

STATE OF NEW YORK: DEPARTMENT OF ENVIRONMENTAL CONSERVATION

In the Matter of a Renewal and Modification of a State Pollutant Discharge Elimination System (SPDES) permit pursuant to Environmental Conservation Law (ECL) article 17 and Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York (6 NYCRR) parts 704 and 750 *et seq.* by

Ruling on Proposed Issues
for Adjudication and Petitions
for Party Status

DEC No.: 3-3346-00011/00002
SPDES No.: NY-0006262

Dynergy Northeast Generation, Inc.,
On behalf of Dynergy Danskammer, LLC,
PERMITTEE

March 25, 2004

(Danskammer Generating Station)

Permittee and Facility Description

Dynergy Northeast Generation, Inc. (Dynergy) is the successor-in-interest to Central Hudson Gas & Electric Co. (Central Hudson), which formerly owned the Danskammer electric generating station (the Facility). The Facility consists of four steam turbine units with a total net generating capacity of 491 megawatts (MW). Units 1 and 2 burn either natural gas or oil, and Units 3 and 4 burn either coal or natural gas. The Facility is located on the west shore of the Hudson River at 992-994 River Road in the Town of Newburgh, Orange County (the site). The Facility withdraws water from the Hudson River for cooling purposes via an intake canal.¹

The intake canal is located on the north side of the site. It is 11 feet deep and 450 feet long. The initial width of the canal is 115 feet, and the canal quickly narrows to 34 feet. Water is drawn into the canal by single speed pumps located near the Facility. Units 1 and 2 each have two cooling water pumps, and each pump is rated at 21,000 gallons per minute (GPM). Unit 3 has two pumps and each pump is rated at 41,000 GPM. Unit 4 has three pumps and each pump is rated at 50,000 GPM. The Facility's total maximum design flow is 316,000 GPM or about 455 million gallons per day (MGD).

A series of traveling screens are located in front of the cooling water pumps in the intake canal. The purpose of the screens is to prevent debris from entering the pump chambers and condensers. The screens are continuously rotated and sprayed with high pressure water to flush the screens. The wash water is directed back to the river through a sluice that exits through the bulkhead in front of the plant. This point source is identified as Outfall 001 in both the current, and the draft State Pollutant Discharge Elimination System (SPDES) permit.

¹ Water passes through the Facility once before it is discharged back to the river, which is characterized as a once through cooling system. Because the water does not come into contact with the electric generating equipment during the cooling process, it is called non-contact cooling water.

After non-contact cooling water circulates through the Facility, it is discharged from outfalls located on the south side of the site. Units 1 and 2 discharge non-contact cooling water via Outfall 002. Unit 3 discharges non-contact cooling water at Outfall 003, and Unit 4 discharges at Outfall 004. The three outfalls (002, 003 and 004) for the non-contact cooling water are submerged and are located adjacent to each other.

The Facility has other outfalls, and the discharges from these outfalls are regulated by the current SPDES permit, and would continue to be regulated as described in the draft SPDES permit. Domestic wastewater is discharged via Outfall 005 after treatment at the Facility's sanitary wastewater treatment plant. The Facility generates industrial wastewater when components are cleaned, and from normal operations such as boiler washdowns. In addition, leachate from the Danskammer Point ash landfill and settlement ponds, and contact runoff from the active and reserve coal piles are collected and treated prior to discharge. After treatment and collection, the wastewater is discharged from Outfalls 006, 006A, and 019, and reaches the Hudson River via a common discharge channel. The wastewater discharges from these and other outfalls at the Site related to stormwater management are regulated by the current SPDES permit and would continue to be regulated as outlined in the proposed draft SPDES permit.

Proceedings

Department Staff issued a SPDES permit for the Facility in 1987. In May 1992, the Facility's former owner, Central Hudson, filed a renewal application with the Department. Since that time, Department Staff authorized minor modifications to the Facility's SPDES permit but did not complete the review of the application or issue a renewal permit.

In May 1992, Department Staff, as lead agency, issued a positive declaration, pursuant to the State Environmental Quality Review Act (SEQRA [ECL article 8]), with respect to the pending SPDES renewal applications for the Roseton 1 & 2, Bowline 1 & 2, and Indian Point 2 & 3 electric generating facilities. Collectively, these facilities are referred to as the Hudson River Settlement Agreement (HRSA) facilities. Department Staff issued the positive declaration due to concerns about the impacts that the HRSA facilities may have on Hudson River fish populations. The purpose of the positive declaration was to undertake a comprehensive environmental review of the potential adverse impacts and to assess reasonable mitigation measures. A draft environmental impact statement (HRSA DEIS) was prepared, and Department Staff issued a Notice of Completion of Final EIS on June 25, 2003 (HRSA FEIS), which appeared in the Department's *Environmental Notice Bulletin* on the same day. With respect to the captioned matter, Department Staff issued a negative SEQRA determination on June 23, 2003 (Issues Conference [IC] Exhibit 3E), notice of which also appeared in the *ENB* on June 25, 2003. The June 23, 2003 negative declaration concerning the Facility references the June 25, 2003 HRSA FEIS.

While Dynegy's renewal SPDES application was pending, Department Staff initiated a permit modification. Conditions in the draft SPDES permit would require Dynegy to implement various technologies, separately or in combination, to reduce entrainment and impingement of fish and other aquatic biota. For example, Dynegy may need to install a Marine Life Exclusion System™ (MLES™) device,² fish barrier nets, or other protective screens; reduce the amount of water withdrawn from the Hudson River for cooling purposes during critical periods in aquatic animal life cycles; install sonic deterrence devices; or implement any combination of the above.

In a letter dated February 5, 2001, Riverkeeper, Inc. petitioned the DEC Commissioner to convene an adjudicatory public hearing about the pending SPDES renewal application and proposed modification. In a ruling dated October 1, 2002, the Commissioner denied Riverkeeper's petition. Subsequently, on November 19, 2002, Riverkeeper, Inc., Hudson River Sloop Clearwater, Inc., Hudson River Fisherman's Association New Jersey Chapter, Inc., Scenic Hudson, Inc., and the Natural Resources Defense Council (NRDC) collectively filed a petition pursuant to Civil Practice Law and Rules (CPLR) article 78 seeking judicial review of the Commissioner's October 1, 2002 ruling, and requesting an order directing Department Staff to continue the processing of the pending SPDES renewal application as well as the Department Staff initiated modification. In an interim order dated March 25, 2003, Justice E. Michael Kavanaugh, New York State Supreme Court, Ulster County, directed the Department to issue a notice announcing the availability of a draft SPDES permit for public review and comment, as well as a draft SPDES permit for the Facility by July 1, 2003.

Consistent with the court's March 25, 2003 interim order, an Announcement of Public Comment Period and Combined Notice of Complete Application and Legislative Public Hearing dated June 24, 2003 (Announcement and Combined Notice) appeared in the Department's *ENB* on June 25, 2003, and in the *Times Herald-Record*, a newspaper of general circulation in the Town of Newburgh, Orange County, on June 29, 2003. As provided for in the Announcement and Combined Notice, Administrative Law Judge (ALJ) Daniel P. O'Connell convened legislative hearing sessions on July 31, 2003 at 2:00 p.m. and 7:00 p.m. at the Newburgh Town Hall to receive unsworn statements from members of the public about the application materials and the draft SPDES permit (IC Exhibit 3A).³ About 18 people attended the 2:00 p.m. session, and eleven speakers, including representatives for the Department Staff and Dynegy spoke. At the 7:00 p.m. session, about 15 people attended, and seven offered comments. Numerous written comments were filed during the comment period, which closed on August 11, 2003.

² At the Bowline and Lovett electric generating facilities, the MLES™ devices are referred to as Gunderbooms™ based on their design features.

