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ENVIR. APPEALS BOARD

Wendy B. Jacobs
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November 4, 2003

Via Federal Express/Signature Required

U.S. Environmental Protection Agency
Clerk of the Board, Environmental Appeals Board
607 14th Street, N.W., Suite 500
Washington, D.C. 20005

Re: **In the Matter of USGen New England, Inc.
Brayton Point Station
Renewal of NPDES Permit No. MA 0003654**

Dear Sir or Madam:

On behalf of USGen New England, Inc., I am herewith submitting for docketing and review by the Environmental Appeals Board one original and five copies of each of the documents listed below:

1. Petition for Review of NPDES Permit Issued by Region I on October 6, 2003;
2. Motion for Leave to Submit Brief in Connection with Petition for Review;
3. Motion to Supplement the Administrative Record;
4. Motion for Evidentiary Hearing;
5. Request for Oral Argument; and
6. Certificate of Service.

Thank you for your attention to this matter.

Very truly yours,

Wendy B. Jacobs

WJB/seb
Enclosures

cc: L. Murphy, EPA Region I
E. Hauser, USGen New England, Inc.

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ENVIR. APPEALS BOARD

**BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.**

In re: USGen New England, Inc. Brayton Point Station NPDES Permit No. MA 0003654)))))))
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**MOTION FOR LEAVE TO SUBMIT BRIEF
IN CONNECTION WITH PETITION FOR REVIEW**

USGen New England, Inc. (the "Petitioner," the "Permittee" or "USGenNE") hereby moves for leave to submit a brief in connection with its Petition for Review of NPDES Permit No. MA 0003654 (the "Permit"). The Permit was issued to USGenNE on October 6, 2003 jointly by Region I of the Environmental Protection Agency ("Region I") and the Massachusetts Department of Environmental Protection ("MADEP"). A substantial Petition for Review has been filed by the Permittee together with this motion and several other motions.

The Permit and the Petition raise novel and complex issues of law concerning, *inter alia*, the relationship between state and federal requirements under the Federal Water Pollution Control Act, 33 U.S.C. § 1251, *et seq.*, (the "Act") in unusual circumstances involving one state, Massachusetts, that has not been delegated authority to issue permits under the Act, but which

has its own Clean Waters Act providing it with independent permit-issuing authority (Mass. General Laws, ch. 21, §§ 26-53) and another state, Rhode Island, attempting to use the federal NPDES permit as a vehicle for imposing its own water quality requirements on the Permittee even though the Permittee's operations are located in Massachusetts. Another significant legal and policy issue presented by this appeal is the authority of an EPA regional office to issue a permit based on a technology standard that is not consistent with a national rulemaking that EPA is under court order to conclude by February 2004. In addition, as highlighted below and detailed in the Petition, the Permit is based on numerous and substantial errors of law and fact.

Accordingly, the Petitioner requests leave to file a brief with respect to the Board's decision whether to grant or deny review of the Petition or, should the Board consider briefing unnecessary for purposes of granting review, the focus of the brief would be to assist the Board in its review of the issues on appeal. In either case, the Petitioner asks that it be given 45 days to submit its brief.¹

ANALYSIS

The Board should grant the motion because the Petition presents issues that are both unusual and complex. First, and most obviously, the Permit was issued jointly by Region I and MADEP. Both state and federal standards apply. Those standards differ in various respects but at the same time are interlocking. This complicated interplay between state and federal agencies and standards requires greater explication than could be set forth in the Petition.

¹ Counsel for EPA Region I was contacted on November 3, 2003 and has indicated that Region I is unwilling to assent at this time, but it intends to continue to consider the matter and issue a final decision at a later date.

One aspect of the interplay between state and federal issues merits brief further comment. Approximately two weeks after the Permit was issued, the Petitioner received from the MADEP, pursuant to the Massachusetts Public Records law, two boxes of documents that had previously been withheld from the Permittee. These documents raise a number of significant issues, including Region I's error in not including some of them in the EPA Administrative Record for this permit proceeding. Because of the timing of the production of the documents and the requirement that a petition for review by the Board be on the record, these documents could not be given the degree of consideration they merit in the Petition, and a further submission for that purpose is necessary.

Second, the Petition presents complex issues that are largely unique to the electricity generating industry. More particularly, the Permit incorporates both a variance from the state standards governing the thermal component of USGenNE's discharge and application of a technology standard to its intake of cooling water that requires a cost/benefit analysis. Complicating these issues are legal errors committed by Region I in its interpretation and application of the Rhode Island and Massachusetts water quality regulations. Further complicating the cost/benefit analysis required by the Act, Region I committed errors of law and fact in calculations that attribute almost the entire benefit supposedly to be derived from limiting USGenNE's cooling water intake to a unique attribution of value by individuals who make no use whatsoever of the waterbody at issue.

Third, even within the largely unique context of the electricity generating industry, Region I proposes to treat USGenNE's Brayton Point Station in a manner that Region I concedes is atypical, and the Petitioner believes is entirely unprecedented and unlawful. Specifically, Region I would require a power station constructed a decade before enactment of the Act to undergo an enormously expensive and complex conversion from an open-cycle to a closed-cycle cooling process. Focused analysis in a brief will assist the Board in determining whether the voluminous Response to Comments compiled by Region I, in fact, does nothing more than mask the lack of basis for its disparate treatment of Brayton Point Station.

