwelling applications. Because of stocks that lasted until the mid-1970's Paris green (copper aceto-arsenite) was also applied as a larvicide by program employees.

Duke Power's mosquito control program always reflected the austerity of the times as well as being a low-tech public health program. Keeping the program low cost has always been an important consideration. The depression and WWII produced a no-frills approach to mosquito control.

A wonderful overview of early mosquito control in impounded waters is a book prepared by the US Public Health Service and Tennessee Valley Authority entitled Malaria Control on Impounded Waters , published in 1947 by the US Government Printing Office, Washington, DC. I'll leave my personal copy in the Environmental Center library for you to look through.

Post WWII through the late 1980s

During and following WWII, the amount of larviciding oil used was reduced. Only mosquito breeding habitats were treated. Barges carrying 55 gallon barrels gave way to boats. Larviciding oil was metered into the water stream from on-board oil storage tanks. The water/oil spray produced by a gasoline powered pump was directed at known breeding habitat as the boats followed their spray route. As late as the 1990s older

reservoir residents would complain that the newer boats, containing a 12V spray on demand pump systems, didn't spray "their mosquitoes" when the boats came by. In the gasoline engine run pump days, the old gasoline engines ran continuously because they were notoriously hard to restart after becoming hot, so water was sprayed continuously. When a crew arrived at a breeding habitat site, unseen by shoreline observers they would turn a valve allowing fuel oil to be pulled into the water stream, to be directed on the mosquito breeding area then turned off s the boat continued its route. This explanation still doesn't satisfy the older folks who want to see that continuous spray they saw as children growing up or when visiting their grandparent's lake cottage, the "placebo effect."

Larviciding began on L. Norman before it reached full pool in 1963. Lake Greenwood 's existing county mosquito control program was added in 1966 when that lake was leased from Greenwood County. John Whiteford, a Cross Hill native and returning European war veteran who had been running the Greenwood mosquito control program and log removal operation on the lake since 1945 was transferred over to Duke along with his laborer crew. To keep them and their lake experience, they were given full seniority when they were transferred to Duke Power. "Mr. John" retired in the late 70's and his son Robert was hired to continue the program. Robert was chosen by the Buzzard Roost Hydro Station (Lake Greenwood hydroelectric dam and station) management to continue the program because as a student he spent his summer vacations with his dad on the lake and knew every inch of shoreline as well as most of it's shoreline residents. Robert says he's related to most of them. Not the Yankees of course.

The last large reservoir added to the program was Lake Keowee near Clemson, SC. When the lake reached full pool in 1973 boat crews were busy spraying the mosquito breed habitat. It is interesting to note that as Belews Lake, Northeast of Winston Salem, NC, was under construction, site of the large Belews Creek Coal Fired Steam Station, a temporary mosquito control program was put in place until the lake reached full pool. Belews Lake is steep sided with little shallow water providing mosquito breeding habitat. Most of the potential breeding habitat is available to resident lake fish. When rafting wind-blown floating organic detritus (wood, sticks, bark) that protected the mosquito larvae from fish perdition sank due to lake water saturation by the end of filling, mosquito control was no longer necessary. Reservoir morphology plays a great roll in the development of mosquito breeding habitat. The shallower the reservoir, the more likely larger areas of the reservoir my produce mosquito breeding, especially in aquatic plants and in shoreline ponds cut off from the reservoir by sand-bars.

By the early 1960s, Doc Boldridge, planning for retirement, hired John Lyon to take over the day to day mosquito control program. Lyon's premature death from brain cancer in the mid 1960's delayed Boldridge's retirement until 1966. George T. Swearigan, M.S., R.S., was hired in 1966 to become the second mosquito control director for Duke Power. Doc Boldridge died in 1981 after 43 years with Duke Power and many years as a public health consultant to the company. He saw both lakes Norman and Keowee, the last major reservoirs built by Duke Power and thus finishing the electrification of the upper Catawba River begun decades before under the leadership and vision of James B. Duke

(President of the American Tobacco Co, and namesake and benefactor of Duke University), brought into the company's mosquito control program. At his funeral, the who's-who of Duke Power were his pall bearers and honorary pall bearers.

Doc Boldridge and his wife did not have children and when she died in the mid 80's her nephew contacted Duke to see if the company wanted Doc's extensive collection of correspondence about the early mosquito days and his oil portrait that dated from the 1930's. It always hung over the main fireplace in his big Selwyn Avenue, Charlotte, NC home and many Duke executive old-timers remember it staring down at them when they visited.

The company did not take the correspondence ( what a phenomenal loss of our history) but Jim Hendicks (a company environmental engineer and General Manager in charge of DPC environmental activities) managed to obtain the portrait, have it cleaned, re-stretched, and it now hangs in the lobby of the Duke Power Environmental Center, located on Lake Norman near McGuire Nuclear Station.. If Duke ever gets out of environmental work, please see if the portrait can be donated to the Public Health Pest Management Division of North Carolina. They house the state mosquito control program and would understand the historical significance of the painting. Look into those eyes and imagine telling Doc Boldridge that mosquito control wasn't important! By the way, he was over six feet tall. I wouldn't want the ghosts of Boldridge and J.B. Duke paying me a visit!

As a side note, Ruben Swafford of our L. James crew was hired by Boldridge in 1949. His father Clifton was employed in the program from 1940 until his death in 1968. Ruben had one break in service with the company when he was drafted into the Army (serving in the Korean War with distinction) rides the mosquito boat at L. James with is younger brother Boyd who retired from the Hickory area furniture industry. In December 1998, the new Black Bear access area on L. James was dedicated to the 80+ years of environmental service to Lake James by the Clifton Swafford family. We placed a brass plaque on a large stone boulder at the head of the ramps to mark the occasion. Tommy Bowen (Mosquito Control Field Staff & Facilities Coordinator), my scientific colleague and partner in keeping this program together picked out the boulder, a small Mt. Rushmore! As time allows, check to see if it's still there and if it needs a good cleaning. If members of the Swafford family are still around in Nebo, NC, give them a call and thank them again for their family's dedication to public health on L. James.

During his tenure as program director, George Swearingen established permanent mosquito control facilities on the program lakes. Small wooden buildings were erected on Duke owned lake shore property to house the day to day needs of the crews on each lake. On Lake Wateree for example, yellow pines were logged on the property, cut into rough cut boards at a local saw mill. The mosquito control crew used the boards to build the small one room facility at the lake. Was this cost effective or what? George began his career as a SC county environmental public health worker and Doc Boldridge, keeping true to his SC roots hired Swearingen.

Above ground, eight thousand gallon bulk oil storage tanks installed at each lake mosquito control facility site replaced the continuous hauling of 55 gallon barrels. Boats filled their on-board oil tanks from filler hoses at the end of their piers. Enclosed boat houses were built to give the spray boats security from adverse weather and possible vandalism.. The work boats took on a characteristic "African Queen" look as each boat was covered with a handmade aluminum tube and wood, canvas sun/rain awning that extends almost the length of each boat. Swearingen retired from Duke Power in 1988 and now lives in Bishopville, SC. Robert T. Barden M.S., R.S., who had worked for Swearigan since the early 1970s became the third director in 1988. Both were South Carolina natives and former SC county public health workers. Both Barden and Swearingen are past presidents of the North Carolina Mosquito and Vector Control Association.

By 1989, Barden replaced fuel oil as the main larvicide used in the program and had all the 8000 gallon above ground oil tanks removed. Gasoline powered spray pumps were replaced with quite, spray on demand, 12V electric agricultural spray pumps. The liquid Bti is mixed in a 30 gallon on-board mix tank. The normal spray rate is four ounces of Bti per acre which translates to about a mile of mosquito breeding habitat sprayed per day. As cellular phone towers became widely located, each boat was provided with on-board cellular phone service to enhance program communications especially during an emergency.

Barden also conducted aquatic weed control operations for the company. He was the first operator of the company airboat that allows herbicide application on dense underwater weed beds. Exotic invasive weeds can block power plant intakes and produce massive mosquito breeding habitat. Prior to his retirement in 1996, Barden was also responsible for not only mosquito control and weed management but also access ramp construction and maintenance. Barden is President of L&B Services of Waxhaw, NC and is a consultant to Duke Power during the mosquito control season.

It is interesting to note that mosquito control was never a stand alone program. Boldridge had responsibility for company medical concerns, and among many other things ordered all medical supplies for the various scattered power stations and support operations. The most requested item from the stations in the early days was "medicated foot power." Go figure?

By the 1980s George Swearingen and Bob Barden held responsibility for station medical supplies, mosquito control, general facilities pest control, facilities sanitation, company wide oil spill planning and prevention, FERC mandated recreation planning, installation and maintenance of reservoir launch ramps and many other lake maintenance issues such as pier permitting and shoreline issues including aquatic weed control. Most of these responsibilities now reside with other work groups or the functions are no longer conducted in-house if at all.

Historically, the mosquito control program is the oldest environmental program at Duke Power. It is also possibly the oldest continuously operated environmental program of any

electrical utility in North America, predating TVA. Although the oldest company environmental program it was until recently not part of the other environmental programs of the company that found their beginnings with federal and state environmental impact studies (EIS) work of the 1970s. Through the years, following many company reorganizations, the program found its home under many different organizations such as an early company health department, Real Estate Department, Operation Department, Fossil/Hydro Department, Electrical Systems Support Department, and is now united with all the other operational environmental activities of Duke Power Company in Group Environment, Health, and Safety (Department).