³ Other documents related to the draft SPDES permit include the SPDES Permit Fact Sheet (IC Exhibit 3C), the Danskammer Point Generating Station Biological Fact Sheet (IC Exhibit 3D), and the June 23, 2003 negative declaration (IC Exhibit 3E).

Generally, comments were critical of the proposed conditions outlined in the draft SPDES permit. Many said there should be permit conditions that would require Dynegy to install a closed cycle cooling system at the Facility to reduce the amount of water that would be withdrawn from the Hudson River. These speakers said there is a direct relationship between the amount of water withdrawn by the Facility, and the number of fish and other aquatic organisms that are entrained and impinged.

A Notice of Issues Conference dated September 5, 2003 appeared in the *ENB* and in the *Times Herald-Record* on September 10, 2003. The September 5, 2003 Notice scheduled an Issues Conference for October 29, 2003 at 10:00 a.m. at the Newburgh Town Hall. As scheduled, ALJ O'Connell convened the Issues Conference, and ALJ Maria E. Villa also presided. During the Issues Conference, a list of exhibits was developed. A copy is attached to this ruling as Appendix A.

In addition, the September 5, 2003 Notice outlined the requirements to file petitions for either full party status or amicus status, and set October 14, 2003 as the return date for these petitions. With a cover letter dated October 14, 2003, Riverkeeper, Inc., Scenic Hudson, Inc., and NRDC (collectively referred herein as Riverkeeper) timely filed a joint petition for full party status with attachments.

Representatives for Dynegy, Department Staff, and Riverkeeper attended the October 29, 2003 Issues Conference. Robert J. Alessi, Esq., from LeBoeuf, Lamb, Greene & MacRae, LLP, Albany, New York appeared for Dynegy. Department Staff was represented by Mark D. Sanza, Esq., Associate Counsel. David Gordon, Esq., appeared for Riverkeeper.

At the conclusion of the Issues Conference, Dynegy requested permission to file a brief concerning legal issues. I reserved on this request and asked Dynegy to provide me with a list of the proposed legal issues. In a letter dated November 7, 2003, Dynegy proposed three legal issues, and reserved the right to brief issues related to Department Staff's negative declaration and Department Staff's determination not to require the preparation of a DEIS for the pending SPDES permit application.

The other Issues Conference participants were given the opportunity to comment about the proposed legal issues. Department Staff responded with a letter dated November 12, 2003. Subsequently, by letter dated November 14, 2003, Dynegy replied to Department Staff's November 12, 2003 letter. With a letter dated November 18, 2003, Riverkeeper responded to Dynegy's November 7 and November 14, 2003 letters. In the November 18, 2003 letter, Riverkeeper requested that Dynegy's November 14, 2003 letter not be considered because it was not authorized. In an e-mail circulated to all Issues Conference participants, Department Staff supported Riverkeeper's request.

On November 21, 2003, I issued a ruling that identified for briefing one legal issue concerning Department Staff's negative declaration. The November 21 ruling set a briefing

schedule. Briefs were timely received from Dynegy, Department Staff and Riverkeeper. Replies were timely received from Dynegy, Department Staff, and Riverkeeper by January 21, 2004, whereupon the record of the Issues Conference closed on January 21, 2004 (*see* 6 NYCRR 624.4[b][5]).

At Dynegy's request, a conference call convened on February 4, 2004. Representatives for Dynegy, Department Staff, and Riverkeeper participated with ALJs Villa and O'Connell. The purpose of the conference call was to consider Dynegy's request to include electric reliability as a SEQRA issue in the adjudicatory hearing. During the conference, Department Staff and Riverkeeper did not agree to adjudicate this issue. Subsequently, in a letter dated March 25, 2004, Dynegy withdrew its request for review of the June 23, 2003 negative declaration.

Also during the February 4, 2004 conference call, Dynegy objected to the requirements in proposed draft permit Conditions 13 and 15. According to Dynegy, the terms of these conditions would adversely impact electric reliability in New York. Department Staff and Riverkeeper did not consent to adjudicating this proposed issue. The proposed issue is discussed further below. (*See* Rulings § II[A][12])

On February 16, 2004, the US Environmental Protection Agency (EPA) issued final regulations for cooling water intake structures at large power plants.⁴ The new regulations are referred to as the Phase II regulations, and implement federal Clean Water Act (CWA) § 316(b). Subsequently, in a letter dated March 9, 2004, Dynegy renewed its request to brief issues related to the Phase II regulations. Department Staff and Riverkeeper responded with letters dated March 11 and 15, 2004, respectively. Subsequently, Dynegy filed another letter dated March 15, 2004, and Department Staff and Riverkeeper responded with letters dated March 17 and 18, 2004, respectively. In a letter dated March 19, 2004, I informed the parties that I would take Dynegy's request and the comments from Department Staff and Riverkeeper under advisement. Dynegy's request is addressed below. (*See* Rulings § III).

Rulings

⁴ With respect to new facilities that must comply with the best technology available (BTA) requirement outlined at CWA § 316(b) (codified as 33 USC § 1326[b]), EPA promulgated the Phase I regulations in 2001. The US Court of Appeals recently issued a decision concerning the Phase I regulations (*see Riverkeeper, Inc. v. United States Env'tl. Protection Agency*, 358 F3d 174 [2d Cir., 2004]). EPA plans to propose Phase III regulations in November 2004. Phase III regulations would apply to existing manufacturing facilities and small electric generating facilities not regulated by the Phase II regulations.

I. SEQRA

With a letter dated August 11, 2003, Dynegy attached its comments about the draft SPDES permit (*see* IC Exhibit 4). Those comments included concerns about the June 23, 2003 negative declaration. Subsequently, in a letter dated November 7, 2003, Dynegy repeated its concerns about the negative declaration, and reserved the right to brief the issue.

As explained above, I outlined a briefing schedule for this issue in a ruling dated November 21, 2003. Briefs and replies were timely received from Dynegy, Department Staff and Riverkeeper. In a letter dated March 25, 2004, however, Dynegy withdrew its request for review of the June 23, 2003 negative declaration.

Discussion and Ruling: To ensure fairness and the orderly consideration of issues, the permit hearing regulations require that any and all potential issues are to be raised by the time of the Issues Conference (*see* 6 NYCRR 624.4[b][2][ii],[iii] and [iv]). The regulations specifically provide that, where, as here, the Department is lead agency, SEQRA issues are also to be raised during the Issues Conference (*see* 6 NYCRR 624.4.4[c][6][i]). Unless an issue is so raised and the ALJ concludes that the SEQRA determination was irrational or otherwise affected by an error of law, the ALJ will not disturb Department Staff's SEQRA determination (*see* 6 NYCRR 624.4[c][6][i][a]).

Dynegy duly raised its concerns about the June 23, 2003 negative declaration at the Issues Conference. In addition, all Issues Conference participants filed briefs and replies. Therefore, Dynegy as well as the other parties to this proceeding have had a full opportunity to seek administrative review of the negative declaration. Because Dynegy has withdrawn the issue, and no other party alleged a defect with the June 23, 2003 negative declaration, the parties will be precluded from attempting to re-assert this issue later in the proceeding (*see Matter of Village of Freeport*, Commissioner's Decision, November 26, 2003).

Where, as here, the lead agency has issued a negative declaration, the SEQRA process is complete. Accordingly, the scope of this DEC administrative hearing will be limited to compliance with applicable environmental standards (*see e.g.* 6 NYCRR 624.4[c][6][ii][a]).

II. Proposed Issues for Adjudication

Dynegy and Riverkeeper have proposed issues for adjudication. First, Dynegy sent two letters outlining its objections to the conditions proposed in the draft SPDES permit (*see* IC Exhibit 4). An issue is adjudicable where, as here, Dynegy and Department Staff dispute substantial terms or conditions of the draft permit (*see* 6 NYCRR 624.4[c][1][i]). The disputed draft SPDES conditions are discussed below.

