

STATE OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
625 BROADWAY
ALBANY, NEW YORK 12233-1010

In the Matter

- of -

Renewal and Modification of the State Pollutant Discharge Elimination System (SPDES)
Permit for the Roseton Generating Station

-by-

ROSETON GENERATING LLC,

Permittee.

DEC Application No: 3-3346-00075/00001

SPDES Permit No. NY-0008231

DECISION OF THE COMMISSIONER

March 29, 2019

DECISION OF THE COMMISSIONER

This proceeding involves the renewal and modification of the State Pollutant Discharge Elimination System (SPDES) permit for the Roseton Generating Station (Roseton facility or facility). At the commencement of this proceeding, the permit was held by Dynegy Northeast Generation, Inc. on behalf of Dynegy Roseton, LLC (Dynegy). The current permittee name and address is Roseton Generating LLC (applicant), 992 River Road, Newburgh, New York.¹

The Roseton facility, which became operational in 1974, is located in the Town of Newburgh, Orange County, on the west shore of the Hudson River. Both units of the station are cooled by a once-through cooling system using water drawn from the Hudson River at a shoreline intake structure. Non-contact cooling water is withdrawn by pumps from the Hudson River and passed through the facility, before being returned to the Hudson River. See Matter of Dynegy Northeast Generation, Inc., Ruling on Issues and Party Status of Administrative Law Judge Susan J. DuBois, September 22, 2006 [Ruling] at 3; Issues Conference Exhibit [IC Exh] 18 [Fact Sheet: New York [SPDES] Draft Permit Renewal with Modification -- Roseton Generating Station] at 2).

This proceeding addresses the renewal and modification of a SPDES permit for the Roseton facility that was issued in 1987 pursuant to the Hudson River Settlement Agreement. As prepared by the staff of the New York State Department of Environmental Conservation (Department or DEC), the draft permit includes conditions regarding conventional industrial pollutant discharges, thermal discharge, and cooling water intake structures (see IC Exh 18, at 1).

Pursuant to section 316(b) of the federal Clean Water Act (CWA) and section 704.5 of title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR), the location, design, construction and capacity of cooling water intake structures must reflect best technology available (BTA) for minimizing adverse environmental impacts (see IC Exh 18, Attachment B, at 1). For this facility, Department staff identified a number of technologies and operational measures, which -- when combined and optimized in an overall program of fish deterrence, enhanced survival and return to river, and circulating water flow reduction -- represent BTA “at a cost that is not wholly disproportionate to the benefits” (id. at 3). These included:

- maintaining the fish-escape passageway at the facility’s intake structure;
- maintaining a continuous wash of each traveling screen when the associated cooling water circulating pump is operating;
- continuing to reduce cooling water flow through outages and flow minimization;
- changing the intake discharge temperature difference (delta T), so that it would be the same year-round, in contrast to the existing permit condition that

¹ See Letter dated September 1, 2017 from Robert J. Alessi, Esq., on behalf of Roseton Generating LLC, to Assistant Commissioner Louis A. Alexander, at 1.

sets a different limit for the period from May 15 to October 16 and for the period from October 17 to May 14;

- instituting diurnal cycling matching cooling water flow with generation flow, in order to minimize cooling water flow between dusk and dawn; and
- installing variable speed drives on two or more cooling water circulator pumps in order to further reduce cooling water flow.

(See e.g. IC Exh 17, at 11, Additional Requirements-BIOLOGICAL [Required Technologies and Operational Measures Condition Nos. 8 and 9]; IC Exh 18, Attachment B, at 3-5.)

The matter was assigned to Administrative Law Judge (ALJ) Susan J. DuBois. At the issues conference, applicant stated that no disputes existed between it and Department staff regarding the provisions of the draft SPDES permit (see July 19, 2005 Issues Conference Transcript [IC Tr] at 10).

Ruling on Issues and Party Status

In the Ruling, ALJ DuBois identified the following four issues for adjudication:

- 1) whether closed-cycle cooling is the best technology available for minimizing adverse environmental impacts of the facility's cooling water intake structure (Ruling at 32);
- 2) whether the adjustment factors used in calculating the baseline levels of fish impingement mortality and entrainment at this facility are appropriate.² The ALJ ruled that, although no adjudicable issue was raised concerning an alternative way of arriving at the flow component of the calculation baseline, "testimony concerning whether and to what extent a full-flow baseline is unrealistic for evaluating impacts and mitigation measures may be provided in the context of the closed-cycle cooling and flow reduction issues" (Ruling at 40);
- 3) whether installation of variable speed pumps and related provisions, and diurnal cycling, would be effective enough that the draft SPDES permit's "combination of technologies and operational measures would constitute BTA [best technology available]" for the facility (Ruling at 43); and

² "Entrainment" is the process by which smaller organisms including larval fish and fish eggs are carried along with the intake water through any intended exclusion technology (such as screens) into the cooling system where they may be damaged or killed (see Matter of Athens Generating Co., LLP, Interim Decision of the Commissioner, June 2, 2000, at 12-13). "Impingement" occurs when larger organisms, such as fish, are trapped against intended exclusion technology (such as screens) by the force of the intake water flows, which may suffocate or injure the organisms (see id. at 13). The ALJ noted that the performance standards in the draft permit are stated in terms of reducing entrainment mortality and impingement mortality by specified percentages from the full-flow calculation baseline for the facility (Ruling at 32), and further addresses the concept of fullflow calculation baseline (see id. at 33-40, 54; see also July 19, 2005 IC Tr at 82-83, 91-93). For the Department's present definition of "calculation baseline," see infra at 16 n 9).

- 4) whether the draft SPDES permit violates the prohibition against backsliding with regard to the change in the discharge temperature limitation (delta T) (Ruling at 51).

In addition, ALJ DuBois determined that a fact issue existed concerning the length of time that it would reasonably take applicant to prepare a Technology and Compliance Assessment and a Verification Monitoring Plan that would be required pursuant to the draft permit (see Ruling at 45; IC Exh 17, at 11 [Condition Nos. 12 and 13]). In addition, the ALJ stated that, following the close of the adjudicatory hearing, the parties may brief whether an adequate opportunity for review of these reports exists “under 6 NYCRR parts 621 . . . , 624 . . . and 617,” and “if not, how to ensure adequate review of the BTA determination or of future changes in the BTA determination” (id.).

The ALJ accorded party status to Riverkeeper, Inc., Scenic Hudson, Inc. and the Natural Resources Defense Council, Inc. (collectively, petitioners) (see Ruling at 13-14).

Appeals from the Issues Ruling

Appeals from the Ruling were filed by petitioners, Department staff, and applicant. Reply briefs were subsequently filed by each of the issues conference participants.

Department staff challenged two portions of the Ruling on appeal:

- with respect to the calculation baseline, that portion of the Ruling, “insofar as it purports to allow testimony . . . questioning the validity of the full-flow baseline” (Department Staff Appeal dated October 23, 2006 [Staff Appeal], at 2; see also id. at 5-12); and
- with respect to anti-backsliding, that portion of the Ruling, “insofar as it relates to the draft SPDES permit’s proposed change to discharge temperature limitation (a/k/a delta T)” (id. at 2; see also id. at 13-21).

Petitioners on appeal raised issues relating to (1) calculation baseline and (2) anti-backsliding. According to petitioners, the ALJ should have identified the flow component of the baseline levels of fish impingement and entrainment to be used for purposes of determining whether the draft SPDES permit conditions reflect BTA. Petitioners objected to the application of the calculation baseline, as the term is defined and used in a federal regulation referred to as the Phase II rule, on the ground that the Phase II rule does not apply to this proceeding. Petitioners also requested that the DEC Commissioner clarify the Ruling concerning the scope of any testimony on the baseline levels of impingement and entrainment for evaluating alternative technologies at the Roseton facility. (See Petitioners’ Appeal dated October 23, 2006 [Petitioners’ Appeal], at 1-2, 3-17). With respect to anti-backsliding, petitioners argued that the ALJ erred in determining that the outage requirements and flow restrictions were not effluent limitations and, therefore, not subject to the anti-backsliding prohibition (see id. at 2-3, 17-18) and contended that the anti-backsliding rule applies in this proceeding (see id. at 19-29).

Applicant contended on its appeal that petitioners failed to identify a substantive and significant issue with respect to closed-cycle cooling (see Applicant Appeal dated October 23, 2006 [Applicant Appeal], at 19-22). Applicant also contended that:

- the Ruling failed to follow Department precedent establishing that BTA is implemented by imposing quantitative reduction requirements measured against the full-flow calculation baseline (see id. at 22-25);
- petitioners’ claims relating to the submittal of documents under the Phase II rule were rendered moot or otherwise inapplicable by the ALJ’s Ruling that the Phase II rule does not apply (see id. at 25-27 [addressing ALJ’s identification of an issue relating to the timing and adequacy of review of submissions of certain plans]);
- no adjudicable issue was raised with respect to diurnal cycling and that petitioners’ challenge to the validity of diurnal cycling was moot “as it will have no impact on [the Roseton facility’s] satisfaction of the operative BTA performance standards” (id. at 2; see also id. at 27-29); and
- no adjudicable issue was raised regarding the application of the anti-backsliding provisions to the pending draft SPDES permit (see id. at 29-32).