Current Program Operations

The mosquito control program is conducted daily on six DPC reservoirs beginning the first working day of May, ending the last working day of October of each year. The reservoirs with ongoing control programs are lakes James (one crew), Norman (three crews), Wylie (one crew), Wateree (one crew), Greenwood (one crew), and Keowee (one crew).

The program continues to use the state of the art Bti larvicide program establish by Barden. Altosid pellets and briquette are also used in temporary pool breeding habitats as well as a specially refined oil (Golden Bear) and highly refined mono-molecular oil called Arosurf. Today the mosquito control program is part of a sister activity responsible for aquatic plant management in Duke reservoirs.

The field office for the Duke Power Reservoir Mosquito Control Program and the Aquatic Plant Management Program is the newly dedicated Frank M. Boldridge Lake Norman Mosquito Control Facility located at the mouth of the Marshall Steam Station discharge canal. The new facility was dedicated on September 11, 1998 by Bill Coley, President of Duke Power Company. In his remarks he seemed sincerely pleased that we were carrying on the tradition of Duke Power's long held motto, "Citizenship and Service."

The program is now under the leadership of Ken Manuel, an aquatic entomologist who came to work for Duke Power in 1980. The personnel and facilities coordinator for the program is Tommy Bowen who began work for Duke Power in 1974.

Today, Spring 1999

When reading old mosquito control file correspondence around December 7, 1941 into early 1942 it was interesting to note that no one spoke about the attack of Pearl Harbor and the beginning of WWII. I will not attempt to encapsulate ALL the current news but in short, NATO is in its third week of bombing of the former Yugoslavia because of the massive repression of the Albanian Muslims living in the province of Kosovo. Those of us with young adult children are worried about the US possibly starting the military draft because of the military services have not been meeting their recruiting quotas for

several year now. When the economy is booming, who wants to go into the Army? Maybe 15 years from now we will better understand the national interest need of the US to be at war in the Balkans.

President Clinton weathered the senate impeachment trial and Monica (a White House intern involved in the sex scandal with Clinton leading to the impeachment trial) is on the talk show book writing circuit.

Prediction: Clinton will be back in his home town of Hope, Arkansas or maybe in Bentonville, AK as head of Walmart (a large national retail store chain). Hillary (Pres. Clinton's wife) may be a senator from New York (a rumor). V-Pres. Albert Gore will probably be elected in 2000 if the economy continues to boom like it has for the last several years. After that, who knows, although you'll be in the last year of a possible eight year term of another professional politician follow Gore.

If the US economy goes south along with the Japanese....but we'll all know what really happened in 15 years! Did you ever get a flat tax? By the way, Mark McGuire with 70 home runs in 1998 and Sammy Socia with 65, both breaking the Babe Ruth/Roger Mares homerun record are looking for another record year in 1999. Now we know what's important.

We're going into the second full year of the Duke Power-Pan Energy merger (now Duke Energy unless Exxon buys us as the rumor mill suggests). We're one of the biggest energy companies in the US. Duke Power, a subsidiary of Duke Energy, is still a regional power company. Most of us like that because we know our customer base and most of the reservoir/water environmental issues. We sill believe in "Citizenship and Service" although it's been removed from the company logo. Who knows what's next.

The last decade at Duke Power (1988-98) has been hard on the hired help with large layoffs in 1988 and 1996 and little layoffs all along the way. There's not much in the way of employee moral these days. Most folks hope they can hold on until retirement and day to day continue to do their job as professionally as possible.

We still have a lot of environmental work to keep us busy due to NRC, FERC, state and local rules and regulations but the trend within the company is to look at the "low bidder" vendor. If, when reading this you find yourself a Duke Power employee then the company still has something of an environmental program. It is interesting to note, the reason DPC has an in-house environmental operation now (1999) is because, when environmental work was growing by leap and bounds in the early 1970s (due to EPA and many new environmental protection laws being implemented by state and federal governments at the time), low bidders trashed several important EIS studies resulting in major Duke cost over-runs and delays. Duke then decided to do the work itself to control study quality and built a large environmental team between 1974 and 1980 to respond to that need. Hopefully we don't forget out history and try to reinvent the early 70's wheel.

The one real and absolutely valid prediction in all this is the continued urban growth around DPC's reservoirs. The entire Catawba River Valley is growing beyond belief and that growth is having an amazing impact on the area's watershed. Water use issues are growing and will become more contentious as the various multi-use water factions via for prominence. Some time in the first ten years of the next century (2006?) all the Catawba River reservoirs will need to be relicensed and I'm sure these issues will be high on the list of concerns. Drinking water quantity and quality concerns will continue to grow since most of the local municipal drinking water supplies originate in Catawba River reservoirs. We will probably have to grow the mosquito control program especially if Fishing Creek and Wateree shoreline development booms as Crescent Resources, Inc. (a Duke Energy subsidiary) develops the forest land around the lake into small towns.

Although malaria is no longer a problem (it could be if immigrant workers bring it in) there are some 25 mosquito borne (arboviral disease agents like EEE and SLE) that can have up to 80% mortality rate in humans. Mosquito control is not and never will be a luxury.

The Future

A new Lake Keowee Mosquito Control Facility in under construction near Oconee Nuclear Station to replace the existing structure at "mosquito point" soon to be part of a new upscale Crescent Resources, Inc. residential development. The structure is large enough to store two boats and trailers and will have a restroom, chemical storeroom and a break area with table sink, refrigerator and microwave. We'll also have it wired for a computer terminal. The new Lake Keowee Mosquito Control facility should be open by mid-May.

We are planning to replace the old facility on Lake Wylie in 2000 with a structure similar to the one at Keowee. The small wooden lake Wylie facility was a salvaged one room commercial dinner/store moved to the mosquito control program property in the mid 1960's. Termites have over the years made good use of it. In 2001 and 2002 we hope to upgrade the facilities on Wateree and James. By 2003, or so, I hope by the time I'm gone we will have a modern mosquito control infrastructure on our program lakes. Frank Boldridge would surely smile and think it was a lot different from the old isolated tent camps of the 1920s (pay for a crew member then was $0.12 cents per hour, now it's about $11.00 per hour). I like to think he would be darn proud of Duke's continued commitment to the public health needs of those folks that live on the shorelines and use the reservoirs that Duke Power calls home.

We hope you will find time to add a few notes to this, bringing the mosquito control history at Duke Power up to date since this writing in early 1999. Please reseal everything for the next group of folks who may enjoy looking at these materials during the 100th Anniversary year in 2023. As good scouts, we have tried to leave the program a little better than we found it. Good luck as you carry on the long held Duke Power tradition of "Citizenship and Service" into the next century.

Ken Manuel
Mosquito Control Program Leader

April 4, 1999

# Exhibit 3

A BRIEF SUMMARY OF DUKE POWER COMPANY'S WWII (1942-1943) MOSQUITO CONTROL FILES

During the early years of WWII, Dr. F. M. Boldridge the Director of Duke Power's Health and Sanitation Department was fighting his second major war in a way different from his participation in WWI as a young army doctor with the American Expeditionary Force in France. Doc Boldridge or Doc as he was known by all who knew him at Duke Power, was struggling to maintain an effective malarial mosquito control program on Catawba River reservoirs in the face a massive national defense mobilization of men and essential war materials.

Hired by James B. Duke in 1923 to establish and direct a Duke Power response to the transmission of malaria that might be associated with Duke reservoirs, Boldridge was a leading US malaria expert who at that time was with the US Public Health Service. Malaria transmission was common along the river valleys of the southern US as well as the Catawba River during the first half of the Twentieth Century [1]. This debilitating and deadly disease was associated with the presence of indigenous anophelene mosquitoes species especially *Anopheles quadrimaculatus*.

The mosquito control program Boldridge developed for Duke Power, focused on the reduction of mosquito breeding habitat and the control of mosquito larvae [2]. This approach became a model for TVA and other later mosquito control programs in the southern states during the years of the Great Depression preceding WWII [3].

By 1941, many of the reservoirs in the Duke Power system were receiving mosquito larvae control activities called "oiling" either on a routine basis or as determined by mosquito surveys. During this time Boldridge was dealing with several malaria court cases against DPC as malaria continued to be a problem in the area especially by anophelene mosquito breeding in farm ponds, ditches, swampy lowland streams, etc. It is interesting to note that due to Duke Power's aggressive mosquito control campaign on its reservoirs, no court case against DPC concerning malaria transmission because of mosquito breeding on company property has been upheld.

Following the US entry into WWII and the massive mobilization of labor and critical material resources for the war effort, the typically used larvicid oil (diesel fuel) was no longer available for mosquito control. Challenged with providing an effective mosquito control program on DPC reservoirs to prevent the increase of malaria in the Catawba River basin, Boldridge scoured the Carolinas for substitute oils for use in the DPC mosquito control program. These substitute oils included used auto crankcase motor oil from service stations, gashouse oil (a possible by-product oil from coal gasification plants), pump drip oil (oil type unknown) and transformer oil. Other oil products may have also been used, but the vast majority of the material used in the program during 1942 and 1943 (based on records reviewed) was used crankcase oil from numerous service stations receiving a regular used oil pick-up service from Duke Power provided by a drayage contract with Cox Transfer [trucking] Co [4].

From conversations with previous employees associated with the mosquito control program, Boldridge continued to struggle with the needs of the program throughout the war years. Following the war, he upgraded equipment, established modest permanent facilities on the major mosquito control program lakes instead of tent camps, and expanded the program to accommodate the growth of Duke Power with the lease of Lake Greenwood (1966) and the building of Lakes Norman (1963) and Keowee (1972). Boldridge laid the foundation for the current state of the art mosquito control program on six of Duke Energy's largest reservoirs. These reservoirs are today the focus of one of the largest residential developmental booms in the regions history with Duke Power's mosquito control program providing a major public health/environmental amenity for lake homeowners and the lake using public.