In addition, Riverkeeper asserts that the draft SPDES permit does not comply with either federal CWA § 316(b) or 6 NYCRR 704.5 because it does not require the best technology

available to minimize adverse environmental impacts. Riverkeeper also characterizes the draft SPDES permit as “open ended.” To Riverkeeper, the draft SPDES permit is essentially a series of studies, which, depending on the results of those studies, would require Dynegy to implement various technologies, either alone or in combination, to reduce entrainment and impingement by amounts that fall far short of what could be achieved with a closed cycle cooling system. Riverkeeper acknowledges that “short-term” reductions in entrainment and impingement are necessary, and that it is appropriate for Department Staff to require Dynegy to implement something until a more effective technology, like a closed cycle cooling system, can be designed and built at the Facility. However, Riverkeeper maintains that the draft SPDES permit does not identify a long-term technology that would substantially reduce entrainment and impingement, and the associated environmental impacts.

Dynegy contends that the draft SPDES permit is very clear about what some of the long-term constraints would be. To support its contention, Dynegy refers to proposed permit Condition 13 of the draft SPDES permit (*see* IC Exhibit 3A, page 16 of 26). Dynegy acknowledges that Condition 13 does not specify a particular technology if it is not feasible to install an MLES™ device in the Hudson River in front of the Facility’s intake canal, but the constraint, according to Dynegy, is very specific. Beginning November 1, 2005, the draft SPDES permit would require entrainment to be reduced by 80%, and impingement to be reduced by 90% (*see* IC Exhibit 3A, Condition 13).

Department Staff argues that the draft SPDES permit is not open-ended. Department Staff points out that the draft SPDES permit requires Dynegy to assess and implement various technologies within the periods specified in the draft SPDES permit over the life of the Facility. According to Department Staff, the proposed reductions in entrainment and impingement would be substantial.

A. Draft Permit Conditions

1. Revisions

In correspondence dated July 22, and August 11, 2003, Dynegy filed comments about the proposed draft permit conditions (*see* IC Exhibit 4). Among other things, Dynegy objected to the language in Part I, Footnote (a) on page 12 of 26, and Part I, Condition 12(a) on page 16 of 26 (*see* IC Exhibit 3A). At Dynegy’s request, Department Staff revised these two conditions. With a cover letter dated November 4, 2003, Department Staff provided copies of Revised Part I, page 12 of 26 and a Revised Part I, page 16 of 26 to the Issues Conference participants. The revisions are collectively identified as IC Exhibit 3B.

On Revised Part I, page 12 of 26, Staff changed Footnote (a), which would apply to the non-contact cooling water discharges from Outfalls 002, 003, and 004. The initial language of Footnote (a) was:

This limitation applies when intake water temperature is less than or equal to 81°F (27.2°C). If the intake water temperature exceeds 81°F (27.2°C), the discharge temperature may exceed 100°F (37.8°C) by that amount.

The mutually accepted revised language is:

The 100°F maximum discharge temperature limitation applies when intake water temperature is less than or equal to 81°F (27.2°C). If the intake water temperature exceeds 81°F (27.2°C), then incremental (degree for degree) increases in the discharge maximum temperature above 100°F are allowed.

With respect to Revised Part I, page 16 of 26, Department Staff changed the frequency for filing monitoring reports in proposed draft permit Condition 12(a) from quarterly to monthly. As a result of these revisions, there are no issues for adjudication with respect to Footnote (a) and proposed draft permit Condition 12(a).

Dynegy objects to other proposed draft conditions, however. Pursuant to 6 NYCRR 624.4(c)(1)(i), the following proposed draft permit conditions (*see* IC Exhibit 3A) are issues for adjudication.

2. Draft Permit Part I, Condition 4 on page 13 of 26

Dynegy asserts there is an issue of fact related to proposed draft permit Condition 4. This condition would require Dynegy to undertake a tri-axial (or three dimensional) thermal study within four months of the effective date of the permit. The purpose of the study is to map the thermal mixing zone in the Hudson River of the discharge from the Facility. Referring to application materials, Dynegy states that it has already performed extensive thermal evaluations, and concludes that the proposed requirement is unwarranted.

Ruling: Therefore, the issue for adjudication is whether there is sufficient information in the application materials referred to as Supplement C of Appendix A to determine whether the thermal discharges from the Facility comply with the requirements outlined at 6 NYCRR 704.2.

3. Draft Permit Part I, Condition 8 on page 14 of 26

Dynergy asserts there is an issue of fact related to proposed draft permit Condition 8. This condition would require Dynergy to conduct a two year impingement abundance monitoring program from January 1, 2004 to December 31, 2005⁵ to determine the numbers and total weights by species of aquatic organisms impinged on all operating intake screens.

Dynergy objects to this proposed condition for two reasons. First, Dynergy notes that the predecessor owners and operators of the Facility participated in the Impingement Monitoring Program since 1974. Second, Dynergy argues that the proposed impingement monitoring program is unwarranted given the additional requirements in proposed draft permit Conditions 13 and 14, which relate to a feasibility study that would evaluate the installation of an MLES™ device, another alternative technology, or a combination of technologies. The purpose of Condition 8 is to collect data.

Ruling: The issue for adjudication is whether the proposed impingement monitoring program is necessary to make any findings or determinations required by law (*see* 6 NYCRR 621.15[b]). An element of this issue is to identify the required findings or determinations that need to be made.

4. Draft Permit Part I, Condition 9, page 15 of 26

Dynergy asserts there is an issue of fact related to proposed draft permit Condition 9. This condition would require Dynergy to conduct a two year entrainment monitoring program from February 1 through August 31, 2004 and during the same period in 2005 to determine the temporal distribution and numbers, by species and life stage, of fishes entrained through the cooling system.

Dynergy objects to this proposed condition for two reasons. First, Dynergy contends that the historical database for the Facility is complete and sufficient to predict temporal entrainment patterns. Dynergy contends further that the Danskammer Alternative Technology Evaluation Model (DATEM) predicts percentage reductions relative to station flow, regardless of the absolute numbers of organisms involved. Second, Dynergy argues that the proposed entrainment monitoring program is unwarranted given the additional requirements proposed in Conditions 13 and 14. The purpose of Condition 9 is to collect data.

⁵ According to the note on Part I, page 14 of 26 of the draft SPDES permit (*see* IC Exhibit 3A), compliance dates will need to be changed. Compliance dates in the draft SPDES permit were based on the presumption that the permit would have become effective on November 1, 2003.

Ruling: The issue for adjudication is whether the proposed entrainment monitoring program is necessary to make any findings or determinations required by law (*see* 6 NYCRR 621.15[b]). An element of this issue is to identify the required findings or determinations that need to be made.

5. Draft Permit Part I, Condition 10, page 15 of 26

Dynegy asserts there is an issue of fact related to proposed draft permit Condition 10. This condition would require Dynegy to research, develop and evaluate the effectiveness of a high frequency, high energy sonic fish deterrent device that would be deployed at the mouth of the Facility's intake canal from August 1 through October 31 of each calendar year beginning in 2004.

Dynegy objects to this proposed condition for two reasons. First, Dynegy explains that in its renewal application, it proposed to use a sonic deterrent system in combination with a program of targeted flow reductions. Dynegy wants to evaluate the proposal presented in its renewal application over a three year period. Dynegy contends, however, that the proposed permit condition would impose more stringent entrainment and impingement mitigation measures in "Year 2." Second, Dynegy argues that the proposed study would not be necessary given the additional requirements proposed in Conditions 13 and 14.

Ruling: The issue for adjudication is whether the proposed permit condition would impose more stringent entrainment and impingement mitigation measures in "Year 2" rather than "Year 3," and if so, whether such a condition is necessary given the requirements proposed in Conditions 13 and 14.