August 9, 2017 Inquiry Letter

By letter dated August 9, 2017 (August 9, 2017 Letter), Assistant Commissioner Louis A. Alexander requested that additional information be supplied for my consideration in the review of the pending appeals. Specifically:

- information was requested on any changes to the facility’s operations since the Ruling was issued including, but not limited to, changes that might affect the description and discussions in the SPDES fact sheet on the Roseton facility (see IC Exh 18). In addition, the Roseton facility was to confirm the names of its current owner and operator;
- to the extent that Department staff had made revisions to the draft SPDES permit, such revised draft permit was to be circulated;
- the issues conference participants were directed to advise whether any of the issues identified by the ALJ or in any of the appeals that have been filed were either moot or should otherwise be modified as a result of: (a) any changes in the operational status of the Roseton facility; or (b) other developments that have occurred since the Ruling. Furthermore, the issues conference participants were requested to advise if they had decided to withdraw an issue that they raised at the issues conference or any matter that they had raised on appeal; and

- direction was given to submit any additional State Environmental Quality Review Act (SEQRA)-related reviews or studies with respect to the Roseton facility that are relevant to the proceeding and which have not been submitted.

Updated Information Provided by Applicant

By letter dated September 1, 2017, applicant's attorneys advised that the permittee name at this time is Roseton Generating LLC. In addition, further details were provided regarding the facility's operation, including the replacement of two dual-flow traveling screens with conventional vertical traveling screens similar to the remaining six (Letter dated September 1, 2017, at 2). Applicant noted that the facility "has continued to perform impingement monitoring when the facility is operating and has continued to follow the thermal discharge guidelines and aquatic organism protection measures" (id. at 2). Applicant also provided information comparing the facility's net capacity factor for the years 2003-2005 (average of 33.02), with the net capacity factor for 2014-2016 (average of 3.63) (id.). Also discussed was the installation of a new geo-synthetic liner system within the earthen berm secondary containment of the facility's fuel oil tank farm and a well pump installation (id. at 2-3).

Revised Draft SPDES Permit

Department staff circulated a revised version of the draft SPDES permit under cover of a letter dated September 8, 2017 and a further revised version under cover of a letter dated September 15, 2017. According to Department staff, the further revised version of the draft permit dated September 15, 2017 (September 15, 2017 draft SPDES permit) "incorporates additional changes made as a result of updated information concerning the facility, as well as from other developments that have occurred since the 2006 [Ruling]" (Department staff letter dated September 15, 2017, at 1).

As set forth by Department staff, the September 15, 2017 draft SPDES permit includes changes with respect to:

- (i) submission of a Technology Installation and Operation Plan (Condition No. 10);
- (ii) submission of a Verification Monitoring Plan (Condition No. 11);
- (iii) submission of an approvable report demonstrating the facility's compliance with 6 NYCRR 704.5 and federal Clean Water Act (CWA) § 316(b) (Condition No. 12);
- (iv) implementation of BTA (Condition No. 13); and
- (v) a Contingency Plan to Meet Conditions Identified in Biological Monitoring Requirement 13 (Condition No. 14).

(see Department staff letter dated September 15, 2017, at 1; see also September 15, 2017 draft SPDES permit at 12-13). According to Department staff, the revisions were made "as a result of DEC staff's application of, and compliance with, DEC Commissioner Policy CP-52/Best

Technology Available (BTA) for Cooling Water Intake Structures, issued July 10, 2011 [CP-#52], as well as from DEC’s issuance of final individual SPDES permits for other industrial facilities in New York having cooling water intake structures . . . in connection with a point source thermal discharge since 2006” (Department staff letter dated September 15, 2017, at 2).

Department staff noted that the September 15, 2017 draft SPDES permit includes revised language as to endangered/threatened species (Condition No. 15) (see Department staff letter dated September 15, 2017, at 2; see also September 15, 2017 draft SPDES permit at 13). Lastly, Department staff noted revisions to additional terms and conditions as they relate to:

- (i) Outfall 002 – chlorine was removed because it is no longer used as a biocide for Outfall 002;
- (ii) Outfalls 03A and 03B – the outfall information would remain in the permit until the facility makes a modification request;
- (iii) Outfall 006 – chlorine sampling would be required only at the outfall and not in the contact tank. In addition, the chlorine limit was reduced to 1.0 mg/l;
- (iv) Mercury Management Plan – this plan was removed as not necessary at this facility;
- (v) Special Condition - a special condition was added to allow DEC to review any water quality standard based on flow changes to an unnamed tributary “because this waterbody is composed mainly of leaking New York City aqueduct water that may be repaired in the future” (Department staff letter dated September 15, 2017, at 2 [footnote omitted]); and
- (vi) Schedule of Submittals – the schedule was added for the facility to review water conservation measures “to reduce the combined effluent flow rate at the facility during periods when the facility is off-line” (September 15, 2017 draft SPDES permit at 15).

Petitioners’ Comments on the SPDES Permit

Petitioners provided comments on the SPDES permit both as to carryover provisions from the 2005 draft permit and as to new or different permit terms, and requested that an operational cap be added to the permit (see Petitioners’ [first] letter dated November 17, 2017, at 9-17).³ A review of petitioners’ comments follows:

³ Petitioners note that “[t]o the extent that draft permit terms are common between the 2005 and the newest 2017 draft permits, [p]etitioners incorporate and reiterate the comments and concerns with those terms expressed in the 2005 ecological issues report issued by Pisces Conservation” (Petitioners’ [first] letter dated November 17, 2017 at 9).

--Carryover Provisions:

- Flow rate. Petitioners note that the 2005 draft SPDES permit and the current 2017 draft permit both require monitoring of condenser cooling water discharge flow rates, in addition to hourly recording, but that neither sets maximum flow rates. Petitioners express concerns that failing to set maximum flow rates will adversely affect impingement and entrainment rates of fish and aquatic species in the facility's cooling water intake structures. Petitioners are also concerned that the current draft SPDES permit does not include seasonal limitations on maximum flow, contending that this may represent illegal backsliding (see Petitioners' [first] letter dated November 17, 2017, at 9-10).
- Intake discharge temperature difference (delta T). Petitioners note that the 2005 draft SPDES permit and the current 2017 draft SPDES permit both apply a 36°F maximum intake discharge temperature difference all year long whereas the facility's 1987 permit provided seasonal temperature difference limits. Petitioners contend that this constitutes "unlawful backsliding" under the Clean Water Act (see Petitioners' [first] letter dated November 17, 2017, at 10).
- Net discharge of heat. Petitioners indicate that the 2005 draft SPDES permit and 2017 draft permit eliminate the seasonal limits for net discharge of heat that were in the 1987 permit. Petitioners argue that an increase in the net discharge of heat during warmer months of the year will have a negative impact on fish habitability and constitutes illegal backsliding (see Petitioners' [first] letter dated November 17, 2017, at 10).
- Tri-axial thermal study. Both the draft 2005 and 2017 SPDES permits require the facility to undertake a tri-axial thermal study to evaluate the mixing zone of thermal discharges and to define its characteristics. Pursuant to the draft SPDES permit, the facility is to submit a draft protocol within six months of the effective date of the permit and conduct the study within one year of the approval of the study protocol by the Department. Petitioners contend that the study should be required prior to the issuance of the permit "so that . . . foreseeable problems with the Facility's 'BTA equivalence' can be taken into consideration in the final permit" (Petitioners' [first] letter dated November 17, 2017, at 11).
- Water use reporting. Petitioners note that both the 2005 and 2017 draft SPDES permits incorporate a requirement that the facility submit monthly reports to the Department with respect to water use, and intake and discharge water temperatures. Petitioners request that these monthly reports be shared publicly and with petitioners "to ensure that the permit requirements are being met and comport with [the Department's BTA policy]" (see Petitioners' [first] letter dated November 17, 2017, at 11-12).

- Diurnal cycling. Petitioners refer to the comments in the Pisces Report and to prior arguments they raised in their briefing on the Ruling and the appeals (see Petitioners’ [first] letter dated November 17, 2017, at 12).
- Prior notification of permit changes. Petitioners note that the 2005 and 2017 draft SPDES permits included a requirement that the facility notify the Department of any modification of the cooling water intake structure operation at least sixty (60) days prior to implementation and demonstrate that the change reflects BTA. Petitioners support this condition and indicate that any notification of change by the facility should be made available to the public, “including [p]etitioners, to evaluate whether the proposed changes constitute BTA” (see Petitioners’ [first] letter dated November 17, 2017, at 12).