Dr. Boldridge retired from Duke Power in the late 1960's having given more than 40 years of service to the company. He was a consultant on environmental matters on many occasions following his retirement and was very active in reviewing the mosquito control plans for L. Keowee during its construction and filling during the early 1970's. Frank Moon Boldridge, MD died in 1982. His pallbearers and honorary pallbearers were many of the past and current officers of Duke Power Company at that time. His portrait hangs in the lobby of the Environmental Center, a gift to DPC from the estate of his wife who died in 1996.

Ken Manuel
Mosquito Control Program Leader
August 8, 1997

## FOOTNOTES

1. W. S. O'B Robinson (Duke Power's Highest Employee Award is named in honor of Robinson) traveled to L. James in 1921 and lead a survey team of expert mosquito consultants to determine the extent of anophelene breeding in the lake and surrounding areas. A type written account reports some small amount of anophelene breeding in the lake. Most of the breeding, however, was associated with potholes, ruts, cow footprints, and swampy areas associated with streams above the lake project boundary. In 1996 the World Health Organization estimated there were five hundred million annual cases of malaria worldwide. Few cases are reported from the US and Canada due to extensive mosquito control by public and private agencies.
2. The focus of reducing mosquito breeding habitat when feasible and applying appropriate mosquito larviciding materials within reservoir project boundaries continues to this day. The Duke Power Mosquito Control Program is the oldest environmental program of Duke Energy, and one of the oldest, if not the oldest continuos corporate environmental program in the US. In 1998 this program will celebrate its 75th anniversary.
3. During the 1930's in response to the wide spread malaria problem, all the states in the southeastern US adopted public health regulations requiring impoundment's to be permitted and the impoundment owners to be responsible for controlling mosquito populations that may be produced in their water bodies. In one form or another (NC continues the permit process where SC now considers all impoundment's under a general public health nuisance regulation) both North and South Carolina require DPC to control mosquito populations breeding in its reservoirs.
4. More than 32,000 gallons of crankcase oil was used on Lake Wateree during the 1943 mosquito control season. No other oil type was use on this lake during this time according to the records reviewed. The other regular scheduled control operations were on Lakes James, and Wylie (a.k.a. Catawba Pond). In records reviewed to date, transformer oil from the Fishing Creek Station (hydro) was transported to the mosquito control camps at Bridgewater (L. James, NC), Oxford (L. Hickory, NC), and Tumbling Shoals (NC ?).

# Exhibit 4

1

# DUKE POWER COMPANY
# IMPOUNDMENT MOSQUITO CONTROL PROGRAM

MOSQUITO CONTROL PROGRAM TEAM:

Ken Manuel, Program Team Leader
Tommy Bowen, Asst. Program Team Leader
Robert Whiteford, Lake Greenwood Operations Team Leader
Tommy Gunter, Lake Greenwood Operations
Bob Barden, Consultant (L & B Services, Inc.)

DUKE POWER COMPANY
ELECTRIC SYSTEMS SUPPORT - ENVIRONMENTAL DIVISION,
SCIENTIFIC SERVICES - AQUATIC ECOLOGY

April 9, 1996

DUKE POWER COMPANY IMPOUNDMENT MOSQUITO CONTROL PROGRAM

I. Introduction

The DPC mosquito control program was organized in 1923 in response to the spread of malaria by the malaria mosquito Anopheles quadrimaculatus in the Catawba River basin.

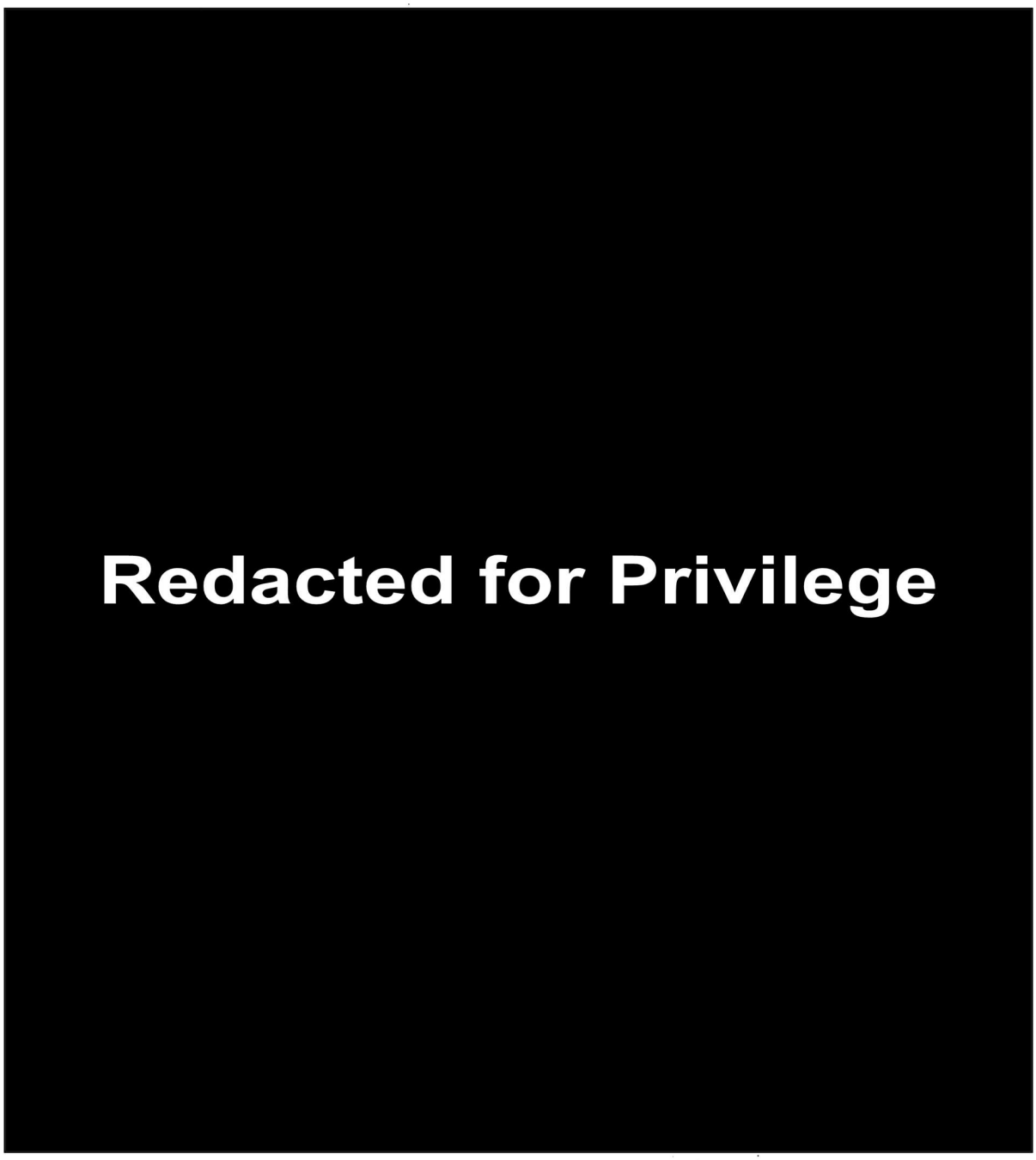
Today, malaria is no longer considered a major disease threat in North America due to ongoing mosquito control efforts and excellent public health prentitive medicine, however, by July 1995 four cases have been reported this year from Mecklenburg County. The Worls Health Organization reported over 400 million cases worldwide in 1994. In contrast, this is the equilivant of the entire population of the United States and Canada.

Various mosquito species breeding in and around Duke Power impoundments have the potential to transmit several devastating human diseases such as: several encephalitid (sleeping sickness) diseases, malaria, Dengue fever, and yellow fever, to name a few of the more commonly known diseases. The United States Centers for Disease Control considers the United States threatened by a Dengue epidemic. Some 50,000 cases have been reported in Central America during the 1995 Summer. A highly effective mosquito vector of Dengue and other mosquito borne diseases, recently introduced into North America from Asia, Aedes albopictus, is now well established in North Carolina. Mosquitos also commonly transmit diseases and parasites which affect animals such as dog heartworm.

Legal requirements in both North and South Carolina require impoundment operators to control mosquito populations which interfere or effect human activities or public health. To comply with the intent of these regulations, DPC maintains an active mosquito control program on its larger dendritic impoundments which have extensive or growing shoreline urbanization. The purpose of Duke Power's mosquito control program is expressed as follows,:

*"The purpose of the Duke Power Company mosquito control program is to provide a scientifically sound, cost effective program that achieves significant reduction in disease vector mosquito populations to below nuisance levels on project impoundments; to offer timely response to customer mosquito concerns; and to comply with all state agency mosquito control regulations."*

II. Legal requirements




Redacted for Privilege

[redacted]

III. Mosquito Abatement Program Description

A. Surveillance Techniques

1. Adult and larval mosquito surveillance surveys - Pre and post-control mosquito surveys are conducted to gather the data that will be used to determine mosquito population trends. Standard surveillance techniques are as follows:

   a. Adult light trap collections - traps are located next to suspected mosquito breeding habitat within project boundaries. They are operated twice a month during mosquito breeding season. Partnerships can be developed with full time lake homeowners to run traps, collect and ship samples.

   b. Adult resting shelters - Resting shelters are established near breeding habitat and used to monitor the seasonal abundance of reservoir breeding species.

   c. Larval collections - Pre and post control larval collections (larval dip collections) are made in selected larval habitat sites to monitor the seasonal abundance of reservoir breeding species. Lake resident complaints will be helpful in the identification of breeding sites.