6. Draft Permit Part I, Condition 11, page 15 of 26

Dynegy asserts there is an issue of fact related to proposed draft permit Condition 11. This condition would require Dynegy to implement a flow reduction and planned outage program by actively managing flow and cooling water discharge temperature on a daily basis by using DATEM to operate the plant. The proposed condition would require Dynegy to alter plant operations to use the minimum volume of water necessary to provide cooling and to comply with the thermal limits proposed in the draft SPDES permit. The three year cumulative daily average (CDA₃) of the percent reductions would be used to assess compliance with this proposed condition.

Dynegy objects to the proposed program given the additional requirements proposed in Conditions 13 and 14. In addition, Dynegy argues that proposed reductions in entrainment and impingement in Condition 11 compared with those required in Condition 13 are inconsistent. For example, the percent reduction for entrainment would be 70% in Condition 11, but 80% in Condition 13. With respect to impingement, the percent reduction would be 85% in Condition

11, but 90% in Condition 13. Under these circumstances, Dynegy argues that it will not have an opportunity to demonstrate that the CDA₃ mitigation proposal could be effective.

Ruling: The issue for adjudication is whether the time frame in Condition 13 should be extended so that Dynegy has an opportunity to evaluate the flow reduction program properly.

7. Draft Permit Part I, Condition 12(c), page 16 of 26

Dynegy asserts there is an issue of fact related to proposed draft permit Condition 12(c). This condition would require Dynegy to update DATEM using the entrainment and impingement data collected as a requirement of Conditions 8 (impingement) and 9 (entrainment). The purpose of Condition 12(c) is to determine how well DATEM predicts entrainment and impingement. The proposed condition would allow Department Staff to revise DATEM after reviewing the data.

Dynegy objects to Condition 12(c) for two reasons. First, Dynegy contends that the proposed condition would impose more stringent entrainment and impingement mitigation measures in Year 2, regardless of the CDA₃ assessment (*see* Condition 11[a]). Dynegy argues that historical data are sufficient for DATEM to predict entrainment and impingement rates. Second, Dynegy also argues that the proposed requirement is unwarranted given the additional requirements proposed in Conditions 13 and 14.

Ruling: The issue for adjudication is whether an evaluation of how well DATEM predicts entrainment and impingement is necessary to make any findings or determinations required by law (*see* 6 NYCRR 621.15[b]). An element of this issue is to identify the required findings or determinations that must be made.

8. Evaluation of an MLESTM device and Alternative Technologies

Dynegy asserts there are mixed issues of fact and law related to proposed draft permit Conditions 13, 14, and 15. These conditions relate to the evaluation and potential installation of an MLESTM device and implementation of alternative technologies. Depending on whether an MLESTM device can be installed, Dynegy may be required to evaluate and potentially implement alternative technologies. The goal of these technology evaluations is to reduce entrainment and impingement at the Facility “to levels approaching that which could be achieved by closed-cycle cooling” (*see* IC Exhibit 3A, Condition 15, page 16 of 26). For the reasons discussed below, Dynegy objects to these proposed conditions.

a. Draft Permit Part I, Condition 13, page 16 of 26

As currently proposed, Dynegy would implement draft permit Condition 13 in two phases. During the first phase, Dynegy would be required to undertake a feasibility study that would evaluate the installation of an MLESTM device at the Facility, or other alternative

technologies. During the second phase, Dynegy would be required to install the MLES™ device and, if necessary, implement alternative technologies. If, however, the feasibility study shows that neither an MLES™ device nor any alternative technology or combination of technologies would be feasible, then Dynegy would be required to reduce entrainment and impingement by 80% and 90%, respectively.

Dynegy objects to proposed draft permit Condition 13 for several reasons. First, Dynegy argues that the requirements in this condition are inconsistent with those in Condition 11(a). According to Dynegy, Condition 11(a) would require a 70% reduction in entrainment and a 85% reduction in impingement, which would be verified with the CDA₃, compared to reductions of 80% and 90%, respectively, that proposed Condition 13 may ultimately require. Dynegy concludes that proposed Condition 13 would supersede the reductions proposed in Condition 11(a) before the reductions could be fully evaluated by CDA₃. Second, Dynegy contends that requiring 80% reductions for entrainment and 90% reductions for impingement would be arbitrary without considering the costs associated with implementing the greater proposed reductions relative to the benefits that would be provided by proposed Condition 11(a).

Dynegy argues further that its objections to proposed Condition 13 relate, in part, to whether there is any legal authority for Department Staff to impose more restrictive reductions for entrainment and impingement. Dynegy challenges Department Staff's assumption that closed-cycle equivalent methods exist that would enable the Facility to meet the reductions proposed in Condition 13. Finally, Dynegy contends that the proposed reductions are not consistent with the EPA's proposed regulations for Phase II (or existing) facilities.⁶

Ruling: Upon review of Dynegy's comments, it does not appear that Dynegy objects to undertaking the feasibility study for an MLES™ device or alternative technologies. Rather, Dynegy's objections relate to the proposed requirement to reduce entrainment and impingement further if installation of an MLES™ device or implementation of alternative technologies is not feasible. Since Dynegy has not yet undertaken any feasibility studies, it cannot be determined, first, what technologies would be feasible, and second, whether reductions in entrainment and impingement would need to be reduced by 90% and 80%, respectively.

Therefore, the issue for adjudication with respect to proposed draft permit Condition 13 is whether Department Staff has the legal authority to require the reductions in entrainment and impingement proposed in Condition 13, assuming that installation of an MLES™ device or implementation of alternative technologies at the Facility would not be feasible. There is also a factual element to this issue related to the potential costs associated with achieving a 90%

⁶ As noted above, EPA issued final regulations for cooling water intake structures at large power plants (Phase II) on February 16, 2004. To date, the regulations have not yet appeared in the *Federal Register*.

reduction in entrainment and an 80% reduction in impingement relative to the benefits that proposed draft permit Condition 11(a) may provide.

b. Draft Permit Part I, Condition 14, page 16 of 26

Proposed draft permit Condition 14 also relates to the development of an MLES™ device, and assumes that its installation or the implementation of alternative technologies would be feasible. Condition 14 would require Dynegy to prepare an engineering report and plans for the design and installation of an MLES™ device and any other alternative technologies that may need to be implemented to reduce entrainment and impingement.

Dynegy objects to proposed draft permit Condition 14. Dynegy's objections are similar to the ones related to proposed draft permit Condition 13.

Ruling: With respect to proposed draft permit Condition 14, the issue for adjudication is the same as the one identified for proposed draft permit Condition 13.

c. Draft Permit Part I, Condition 15, page 16 of 26

Proposed draft permit Condition 15 relates to the installation of an MLES™ device, or the implementation of alternative technologies. It assumes that Dynegy prepared the engineering report and plans required by Condition 14, and would require Dynegy either to install an MLES™ device and any other necessary technology, or reduce entrainment and impingement by 80% and 90%, respectively.

Dynegy objects to proposed draft permit Condition 15 for reasons similar to the ones related to proposed Conditions 13 and 14.

Ruling: With respect to proposed draft permit Condition 15, the issue for adjudication is the same as the one identified for proposed draft permit Condition 13.

9. Draft Permit Part I, Supplementary Special Conditions 2 and 3, page 18 of 26

Dynegy asserts there is an issue of law related to proposed draft supplementary special permit Conditions 2 and 3. Proposed supplementary special Condition 2 would require the Facility to be dismantled and removed from the site (*i.e.*, decommissioned) when the Facility is taken out of service. Proposed supplementary special Condition 3 would require Dynegy to conduct its operations at the site with due consideration of visual quality and impact to the Hudson River. In addition, proposed supplementary special Condition 3 would require Dynegy to grade and cap the solid waste management facility on the site so that its appearance would be compatible with the surrounding area.