--New or Different Permit Terms

- Residual chlorine discharge. Petitioners contend that the Department should include a residual discharge limit for chlorine for outfall 2 in the final permit (see Petitioners’ [first] letter dated November 17, 2017, at 12-13).
- Traveling screens. Petitioners state that “the fish passageway as well as continuous rotation and wash of the traveling screens, as measures to reduce fish and aquatic organism kills,” should be included in the final facility permit (see Petitioners’ [first] letter dated November 17, 2017, at 13-14).
- Variable speed drives. Petitioners contend that none of the adverse impacts of variable speed drives are taken into account, including increased biofouling (requiring additional use of chlorination or other biocides), increased mortality for aquatic species inside the cooling water intake structure and an increase in heat concentration of thermal discharges (see Petitioners’ [first] letter dated November 17, 2017, at 14).
- Impingement and entrainment reduction. Petitioners contend that it is unclear which adjustment factors “if any” are being applied in the calculation of the baseline for the 2017 draft SPDES permit (see Petitioners’ [first] letter dated November 17, 2017, at 15). Petitioners note that “[t]o the extent that the current 2017 draft SPDES permit utilizes any of the same adjustment factors as the 2005 draft permit, [petitioners] fully incorporate the Pisces Report . . . and any arguments made in their briefing on the issues ruling and appeal” (see id. at 15-16). Petitioners also request that documentation of how the “calculation baseline” is being computed for the 2017 draft SPDES permit be included in any final permit (see id. at 16).
- Verification monitoring plan. Petitioners note that the plan is intended to confirm that the suite of technological and operating measures “actually constitute ‘BTA equivalent’ as defined in the CP-52 Policy” (id.). Petitioners

request that the final permit include a requirement for impingement and entrainment monitoring not only for the first two years that the permit is in effect, but for the permit's entire life (id.).

- Biological monitoring. Petitioners indicate that the 2017 draft permit requirement regarding biological monitoring and the BTA “contingency” plan is important in assuring BTA compliance and “should continue to be included in the final permit” (id.; see also September 15, 2017 draft SPDES permit at 13 [Condition No. 14]).
- Submission of status reports. Petitioners support the Department's inclusion in the 2017 draft SPDES permit of a requirement for the submission of a status report that includes evaluation of cumulative reductions in impingement and entrainment and analysis of technologies or operational measures “which have or have potential to further reduce fish mortality” (Petitioners' [first] letter dated November 17, 2017, at 16-17). Petitioners note that the draft 2017 permit requires submission of the status report only once during the permit term – 4.5 years after the effective date of the permit. Petitioners maintain that the 2017 draft SPDES permit should include more frequent status reports – that is “at least at 2.5 and 4.5 years” (id. at 16-17).
- Endangered Species Act (ESA) compliance. Petitioners support the language contained in the draft 2017 permit that states that nothing in the permit authorizes a take for purpose of the facility's compliance with the ESA (see Petitioners' [first] letter dated November 17, 2017, at 17).

Positions on the Issues Identified for Adjudication

Petitioners maintain that “the only issue that has been rendered moot by developments since the 2006 Issues Ruling is the application of the full-flow calculation baseline as it is defined in the 2011 CP-52 Policy” (see Petitioners' [second] letter dated November 17, 2017 at 1). Petitioners contend, however that the other issues identified by the ALJ have not been rendered moot (see id.).

Applicant argues that closed-cycle cooling should not be an issue for adjudication (see Applicant's Letters dated October 30, 2017, at 3 n 1, and November 17, 2017, at 1-3), and that the use of full-flow calculation baseline as part of the BTA determination in the draft SPDES permit and any adjustment factors should also not be subject to adjudication (see Applicant's Letters dated October 30, 2017 and November 17, 2017, at 1-3 and 3-4, respectively).⁴

Department staff rested on its prior arguments, but discussed subsequent developments regarding the calculation baseline issue which it contends support its original arguments (see Department staff letter dated September 15, 2017, at 2-3).

⁴ Applicant in its November 17, 2017 letter identified portions of Petitioners' October 30, 2017 submission that applicant requested be struck or disregarded as beyond the authorized scope (see Applicant's Letter dated November 17, 2017, at 4-5). After due consideration of these identified portions, I am denying applicant's request.

Based upon my review of the record, I determine that no substantive and significant issues have been raised for adjudication. The issues raised by petitioners on their appeal are rejected. Accordingly, I am remanding this matter to Department staff. Department staff is directed, following its compliance with the requirements of the State Environmental Quality Review Act (SEQRA), to issue a permit consistent with the draft permit prepared by Department staff dated September 15, 2017 as modified by this decision.

BACKGROUND

Applicable Standard

The standard for adjudicable issues is set forth in 6 NYCRR 624.4(c). In this proceeding, Department staff and applicant agree on the terms and conditions of the draft permit. Where, as here, the contested issues are not the result of a dispute between applicant and Department staff (see 6 NYCRR 624.4[c][1][i] and [ii]), but are proposed by third parties, an issue must be "both substantive and significant" to be adjudicable (see 6 NYCRR 624.4[c][1][iii]).

An issue is substantive "if there is sufficient doubt about the applicant's ability to meet statutory or regulatory criteria applicable to the project, such that a reasonable person would require further inquiry" (6 NYCRR 624.4[c][2]). An issue is significant "if it has the potential to result in the denial of a permit, a major modification to the proposed project or the imposition of significant permit conditions in addition to those proposed in the draft permit" (6 NYCRR 624.4[c][3]).

In order to participate as a party in a 6 NYCRR part 624 (Part 624) proceeding on a permit application, the potential party must file a petition in writing that, among other things, identifies the precise grounds for opposition and support (see 6 NYCRR 624.5[b][1][v]). Pursuant to 6 NYCRR 624.4(c)(4), where Department staff has determined that an applicant's project, as proposed or as conditioned by the draft permit, conforms to all applicable requirements of statute and regulation, "the burden of persuasion is on the potential party proposing any issue . . . to demonstrate that it is both substantive and significant."

A potential party's burden of persuasion at the issues conference is met with an appropriate offer of proof supporting its proposed issues. The offer of proof must specify "the witness(es), the nature of the evidence the person expects to present and the grounds upon which the assertion is made with respect to that issue" (see 6 NYCRR 624.5[b][2][ii]). Judgments about the strength of the offer of proof must be made, among other things, in the context of the Department staff's analysis (see Matter of NYC Department of Sanitation [Southwest Brooklyn Marine Transfer Station], Decision of the Commissioner, May 21, 2012, at 5); see also Matter of Mirant Bowline, LLC, Interim Decision of the Commissioner, June 20, 2001, at 3).

An issues conference is not meant to merely catalogue areas of dispute, but rather is used to make qualitative judgments as to the strength of the offers of proof and related arguments. In determining whether a potential party has raised an adjudicable issue, the ALJ "must consider the proposed issue in light of the application and related documents, the draft permit, the content

of any petitions filed for party status, the record of the issues conference and any subsequent written arguments [that the ALJ authorizes]” (6 NYCRR 624.4[c][2]).

With respect to the offer of proof, any assertions that a potential party makes must have a factual or scientific foundation. Speculation, expressions of concern, general criticisms, or conclusory statements are insufficient to raise an adjudicable issue. The qualifications of the expert witnesses that a petitioner identifies may also be subject to consideration at this stage, including for example their background and expertise with respect to the specific issue area(s). Even where an offer of proof is supported by a factual or scientific foundation, it may be rebutted by the application, the draft permit and proposed conditions, Department staff’s analysis, or the record of the issues conference, among other relevant materials and submissions. In areas of Department staff expertise, its evaluation of the application and supporting documentation is important in determining the adjudicability of an issue (see e.g. Southwest Brooklyn Marine Transfer Station, at 5-6; Matter of Crossroads Ventures, LLC, Interim Decision of the Deputy Commissioner, December 29, 2006, at 6; Matter of Mirant Bowline, LLC, Interim Decision of the Commissioner, June 20, 2001, at 3; Matter of Bonded Concrete, Inc., Interim Decision of the Commissioner, June 4, 1990, at 2).

On an appeal, the Commissioner will first review the ALJ’s application of the substantive and significant standard and the sufficiency of any offers of proof. With respect to legal and policy issues, the Commissioner’s review is de novo, and provides the opportunity to offer guidance “to optimize the permitting process and focus the hearing” (Matter of Saratoga County Landfill, Second Interim Decision of the Commissioner, October 3, 1995, at 3). Factual issues may also be reviewed based on the record before the Commissioner.

DISCUSSION

Closed-Cycle Cooling

BTA Analysis and Factors

Department staff makes BTA determinations on a site-specific, case-by-case basis. Department staff employs a four-step analysis (see e.g. Matter of Dynegy Northeast Generation, Inc. [Danskammer], Decision of the Deputy Commissioner, May 24, 2006, at 20; Matter of Athens Generating Co., LP, Interim Decision of the Commissioner, June 2, 2000, at 4). The analysis, as originally developed through administrative precedent, included the following factors:

- (1) whether the facility's cooling water intake structure may result in adverse environmental impact;
- (2) if so, whether the location, design, construction and capacity of the cooling water intake structure reflect BTA for minimizing adverse environmental impact;

- (3) whether practicable alternate technologies are available to minimize the adverse environmental effects; and
- (4) whether the costs of practicable technologies are wholly disproportionate to the environmental benefits conferred by such measures.

(See Ruling at 16.)

The fourth step of the BTA analysis (i.e., whether the costs of practicable technologies are wholly disproportionate to the environmental benefits conferred by such measures) has been subject to further judicial consideration subsequent to the issuance of the Ruling. Accordingly, I provide the following clarification with respect to this fourth step.

Department staff's evaluation of closed-cycle cooling was undertaken in this proceeding pursuant to the "wholly disproportionate" test that was the original fourth step in the Department's BTA analysis (see e.g. IC Exh 18, Attachment B, at 1, 3). Under this test, the Department analyzed "whether the costs of practicable technologies are wholly disproportionate to the environmental benefits conferred by such measures" (Matter of Dynegy Northeast Generation, Inc. [Danskammer Generating Station], Interim Decision of the Deputy Commissioner, May 13, 2005, at 7-8, n 8; Matter of Mirant Bowline, LLC, Decision of the Commissioner, March 19, 2002, at 12; Matter of Athens Generating Co., LP, Interim Decision of the Commissioner, June 2, 2000, at 9).