2. Surveillance Results

   The results obtained from surveillance are needed to: 1) identify breeding habitats; 2) determine the onset of breeding and establish lifecycle rates; 3) estimate larval and adult populations; 4) determine species composition; and 5) provide other life

history data. This information is used to direct abatement spray crews to the appropriate mosquito breeding areas and time the control measures for maximum efficacy. The larval collections are made at strategic locations throughout the breeding season and will provide information used to determine the success of abatement measures, timing of additional treatments, and determine the end of the breeding season.

The adult light trap collections and resting shelter collections will provide information about the actual nuisance populations of adult mosquitoes. The larval collections may not be effective in identifying all the available larval habitat or the effectiveness of the control program.

Further the adult and larval collections are used to determine if the mosquitoes are impoundment or non-impoundment breeders. If mosquitoes are non-impoundment breeders, then customer complaints will be handled through a site visit by a staff member. The staff member will explain that DPC only controls impoundment breeders and will guide the customer to an understanding of basic mosquito habitat identification and homeowner control measures.

B. Mosquito Abatement Techniques - The following standard mosquito abatement techniques may be applied in specific situations and or circumstances as necessary to control nuisance mosquito populations within impoundment boundaries.

1. Larval control - BTi (a biological pesticide specific to mosquito larvae) applications to suspected larval habitats from specially rigged shallow draft spray boats is the normal mode of pesticide application in Duke Power impoundments. In addition, BTi may be applied by backpack sprayer and dry briquette depending on local need.

2. Adult control - Adult control activities will not normally be conducted. During a mosquito vectored disease outbreak, adult control activities will be contracted to a qualified consultant.

3. Source reduction - The elimination of mosquito breeding habitat is a major focus of a mosquito control program. This may include, but not limited to: selective clearing of shoreline and littoral zone vegetation, draining low areas, ditching and

ditch maintenance, filling, dredging, or draining "cut-offs", and the periodic removal of debris and flotage from impoundments.

4. Water level manipulation - Water level management of impoundments may consist of annual surcharge to strand flotage which provides protection to larvae during constant level operations or fluctuation and recession of about 0.1 foot per week, during the mosquito breeding season.

C. Summary of Mosquito Abatement and Additional Required Activities

In summary, two person control teams operate specially equipped mosquito pesticide spray boats. These boats travel along specified reservoir shoreline areas and apply pesticide (BTi) to mosquito breeding habitat within impoundment boundaries as identified through the surveillance program. The spray boats operate from May to October of each year. Control teams are composed of experienced seasonal employees, many of whom have been working for DPC as pesticide applicators for many years. The program has two operation centers: Lake Norman and Lake Greenwood (TABLE 1).

The L. Norman mosquito program staff is composed of one program leader/scientist, one maintenance and temporary employee supervisor, and fourteen seasonal temporary employees assigned to Lakes James, Norman, Wylie, Wateree, and Keowee. A separate mosquito control program on Lake Greenwood includes one program supervisor, one senior technician, and two seasonal temporary employees.

During mosquito season both programs together employ 20 individuals. During the remainder of the year there are four full time employees in the program, two stationed at the Lake Norman mosquito operations and two stationed at at the Lake Greenwood mosquito operations.

In addition to mosquito control activities the mosquito control program assists in the removal of hazards to navigation (floating debris, trees, abandoned structures, etc.) and trash within impoundment project boundaries on Catawba River impoundments. Mosquito spray crews will identify hazards, tie hazards off to the shoreline and report the location to ESS-Lake Management for removal. Teams also pick up containers and other trash that can contain water and serve as mosquito breeding habitat. Approximately 1000 large bags of trash were removed from the program lakes during the 1995

program year.

D. Vehicles/Boats - One vehicle is utilized but not limited to the collection of adult and larval samples, to pull program boats, pull logs from lakes, transport pesticides/supplies, and travel to investigate customer complaints/concerns.

Nine boats are used in the program. Seven full time spray boats, one survey boat, and one backup spray boat.

E. Communications - All boats and trucks are linked by mobile phone.

F. Safety

1. Chemical storage - Storage of all program chemicals in a NCDA approved storage facility.

2. Boat itineraries - Search and rescue response is based on predetermined daily schedules supported by in-boat phones.

3. Boat handling training - DPC training

4. Pesticide handling - DPC training

5. Pesticide container disposal - local certified landfill.

G. Pesticide Applicator Training and Certifications - Key program personnel will obtain all state required certifications and training to maintain a Certified Pesticide Applicators License in Aquatic and Public Health categories in both North and South Carolina.

H. Laboratory support

1. Taxonomy - Taxonomic specialists will conduct taxonomic analysis of collected mosquito specimens and summarize findings.

2. Pesticide residue analysis - Contract as needed.

I. Public Education - Public education about the DPC mosquito abatement program will be highlighted in brochures, news releases, bill inserts and other media. This information will inform customers about program activities, homeowner mosquito sanitation, and other related vector control and public health information

dealing with mosquitoes. Presentation materials will be developed for professional as well as lay audiences, e.g. homeowner associations, service clubs, and school groups.

J. Program Facilities - Facilities will be required to maintain and store program equipment (boats, pumps, motors, etc.), fabricate special program equipment, store pesticides, collect and remove floating debris (trees, abandoned structures and trash), and maintain program records.

K. Program Budget - A budget information will be outlined in an annual budget summary.

L. Annual Report - An annual report will summarize program highlights, program modifications, and present recommendations. The annual report will include surveillance data and analysis, and other data associated with program operations (These data may include: impoundments/acres treated, complaints investigated and significant resolutions, source reduction acreage, training accomplishments, license recertification credit earned, presentations, and other activities highlighting program accomplishments.)

M. Contract consulting services for mosquito control technology are provided by L & B Services, Inc.

TABLE 1. Mosquito Control Program Elements by Impoundment Control Area

| Lake | Structure | Boats | Employees | Comments |
|---|---|---|---|---|
| **Catawba River Operations** | | | | |
| James | boathouse | 1 | 2 | TP*Spray Crew/HDR** |
| Norman | boathouse | 3 | 6 | TP Spray crews/HDR |
| Norman | shop/storage | (1 truck) | 2 | Admin./maintenance/ complaint investigation |
| Wylie | boathouse | 1 | 2 | TP Spray crew/HDR |
| Wateree | boathouse | 1 | 2 | TP Spray crew/HDR |
| **Kweowee-Toxaway Project Operations** | | | | |
| Keowee | boathouse | 1 | 2 | TP Spray/HDR |
| **Lake Greenwood Operations** | | | | |
| Greenwood | boathouse*** | 2 | 3 | Spray/HDR/tree removal |
| Greenwood | shop/storage | - | 1 | Admin./maintenance/ complaint investigation |

* TP = Tempoary Employee
** HDR = Hazardous Debris Removal
*** Boathouse facility leased from Greenwood County.

Document revised: April 10, 1996

# Exhibit 5

**THE DUKE POWER COMPANY RESERVOIR MOSQUITO CONTROL PROGRAM: SEVENTY FIVE YEARS OF SERVICE**

Duke Power Company is celebrating its 75th year of mosquito control operations on its major reservoirs. The Duke Power mosquito control program was organized in 1923 in response to the spread of malaria by the malaria mosquito Anopheles quadrimaculatus in the Catawba River basin. James B. Duke, the founder of Duke Power Company hired a young medical doctor, Frank M. Boldridge, from the US Surgeon General's office to develop and head the company's efforts to control malaria along the Catawba River. At the time Frank Boldridge was uniquely qualified for this challenge. He was an expert in dealing with malaria and transmission due to his study and treatment of malaria among US solders in Europe as an army doctor during WW1.

"Doc" Boldridge was Duke Power's Head of Health and Sanitation, and directed the mosquito control program some 40 years before his retirement in 1963. He served as a mosquito control consultant to Duke Power for many years, dying in 1981. Following Boldridge as manager of mosquito control, was John Lyon who died after a few short years leading the mosquito program.

The next two program managers are well known to regional mosquito control workers. George Swearingen, a South Carolina native, came to Duke Power in 1966 and retired in 1988. Bob Barden, also a South Carolina native, came in 1972 as assistant program manager and then was manager from 1988 until his retirement in 1996. Bob, President of L & B Services, is a mosquito control consultant working for Duke Power during the mosquito control season. The primary goal of the Duke Power mosquito control program is to suppress major mosquito populations that may breed within Duke Power operated impoundments that interfere or effect human activities or impact the public health.

From May 1 through October 31, two person crews operate specially equipped mosquito larval pesticide spray boats on six reservoirs. These crews cover some 1700 miles of shoreline every ten days applying the larvicide Bti and Altosid to appropriate mosquito breeding habitat. The reservoirs with daily operations are Lakes James, and Norman in North Carolina. Lake Wylie on the NC/SC state line, and Lakes Wateree, Greenwood, and Keowee in South Carolina.

In addition to larviciding, boat crews pick up floating and shoreline stranded containers such as soda cans, bottles, bait cups, and auto tires. The total amount of potential breeding containers and trash removed from these reservoirs in 1997 was estimated to be about 27,000 lbs.