Ruling: Dynegy objects to these proposed supplementary special permit conditions, and argues they are unlawful. Therefore, the issue for adjudication is whether there is any legal authority to impose supplementary special Conditions 2 and 3.

10. Draft Permit Part I, Toxicity Testing Program, Tier I, page 19 of 26

Dynegy asserts there is a mixed issue of law and fact related to a proposed draft permit condition that would require toxicity testing. This proposed permit condition would require Dynegy to implement an acute effluent toxicity monitoring program for the discharge from Outfalls 006 and 019. The required testing protocol identified in the draft permit is entitled, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Water to Freshwater and Marine Organisms*, 4th Edition, EPA/600/4-90/027F(1993) (see IC Exhibit 3A, Part I, page 19 of 26).

Dynegy objects to this proposed draft permit condition, and argues that it is unwarranted. According to Dynegy, extensive acute toxicity testing had been performed at the Facility during the coal re-conversion process. Dynegy contends that the results of tests performed at that time showed no acute toxicological effects. Since the time of that testing, Dynegy argues that no process changes have been implemented at the Facility that would change the quality of its effluent.

Ruling: The issue for adjudication is whether there is any legal authority to impose a condition that would require Dynegy to implement an acute effluent toxicity monitoring program. At the adjudicatory hearing, Dynegy may offer the appropriate documentation to support its factual claims that extensive acute toxicity testing had been performed at the Facility in the past, that the results were negative, and that no process changes have been implemented that would change the quality of the effluent.

11. Draft Permit Limits, Levels and Monitoring pages 6 and 11 of 26

Dynegy asserts there is an issue of fact related to this proposed draft permit condition. The draft permit proposes to set a daily maximum effluent limit for mercury discharged from Outfalls 06A and 019. The discharges from these outfalls come from the on-site waste treatment facility, and runoff from areas where coal is stored and ash is disposed of, among other locations on the site. In the draft SPDES permit, the proposed daily maximum compliance limit for mercury would be 0.0008 micrograms per liter ($\mu\text{g/l}$). The basis for Dynegy's objection is that the proposed compliance limit is too close to the laboratory practical quantitation limit (PQL). Dynegy argues that when the compliance limit is close to the PQL, instrument and laboratory errors could cause false positive results that could inappropriately be considered violations of the terms of the SPDES permit.

Ruling: The issue for adjudication is what should be the appropriate daily maximum compliance limit for mercury from Outfalls 06A and 019. Information may also be presented

about the applicable analytical method, or methods, that would be used to measure mercury concentrations, as well as information related to the probability of false results.

12. Electric Reliability and Proposed Conditions 13 and 15

As stated above, a conference call with the parties was held on February 4, 2004 concerning the potential environmental effects that additional fish protection outages at the Danskammer facility may have on electric reliability. During the telephone conference, Department Staff and Riverkeeper objected to adjudicating the proposed SEQRA-related issue. After the telephone conference, Dynegy sent a letter dated February 4, 2004 and proposed the following issue, which relates to the proposal that would require additional fish protection outages if an MLES™ device, another technology, or combination of technologies cannot be implemented at the Danskammer facility:

“Whether proposed draft permit Conditions 13 and 15, and the schedule of compliance relating to those conditions should be eliminated or modified in light of their direct and cumulative impacts on electric system reliability in New York State?” (Dynegy’s February 4, 2004 letter from Mr. Alessi to ALJ O’Connell.)

As previously mentioned, Dynegy withdrew its request to have the June 23, 2003 negative declaration reviewed by the ALJ pursuant to 6 NYCRR 624.4[c][6][i][a]. The basis, in part, for Dynegy’s withdrawal was “due, in part, to the fact that [the ALJ] currently is considering the issue of electric system reliability as a potential issue for adjudication” (Dynegy’s March 25, 2004 letter from Mr. Alessi to ALJ O’Connell).

Discussion and Ruling: As noted above, the SEQRA process has been completed, and the scope of this proceeding is limited to compliance with applicable environmental standards (*see* 6 NYCRR 624.4[c][6][ii][a]). SEQRA concerns related to the direct and cumulative impacts on electric system reliability in New York are, therefore, beyond the scope of this proceeding (*see* Rulings § I). Consequently, Dynegy’s proposed issue relates exclusively to compliance with the BTA standard because the purpose of additional fish protection outages is to minimize entrainment and impingement.

Because this proposed mitigation would essentially limit capacity, the fact questions related to this issue are whether this proposed mitigation is available for implementation at the site (*see Matter of Mirant Bowline, LLC*, Commissioner’s Decision, March 19, 2002 at 11; *Matter of Athens Generating Company, LP*, Commissioner’s Interim Decision, June 2, 2000 at 9), and whether the costs associated with additional fish protection outages are wholly disproportionate to the environmental benefits to be gained compared to other available alternative technologies. As explained elsewhere in this ruling, other alternative technologies have been identified in the draft SPDES permit (*see* Rulings §§ II[A][5], [6], and [8]) and proposed by Riverkeeper (*see* Rulings § II[B]). Dynegy’s proposed issue with respect to the

effect of additional fish protection outages on electric system reliability in New York is not relevant to the BTA determination and, therefore, will not be adjudicated in this proceeding.

B. Riverkeeper's Proposed Issues for Adjudication

In its petition for full party status, Riverkeeper proposes five issues for adjudication. They are addressed below.

1. Closed Cycle Cooling

According to Riverkeeper's petition for full party status, the proposed draft permit conditions do not reflect the "best technology available," as required by CWA § 316(b) and 6 NYCRR 704.5 and, therefore, would not minimize adverse environmental impacts from the Danskammer cooling water intake canal. In order for the Facility to comply with the BTA requirement, Riverkeeper argues that the final SPDES permit must limit the amount of water that Dynegy may withdraw from the Hudson River by requiring some type of closed cycle cooling system. Riverkeeper asserts that a closed cycle cooling system would reduce entrainment and impingement by at least 97% from current levels.

Riverkeeper's offer of proof includes the expert testimony of William Powers, P.E., from Powers Engineering, San Diego, California, and Peter Henderson, Ph.D. Aquatic Ecology, from Pisces Conservation, Ltd., Lymington, United Kingdom. In general, Mr. Powers would testify that the installation of a wet or a hybrid closed cycle cooling system at the Danskammer facility would reduce the amount of water currently used at the Facility by 97%, and that a dry cooling system would reduce water usage from current levels by 99%. Dr. Henderson would testify that substantial reductions in water withdrawals are necessary to stop the persistent adverse environmental impacts associated with entrainment and impingement.

Riverkeeper contends further that Mr. Powers's testimony would demonstrate there is sufficient area on the site to install closed cycle cooling towers, and that the Danskammer facility could be retrofitted with a closed cycle cooling system. Mr. Powers' testimony would include an explanation of the retrofit process. Riverkeeper's petition includes eight potential configurations.

Dynegy and Department Staff oppose this proposed issue. Dynegy points out that the subject matter is, in part, a renewal application. Consequently, Dynegy argues there is a threshold fact question about whether the Danskammer electric generating facility actually causes an adverse environmental impact. According to Dynegy, the prospective intervenor has offered nothing to show that an adverse environmental impact could potentially result from renewing the SPDES permit.

With respect to CWA § 316(b), Dynegy states that Phase II regulations do not require closed cycle cooling systems at existing facilities (*see 67 Fed Reg 17160*). Dynegy concludes that Riverkeeper's assertion that a closed cycle cooling system should be required at the

Danskammer generating facility is erroneous. Based on prior DEC administrative decisions, Dynegy argues that BTA determinations must be made on a case-by-case basis (*see Mirant*, at 11; *Athens*, at 9), and that closed cycle cooling systems cannot be required at every electric generating station.