Subsequent to the issues conference in this proceeding, the fourth step of the BTA analysis was revised in another proceeding to provide as follows: "whether the cost of the technology can reasonably be borne by the industry and, upon making the determination that it can, whether considerations of cost-effectiveness allow for selection of a less expensive but equally effective technology" (see Matter of Entergy Nuclear Indian Point 2, LLC and Entergy Nuclear Indian Point 3, LLC, Interim Decision of the Assistant Commissioner, August 13, 2008, at 13 [Entergy Indian Point interim decision]).

The Entergy Indian Point interim decision relied on the "reasonably borne" test for the fourth step in the BTA analysis pursuant to the Second Circuit decision in Riverkeeper, Inc. v U.S. EPA (475 F3d 83 [2d Cir 2007]) (Riverkeeper). In that decision, the Second Circuit held that BTA for minimizing environmental impacts under CWA § 316(b) was the technology that achieves the greatest reduction in adverse environmental impacts at a cost that can reasonably be borne by the industry (see id. at 99). However, as stated in the Entergy Indian Point interim decision, the Second Circuit's construction in Riverkeeper would govern Departmental proceedings unless it was "overturned or otherwise modified by the United States Supreme Court" (Entergy Indian Point interim decision at 12). The U.S. Supreme Court subsequently reversed the Second Circuit decision (see Entergy Corp. v Riverkeeper, Inc., 556 US 208 [2009]).

In addition, Commissioner Policy 52, entitled "Best Technology Available (BTA) for Cooling Water Intake Structures" (CP-#52), has been issued which identifies closed-cycle

cooling or its equivalent⁵ as the performance goal for BTA to minimize adverse environmental impacts pursuant to 6 NYCRR 704.5⁶ and section 316(b) of the federal Clean Water Act in SPDES permits issued by the Department. Consistent with the Department’s approach prior to Riverkeeper, CP-#52 provides that the Department will, in making its site-specific determinations, choose “a feasible technology whose costs are not wholly disproportionate^[7] to the environmental benefits to be gained” (CP-#52, at 6). Accordingly, in light of the U.S. Supreme Court decision in Entergy Corp. v Riverkeeper, Inc., CP-#52, and administrative precedent prior to the Entergy Indian Point interim decision, the fourth step of the BTA analysis is to be analyzed under the “wholly disproportionate” test.

With respect to the Roseton facility, Department staff utilized the “wholly disproportionate” test in evaluating and selecting the technologies and operational measures that represent BTA for this facility. These technologies and operational measures were incorporated into the draft SPDES permit (see IC Exh 18, Attachment B at 3-5; see also IC Exh 17 and September 15, 2017 draft SPDES permit). Components reviewed included location, design, construction and capacity (see IC Exh 18, Attachment B at 4-5). Department staff considered other alternatives (closed-cycle cooling, aquatic filter barrier, ristroph screens and sonic deterrent) but did not select them for the reasons set forth in the fact sheet for the Roseton facility (see id., Attachment B at 5-6; see also July 19, 2005 IC Transcript at 39-40; IC Exh 13 Dynegey Northeast Generation [Inc.] Response to [NYSDEC] Request for Additional Information – Roseton Generating Station, July 2004, at Section 5 [Intake Alternatives – Level 2 Evaluation]). Applicant in this proceeding did not oppose the technologies and operational measures that Department staff included in the draft SPDES permit.

Issues Conference Discussion and ALJ Ruling on Closed-Cycle Cooling

Petitioners, in their petition for party status, maintained that closed-cycle cooling, rather than the technologies and operational measures contained in the facility’s draft SPDES permit, constituted BTA to minimize adverse environmental impacts for the facility. Where, as here, no disagreement exists between Department staff and the applicant, the burden of persuasion is on petitioners to demonstrate that its issue is substantive and significant (see 6 NYCRR 624.4[c][4]).

Much of the debate at the issues conference focused on petitioners’ cost estimates for a closed-cycle cooling system at this facility, and whether such costs would be “wholly disproportionate.” Department staff noted that it requested that applicant evaluate closed-cycle

⁵ “Equivalent” is defined in CP-#52 as “reductions in impingement mortality and entrainment from calculation baseline that are 90 percent or greater of that which would be achieved by a wet closed-cycle cooling system” (CP-#52, at 3).

⁶ Section 704.5 of 6 NYCRR states: “[t]he 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.”

⁷ The “wholly disproportionate” test is “a comparison of the proportional reduction in impact (benefit) as compared to the proportional reduction in revenue (cost) of installing and operating BTA technology to mitigate adverse environmental impact” (CP-#52, at 4).

cooling “as another alternative to higher percentage reductions” (see July 19, 2005 IC Transcript at 40). According to Department staff, applicant submitted information, based on applying “testing standards that the department has had for some time,” which demonstrated that closed-cycle cooling was “wholly disproportionate” at this site (*id.*). Furthermore, as Department staff then set forth in the attachment to its SPDES fact sheet:

“Due to the Roseton Station’s current operational status as an intermediate generating facility the cooling systems are off line approximately 70% of each year. The cost of retrofitting Roseton with a closed cycle cooling system would be many times higher than the selected suite of technologies and operational measures, but would not result in correspondingly greater reductions in impacts to aquatic organisms. As a result, the Department has determined that the cost of a closed cycle system installed at Roseton would be wholly disproportionate to the benefit to aquatic organisms” (see IC Exh 18, Attachment B, at 5).

The ALJ however identified the issue whether closed-cycle cooling is the best technology available for minimizing adverse environmental impacts of the facility’s cooling water intake structure as being adjudicable (see Ruling at 32).

Applicant challenged this aspect of the ALJ’s ruling on appeal. Applicant asserted that petitioners’ offer of proof on this issue was insufficient to raise an adjudicable issue. Applicant also asserted that Department staff had significant discretion under the “best professional judgment” standard to determine the appropriate technology to be required at the facility relative to cooling water intakes. Applicant maintained that Department staff’s determination that the cost of closed-cycle cooling would be “wholly disproportionate” to any environmental benefit was sound and should be upheld. See Applicant Appeal at 19-22.

Petitioners, in their reply brief, maintained that the Ruling properly advanced the issue of closed-cycle cooling to adjudication (see Petitioners’ Reply Brief dated November 20, 2006 [Petitioners’ Reply], at 10-16). Petitioners state in more recent correspondence that they are not aware of any changes to the Roseton facility that would render this issue moot (see Petitioners’ Letter dated October 30, 2017, at 2). Noting that CP-#52 applies, petitioners contend that the facility “cannot demonstrate equivalence to closed-cycle cooling, thus making closed-cycle cooling BTA here” (*id.*).

Although Department staff did not appeal from the Ruling with respect to closed-cycle cooling, its fact sheet for the facility’s SPDES permit details Department staff’s rationale for the technologies and measures it selected in lieu of requiring closed-cycle cooling or alternative technologies for the Roseton facility (see e.g. IC Exh 18 [Attachment B]). In its recent correspondence, Department staff has addressed the question of equivalency and has set forth how the percentage reductions in terms of entrainment mortality and impingement mortality specified in the draft SPDES permit would be equivalent (see Department staff letter dated November 17, 2017, at 2 [applying the Department’s “equivalent” metric in CP-#52 to the U.S. Environmental Protection Agency’s closed-cycle cooling estimates and comparing the resulting reduction levels with the percentage levels in the draft SPDES permit for the Roseton facility]).

Applicant similarly contends that the proposed technologies and operating measures, as contained in the draft SPDES permit satisfy the BTA mandate (see Applicant letter dated November 17, 2017 at 1).

As part of my review, I have examined petitioners' offer of proof with respect to closed-cycle cooling (including but not limited to the Petition for Full Party Status and Adjudicatory Hearing [setting forth arguments in support of closed-cycle cooling in terms of cost and opportunities to minimize aquatic impacts, in addition to proposed testimony], Attachments E [Assessment of Closed-Cycle Wet Cooling at Roseton Generating Station prepared by Powers Engineering] and F [Ecological Issues Relating to the Draft SPDES Permit for the Roseton Generating Station by Drs. Peter Henderson and Richard Seaby]), in the context of the record of this proceeding. I have, among other things, also considered Department staff's fact sheet (see IC Exh 18), CP-#52, applicant's review of the cost estimates for a closed-cycle cooling system presented in the petition and supplemental documents (see July 20, 2005 IC Transcript at 143-213), and the arguments that petitioners raised in their appeal, in addition to the recent submissions of applicant, Department staff and petitioners.

Notwithstanding petitioners' arguments raised in their petition, at the issues conference and in their recent correspondence, it is clear that Department staff gave due consideration to closed-cycle cooling, and, upon that consideration, rejected it for this facility. Staff's review, including its discussion of equivalency, is thorough, complete and convincing. Alternatives were carefully evaluated and compared. Nothing in petitioners' offer of proof demonstrates that Department staff's review was flawed. In addition, the draft SPDES permit has been further revised in accordance with the application of Department BTA policy as set forth in CP-#52 (see Department staff letter dated September 15, 2017, at 2) and reflects an appropriate suite of technologies and operating measures for BTA at the Roseton facility.