The ongoing Duke Power mosquito control program started by Frank Boldridge is one of the oldest, if not the oldest continuously operated environmental program by a corporation in the United States. In July 1998, a newly constructed central mosquito control facility will be dedicated on Lake Norman, NC. This new facility composed of two floating boathouses, and a maintenance shop-office complex will be named the Frank M. Boldridge Lake Norman Mosquito Control Facility in honor of this early pioneer of mosquito control in the Piedmont Carolinas.

Ken Manuel
Mosquito Control and Aquatic Weed Management
Program Leader
(704) 875-5424

# Exhibit 6

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF SOUTH CAROLINA
COLUMBIA DIVISION

Clyde Marcus Jones, II, on behalf of himself and all others similarly situated,

Plaintiffs,

vs. Case No. 3:24-cv-01281-MGL

Duke Energy Corporation and Duke Energy Carolinas, LLC,

Defendants.

VIDEOTAPED TELECONFERENCE
DEPOSITION OF: BOB BARDEN
DATE: Friday, March 13, 2026
TIME: 9:10 a.m.
TIME ENDED: 12:40 p.m.
LOCATION: Duke Energy Operations Center
217 Craigh Manor Road
Lancaster, South Carolina
REPORTED BY: YVONNE R. THURSTON-BOHANNON
Registered Merit Reporter,
Certified Realtime Reporter

University of South Carolina. When I finished there, I went back to -- got my master's degree at Eastern Tennessee State University in Johnson City, Tennessee.

Q. What degree did you get from the University of South Carolina?

A. It was a BA degree in mar -- marketing.

Q. What year was that?

A. '64.

Q. Then you got your master's at East Tennessee State?

A. Right, uh-huh, in Johnson City.

Q. What was your master's degree in?

A. Environmental health.

Q. What year was that?

A. '71.

Q. In addition to getting those degrees from University of South Carolina and from East Tennessee State, have you ever received any other registrations or certifications?

A. Yeah, I'm a registered sanitarian. I was. I let it lapse now because I'm too old to be in there, but in the state of South Carolina, the state of North Carolina and the National Association of Environmental Health Workers.

Q. What did you have to do to get a certification as a registered sanitarian?

A. Finish different grades of school, short courses, and be able to demonstrate your knowledge of the different programs.

Q. And did you ever hold any other certifications or registrations in addition to that?

A. Well, different safety certifications, you know, that -- that Duke required us to get, you know, but not -- you know, CPR and that kind of stuff, medical stuff for safety.

Q. And have you ever had any additional courses after your master's program in insects, mosquitos or anything like that?

A. Oh, yeah. I went to -- took a short course in Florida -- well, it wasn't short. It was two weeks -- on mosquito identification at University of Florida, and I went to Atlanta two or three different times taking different short courses on mosquitos and other insects.

Q. Do you know what the North Carolina Mosquito and Vector Control Association is?

A. Oh, yes, sir. I was president one year of that association.

Q. Tell us what that association -- the North Carolina Mosquito and Vector Control Association, tell us what that is.

A. It's a group of mosquito control workers that get together annually, and then they have newsletters put out on updates of different pesticides or herbicides, methods of applications.

Q. When were you president of the North Carolina Mosquito and Vector Control Association?

A. It had to be -- I don't know for sure, but I would say '77 or '8, somewhere back in there.

Q. I'd like to just talk a little bit about your job history. So --

A. What now?

Q. Your job history.

A. Job history, okay.

Q. And I'm glad that you asked me to speak up.

A. Okay.

Q. So if there's anything that you're not hearing --

A. Okay. Well, I'll have to ask you again because I am hard of hearing.

Q. Yeah, I'm not at all upset --

A. Okay.

Q. -- if you have to ask me to repeat myself --

A. Okay.

Q. -- so don't worry about that.

Job history is what I wanted to talk about. What was your first job coming out of grad school -- no, let me go back.

What was your first job coming out of University of South Carolina?

A. I worked at -- I was assistant manager at the West Columbia sports shop in -- in Columbia, boat and motor outfit.

Q. Where did you work after that?

A. I went to Lexington County health department in -- which is the county next to Columbia. I worked as an environmental health worker there, environmental sanitarian they called it, inspecting restaurants and septic tanks and dairy farms and everything the environmental health group does.

Q. Was that a position with Lexington County, the county government?

A. The county, yeah, uh-huh.

Q. When did you start there in the environmental department at Lexington County?

A. '67 I think. And I left there -- they transferred me to the state Board of Health in Columbia.

Q. When did that happen?

A. Let's see. I went to -- back to school in -- somewhere '66, '67, somewhere in that neighborhood.

Q. And when you were at the South Carolina Board of Health, were you in any particular department?

A. I worked for the director of environmental health, Mr. Carl Fox, and before him, Mr. Charles Corley. I worked for them, and more or less I call it troubleshooting. If they had a problem in another county or somewhere, I would go listen to them and try to get a resolution of the problem they were having.

Q. How long did you work at the South Carolina Board of Health?

A. Let's see. I went back to school in '70. I was still there in '70. And I -- it was end of December or the first of January of '73 I started with Duke Power.

Q. Okay. Who hired you at Duke Power in January of 1973?

A. Well, my immediate boss was George Swearingen at Duke.
Q. Had you known him previously?
A. Oh, I had known him -- I had known him for you years through the South Carolina Environmental Health Association, South Carolina Mosquito Control Association.
Q. So how did it come about -- if you could just tell us how it came about that you got hired on at Duke.
A. Well, he was wanting a -- a qualified assistant in his department, and he knew that I had worked with mosquitos and other environmental health problems over the years, and I -- I fit the bill, I reckon, so he offered me a job.
Q. And when did you actually start? Was it January of 1973?
A. Correct. It was January '73. I don't know if it was the 1st or the 2nd. The first week anyway.
Q. And what was your first job there at Duke starting in January 1973?
A. Well, I was assistant manager of the environmental health department, but you talking about daily duties or -- or --

Q. So, yeah, your title was assistant manager of environmental health?
A. Right.
Q. What were your daily duties when you first started --
A. Oh.
Q. -- in January?
A. Oh, when I first started, I had to learn the system. I went with the different -- what the job was on -- Mr. Swearingen was on. Doc Boldridge went with us with a few times, and he was getting on up in age then. I worked with the district people in Duke, district managers. I went to different steam stations and hydro stations.
Q. You mentioned Dock Boldridge. Was that Dr. Frank Boldridge?
A. Right. Frank Moon Boldridge. And he was getting real elderly whenever I came on, but he had run the program since '23 I believe. I believe it was '23 or '24. And he started the mosquito control program for Duke back then.
Q. So what sort of activities did Mr. Swearingen have you do to get you trained and oriented?
A. Visit all the lakes, visit all the

were breeding in the lake basin or if they were breeding in an artificial container at her home and explain to them how the mosquito cycle works and -- I -- I met numerous residents around all the lakes.

Q. And how frequently would you have that type of personal interaction with neighbors around the lakes?

A. Several times a week sometimes and several times a day sometimes. It just depends on the -- the weather and the situation, you know.

Q. And -- and these interactions with the neighbors around the lakes, were you able to understand whether they were appreciative of what Duke Energy --

A. Oh, they were very much appreciative, yeah.

MS. FICKLING: I -- I'm so sorry. Objection to form.

BY MR. LONG:

Q. I'll just ask you to explain a little bit more about that. Why do you say that the people around the lakes were appreciative of the Duke Energy mosquito control program?

MS. FICKLING: Objection to form.

Go ahead.

BY MR. LONG:

Q. You can go ahead.

A. Okay. Well, one thing, it would reduce the nuisance mosquitos after our conversation. If I found they were breeding on their property or the lake property, I could direct the crews to larvicide this cove or this area, aquatic plant, you know, habitat within that -- that area.

In fact, one guy I remember I was going on vacation to Florida one time, and there was a guy on Lake Wateree. He and his wife -- I didn't know they were going or anything. We happened to be at a rest stop down in this end of Florida and I heard somebody say, "Bob," and I looked around and it was that guy that lives on Lake Wateree. He recognized me, you know. Of course he wanted to know where I was going. And I introduced my family to him, you know.

He said, "I appreciate all y'all do, you know, around -- around the lake for us, the residents."

That's just one example. But he's dead now. That old man, he died, I don't know, 20, 25 years ago.

Q. This -- this resident that called out

to you --

A. Yeah.

Q. -- in the rest stop in Florida --

A. Uh-huh.

Q. -- that lived on Lake Wateree, tell me more about what exactly you recall him saying.

A. What --

MS. FICKLING: Object to the form.

BY MR. LONG:

Q. Yeah. What do you recall him saying?

A. Wait a minute. Why I was what now?

Q. Yeah, what did he say to you? What did he say to you?

MS. FICKLING: Objection to the form.

THE WITNESS: Oh, he just said --

MS. FICKLING: Go ahead.

THE WITNESS: -- "Where are you going? You know, where are you headed?"

And I told him we were going down to Disney World, and he said -- I forget where he said they were going. Somewhere down below there, Miami or somewhere.

And we just got to talking about things back home, and he said, "Any time you need anything, come to the house. If you on the lake

and break down, come to the house and I'll try to help you," or -- or whatever, you know. And he was appreciative of the -- the mosquito crew down there that did the larviciding for us.

BY MR. LONG:

Q. Were there other people around the lakes that would try to work with you or the mosquito crews to let the mosquito crews do their jobs?

A. Sure. Yeah, there were several -- there was a lady up on the Singleton Creek that it was almost an inaccessible place from the lake to get to the area that we needed to spray, but it was still within the lake boundary, the high watermark, and she said, "Any time y'all need to come park in my yard, if you need water, the spigots are right there. The well is on all the time. Go do -- do your spraying, do whatever you need to do," and --

Q. I think you told me a story at one point about somebody mentioning to you that he was concerned about hopping mosquito tadpoles.