Department Staff agrees with Dynegy that closed cycle cooling systems are not required at every facility in order to comply with BTA. With respect to the Danskammer generating station, Department Staff considered a closed cycle cooling system, but ruled it out because there is not sufficient space on the site to accommodate cooling towers. Department Staff points out that in addition to the federal requirement at CWA § 316(b), New York has regulations (*see* 6 NYCRR 704.5) that can be relied upon to implement the federal requirement. According to Department Staff, 6 NYCRR 704.5 includes the “wholly disproportionate” test discussed in *Athens* (at 13-15; *see also Mirant* at 11).

Department Staff states further that EPA has “approved” New York’s SPDES program, and that such an approval is different from a delegation. According to Department Staff, an approved program may be more restrictive than the federal NPDES program. For example, certain discharges to groundwater are regulated by the Department’s SPDES program, which are not regulated pursuant to the federal Clean Water Act. Department Staff acknowledges that the EPA Phase II regulations would not require closed cycle cooling systems for existing electric generating facilities, but argues that technologies more restrictive than those identified in the EPA Phase II regulations could be required at the Danskammer facility based on New York’s approved SPDES program.

In clarification, Riverkeeper acknowledges that BTA does not require closed cycle cooling systems at every facility. Rather, Riverkeeper maintains that to comply with BTA, a closed cycle cooling system should be installed at the Danskammer electric generating facility. Riverkeeper argues that the Phase II regulations do not prohibit the retrofit of closed cycle cooling systems at existing facilities, such as the Danskammer facility. Riverkeeper agrees that BTA determinations must be made on a case-by-case basis. Riverkeeper also agrees with Department Staff’s position that New York’s approved SPDES program may be more restrictive than the federal NPDES program.

Discussion and Ruling: There is a substantive and significant issue for adjudication about whether the Danskammer facility should be retrofitted with a closed cycle cooling system. Whether a closed cycle cooling system can be located on the site is at the center of this issue.

The issue is substantive because further inquiry is required to determine whether the adverse environmental impacts associated with entrainment and impingement could be further mitigated with a closed cycle cooling system. At Department Staff’s request, Dynegy’s consultant, ASA Analysis & Communication, Inc., New Hampton, New York, developed a report entitled *Danskammer Point Generating Station Review Technology for Fish Protection*, dated January 2003 (ASA Report). Based on the ASA Report and other information, such as site

visits, Dynegy and Department Staff contend there is insufficient space on the site to accommodate any closed cycle cooling system. Riverkeeper's proposed experts, however, challenge the findings of the ASA Report. Because there is conflicting expert opinion, I find that Riverkeeper's petition raises sufficient doubt such that a reasonable person would inquire further, particularly given Riverkeeper's limited rights concerning discovery (*see* 6 NYCRR 624.7[a]) and site access (*see* IC Tr pp. 192-196).

The issue is significant because, after hearing, the proposed draft SPDES permit may be modified to limit the amount of water that Dynegy may withdraw from the Hudson River for cooling purposes. (*See* 6 NYCRR 624.4[c][1][iii]; 624.4[c][2] and [3]).

Although Dynegy proposed to resolve the issue of whether a closed cycle cooling system could fit on the site during the Issues Conference, I explained that the purpose of the Issues Conference was to identify factual disputes for adjudication, not decide them (IC Tr pp. 78-79). The factual issues identified in this ruling will be resolved after the parties have had an opportunity to develop a record at the adjudicatory hearing.

Other factual questions related to this issue include whether any of Riverkeeper's proposed closed cycle cooling configurations are available (*see Mirant* at 11; *Athens* at 9). Factors that should be considered in determining the availability of a closed cycle cooling system include, but are not limited to, how the proposed designs would impact the Facility's electric generating capacity (*i.e.*, thermal efficiency and energy penalties), how the proposed designs would impact air emissions from the facility, and how the proposed designs could impact the environment. With respect to the latter factor, considerations include, among other things, the environmental impacts associated with constructing the proposed designs, the potential visual impacts associated with cooling tower components and plumes, the frequency and duration of visible plumes and their anticipated size, the potential effects of plumes on vegetation, and the potential effects of plumes on highway safety.

Another relevant factor will be whether the costs associated with retrofitting the Danskammer facility with a closed cycle cooling system are wholly disproportionate to the environmental benefits to be gained compared to other available alternative technologies that have been identified in the draft SPDES permit, and proposed by Riverkeeper. As explained above, Dynegy has identified substantive and significant issues for adjudication regarding the technologies identified in the draft SPDES permit.

This issue will be limited to the configurations proposed in Riverkeeper's petition for full party status (*see*, Riverkeeper's Petition, p. 22 (a - d), *also* Riverkeeper's Petition, Exhibit E dated August 8, 2003). My understanding of Riverkeeper's petition is that all the proposed configurations would be located on the Danskammer site. During the Issues Conference, the parties discussed the possibility of locating a closed cycle cooling system for the Danskammer facility on adjacent property. This property is associated with the Roseton facility, and Riverkeeper argued that Dynegy, or a parent company could authorize the use of the Roseton site

for that purpose. I am not persuaded by Riverkeeper's arguments concerning the availability of the Roseton site.

2. Accuracy of DATEM Assumptions

As explained above, proposed draft permit Conditions 8 and 9 would require Dynegy to monitor impingement and entrainment for two years, and report the data in tabular and graphic formats to the Department. In addition, proposed draft permit Condition 11 would require Dynegy to implement a flow reduction and outage program by managing flow and cooling water discharge temperature on a daily basis using DATEM. Condition 11 would require Dynegy to reduce flows so that entrainment is reduced by 70% and impingement is reduced by 85%. Compliance with the flow reductions will be based on the three-year cumulative daily average (CDA₃) of the percent reductions.

In its petition for full party status, Riverkeeper asserts that certain baseline assumptions in DATEM are not accurate. According to Riverkeeper, the alleged inaccuracies would prevent reliable comparisons between reductions in entrainment and impingement from the flow reduction program that would be required by Condition 11 and closed cycle cooling systems. Riverkeeper observes that DATEM correctly assumes that all entrained organisms would die, but when estimating the effectiveness of the mitigation technologies, DATEM incorrectly assumes that substantial numbers of entrained organisms would survive. Another significant concern is that DATEM assumes that the pumps for the Danskammer generating facility operate at full capacity. According to Riverkeeper, the Facility does not operate at full capacity because Units 1 and 2 are usually idle.

Dynegy argues that the proposed technologies related to flow reductions would be effective. Dynegy, however, does not consider DATEM to be a model, per se. Rather, Dynegy characterizes DATEM as an accounting or bookkeeping system to organize the data that Dynegy would be required to collect with respect to entrainment and impingement. As an accounting device, Dynegy claims that DATEM would be very effective. Dynegy states that Department Staff approved DATEM, and that Department Staff has determined that DATEM would assist Dynegy in recording and maintaining the accuracy of the entrainment and impingement data to ensure compliance with the proposed flow reduction conditions in the draft SPDES permit.

Department Staff states that the purpose of DATEM is to verify whether flow reduction reduces entrainment and impingement, and if so by how much. According to Department Staff, DATEM results would be accurate. Department Staff intends to compare DATEM results with the current body of information collected over the past 25 years. Department Staff notes that Riverkeeper may be concerned that DATEM considers only six fish species, and argues that these six species account for over 90% of the fish species adversely impacted by the Facility.

Discussion and Ruling: For the reasons explained above, there are substantive disputes between Dynegy and Department Staff concerning the terms of proposed draft permit Conditions

8, 9, 11, and 12(c). Implementation of these draft SPDES conditions depends on the results obtained from DATEM. The dispute between Dynegy and Department Staff centers on the need to collect additional entrainment and impingement data, and the appropriateness of using DATEM results to manage cooling water through the Facility. Riverkeeper's proposed issue relates to the reliability of DATEM.