Upon this record, petitioners have failed to make an offer of proof sufficient to advance this issue to adjudication. Accordingly, the issue whether closed-cycle cooling is BTA for minimizing adverse environmental impacts of the facility's cooling water intake structure shall not be adjudicated in this proceeding.⁸

Calculation Baseline

The performance standards in the draft permit considered at the issues conference were stated in terms of reducing entrainment mortality and impingement mortality by specified percentages from the "full[-]flow calculation baseline" for the facility (see IC Exh 17, at 11 [Additional Requirements 10 and 11]). The efficacy of the technologies and operational

⁸ Applicant contends that petitioners failed to provide any SEQRA analysis of their proposed alternative technology for the Roseton facility (see Applicant's Letter dated November 17, 2017, at 1-3 [citing Energy Indian Point interim decision]) and, accordingly, whether closed-cycle cooling is the best technology available should not be adjudicated (see also Department staff letter dated November 17, 2017 at 3-4). My review of the record demonstrates that implementation of closed-cycle cooling would be "wholly disproportionate" in the circumstances presented here and the technologies and operating measures that staff has identified and incorporated into the draft SPDES permit are appropriate, and I do not need to reach the argument relating to petitioners' failure to provide a SEQRA analysis of the alternative technology (closed-cycle cooling) that they propose.

measures implemented for reducing impingement and entrainment were to be evaluated by means of studies comparing those impacts under full-flow base conditions and actual operating conditions (see IC Exh 18, Attachment B, at 6, #5 [discussion of the Verification Monitoring Plan]).⁹

The ALJ ruled that, although no adjudicable issue was raised concerning an alternative method of arriving at the flow component of the calculation baseline, “testimony concerning whether and to what extent a full-flow baseline is unrealistic for evaluating impacts and mitigation measures may be provided in the context of the closed-cycle cooling and flow reduction issues” (Ruling at 40).

Department staff challenged that portion of the Ruling, “insofar as it purports to allow testimony . . . questioning the validity of the full-flow baseline” (Staff Appeal, at 2; see also id. at 5-12). Applicant also challenged that portion of the Ruling, arguing that the use of a full-flow baseline provides a fair and equitable mechanism for implementing BTA, and that its use, based on precedent, is not a subject for adjudication in this proceeding (see Applicant Appeal, at 2, 22-25).

Petitioners, in their 2006 appeal, asserted that they raised a substantive and significant issue concerning both the flow as well as the adjustment factors of the baseline levels of fish entrainment and impingement used in connection with the draft SPDES permit conditions. Petitioners contended that considering the “real flows” of the facility is the proper approach to estimate a baseline level of fish entrainment and impingement for determining whether closed-cycle cooling is BTA at the facility (Petitioners’ Appeal at 8). Petitioners also challenged the application of the “concept calculation baseline,” and requested that the Commissioner clarify the Ruling concerning what testimony would be allowed on full-flow baseline (see id. at 8-17).

Department staff’s September 15, 2017 draft SPDES permit requires that the technologies used under the permit “can be no less stringent, and if possible, should be substantially greater than” 85 per cent reduction in entrainment mortality from calculation baseline and 90 per cent reduction in impingement mortality from calculation baseline (see September 15, 2017 draft SPDES permit, at 13 [Condition Nos. 13.a and 13.b]).

Administrative precedent and Department policy support using a calculation baseline in Department reviews of cooling water intakes at power plants. In Danskammer, the ALJ found that full-flow baseline should be used to determine the facility’s compliance with entrainment and impingement performance standards (see Danskammer, ALJ Hearing Report at 67-69, adopted by Decision of the Deputy Commissioner, May 24, 2006, at 17-18). The ALJ in the Danskammer hearing report stated that calculating the baseline by using the full-flow capacity is a rational, conservative approach because the full-flow baseline would facilitate staff’s ability to

⁹ CP-#52 defines “Calculation baseline” as “an estimate of impingement mortality and entrainment that would occur at a facility [cooling water intake structure] assuming that the cooling water system has been designed as a once-through system; the opening of the cooling water intake structure is located at, and the face of the standard 3/8-inch mesh conventional traveling screen is oriented parallel to, the shoreline near the surface of the source waterbody and is operated at the full rated capacity 24 hours a day, 365 days a year. This is the baseline of adverse environmental impact to be used in estimating reductions in impingement mortality and entrainment resulting from operating a closed-cycle cooling system” (CP-#52, at 2-3).

determine compliance with the performance standards limiting entrainment and impingement mortality by all Hudson River electric generating facilities on a comparative basis (see Danskammer, ALJ Hearing Report, at 68-69). The Commissioner's determination as to the use of the full-flow baseline was subsequently litigated, and that determination was upheld (see Matter of Riverkeeper v Johnson, 52 AD3d 1072, 1074-1075 [3d Dept 2008], lv denied 11 NY3d 716 [2009] [Johnson]).

In their recent submissions, both applicant and Department staff address legal developments, including Johnson, that support the calculation baseline used here (see Applicant's Letters dated October 30, 2017, at 1-3 and November 17, 2017, at 3-4; see Department staff letters dated September 15, 2017, at 3 [citing judicial decision upholding the Department's definition and use of the calculation baseline, use of the calculation baseline in individual SPDES permits for other facilities with cooling water intake structures in New York State, and CP-#52's definition of "calculation baseline"] and November 17, 2017, at 1-2). Petitioners, in their November 2017 submission, acknowledge that the issue of the application of the full-flow calculation baseline, as it is defined in the 2011 CP-#52 Policy, is "moot" and no adjudication would be required (Petitioners' [second] letter dated November 17, 2017 at 1).

It is clear that Department staff's use of the calculation baseline with respect to this BTA determination for the Roseton facility is appropriate and consistent with applicable precedent and controlling law. No adjudicable issue relating to the use of the full-flow baseline has been raised.¹⁰

Petitioners however contend that the use of any adjustment factors in calculating the baseline is an issue appropriate for adjudication and object to the use of any adjustment factors that would give applicant an impingement and entrainment credit (see Petitioners' Letter dated October 30, 2017, at 3, 4). Adjustment factors were contested during the issues conference (see Ruling at 35-36; see also July 19, 2005 IC Tr at 135-188).

Applicant argues that the Department's use of adjustment factors, such as entrainment survival credits, have been judicially upheld (see Applicant's Letter dated November 17, 2017, at 3-4 [noting the Danskammer facility SPDES permit and citing Johnson]; see also IC Tr 135-139 [applicant's overview of adjustments used in calculating part of baseline and support for their use] and IC Exh 13). Department staff contends that adjudication of any adjustment factors is precluded based on the calculation baseline utilized in the BTA determination (see Department's staff letter dated November 17, 2017, at 1 [citing, in part, the definition of entrainment in CP-#52¹¹]).

¹⁰ As to the ALJ's statement that "testimony concerning whether and to what extent a full-flow calculation baseline is unrealistic for evaluating impacts and mitigation measures may be provided in the context of the closed-cycle cooling and flow reduction issues" (Ruling at 40), I conclude that such testimony is unnecessary. The use of a full-flow baseline was fully litigated in Danskammer and represents a rational approach for Department BTA determinations. The full-flow calculation baseline need not be revisited here in the context envisioned by the Ruling. As a result, petitioners' request for me to clarify the scope of testimony on this issue, as proposed by the ALJ, is also rendered moot.

¹¹ CP-#52 defines "entrainment" as "the incorporation of all life stages of fish with intake water flow entering and passing through a cooling water intake structure and into a cooling water system. The Department assumes that

Based upon my review of the record, I concur with applicant and Department staff that no adjudicable issue has been raised with respect to the use of adjustment factors.

Use of Variable Speed Pumps and Diurnal Cycling

The fact sheet that Department staff prepared relating to the SPDES permit for the Roseton facility addressed variable speed cooling water pumps and diurnal cycling of cooling water flows. Specifically, these measures were described as follows:

“Variable Speed Cooling Water Pumps – Variable speed motors or electric drives mounted to cooling water pumps can enable a generating station to more precisely modulate cooling water flow. This allows flows to be further reduced during periods of reduced generation and when the ambient water temperature is low.”

“Diurnal Cycling of Cooling Water Flows – Impingement and entrainment studies conducted at the Roseton and Danskammer Stations have revealed that the densities of fish, including juveniles and motile larvae, fluctuate on a daily cycle. Increased densities have been observed from evening through sunrise, with maximum densities near dusk and dawn. In contrast, periods of peak electrical demand have historically occurred during daylight hours. Lowering the generation output of the facility allows less water to be used for cooling, creating an opportunity to decrease cooling water flow during periods when the highest number of fish are subject to entrainment and impingement.”

(See IC Exh 18, Attachment B at 2).

The ALJ identified, as an adjudicable issue, whether installation of variable speed pumps and related provisions, and diurnal cycling, would be effective enough that the draft SPDES permit’s “combination of technologies and operational measures would constitute BTA” for the facility (see Ruling at 43). Petitioners contended that this issue is not moot, and the effectiveness of variable speed pumps and diurnal cycling “as part of [applicant’s] claim to BTA” remains at issue (Petitioners’ Letter dated October 30, 2017, at 3; see also id. at 5).