A. Yeah.

Q. Do you remember that story?

A. Yeah. I had a call --

MS. FICKLING: Objection -- I'm so

And he was appreciative of -- of that. Then I never heard anymore about the hopping mosquito tadpoles after that, but I thought that was funny.

BY MR. LONG:

Q. Was it unusual for you to be getting calls from neighbors from lakes like Lake Wateree asking for the spray?

A. Oh, yeah. Yeah. If they didn't see the boat -- they might not have been home or they might have been in the back of the house when the spray crew came by. But we didn't spray everywhere on the lake. We only sprayed select areas of mosquito habitat and -- but still when the boat went by in the early days, they were spraying -- they sprayed water all the time and we could blend in the insecticide as we needed it in a certain area. So we may go a mile up the shoreline and be spraying water.

Some people would think, "Hey, man, they're spraying the whole shoreline," you know, but, in fact, we were just spraying water because the little engines -- I don't know if you're familiar with a small gasoline engine, but if it running hour after hour, they get hot, and if you turn it off, it's hard to get started back up,

sometimes.

So we would -- we learned just to run the spray engine pumping water. When we got to the area that needed larvicide, we had a valve we just -- that the crews would just crack that valve and blend in the -- the insecticide with the water, you know. And if they -- a lot of the landowners or property owners, if they didn't see us spraying, they would call, you know, "Last week -- y'all didn't come by last week," but it could be they had gone to the grocery store or they had gone back to the bathroom and didn't see us when we came by, I don't know, but we had a routine we tried to get around every eight to ten days to break the lifecycle of mosquito larva.

Q. How frequently do you recall getting these messages or telephone calls from neighbors asking for the spraying for mosquitos?

A. Of course during the summer it was more. And I'd say July and August were the biggest times that people would -- would call in. But, there again, it -- it wasn't always lake breeders, and then some weeks we'd be -- we'd get a call a day, sometimes two or three a day to come -- come check.

The weather had a lot to do with how many calls we got. The hotter it was, the kids out of school, all of them on the lake playing, the parents would, you know, be more likely to call in. The children wouldn't call, but their parents would or grandparents would.

Q. Sure.

So you've told us about the ways that the mosquito control program at Duke would work with the neighbors to the lakes. I want to shift to a different topic.

A. Okay.

Q. Did you all in the mosquito control program also work with any of the state officials?

A. Oh, yeah. Yeah.

Q. How so?

A. Dr. Elliott Williams was in Columbia, the state Board of Health, and he was an entomologist for South Carolina over the whole state, and he would at times come ride the boat with me to look at the areas. He went at least once a year to ride all the lakes in South Carolina for me to show him the areas we were spraying and how were we doing it.

And Noah Newton was probably the last

MS. FICKLING: Objection to form.
BY MR. LONG:
Q. Go ahead.
MS. FICKLING: Go ahead.
THE WITNESS: We had a letter -- or George Swearingen had a letter when I went to work and showed it to me from the commandant of the Coast Guard on approving us using diesel fuel for a larvicide. It -- so we had -- he had that letter. I can still see it on the -- up above his visor in the front of that old green Chevrolet he used to drive.
And if people would question, "Well, why you spraying oil on the water?" here's a letter from the commandant of the Coast Guard authorizing us to do that. It was the best mosquito larvicide known at the time.
BY MR. LONG:
Q. And -- and what about the -- the state health officials in South Carolina, for example?
A. Oh, yeah. Elliott Williams was -- he was aware of what we were using. Frank Arnold before him. We were aware of all the methods we were using.
Q. Do you know who Dr. H. W. Brown was?

Does that name ring a bell?

A. Yeah, Brown, he was one of our consultants.

Q. Tell -- tell us about what he did, Dr. Brown, as a consultant.

A. Now, George -- he was on board as a consultant before I came to work, but he would come down -- he lived in Kentucky as well as I remember, and he would come down and spend a week -- at least a week, sometimes two weeks with George and I, and he wanted to go on all the reservoirs, the ones that we sprayed and the ones that we didn't spray.

He would want us to ride in the different areas that we were spraying, and he would give us ideas or his suggestions on, "Yes, that's a good idea to do it like you're doing it."

But very few areas did he not agree with us on what needed spraying. And he would take samples of mosquitos, mosquito larva and verify what we were seeing, make sure we were identifying them correctly.

Q. And did you ever discuss with him what sort of product was being sprayed to control the mosquitos?

A. Oh, yeah. Well, back in the early

days, see, all it was was number two diesel fuel, and then it graduated because -- and things have changed I'm sure now from whenever I left the company. They got new developments every year, you know, a new product comes out, and they -- they were familiar with what we used. They went along with BTI -- change to BTI.

We even used -- there was a product called Arosurf that we used briefly, not a whole lot of that because of the cost of it. That was known about the time and it was going from diesel fuel to BTI. There was a prod -- like I said, Arosurf was one.

Altosid, we used some of that. It comes in pellets. I don't know how to explain it. Little -- bigger -- about a little quart. But they were dark brown, and they had them going for so many square feet of surface area. You'd throw in a long and slow -- slow release herbicide, but we didn't use this out in the open water. It had to be in a cutoff or a pothole or something like that.

We could put one tablet in a pothole as big as this room and it would control the larva for -- till the water drained completely out or up to two weeks, and then we'd go back and just throw

them wiggling in the water, and they get to the top and rest.

What they're doing then is putting the air tube up into the oxygen above the lake water or wherever the water source is, but that breathing tube is covered, if you put them under a microscope, with microscopic hairs on them, and as soon as that larva penetrates that sheen on the water, it clogs all that -- hairs just clog and a mosquito can't breathe. It suffocates him, and that's what kills the larva.

If you kill the larva, he can't pupate, and if he can't pupate, he can't emerge as an adult.

Q. So what exactly is it about the number two diesel fuel that when it gets sprayed that fits into that process?

A. It puts --

MS. FICKLING: Objection to form.

Go ahead.

Basis.

Go ahead.

BY MR. LONG:

Q. Go ahead.

A. Okay. It puts a thin film on the water

that will stay there and depending on the weather -- if it's hot, June, July, August, it will be gone in a couple of hours. It evaporates. But in that -- in the meantime that mosquito larva that's in the water is going to come to the top to breathe and it goes -- stick his air tube up into that diesel fuel and it's going to clog all of the hairs, just (indicating). It will shut down its breathing mechanism.

Q. Does it suffocate?

A. Suffocate the mosquito larva, yeah, uh-huh.

But the BTI now worked in a different way. It was a stomach poison just for mosquitos. You could take the BTI and put a handful in a beehive and it won't affect the bees at all, but mosquito larva -- it's specific for mosquito larvas.

Q. Okay. So I want to go back to, you know, what you were doing in your role on the mosquito control program starting back in the early days of 1973 when you were --

A. Uh-huh.

Q. -- working then. What was the spraying season?

the mosquito control program?

A. We used those little Altosid pellets, like I said, we'd throw out at wash-ups or contained area. So a water pool as big as this table or this room. Altosid, A-L-T-O-S-I-D, I believe is the pellet.

Q. So other than the Altosid pellet, the number two diesel fuel, and the Arosurf, was there anything else to your knowledge that was used in the mosquito control program?

A. No, sir.

MS. FICKLING: Objection to form.

BY MR. LONG:

Q. Did you ever use any material that you understood had PCBs in it --

A. Uh-uh.

Q. -- as a product in the mosquito control program?

A. No, sir.

Q. So the -- we talked about the -- the budget process --

A. Uh-huh.

Q. -- for getting the budget money together for the product that was used. We talked about the delivery --

didn't matter what time of day or night. George and I rotated days or weeks of who would get to call at night, you know. I'd hate to hear the phone ring after midnight.

So I -- I would tell my wife, I said, "Well, that must be another oil spill somewhere." Sure enough.

Q. Was this for any kind of oil or just certain kinds of oil?

A. Any -- any kind of oil that -- that hit the ground, in a ditch or -- that could put a sheen on the water -- on the navigable waters of the United States.

Q. So here's my question. If you had to report any small amount --

A. Uh-huh.

Q. -- like a teaspoon as you --

A. Right.

Q. -- just mentioned, any kind of oil being a sheen on the water, then what's the difference between that and spraying number two diesel fuel in your mind on the lake?

A. Well --

MS. FICKLING: Object to the form.

THE WITNESS: -- George had a letter

from the commandant -- I think that was the name of one of the top dogs in the Coast Guard. He had a letter authorizing Duke Power to spray number two diesel fuel as a larvicide for mosquitos, whatever we needed in certain areas. And George kept that area above his visor, his car right there, so if anybody was to say, "Hey, why are y'all spraying oil on the water? I see a sheen," he would pull a letter out that "So-and-So gave us express permission -- permission to use number two diesel fuel."

MR. LONG: Thank you, Mr. Barden, for your time. I have no questions. Counsel for the plaintiffs, Ms. Fickling, is likely to have questions for you.

THE WITNESS: Okay.

MS. FICKLING: I do. So why don't we take just a little bit of a break and we'll figure -- we'll figure the volume out.

THE WITNESS: I'm sorry, y'all might have to interpret that for me, but I can't understand.

MR. LONG: Yeah, we're off the record.