In addition to the substantive dispute between Dynegy and Department Staff, Riverkeeper also raises a substantive and significant issue about the reliability of DATEM. The issue is substantive because Riverkeeper's proposed expert disputes some DATEM assumptions, which prompts further inquiry. The issue is significant because the proposed draft SPDES permit conditions identified above may be substantially modified as a result of the adjudication.

Department Staff has identified flow reductions as an interim technology to mitigate adverse impacts related to entrainment and impingement while Dynegy determines the feasibility of a high frequency, high energy sonic fish deterrent device and an MLES™ device. The benefits associated with flow reductions would be verified by DATEM. However, there is a factual dispute about whether the results from DATEM would be reliable. During the adjudicatory hearing, the parties will have an opportunity to evaluate the assumptions relied upon in DATEM.

3. Thermal Discharges

Riverkeeper also objects to the proposed modification in the draft SPDES permit related to the intake-discharge temperature differential (*see* IC Exhibit 3A, Outfall 002 on page 3 of 26, Outfalls 003 and 004 on page 4 of 26, and Footnote [b] on page 12 of 26). The temperature differential limits the maximum discharge temperature of the non-contact cooling water based on the ambient temperature of the Hudson River. The biological fact sheet (*see* IC Exhibit 3D, page 4 of 8) explains that the September 27, 1987 SPDES permit had two intake-discharge temperature differentials. From October 17 to May 14 (*i.e.*, the winter), the temperature differential was limited to 34.2°F. From May 15 to October 16 (*i.e.*, the summer), the temperature differential was limited to 19.0°F. The draft SPDES permit, however, would limit the intake-discharge temperature differential to 34.2°F year round. The May 15 to October 16 temperature differential of 19°F has been dropped from the draft SPDES permit.

Referring to a report dated 2000 by EA Engineering Science & Technology entitled *Review of Entrainment Survival Studies: 1970-2000*, the biological fact sheet states that temperature induced mortality of entrained fish remains low up to discharge temperatures of 86° to 90°F. According to the report, mortality increases dramatically when discharge temperatures exceed 90°F. (*See* IC Exhibit 3D, page 4 of 8.) Department Staff contends that a year round temperature differential of 34.2°F would not adversely impact the riverine environment during the summer period, and would allow Dynegy to comply with the proposed flow reductions, which in turn would reduce entrainment.

Riverkeeper's proffered experts reason that if less cooling water is circulating through the Facility, then the temperature of the discharge would increase. Essentially, Riverkeeper argues that one adverse environmental impact would be traded for another. In other words, reductions in the adverse impacts associated with entrainment and impingement from reduced flow would be offset by an increase in the temperature of the cooling water discharge.

Dynergy argues the contrary, and asserts that Riverkeeper has not made an offer of proof concerning the alleged adverse impacts associated with the thermal discharge. To support its argument, Dynergy cites to the modified draft SPDES permit at Footnote (a) on page 12 of 26 (*see* IC Exhibit 3B). Dynergy argues further that thermal discharges from the Danskammer facility would comply with the regulatory criteria outlined in 6 NYCRR part 704. Dynergy contends that Riverkeeper made no offer of proof about the anticipated temperature of the cooling water discharge.

With respect to the thermal discharge, Department Staff points to proposed draft permit Condition 4, which would require Dynergy to undertake a tri-axial thermal study. According to Department Staff, such a study has not been undertaken recently, and Department Staff wants to verify whether the SPDES permit should include criteria for a mixing zone related to the thermal discharge, pursuant to 6 NYCRR 704.3. In addition, Department Staff states there is only one intake-discharge temperature differential in the renewal SPDES permit for the FitzPatrick Station on Lake Ontario, and that the temperature differential is 34.2°F.

At the Issues Conference, the parties agreed to have a technical conference concerning this proposed issue (*see* IC Tr pp. 169-171). I do not know whether the parties' experts met, and if they did, I do not know what the outcome of the conference was. To date, the parties have not reported that the proposed issue has been resolved. Therefore, a ruling about Riverkeeper's proposed issue follows.

Ruling: Riverkeeper's premise seems reasonable: if less water circulates through the Facility, then the temperature of the discharge would be greater compared to the temperature of current discharges. However, I am not inclined to inquire further because Riverkeeper's proposed expert does not challenge the results of the study that Department Staff relied upon to set the year round intake-discharge temperature differential at 32.4°F (*see* IC Exhibit 3D, page 4 of 8). Absent an offer of proof by Riverkeeper, the proposed issue is not substantive.

4. Sonic Deterrence

Proposed draft permit Condition 10 would require Dynegy to evaluate the effectiveness of a high frequency, high energy sonic fish deterrent device that would be deployed at the Facility from August 1 through October 31 each calendar year. For the reasons outlined above, Dynegy objects to this proposed condition. According to Riverkeeper, sonic fish deterrent systems are experimental, and the current body of information shows that sonic deterrence is not effective for all fish species. According to Riverkeeper's fisheries expert, Dr. Henderson, high frequency, high energy sonic devices can cause some fish species to swim erratically, which could increase the incidence of impingement among those species. Finally, Riverkeeper argues that sonic deterrence would not be as effective at reducing entrainment and impingement as a closed cycle cooling system.

Dynegy argues that sonic deterrence has been used for over twenty years. Dynegy acknowledges that sonic deterrence is not effective for all fish species. Dynegy notes that sonic deterrence is being used at the FitzPatrick facility on Lake Ontario. According to Dynegy, sonic deterrence at the FitzPatrick facility has reduced entrainment and impingement there from between 50% to 80%. Dynegy argues, however, that sonic deterrence was not intended as the only technology to reduce entrainment and impingement at the Danskammer facility. Rather, sonic deterrence was intended to be used with flow reduction as outlined in the draft SPDES permit.

Department Staff opposes the adjudication of Riverkeeper's proposed issue. According to Department Staff, sonic deterrence has effectively reduced adverse effects of entrainment and impingement at the FitzPatrick facility, and Department Staff expects a similar result would be obtained at the Danskammer facility, particularly when combined with the additional mitigation requirements outlined in the draft SPDES permit.

Discussion and Ruling: Based on its offer of proof, Riverkeeper's proposed issue concerning sonic deterrence is substantive. In addition, the issue is significant because sonic deterrence may be an alternative mitigation technology that could be used in conjunction with flow reductions to reduce that adverse impacts of entrainment and impingement.

Because BTA determinations are made on a case-by-case basis, the success of sonic deterrence technology at the FitzPatrick facility is not dispositive of its effectiveness at the Danskammer facility. Moreover, Riverkeeper's expert states that sonic deterrence may disorient certain fish species, which could make those species more vulnerable to entrainment and impingement. The issue for adjudication is whether sonic deterrence, alone or in combination with flow reductions, is an available BTA technology for the Danskammer facility. A relevant factor is whether the cost of sonic deterrence is wholly disproportionate to the environmental benefits to be gained compared to other proposed alternatives such as closed cycle cooling systems and the proposed MLES™ device.

5. Marine Life Exclusion System™ (MLES™)

As explained above, proposed draft permit Conditions 13, 14 and 15 relate to the MLES™. Condition 13 would require Dynegy to undertake a feasibility study to evaluate the installation of an MLES™ device at the Danskammer facility. If installation is feasible, then Condition 14 would require Dynegy to prepare an engineering report and plans for the design and installation of an MLES™ device. After Department Staff reviews and approves the design plan, Condition 15 would require Dynegy to install an MLES™ device at the Facility.