The use of variable speed pumps and diurnal cycling were part of the technologies and operational measures that Department staff determined represented the best technology available for minimizing adverse environmental impacts (see e.g. IC Exh 18, Attachment B, at 3 [(i)nstitute diurnal cycling matching cooling water flow with generation load in order to minimize cooling water flow between dusk and dawn” and “(i)nstall variable speed drives on two or more cooling water circulator pumps in order to further reduce cooling water flow”]; see also id. at 4 [noting these and other measures to “further reduce cooling water usage during the permit term”]).

The draft SPDES permit considered at the issues conference required applicant to install variable speed drives on two or more cooling water circulator pumps “in order to further minimize cooling water flow” (IC Exh 17, at 11 [Additional Condition No. 9]). The requirement

entrainment results in 100 percent mortality of the entrained organisms unless a lesser mortality is demonstrated to Department staff based on site-specific studies” (CP-#52, at 3).

relating to variable speed drives also appears in the current draft SPDES permit (see September 15, 2017 draft SPDES permit, at 12 [Condition No. 9 under “Additional Requirements/ Biological Monitoring Requirements”]; see also id. at 13 [Condition No. 13] [(v)ariable speed pumps shall be installed on two or more units in accordance with Biological Monitoring Requirement 9 and the approved (Technology Installation and Operation Plan) described in Biological Monitoring Requirement 10”).¹²

Based on the record before me, Department staff’s combination of technologies and operational measures, which include variable speed pumps and diurnal cycling, constitute BTA for this facility (see also pages 13-15 of this decision). The implementation of these technologies and measures will allow for significant reductions in entrainment and impingement mortality. Furthermore, diurnal variation and the effectiveness of variable speed pumps will be part of the verification monitoring plan required by the SPDES permit (see July 19, 2005 Transcript at 213; see also September 15, 2017 draft SPDES permit at 12 [Condition No. 11]).

I have considered petitioners’ concern that the variable speed drives may have adverse impacts, but the arguments petitioners present are insufficient to raise a substantive and significant issue. As to diurnal cycling, the ALJ indicated that the draft permit “was not clear” (Ruling at 42; see also July 19, 2005 IC Tr at 123). Although diurnal cycling would appear to be implicit in the draft SPDES permit (see e.g. September 15, 2017 draft SPDES permit at 12 [Condition No. 9]), more explicit reference would be appropriate. Therefore, staff is to incorporate language in the final permit, whether by a condition or by reference in a footnote, that indicates the use of diurnal cycling at this facility.

Based on this record, the installation of variable speed pumps and the use of diurnal cycling do not present an adjudicable issue in this proceeding.

¹² As noted, the September 15, 2017 draft SPDES permit would provide that reductions in entrainment and impingement mortality resulting from operation of these technologies, in combination with operational measures, “can be no less stringent, and if possible, should be substantially greater than” 85% reduction in entrainment mortality from calculation baseline and 90% reduction in impingement mortality from calculation baseline (see September 15, 2017 draft SPDES permit at 13 [Condition No. 13]). The facility’s permittee must also continue to implement the following measures:

- maintain the fish passageway as originally constructed at the intake structure;
- maintain a continuous rotation and wash of each traveling screen when the associated cooling water circulating pump is operating;
- continue to reduce cooling water flow volume through outages; and
- continue to reduce cooling water flow volume through flow minimization by actively managing flow to utilize the minimum volume of water needed to cool the condensers and comply with the thermal limits of the permit.

See September 15, 2017 draft SPDES Permit, Biological Monitoring Requirements at 12 (Condition No. 8).

Reports and Studies

The draft permits have established schedules for the submission of reports and studies. The initial draft permit specified that, three months after the effective date of the permit, applicant must submit to Department staff an “approvable” Technology and Compliance Assessment which includes, at a minimum, a description of the BTA-related technologies and operational measures, as well as the methodology for assessing the efficacy of these technologies and operational measures to attain the performance standards with respect to entrainment mortality and impingement mortality at the facility (see IC Exh 17, at 11 [Additional Requirements Condition No. 12]). In addition, the initial draft SPDES permit specified that two years after the effective date of the permit, applicant must submit to Department staff an approvable Verification Monitoring Plan “designed to confirm that the reductions in impingement and entrainment required by this permit are being achieved” (see id., Additional Requirements Condition No. 13).

Petitioners contended that assessing the effectiveness of the proposed BTA-related technologies and operational measures for the facility after the issuance of the permit is inappropriate, and that such review must occur prior to Department staff’s BTA determination, not three months afterwards (see Petition for Full Party Status and Adjudicatory Hearing at 35-36). With respect to the Verification Monitoring Plan, petitioners indicated that the report should be provided within fifteen months of the effective date of the permit (see id. at 36).

The ALJ determined that a fact issue existed concerning how long it would reasonably take applicant to prepare a Technology and Compliance Assessment and a Verification Monitoring Plan that would be required pursuant to the draft permit (Ruling at 45). In addition, the ALJ stated that, following the close of the adjudicatory hearing, the parties may brief whether an adequate opportunity for review “under 6 NYCRR parts 621 . . . , 624 . . . and 617” exists, and “if not, how to ensure adequate review of the BTA determination or of future changes in the BTA determination” (id.).

Applicant contended that the timing of the submittal of the two reports is neither substantive nor significant, and is not a basis for an adjudicable issue (see Applicant Appeal at 25-27). Applicant also maintained that the ALJ’s concerns relating to the adequacy of the review of these further submittals “are not ripe until such evaluations occur” (see id. at 27).

The September 15, 2017 draft SPDES permit provides a list of due dates for the various reports and studies required under the permit. With respect to the Technology Installation and Operation Plan, the current draft SPDES permit provides that, within three (3) months of the effective date of the permit, the permittee must submit an approvable Technology Installation and Operation Plan which is to include: (a) a schedule for installing and implementing the technologies and operational measures required by the permit to meet the requirements of 6 NYCRR 704.5, CWA § 316(b) and the performance goals of CP-#52; and (b) the methodology for assessing the efficacy of those technologies and operational measures (see September 15, 2017 draft SPDES permit at 12 [Condition No. 10]). Based on the record before me, a three (3) month period, as established by Department staff, for the preparation of an approvable plan is reasonable and appropriate.

Petitioners in their recent correspondence stated that they are not aware of any developments since the Ruling that have settled the fact issue on the adequacy of the opportunity for review as raised by the ALJ (see Petitioners' Letter dated October 30, 2017, at 3). In my judgment, it would be for Department staff, at the time of receiving the reports, to determine what might be an appropriate period for review. Petitioners also raise questions regarding the timing and duration of various other studies and reports – including the tri-axial thermal study (see Petitioners' [first] Letter dated November 17, 2017, at 11), the verification monitoring plan (see id. at 16), and a status report evaluating cumulative reductions in impingement and entrainment and providing an analysis of technologies or operational measures (see id. at 16-17).

With respect to the tri-axial study, I see no reason to alter Department staff's timing (see September 15, 2017 draft SPDES permit, at 11 [Additional Requirements No. 7]). The process established for the tri-axial study in the draft September 15, 2017 SPDES permit is both reasonable and thorough. As to the report evaluating cumulative reductions in impingement and entrainment and providing an analysis of technologies or operational measures, the September 15, 2017 draft SPDES permit requires submission of the status report 4.5 years after the effective date of the permit (see September 15, 2017 draft SPDES permit at 13 [Reporting Requirement No. 17]). Although petitioners request more frequent reports (see Petitioners' [first] Letter dated November 17, 2017, at 17), upon review of this record, I see no need to alter the reporting requirement timeframe established by Department staff in the draft September 15, 2017 SPDES permit.

As to the Verification Monitoring Plan, the revised permit establishes that the permittee must submit an approvable Verification Monitoring Plan within three (3) months of the Department's approval of the aforementioned Technology Installation and Operation Plan. The approvable Verification Monitoring Plan is to provide for, at a minimum, two years of in-plant impingement and entrainment monitoring "to verify the full-scale performance of BTA measures," together with, among other things, a schedule of implementation (see September 15, 2017 draft SPDES permit at 12 [Condition No. 11]). The Department determined that a two year monitoring period to verify the performance of BTA measures would be appropriate, while recognizing that even more time may be required to demonstrate that BTA requirements are being met (see e.g. IC Exh 19 [letter from Deputy Commissioner Lynette M. Stark to Benjamin H. Grumbles, Assistant Administrator, Office of Water, U.S. Environmental Protection Agency], at 7). The conditions relating to the Verification Monitoring Plan, as set forth in the September 15, 2017 draft SPDES permit (see September 15, 2017 draft SPDES permit at 12 [Condition Nos. 11 and 12]), are appropriate on this record. No issue is presented for adjudication.

Petitioners have requested that certain reports be provided to them. Based upon my review of the reports required by the draft SPDES permit, I conclude that, based on this particular record, it would be appropriate for applicant to provide each petitioner with a copy of the Technology Installation and Operation Plan, the Verification Monitoring Plan, and the report required by Condition No. 17 of the September 15, 2017 draft SPDES permit when these are submitted to the Department, subject to any redactions that would be authorized pursuant to the New York State Freedom of Information Law (see Public Officers Law art 6). Accordingly, I direct that Department staff modify the draft permit to require that applicant, at the time of the submission of these documents, provide each petitioner with a copy.