THE VIDEOGRAPHER: The time is now 11:30 -- 11:53 -- 33. Excuse me. We are off the

CERTIFICATE OF REPORTER

I, Yvonne R. Thurston-Bohannon, Registered Merit Reporter, Certified Realtime Reporter, and Notary Public for the State of South Carolina at Large, do hereby certify:

That the reading and signing of the foregoing deposition by the witness is waived.

That the foregoing transcript was taken before me on the date and at the time and location stated on page 1 of this transcript; that the deponent was duly sworn to testify to the truth, the whole truth and nothing but the truth; that the testimony of the deponent and all objections made at the time of the examination were recorded stenographically by me and were thereafter transcribed; that the foregoing deposition as typed is a true, accurate and complete record of the testimony of the deponent and of all objections made at the time of the examination to the best of my ability.

I further certify that I am neither related to nor counsel for any party to the cause pending or interested in the events thereof.

Witness my hand, I have hereunto affixed my official seal March 18, 2026, at Columbia, Richland County, South Ca



Yvonne R. Thurston-Bohannon
Registered Merit
Reporter, CRR
My Commission expires
May 14, 2035

# Exhibit 7

Key Messages Corporate Communications

INTERNAL USE ONLY

## Termination of Duke Energy's Mosquito Control Program | November 2016

### Background

The Duke Energy reservoir mosquito control program, which began in 1923, ceased operating on Oct. 27, 2016. For 93 years, seasonal employees provided mosquito control services on reservoirs located primarily on the Catawba River. Over the past decade, reservoirs in the program included lakes James, Norman, Wylie, Wateree and Keowee.

### Key Messages

- Duke Energy regularly reviews its operations to ensure we are as efficient as possible and can continue to offer affordable rates and services to our customers.
- As part of this review, we have decided to change this historical program, which operated on only a few lakes.
- We will re-focus our resources on mosquito education efforts across Duke Energy's entire service area in the Carolinas -- leveraging our resources more broadly.
- Duke Energy's mosquito control program began as a service to the community in 1923 on certain Duke Energy reservoirs that support our power plant operations.
- Temporary seasonal employees applied larvicide on these lakes (typically shoreline pools) by boat. These efforts did not address backyard container breeders (like the Asian tiger mosquito) that pose a public health threat. (**If asked:** 14 seasonal employees)
- Surveys indicate 66 species of mosquitoes in the Carolinas and all breed differently.
- There are two species of mosquitoes known to transmit the Zika virus: yellow fever mosquito and Asian tiger mosquito. These are container breeders, more likely to be found in someone's backyard. (The Asian tiger mosquito is found in the Carolinas.)
- **If asked:** On a case by case basis, we could cooperate with a state health agency to address a Zika case on or near one of our reservoirs. We would identify mosquito breeding shoreline habitat (stranded containers and water holding debris) where those circles overlap our reservoir shoreline and treat accordingly using boat-based equipment. (This is what we did for the Tega Cay Zika case in York Co. earlier this summer.)

Contact: Kim Crawford | 919.546.6305 | kim.crawford@duke-energy.com.

# Exhibit 8

**DRAFT**

# Duke Power Mosquito Control Program: Approximate Program Costs and Cost Reduction Options

## INTRODUCTION

Established in 1923, the Duke Power Reservoir Mosquito Control Program today continues to provide scientifically based mosquito larval control to several urbanized reservoirs operated by the company. Operating within the project boundaries of Lakes James, Norman, Wylie, Wateree, Keowee, and Greenwood, the program finds it's jurisdiction based on state impoundment permits, state public health and nuisance regulations, and in the case of L. Greenwood, lease agreements with Greenwood County.

The program operates from May 1 to October 31 of each year, corresponding to the majority of the annual mosquito season of the Carolinas. Each lake has at least one mosquito control boat manned by a crew of two. Lake Norman, due to its large size and extensive shoreline, has three mosquito control boats assigned. Crews are composed of annually rehired temporary employees that work six months during the mosquito season.

Crews apply state and federally approved larvicides to mosquito breeding habitat under the direction of two (one exempt and one non-exempt) full time employees. Both of these employees are licensed pesticide applicators as required by North and South Carolina regulations.

On Lake Greenwood, a program mandated by lease agreement, one boat crew sprays for mosquitoes (under the license of one crewman) and one boat removes floating logs and other hazards to navigation and well as conducting FERC dam related activities.

Each boat crew is assigned a control route that corresponds to mosquito breeding habitat with the requirement to apply larvicides to known and discovered breeding habitat within the ten day breeding cycle of target mosquito species. Breeding habitat not within a one mile proximity of human habitation or recreational area are not sprayed. Current expanding urbanization due to real estate marketing and development on all the reservoirs continue to expand spray routes and route cycle time. This expansion may require the addition of spray crews to reduce cycle time to within the ten day breeding period.

Crews are involved in daily shoreline source reduction of mosquito breeding habitat (containers) removing 47K pounds from the program reservoir boundaries in 2000. Crews also support Lake Management operations by securing and reporting hazards to navigation.

**GENERAL PROGRAM ATTRIBUTES AND LAKE ANNUAL BASE COSTS (ABC)***

| Lake | Crews (2-temps ea.) | cycle time Days | 6 mo. Temp-Pay/crew $ | + | boat & trailer $ | **ABC TOTAL = $** |
|---|---|---|---|---|---|---|
| James | 1 | 7 | 23.8K | | 3.2K | **27K** |
| Norman | 3 | 9 | 71.4K | | 9.6K | **81K** |
| Wylie | 1 | 12 | 23.8K | | 3.2K | **27K** |
| Wateree | 1 | 10 | 23.8K | | 3.2K | **27K** |
| Keowee | 1 | 8 | 23.8K | | 3.2K | **27K** |

*Lake annual base cost (ABC) = is labor + boat/trailer per lake

The following are the larger program budget items:

2001 Budget Reductions to date = **$71K**, outside expert contract with L&B Services

Total annual Gas for 10 boats = **$6.7K**

Facilities Maintenance Charges (annual $): **Total = $19.4K**
a. Norman- 2.7K
b. Keowee- 0.7K (direct charge)
c. Wateree – 6.5K +1.5K lease from CRI
d. Wylie- 0, to be constructed in '01 (est. same as Wateree)

Vehicles Charges (annual $)**: **Total = $14.8K**
a. Excurison- 9.7K
b. Line Truck (6 mos.)- 5.1K

Boats/trailers (annual $)** **Total = $32K**
10 boats = 23K
10 trailers = 9K
** Annual chargeback for 2001 0nly. 2002 costs will be direct billed.

Pesticides = **$6423**

Cell phones/yr = **$1920**

General operating supplies = **$6404**

**OPTIONS**

A. **Option I: Reduction of the mosquito control program by one or more lakes.** Savings of approximately $27K (2 man crew & boat) per lake.

The following list ranks the current program lakes from the least to the most urbanized.

1. James* – 1 Crew, approx. savings $27K (labor & boat)
2. Keowee – 1 Crew, approx. savings $27K
3. Wateree – 1 Crew, approx. savings $27K
4. Wylie – 1 Crew, approx. savings $27K
5. Norman – 3 Crews, approx. savings $27K to $81K

* L. James shoreline and vicinity currently under intensive development.

**Discussion**

Positive outcome – reduction of program O&M costs.
Negative outcome – mosquito control complaints by citizens to NC Public Health Pest Management (holder of DPC impoundment permits) or SCDHEC, depending on the lake. Possible citations and fines for violation of NC and SC impoundment nuisance regulations and state agency referral of public health concerns to FERC. Negative impact on Catawba River relicenseing, both Option I & II.

B. **Option II – reducing the length of the DPC mosquito control season**.

1. One month reduction (7 crews*)= $25,715
2. Two month reduction (7 crews)= $51,430
3. Three month reduction (7 crews) =$ 77,145
4. Four month reduction (7 crews) = $102,860

* $3,840/two man crew/4 week month; Greenwood not considered because of lease agreement.

**Discussion**

Program length rationale: The current mosquito control program runs from the first of May to October 31 of each year. Mosquito emergence begins when the reservoir surface water temperature reaches approximately 50 degrees F. In general, for Lake Norman this corresponds to mid-March. At this season dusk and night time temperatures are usually below mosquito flight temperature thresholds. As a result of this and because mosquito population dynamics resembles a bell-

shaped curve, the control program begins (May 1) approximately 4 to 6 weeks following early mosquito emergence.

The program extends into the early fall when falling dusk and night time air temperatures prevent mosquito flight. In any given mosquito season warming trends could allow mosquito emergence and flight to begin earlier and extend later in the year. This has been the situation for the last three years.

The DPC mosquito control season has not been extended to meet warming trends because control crews (Duke Power temporary employees) can not be on the payroll for more than six months each year.

Positive outcome – reduction of program O&M costs.
Negative outcome – reduction of the mosquito control season and resulting uncontrolled mosquito population will cause complaints by citizens to NC Public Health Pest Management (holder of DPC impoundment permits) or SCDHEC, depending on the lake. Possible citations and fines for violation of NC and SC impoundment nuisance regulations and state agency referral of public health concerns to FERC.

Comment: In the mid-1980s South Carolina Public Service Authority (Santee-Cooper) significantly reduced its mosquito control program on Lakes Marion and Moultrie (170,000 acres total). Following local citizen complaints to SCDHEC and FERC, FERC mandated a review of the public health implications of Santee-Cooper actions. This review resulted in a FERC order mandating a full service vector control program. The cost of the mandated program in its first year of operation almost doubled the original program cost. (Pers. Com. John Inabinet, Santee-Cooper Environmental Laboratory Director, Santee-Cooper, April 2001).