In its petition for full party status and at the Issues Conference, Riverkeeper argues that an MLES™ device would not work at the Danskammer facility given the likelihood of biofouling. Biofouling occurs when plankton, and debris suspended in the water column become trapped in the MLES™ fabric. As a result, water cannot pass through the device. According to Riverkeeper's expert, biofouling is more likely to occur as the salinity of the water decreases. Riverkeeper also contends that an MLES™ device at the Danskammer facility may interfere with the navigation channel, which runs on the west side in this section of the Hudson River. Therefore, Riverkeeper concludes that it would be futile to require Dynegy to undertake the proposed feasibility standard.

Dynegy states that it will evaluate the use of an MLES™ device at the Danskammer facility at the Department's request. Dynegy argues there are alternative technologies for the Danskammer facility that would reduce entrainment and impingement better than an MLES™ device, however. For the reasons explained above, Dynegy is challenging the proposed draft SPDES conditions related to the feasibility, design and installation of an MLES™ device.

Department Staff believes that use of an MLES™ device at the Danskammer facility is feasible. Department Staff contends further that an MLES™ device has been determined to meet the BTA standard at other facilities, such as Lovett, and Bowline 3.

Discussion and Ruling: The proposed issue is substantive and significant. Riverkeeper and Dynegy have similar views about the feasibility and effectiveness of installing an MLES™ device at the Danskammer facility. As explained above, BTA determinations are made on a case-by-case basis. Although MLES™ devices have been determined to be BTA at other Hudson River facilities, the installation of MLES™ devices at Lovett and Bowline is not dispositive of its effectiveness at the Danskammer facility. A relevant factor is whether the cost of an MLES™ device is wholly disproportionate to the environmental benefits to be gained compared to other proposed alternatives such as closed cycle cooling systems, and sonic deterrence with flow reductions. For purposes of this hearing, relevant costs may include, among others, expenses associated with the feasibility study proposed in the draft SPDES permit, the design, installation, as well as the long-term maintenance and operation costs of the MLES™ device.

III. Legal Issues

At the conclusion of the Issues Conference, Dynegy requested permission to brief legal issues. Subsequently, in a letter dated November 7, 2003, Dynegy provided a list. In a ruling dated November 21, 2003, I authorized the parties to brief the issue related to the June 23, 2003 negative declaration, and that the parties would have the opportunity to submit legal arguments about the other proposed legal questions at the end of the proceeding in closing and reply briefs.

Subsequently, in correspondence dated March 9, 2004, Dynegy renewed its request to brief the issue related the appropriate legal standards to apply in making a BTA determination. I disagree with Dynegy's contention that identifying the appropriate BTA standards is a legal issue that should be decided before the adjudicatory hearing begins. Rather, I consider the BTA determination for the Danskammer facility to be a mixed issue of fact and law. I believe that it would be more administratively efficient to develop a factual record about the various mitigation technologies identified above, their availability, and whether various proposed mitigation technologies are wholly disproportionate to the environmental benefits to be gained from implementing the other various alternative technologies. Therefore, I deny Dynegy's request to brief the question of "what are the appropriate legal standards to apply in making a § 316(b) 'best technology available for minimizing adverse environmental impacts' determination?" at this point in the proceeding.

In closing and reply briefs, the parties will have the opportunity to discuss the following issues:

- “1. Whether the Department has the legal authority to order a technology change to Danskammer's cooling water intake structure in the context of this SPDES permit review process under: 6 NYCRR 704.5, 33 USC 1326(b), or both;
2. What are the appropriate legal standards to apply in making a 33 USC 1326(b) 'best technology available for minimizing adverse environmental impacts' determination; and
3. Whether ECL articles 3, 8 or 15 require the Department to consider the benefits of its proposed modification, and to balance the social and economic value of Danskammer to the State, regional and local economies and the welfare of the people of New York.” (Dynegy's November 7, 2003 letter from Mr. Alessi to ALJ O'Connell.)

In its March 9, 2004 letter, Dynegy contends that 6 NYCRR 704 is invalid due to a procedural defect in its promulgation. The parties may discuss this issue in their respective closing and reply briefs. To the extent that a party may need to supply factual information to support a particular legal position, the party may offer that factual information as part of its direct case.

To the extent that the foregoing legal issues should be re-framed or that additional legal issues arise during the adjudicatory hearing, I will take all such requests under advisement.

IV. Ruling on Requests for Party Status

Pursuant to 6 NYCRR 624.5, the parties to any adjudicatory hearing are the Applicant, Department Staff and those who have been granted full party status. As explained above, Riverkeeper filed a joint petition for full party status with Natural Resources Defense Council (NRDC), and Scenic Hudson.

The criteria for determining whether the ALJ should grant petitions for full party status are provided in 6 NYCRR 624.5(d)(1). Upon review of these criteria and the petition for full party status, I find that Riverkeeper, NRDC and Scenic Hudson jointly filed an acceptable petition as required by 6 NYCRR 624.5(b)(1) and (2). As discussed above, Riverkeeper has raised substantive and significant issues for adjudication concerning the requirements outlined in federal CWA § 316(b) and 6 NYCRR 704.5 for the implementation of the best technology available for minimizing adverse environmental impacts from the proposed cooling water intake structures (*see* 6 NYCRR 624.5[b][2][i]). In addition, Riverkeeper, NRDC and Scenic Hudson have shown an adequate environmental interest (*see* 6 NYCRR 624.5[b][1][ii]). Therefore, I grant the joint petition for full party status filed by Riverkeeper, NRDC and Scenic Hudson.

Appeals

A ruling of the ALJ to include or exclude any issue for adjudication, a ruling on the merits of any legal issue made as part of an issues ruling, or a ruling affecting party status may be appealed to the Commissioner on an expedited basis (*see* 6 NYCRR 624.8[d][2]). Ordinarily, expedited appeals must be filed to the Commissioner in writing within five days of the disputed ruling (*see* 6 NYCRR 624.6[e][1]).

Allowing extra time due to the length of these rulings, any appeals must be received by the Commissioner (NYS Department of Environmental Conservation, 625 Broadway, 14th Floor, Albany, New York, 12233-1010) before 4 p.m. on April 12, 2004. Replies are authorized, and must be received before 4 p.m. on April 26, 2004.

Send one copy of any appeal and reply to the Commissioner at the address provided above, and one copy of any appeal and reply to all others on the service list at the same time and in the same manner as transmittal is made to the Commissioner. Send three copies of any appeal and reply to the Administrative Law Judge. The Commissioner will not accept submissions by e-mail, or telecopier (FAX).

Appeals should address the ALJ's rulings directly, rather than merely restate a party's contentions.

/s/

Daniel P. O'Connell
Administrative Law Judge

Dated: March 25, 2004
Albany, New York

To: Attached Service List dated November 20, 2003

Attachments: Appendix A - Issues Conference Exhibit List

Exhibit List

**Dynegy Northeast Generation, Inc.
Danskammer Generating Facility**

DEC Application No. 3-3346-00011/00002
SPDES No. NY-0006262

October 29, 2003 - Issues Conference

1.
 - A. Announcement of Public Comment Period and Combined Notice of Complete Application and Legislative Public Hearing dated June 24, 2003.
 - B. Announcement and Combined Notice from the June 25, 2003 edition of the Environmental Notice Bulletin.
 - C. Affidavits of publication for the June 24, 2003 Announcement and Combined Notice.
2.
 - A. Notice of Issues Conference dated September 5, 2003.
 - B. Notice of Issues Conference from the September 10, 2003 edition of the Environmental Notice Bulletin.
 - C. Affidavits of publication for the September 10, 2003 Notice of Issues Conference.
3.
 - A. Part I of Draft SPDES Permit (original version).
 - B. Revised pages 12 of 26 and 16 of 26 for Part I of Draft SPDES Permit.

- C. SPDES Permit Fact Sheet (22 pages).
 - D. Danskammer Point Generation Station Biological Fact Sheet (8 pages).
 - E. Negative Declaration dated June 23, 2003.
4. Applicant's letter dated August 11, 2003.

Appendix A