STATE OF NEW YORK
SUPREME COURT : COUNTY OF YATES

In the Matter of the Application of

SIERRA CLUB, COMMITTEE TO PRESERVE THE FINGER LAKES by and in the name of PETER GAMBA, its President; COALITION TO PROTECT NEW YORK by and in the name of KATHRYN BARTHOMEW, its Treasurer; and SENECA LAKE GUARDIAN, A WATERKEEPER AFFILIATE by and in the name of YVONNE TAYLOR, its Vice President,

Petitioners,

AFFIDAVIT OF COLLEEN KIMBLE

For a Judgment Pursuant to Article 78 of the Civil Practice Law and Rules,

Index No. 2017-0232

-against-

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, BASIL SEGGOS, COMMISSIONER, GREENIDGE GENERATION, LLC and LOCKWOOD HILLS, LLC,

Respondents.

STATE OF NEW YORK)
) ss.:
COUNTY OF ALBANY)

COLLEEN KIMBLE, being duly sworn, deposes and says:

1. I am the Energy Unit Leader in the Division of Fish and Wildlife at the New York State Department of Environmental Conservation (DEC) in its Central Office headquarters located at 625 Broadway, Albany, New York. I submit this affidavit in opposition to the petition in this proceeding. I am fully familiar with the facts set forth below based upon my personal knowledge, my discussions with other DEC staff, and my review of DEC's files and relevant authority in this matter.

2. I have been employed in DEC's Division of Fish and Wildlife since 2007. From 2007 to the present, I have worked in the Energy Unit (previously known as the Steam Electric Unit), where my duties include making Best Technology Available (BTA) determinations for facilities that withdraw cooling water. Federal and New York law require that "the location, design, construction and capacity of cooling water intake structures, in connection with point source thermal discharges, shall reflect the best technology available for minimizing adverse environmental impact" (6 NYCRR § 704.5; *see also* 33 USC § 1326[b] [same]). In this context, adverse environmental impact means the mortality of fish and shellfish impinged and entrained by the operation of a cooling water intake structure.

3. I am familiar with all of the facts, circumstances and prior proceedings in this matter because of my responsibilities with the Energy Unit from 2007 to the present.

BEST TECHNOLOGY AVAILABLE (BTA) REQUIREMENTS FOR EXISTING FACILITIES IN NEW YORK

4. On July 10, 2011 DEC issued Commissioner's Policy CP-52 "Best Technology Available (BTA) for Cooling Water Intake Structures" (R 724-731). This policy outlines the reductions in impingement mortality and entrainment required to minimize the adverse environmental impact caused by industrial facilities having a cooling water intake structure in connection with a point source thermal discharge (R 724-731).

5. Impingement occurs when juvenile and adult fish, as well as other aquatic organisms (such as blue crab), are trapped against a facility's cooling water intake traveling screen. Some organisms will die as a result of being impinged. Mortality of aquatic life is species specific, and can also be affected by water temperature, intake flow velocity, number of organisms impinged, type of screening, and the frequency of the rotation of a facility's traveling screens.

6. Entrainment is when fish, in any life stage, are drawn into a facility along with its cooling water, passing through the system before being discharged. Unless a lesser mortality is demonstrated through site-specific studies, DEC assumes that entrainment causes 100 percent mortality of the entrained organisms (R 726).

7. CP-52 establishes performance goals for all industrial facilities, existing and proposed, "designed to withdraw twenty (20) million gallons per day (MGD) or more of water from the waters of New York State, where at least twenty-five (25) percent is used for contact or non-contact cooling, and that are subject to the requirements of Section 704.5 of 6 NYCRR" (R 724).

8. For an existing industrial facility operating a cooling water intake structure in waters other than the marine district or the Hudson River, CP-52 establishes the following performance goal: "Wet closed-cycle cooling *or* its equivalent" (emphasis added) (R 725).

9. Wet closed-cycle cooling is a system designed to withdraw the smallest amount of water to support contact and non-contact cooling uses within a facility. A closed-cycle cooling system uses between 93 and 98 percent less water than a once-through cooling system. By using substantially less water than a once-through cooling system, the facility minimizes the impingement mortality and entrainment of fish and other aquatic organisms (R 726).

10. Closed-cycle cooling is not required if there is an equivalent alternative. Equivalence is defined as "reductions in impingement mortality and entrainment. . . that are 90 percent or greater of that which would be achieved by a wet closed-cycle cooling system" (R 726).

11. The efficacy of a closed-cycle cooling system for reducing impingement mortality and entrainment is approximately 95%. This 95% reduction is measured by applying DEC's

calculation baseline condition—the number of organisms killed if the cooling water system was operating at full capacity 24 hours per day, 7 days per week. CP-52 requires that existing facilities achieve 90% of that reduction, which equals an approximately 85% reduction from the calculation baseline (*see* R 726).

BEST TECHNOLOGY AVAILABLE (BTA) REQUIREMENTS FOR GREENIDGE STATION

12. Greenidge Station has been in operation for many years and is defined as an existing facility with a cooling water intake structure design capacity greater than 20 MGD (*see* R 1474).

13. As an existing facility, CP-52 provides two options for meeting the BTA performance goal: 1. retrofit the facility with closed-cycle cooling, or 2. reduce impingement mortality and entrainment by implementing equivalent technologies or operational measures.

14. DEC selected narrow slot-width ($\leq$ 1.0 mm) cylindrical wedgewire screens and variable speed drive pumps as BTA for the Greenidge Generating facility. The combination of these two technologies will eliminate impingement mortality (i.e., reduce impingement mortality by 100 percent) and reduce entrainment by at least 85 percent. This reduction in the adverse environmental impact caused by the existing cooling water intake structure will exceed the performance goals established by CP-52.

15. DEC rejected closed-cycle cooling as BTA due to feasibility uncertainties and because the selected BTA will satisfy the equivalence standard in CP-52 (*see* R 1474, 1476).

16. Petitioners incorrectly claim that "compliance with CWA 316(b) and 6 NYCRR 704.5 requires closed-cycle cooling" (Petition ¶ 107).

17. DEC prepared CP-52 to "clarify the Department's. . . ongoing implementation of 6 NYCRR Part 704.5 *regarding requirements applicable to [cooling water intake structures*]"

(*see* R 724, emphasis added). As mentioned above, CP-52 has set a performance goal for Greenidge Station, an existing facility, as wet closed-cycle *or* the equivalent reduction in adverse environmental impact. Neither CP-52 nor 6 NYCRR 704.5 requires closed-cycle cooling as BTA for Greenidge Station or any other existing facility operating a cooling water intake structure in New York State.

18. In August 2014, the United States Environmental Protection Agency (EPA) finalized the CWA 316(b) Phase 2 Rule to establish requirements for cooling water intake structures at existing facilities (*see* 79 Fed Reg 48300, 48317 [2014]). Under this rule, the EPA established no performance standards for entrainment and established an impingement mortality standard of 24 percent. The U.S. EPA explicitly *did not select* closed-cycle cooling as BTA for existing facilities regulated under this rule (*see id*). The selected BTA for Greenidge Station far exceeds the Clean Water Act § 316(b), 33 USC § 1326, requirements for existing facilities.

Colleen Kimble

Sworn to before me this
28th day of February, 2018

Notary Public

JENNIFER ANDALORO
Notary Public, State of New York
No. 02AN6098246
Qualified in Albany County 20
Commission Expires January 14, 20