# Exhibit 9

## I. Invasive Aquatic Plant (weed) and Mosquito Control Services

### A. Invasive Aquatic Plant Control Program

1. Using early detection and rapid response techniques program staff has successfully managed aquatic invasive weed infestations (e.g. hydrilla, parrotfeather, Brazilian elodea, creeping yellow primrose, alligator weed) on lakes, James, Hickory, Lookout Shoals, Norman, Mountain Island, Wateree, Belews, and Keowee.
2. Management plans are now being developed to control a newly identified infestation of hydrilla in Lake Wylie.
3. Management techniques include aquatic herbicides, water level manipulation, and herbivorous fish.
4. Thick aquatic plant infestations can produce extensive mosquito breeding habitat by preventing natural predation of mosquito larvae by fish.
5. Cooperators include NC and SC natural resource agencies, local agencies such as lake marine commissions, and municipal drinking water suppliers, e.g. Charlotte-Mecklenberg Utilities Dept.

*Quick Facts:*

- *Duke Energy Catawba-Wateree reservoirs alone have approximately 21,000 acres of potential invasive weed habitat. This colonization zone is located between the shoreline and 20' bottom contour.*
- *The generation at risk of potential intake blockages without management of aquatic weeds includes 3 nuclear stations, 4 base load coal fired stations, and the conventional hydro fleet.*

### B. Mosquito Control Program

1. 2007 is 84th year of program operation. The control season runs from May-October.
2. The boat based larviciding program operates on five heavily urbanized reservoirs including lakes James, Norman, Wylie, Wateree, and Keowee totaling approximately 85,000 acres and 1500 miles of shoreline.
3. The staff is also routinely involved in special mosquito control needs associated with power station properties, ash basins, transformer yard catchment basins, operation centers, and other Duke Energy infrastructure.
4. The program objective is to apply chemicals on a 10 day, or less, cycle time to break the 10 day mosquito breeding cycle.
5. Boat crews identify and isolate floating hazards to navigation including trees, logs, piers, docks, and other large floating debris. These materials are then removed by Lake Services contractors.
6. During source reduction activities, boat crews removed 48,000 lbs of mosquito breeding containers during the 2006 season.
7. Boat crews are cross-trained to identify and report invasive aquatic plants they observe during reservoir mosquito control operations. Crews have detected early infestations of invasive species especially hydrilla. This aggressive species has a high potential to severely impact power generation by blocking generation station intake structures.

*Risks without the Program:*

- *Violation of state public health disease regulations and state impoundment permits*
- *Disease transmission (e.g. West Nile Virus)*
- *Impacts to reservoir recreation and shoreline aesthetics, property values, and Duke's corporate reputation.*

# Exhibit 10

DUKE POWER COMPANY

LAKE Waterey

MOSQUITO CONTROL

| LOCATION | DATE MONTH YEAR | NO. BBLS. PUT OUT | EMPTY BBLS. IN STOCK | GAS (GALS.) USED | OUTBOARD OIL (QTS.) USED | TRANSFORMER OIL USED | FUEL OIL #2 USED | TOTAL NO. FULL BBLS. IN STOCK | WEATHER FAIR OR RAIN | AREA COVERED |
|---|---|---|---|---|---|---|---|---|---|---|
| 6-23-69 | MON. | 165 gal | | 19 gal | 1½ qt. | | 1 qt. | | Fair | Singleton Cr. to Weeks |
| 24. | TUES. | 110 " | | 19 gal | 1½ qt. | | | | Fair | Weeks to Colonels Cr. |
| 25 | WED. | 110 " | | 18 gal | 1½ qt. | | | | Fair | Colonels Cr. Dutchman Cr. |
| 26 | THURS. | 110 " | | 19 gal | 2 qt | | | | Fair | Dutchman Cr. to Waterey |
| 27 | FRI. | 110 " | | 15 gal | 2 qt | | | | Fair | Waterey Cr. to Singleton Cr. |
| | SAT. | | | | | | | | | |

NO. MEN WORKING:

1. Henry Bickham
2. H.N. Hutchinson Jr
3. _____
4. _____

IN CHARGE H.N. Hutchinson, Jr

DUKE POWER COMPANY

LAKE Wateree

MOSQUITO CONTROL

| LOCATION | DATE MONTH YEAR | NO. BBLS. PUT OUT ✓ | EMPTY BBLS. IN STOCK | GAS (GALS.) USED ✓ | OUTBOARD OIL (QTS.) USED ✓ | TRANSFORMER OIL USED | FUEL OIL #2 USED ✓ | TOTAL NO. FULL BBLS. IN STOCK | WEATHER FAIR OR RAIN | AREA COVERED |
|---|---|---|---|---|---|---|---|---|---|---|
| 6-30-69 | MON. | 165 gal | | 20 | 1½ gt | | 1 gt | | Fair | Singleton Crk to Deals |
| 7-1-69 | TUES. | 110 " | | 20 | 2 gt | | | | Fair | Deals to Colonels Cr. |
| 2 | WED. | 110 | | 19 | 2 gt | | | | Fair | Colonels Cr. to Dutchmans |
| 3 | THURS. | 110 | | 20 | 2 gt | | | | Fair | Dutchman to Waterce |
| 4 | FRI. | 110 | | 19 | 2 qt | | | | Fair | Waterce to Singleton |
| | SAT. | | | | | | | | | |

NO. MEN WORKING:

1. Henry Beckham
2. H.N. Hutchinson Jr
3. _____
4. _____

IN CHARGE H.N. Hutchinson Jr

DUKE POWER COMPANY

LAKE Wateree

MOSQUITO CONTROL

| LOCATION | DATE MONTH YEAR | NO. BBLS. PUT OUT | EMPTY BBLS. IN STOCK | GAS (GALS.) USED | OUTBOARD OIL (QTS.) USED | TRANSFORMER OIL USED | FUEL OIL #2 USED | TOTAL NO. FULL BBLS. IN STOCK | WEATHER FAIR OR RAIN | AREA COVERED |
|---|---|---|---|---|---|---|---|---|---|---|
| 7-28-69 | MON. | 110 | | 18 | 1 qt | | 1½ gal | | Fair | Hutchman's to Wateree |
| 7-29-69 | TUES. | 110 | | 15 | | | 1 gal. | | RAIN | Wateree to Singleton cr |
| 30 | WED. | 110 | | 16 | | | 1½ gal | | Fair | Singleton to Berts |
| 31 | THURS. | 110 | | 20 | | | 1½ gal | | Fair | Berts to Colonel Cr |
| 8-1-69 | FRI. | 110 | | 18 | | | 1½ gal | | Fair | Colonel Cr to Hutchman |
| | SAT. | | | | | | | | | |

NO. MEN WORKING:

1. Henry Beckham
2. H. N. Hutchinson Jr
3. _____
4. _____

IN CHARGE H. N. Hutchinson Jr

DUKE POWER COMPANY

LAKE Catawba

MOSQUITO CONTROL

| LOCATION | DATE MONTH YEAR | NO. BBLS. PUT OUT | EMPTY BBLS. IN STOCK | GAS (GALS.) USED | OUTBOARD OIL (QTS.) USED | TRANSFORMER OIL USED | FUEL OIL #2 USED | TOTAL NO. FULL BBLS. IN STOCK | WEATHER FAIR OR RAIN | AREA COVERED |
|---|---|---|---|---|---|---|---|---|---|---|
| 21 | MON. | 110 | | 15 | 1 qt. | | 1½ pts | | Fair | Singleton to Sailing Club |
| 22 | TUES. | 55 | | 4 gals | 1 | | 1 pt | | Fair | Sailing club to White Oak |
| 23 | WED. | 110 | | 15 | | | 1 pt | | Fair | White oak to Dam |
| 24 | THURS. | 110 | | 15 | | | 1½ | | Rain | Dam To Colonel's Cr. |
| 25 | FRI. | 110 | | 15 | | | 1½ | | Fair | Colonel's cr. To Dutchman cr. |
| | SAT. | | | | | | | | | |

NO. MEN WORKING:

1. Henry Peeler
2. Herbie Hutchison III
3. W. H. Hutchinson Jr. (started Thurs. 7-24-69)
4.

IN CHARGE W. H. Hutchinson Jr.

DUKE POWER COMPANY

LAKE WATEREE

MOSQUITO CONTROL

| LOCATION | DATE MONTH YEAR | NO. BBLS. PUT OUT | EMPTY BBLS. IN STOCK | GAS (GALS.) USED | OUTBOARD OIL (QTS.) USED | TRANSFORMER OIL USED | FUEL OIL #2 USED | TOTAL NO. FULL BBLS. IN STOCK | WEATHER FAIR OR RAIN | AREA COVERED |
|---|---|---|---|---|---|---|---|---|---|---|
| 8-11-69 | MON. | 110 | | 18 | 1 qt | | 2½ gal. | | FAIR | DUTCHMAN - WATEREE |
| 8-12-69 | TUES. | 165 | | 12 | 1 qt | | 1½ gal. | | RAIN | Wateree + Beaver |
| 8-13-69 | WED. | 110 | | 12 | | | 1½ gal | | RAIN | BEAVER - DAM |
| 8-14-69 | THURS. | 110 | | 17 | | | 1¾ gal | | RAIN | Dam to Colonel's |
| | FRI. | 110 | | 15 | | | 2 gal | | FAIR | Colonel's - Dutchman |
| | SAT. | | | | | | | | | |

NO. MEN WORKING:

1. Henry Beckham
2. Herbie Hutchison
3. 
4. 

IN CHARGE _____