With respect to the water use reporting, petitioners request that the monthly reports to the Department -- which include information on: daily minimum, maximum and average station electrical output; daily minimum, maximum and average water use; and temperature of the cooling water intake and discharge -- “be shared publicly and with [p]etitioners to ensure that the permit requirements are being met” (Petitioners’ [first] Letter dated November 17, 2017, at 11-12). I see no necessity to incorporate a permit requirement for distribution of the monthly reports. The information in those reports, to the extent releaseable pursuant to the New York State Freedom of Information Law, would be available to petitioners and the public upon request to the Department.

Anti-Backsliding

The ALJ identified as an issue for adjudication whether the draft permit violates a federal Clean Water Act prohibition against “backsliding” as a result of the proposed change to the discharge temperature limitation (delta T). The ALJ concluded, however, that no adjudicable issue existed with respect to “backsliding” and the proposed changes to flow and outage requirements (see Ruling at 51).

Each of the parties challenged aspects of the ALJ’s determination with respect to “backsliding.” In consideration of the “backsliding” issue, I have also taken into account petitioners’ comments including those in their recent submission with respect to flow rate, intake discharge temperature difference, and net discharge of heat (see Petitioners’ [first] letter dated November 17, 2017, at 9-10). Department staff indicated that it is relying on the arguments it set forth in its appeal and reply to the Ruling (see Department staff letter dated September 15, 2017, at 2).

The statutory prohibition against “backsliding” is set forth in section 402(o) of the federal Clean Water Act, and is known generally as the federal “anti-backsliding rule.” It requires effluent limitations in each successive SPDES permit for a facility to be at least as stringent as those under previous permits (see 33 USC 1342[o]), although the statutory language incorporates several exceptions. Similarly, under the ECL, “when effluent limitations are established they must be at least as stringent as the effluent limitations previously required unless the commissioner determines, through regulation, that an exception is warranted as provided in section 303(d) and 402(o) of the [CWA]” (ECL 17-0809[3]). Both Department staff and applicant contended that the exception in section 402(o)(2)(B) is applicable here. That section provides as follows:

“(2) Exceptions

A permit with respect to which paragraph (1) applies [which references the general prohibition], may be renewed, reissued, or modified to contain a less stringent effluent limitation applicable to a pollutant if

...

(B)(i) information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would

have justified the application of a less stringent effluent limitation at the time of permit issuance.”

Thermal Discharge Limit

Department staff has proposed a thermal discharge limit change in both the draft SPDES permit presented at the issues conference and in the September 15, 2017 draft. The facility’s current SPDES permit lists two water intake-discharge temperature differentials – limiting the water intake differential to 18 degrees Fahrenheit from May 15 to October 16, and limiting the water intake-discharge temperature difference to 36 degrees Fahrenheit from October 17 to May 14 (see IC Exh 18, Attachment B at 2). The draft SPDES permit would eliminate this delta T distinction and limit the water intake-discharge temperature difference to 36 degrees Fahrenheit during the entire year (see IC Exh 18, Attachment B, at 2-3; see also IC Exh 17, at 3 and September 15, 2017 draft SPDES permit at 3 [Temperature, Difference (Intake-Discharge) – daily maximum 36 degrees Fahrenheit]).

Petitioners contended that this change in temperature levels, as well as proposed permit revisions relating to flow and outage requirements, constituted impermissible “backsliding” in violation of the federal Clean Water Act (see Petition for Full Party Status and Adjudicatory Hearing at 39-41). As noted, Department staff is resting on the arguments that it presented on its appeal (see Department staff letter dated September 15, 2017, at 2).

Department staff indicated that its explanation for the proposed elimination of the delta T is rational and scientifically based. As set forth in the Biological Fact Sheet that accompanied the draft permit,

“Since the last permit was drafted in 1987, further review of entrainment survival data has revealed that temperature induced mortality of entrained fishes across most species does not increase incrementally but rather remains low up to discharge temperatures of 86 to 90 degrees Fahrenheit . . . and then dramatically increases (EA Engineering Science and Technology, 2000). The EA Report compiled summaries of 36 entrainment survival studies conducted from 1970 through 1995. Many of the projects were conducted on Hudson River generating stations, including Roseton. Eliminating the seasonal differential of 18 degrees Fahrenheit, and maintaining a differential of 36 degrees Fahrenheit year round, will result in less water drawn into the plant to produce the same amount of electricity. Since research has shown little difference in survival as a result of eliminating the seasonal differential, the greater protection of aquatic resources will result from the lower volume of water being drawn into the plant” (IC Exh 18, Attachment B, at 3).

Both Department staff and applicant asserted that, with respect to the elimination of the temperature differential, the statutory exception contained in CWA § 402(o)(2)(B)(i) applies in the circumstances of this proceeding. Department staff argued that it relied on a report that EA Engineering Science and Technology prepared in 2000 (EA report), which was not available when the facility’s 1987 SPDES permit was issued. According to Department staff, if the information had then been available, it would have justified the application of a less stringent

effluent limitation and, accordingly, the 1987 SPDES permit would not have contained the summer/winter delta T distinction (see Staff Appeal, at 14-17; see also Applicant Appeal at 29-32).

Petitioners argued that no exemption applies because “the circumstances on which the previous permit was based have not materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance” (Petitioners’ Appeal at 29 [emphasis in original]). Petitioners in their recent correspondence stated that the backsliding issue is not moot and that the change to delta T (which is also contained in the September 15, 2017 draft SPDES permit for the facility) “continues to constitute backsliding” (see Petitioners’ Letter dated October 30, 2017, at 3, 4).

Department staff and applicant’s arguments are compelling. The post-1987 study (EA Report) reveals that elimination of the seasonal differential would result in no significant thermal impact on aquatic organisms, and I find Department staff’s arguments persuasive that, if the information had been available at the time, the 1987 permit would not have included the differential provision. Furthermore, the current and proposed draft SPDES permit conditions are written so as to comply with the regulatory criteria at 6 NYCRR part 704.

Department staff pointed out that both the current and draft 2005 SPDES permits include a year-round maximum discharge temperature limit of 99 degrees (see Staff Appeal at 13-14, 19-20). Staff noted that both permits contain a footnote for water intake-discharge temperature allowing for a degree-for-degree exceedance of the 99-degree maximum discharge temperature when the ambient river water temperature exceeds 81 degrees (see Exh 33 [current permit] at 6 n “a,” and Exh 17 [2005 draft SPDES permit] at 9 n “a”). The September 15, 2017 draft SPDES permit also contains a similar footnote (see September 15, 2017 draft SPDES permit at 10 n [a]).

Department staff further argues that petitioners’ offer of proof regarding backsliding is deficient (see Staff Appeal at 17-21). Staff contends that petitioners’ arguments were merely speculative and conclusory. Department staff asserts that petitioners, other than simply rejecting the findings of the EA Report, fail to lay bare their proof as to how or in what manner they would contest the results of the EA Report or challenge the reliance of Department staff on the findings of the report. I concur with Department staff that petitioners’ offer of proof is deficient. Petitioners have failed to provide a basis for their general assertions of disagreement with the report’s findings and staff’s determination.

Based on the foregoing, the issue relating to the thermal discharge limit is not adjudicable.

Flow and Outage Issues

Petitioners maintain that the anti-backsliding requirement applies to all permit conditions, not just effluent limits such as temperature and, as a result, the Ruling incorrectly excluded adjudication of anti-backsliding in relation to the flow and outage issue (see Petitioners’ Letter dated October 30, 2017, at 5, 6). The ALJ, however, concluded that the anti-backsliding requirements pertain only to effluent limits (see Ruling at 48-49; see also Applicant Reply dated

November 20, 2006, at 13-19; Department Staff Reply dated November 20, 2006, at 5-8). In that regard, the definition of effluent standard and effluent limitation in the Environmental Conservation Law and regulations do not incorporate flow and outage as effluent limitations (see ECL 17-0105[15] [definition of “(e)ffluent standard and/or limitation”]; 6 NYCRR 700.1[15] [definition of “(e)ffluent limitations”]). Based on this record and the arguments presented, petitioners’ position that the anti-backsliding requirement applies to the flow and outage issue in this proceeding is rejected.

Petitioners’ Comments on the draft SPDES Permit Conditions

As noted, petitioners have commented on the draft SPDES permit, both as to carryover provisions from the 2005 draft SPDES permit and as to the new or different terms in the September 15, 2017 draft. A number of petitioners’ comments indicate support for language to be contained in the permit including, for example, language relating to Endangered Species Act compliance, biological monitoring, and notification to the Department of any modification of the cooling water intake structure operation at least sixty (60) days prior to implementation and demonstration that the change reflects BTA. As proposed, this language would be included in the issued SPDES permit.

Several of petitioners’ comments on permit conditions are addressed in this decision (see e.g. the discussion under the headings “Reports and Studies” and “Anti-Backsliding”). As to other comments:

--Flow rates. Petitioners question the lack of maximum flow rate limits in the draft SPDES permit, as well as the lack of seasonal limitations on maximum flow rate. The draft SPDES permit establishes that the flow rate monthly average and the daily maximum will be monitored which, together with other conditions in the draft SPDES permit including but not limited to implementation of the identified technologies and operational measures, are intended to protect the Hudson River ecosystem. The studies and reports mandated by the SPDES permit will provide an important means to evaluate the success of these measures. In the event that entrainment and impingement mortality reductions are not being achieved, the SPDES permit provides for additional measures to achieve the reduction targets set forth in Condition No. 13 (Implementation of BTA) in the SPDES permit (see September 15, 2017 draft SPDES permit at 13 [Condition No. 14]). The language in the September 15, 2017 draft is satisfactory and protective.

--Prior notification of permit changes. The September 15, 2017 draft SPDES permit provides that modification of the facility cooling water intake must not occur without prior Department approval (see September 15, 2017 draft SPDES permit at 13 [Condition No. 18]). Applicant is to submit to the Department written notification, including descriptions and plans, “at least 60 days prior to any proposed change which would result in the alteration of the permitted operation, location, design, construction or capacity of the cooling water intake structure” (see id.). Petitioners indicate that any notification of change by the facility should be made available to the public, including petitioners, to evaluate whether the proposed changes constitute BTA. I do not see that request to be necessary as it is within Department staff’s expertise and authority to review and evaluate such permit change requests. The public,

including petitioners, do have the opportunity to request, pursuant to the New York Freedom of Information Law, copies of any such notifications.

--Residual chlorine discharge. Petitioners contend that the Department should include a residual discharge limit for chlorine in outfall 2 in the SPDES permit that was included in a prior version of the draft permit and the 1987 permit (see Petitioners' [first] Letter dated November 17, 2017, at 12-13). Department staff has noted that the parameter for Total Residual Chlorine was removed from outfall 2 because chlorine is no longer used as a biocide for this outfall (see Department staff letter dated September 15, 2017, at 2). Based on Department staff's statement, removal of that parameter from outfall 2 would be appropriate.

I note that the draft SPDES permit contains additional language relative to the use of chlorine (see September 15, 2017 draft SPDES permit at 10 [footnote c, which previously related to the parameter of Total Residual Chlorine in outfall 2 which has been deleted] and at 11 [Additional Requirements – Condition No. 5]). Staff is directed to review the language for both footnote c and Additional Requirements Condition No. 5 to determine if any modification to that language is necessary based on the deletion of the Total Residual Chlorine parameter for outfall 2.

--Traveling screens. Petitioners also note the continued utilization of traveling screens. The September 15, 2017 draft SPDES permit requires applicant to maintain the fish passageway as originally constructed at the intake structure and to maintain a continuous rotation and wash of each traveling screen when the associated cooling water circulating pump is operating (see September 15, 2017 draft SPDES permit at 12 [Biological Monitoring Requirements Condition Nos. 8a. and 8b.]). This language is to be included in the final permit.

--Impingement and entrainment reduction. Petitioners note that the 2005 draft permit included a fact sheet “which explained how NYSDEC determined the ‘full flow calculation baseline’ for purposes of evaluating BTA, and pinpointed the adjustment factors applied in that calculus” (Petitioners' [first] Letter dated November 17, 2017, at 15). Petitioners argue that, as for the September 15, 2017 draft SPDES permit, “it is unclear which adjustment factors (if any) are being applied in the calculation of the baseline for the 2017 draft permit” (see id.). Petitioners request that Department staff provide documentation on how the calculation baseline was computed for the 2017 draft permit and that such documentation be included in any final permit for the facility (see id. at 16). Based upon my review, the 2005 fact sheet and staff's subsequent submissions (see e.g. Staff Letter dated September 15, 2017, at 1-2), together with the record of this proceeding, are sufficient to address the calculation of the baseline (see also supra at 15-18).

--Operational Cap. Petitioners state that Roseton currently operates, “on average, at [three] percent (3%) of its engineering capacity” (Petitioners' [first] Letter dated November 17, 2017 at 17). Petitioners further state that “[a]t this level of operation, there is only a minor risk that the facility will entrain and impinge excessive numbers of fish,” but note that the facility's draft permit does not guarantee that the facility will maintain this level of operation. Accordingly, petitioners request that an operational cap requirement be added to the permit (see id.). Based upon the record of this proceeding, including the September 15, 2017 draft SPDES

permit, the conditions it incorporates, and the reporting with respect to the facility that the permit will require, imposing an operational cap at this time is not necessary.

To the extent that petitioners have raised issues regarding permit conditions or regarding other matters that have not been specifically addressed in this decision, those issues have been considered and have been determined to lack merit or otherwise are not substantive and significant.

ENVIRONMENTAL REVIEW

Once BTA is selected for a facility, the environmental impacts of the technology are subject to review in accordance with the New York State Environmental Quality Review Act (SEQRA) (see CP-#52, at 6 [(o)nce a site-specific BTA determination is made . . . , the Department will undertake a SEQRA review to ensure that any significant impacts with the construction and operation of the selected BTA are avoided, minimized, or mitigated’’]).

A final environmental impact statement that addressed the Roseton facility, among others, was accepted by the Department on June 25, 2003 (see Ruling at 7). However, the final environmental impact statement expressly contemplated that further evaluation of the environmental impacts associated with the proposed site-specific BTA technology would be necessary (see *id.*; see also IC Exh 10 [Final Environmental Impact Statement for State Pollutant Discharge Elimination System (SPDES) Permits for Roseton 1 & 2, Bowline 1 & 2, and Indian Point 2 & 3 Steam Electric Generating Stations] [2003 FEIS] at 4, 28).

The 2003 FEIS examined some environmental impacts, including certain impacts associated with closed-cycle cooling (see *e.g.* 2003 FEIS, Appendix F-IV, ESSA Technologies Ltd., “Review of the Draft Environmental Impact Statement for SPDES Permits” [2000], at 26-27), but did not examine all site-specific environmental impacts associated with the actual construction and operation of closed-cycle cooling or other alternative technologies at a facility. New York Supreme Court acknowledged that additional environmental review was needed for the facilities addressed in the 2003 FEIS (see Matter of Entergy Nuclear Indian Point 2, LLC v New York State Dept of Env'tl Conservation, 3 Misc 3d 1070, 1073 [Sup Ct, Albany County 2004]).

For the Roseton facility, as discussed, Department staff has proposed a suite of separate and distinct technologies and operational measures as BTA that have been incorporated into the draft SPDES permit. Potentially adverse environmental impacts relating to this facility have been evaluated in Department staff’s review of the application and in this administrative proceeding.

Because no adjudicable issues have been raised, I hereby remand this matter to Department staff to complete the SEQRA process and to finalize the September 15, 2017 draft SPDES permit for this facility as modified by this decision. Upon issuance, a copy of the final SPDES permit shall be furnished to each of the petitioners at the same time it is forwarded to applicant.

New York State Department of
Environmental Conservation

By: _____/s/_____
Basil Seggos
Commissioner

Dated: March 29, 2019
Albany, New York

SUPPLEMENTAL RECORD MATERIAL

Letter dated August 9, 2017 from Assistant Commissioner Louis A. Alexander to: Robert J. Alessi, Esq. (on behalf of applicant); representatives of Riverkeeper, Inc., Scenic Hudson, Inc., and Natural Resources Defense Council; and Mark D. Sanza, Esq. (on behalf of Department staff)

Letter dated September 1, 2017 from Robert J. Alessi, Esq. (on behalf of applicant)

Letter dated September 8, 2017 from Mark D. Sanza, Esq. (on behalf of Department staff) with undated revised draft SPDES permit

Letter dated September 15, 2017 from Mark D. Sanza, Esq. (on behalf of Department staff) with further revised SPDES permit dated September 15, 2017

Letter dated September 29, 2017 from Todd D. Ommen, Managing Attorney. and Matthew B. Liponis, Legal Intern, confirming that Pace Environmental Litigation Clinic, Inc. (PELC) will be representing petitioners Riverkeeper, Inc., Scenic Hudson, Inc. and Natural Resources Defense Council in this matter

Letter dated October 30, 2017 from Todd D. Ommen, Managing Attorney, and Matthew B. Liponis, Legal Intern, of PELC (on behalf of petitioners)

Letter dated November 17, 2017 from Robert J. Alessi, Esq. (on behalf of applicant)

Letter dated November 17, 2017 from Todd D. Ommen, Managing Attorney, and Matthew Liponis, Legal Intern, of PELC (on behalf of petitioners)(first letter)(comments on the revised draft permit dated September 15, 2017)

Letter dated November 17, 2017 from Todd D. Ommen, Managing Attorney, and Matthew Liponis, Legal Intern, of PELC (on behalf of petitioners)(second letter)(Petitioners' Response on Modified Issues for Adjudication)

Letter dated December 12, 2017 from Todd D. Ommen of PELC (on behalf of petitioners) requesting an opportunity to file a reply

Letter dated December 12, 2017 from Mark D. Sanza, Esq. (on behalf of Department staff) in opposition to petitioners' request to file a reply

E-mail dated December 15, 2017 from Robert J. Alessi, Esq. (on behalf of applicant) in opposition to petitioners' request to file a reply

Letter dated December 22, 2017 from Assistant Commissioner Louis A. Alexander denying petitioners' request to file a reply

Note: Correspondence relating to requests for extensions of time to submit various filings is not included in this list but is maintained in the proceeding's correspondence files.