In addition, the Petition presents a question as to the interplay between EPA's promulgation of regulations of general applicability and its issuance of permits applicable to particular point sources. More particularly, not only has the Agency not imposed a requirement that older power stations be retrofitted to closed-cycle cooling in the past, but it is nearing completion of a rule providing that it will not impose such a requirement in the future. Whether, in these circumstances, issuance of the Permit is consistent with the fundamental command that like cases be decided in a like manner is an important policy consideration that should be weighed with the benefit of a full presentation of the applicable facts and law.

Affording the Petitioner an opportunity to submit a brief will enable it to make a more detailed and focused presentation of these and other important issues. The Petition did not serve that purpose, for the combination of the short time allowed for its preparation and the

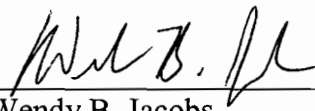
requirement of specificity in identifying objections to the Permit rendered it somewhat unwieldy as a listing, in the body of the Petition and in the attachments, of the clear errors of fact and law committed by Region I in connection with the issuance of the Permit. Briefing will assist the Board in evaluating all of these details, in relating them to the significant questions at issue and in resolving those important questions. The brief would not be used as a vehicle to raise new issues.

CONCLUSION

For all of these reasons, the Petitioner requests leave to file a brief and that it be afforded 45 days to do so.

Respectfully submitted,

USGen New England, Inc.
By its attorneys;



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BEFORE THE ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. ENVIR. APPEALS BOARD

In re: USGen New England, Inc.)
 Brayton Point Station)
)
NPDES Permit No. MA 0003654)

MOTION TO SUPPLEMENT THE ADMINISTRATIVE RECORD

USGen New England, Inc. (the "Petitioner," the "Permittee" or "USGenNE") hereby moves to supplement the administrative record presently identified by Region I of the Environmental Protection Agency ("Region I") to include a number of important documents that were erroneously omitted from the record and are necessary to allow a meaningful review of Region I's decision on the Permit. The missing documents include, among other things, submittals by the Permittee, transcripts of the public meetings held by Region I following release of the draft permit, reports submitted to Region I by the Massachusetts Department of Environmental Protection ("MADEP"), and communications between Region I and MADEP that were relied upon by Region I and are necessary to understand the basis for Region I's decision.

In order to ensure that the record on review accurately and completely explains the bases for Region I's decision, the Board should direct that Region I supplement the record to include all such materials prior to certifying the record for submission to the Board or, in the alternative,

should allow Permittee to supplement the record with these materials for purposes of the Board's review.¹

DISCUSSION

It is an established principle of administrative law that the "administrative record" for purposes of review should consist of the "full administrative record that was before [the agency] at the time [the agency] made [its] decision." Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 420 (1971); accord Silva v. Lynn, 482 F.2d 1282, 1283-84 (1st Cir. 1973); Walter O. Boswell Memorial Hospital v. Heckler, 749 F.2d 788, 792 (D.C. Cir. 1984); Bar MK Ranches v. Yuetter, 994 F.2d 735, 739 (10th Cir. 1993). The purpose of this requirement is to ensure that a reviewing tribunal can conduct a meaningful review based on a balanced record, reflecting all the information actually considered by the agency, and not just that information favoring the final course of action. See, e.g., Boswell, 749 F.2d at 792.

It is equally well established that if the "official" record submitted by the agency does not include all the information actually considered by the agency, it should be supplemented. Id. at 793; Esch v. Yuetter, 876 F.2d 976, 991 & n. 166 (D.C. Cir. 1989) (noting that record may be supplemented, among other reasons, "when an agency considered evidence which it failed to include in the record"); see also In Re: Circle Smelting Site ASARCO Incorporated and Federated Metals Corporation, 6 E.A.D. 410, 442 (EAB 1996) (acknowledging that supplementation of the record with information relied upon by the agency below but not made a part of the formal record is appropriate when necessary to review agency action or when "the record is incomplete").

¹ Counsel for EPA Region I was contacted on November 3, 2003 and has indicated that Region I is unwilling to assent at this time, but it intends to continue to consider the matter and issue a final decision at a later date.

The adequacy and completeness of Region I's administrative record has been an issue of significant concern throughout this permit proceeding. AR #3020; AR #3003. Following issuance of the draft permit, the Permittee requested access to review the administrative records of both Region I and MADEP in order to understand the scientific and legal basis for the draft permit. The record made available by Region I was disorganized, contained numerous duplicates and was missing many pertinent documents. In particular, it contained virtually no information supplied to Region I by MADEP, despite the fact that the agencies had been working in close collaboration throughout the development of the draft permit, which was jointly issued by Region I and the MADEP. The Permittee notified Region I of these shortcomings.² AR #3003.

MADEP did not provide copies of documents in its records until four days before comments on the draft permit were due, making it impossible for the Permittee to conduct a substantive review of those documents and identify omissions from Region I's record within the comment period. In addition, MADEP indicated at the time that a significant number of additional documents had *not* been released and were undergoing further internal review. For this reason, Petitioner made clear in its comments on the draft permit that it had not had the opportunity to review those documents and was reserving its rights with respect to any new information they might reveal relevant to the basis for the permit. AR #3263, Vol. 1, Tab 4 at 32; AR #3003.

² Region I's response was dismissive. Region I's counsel took the position that the Permittee's difficulty in obtaining documents from MADEP was no concern of Region I's, ignoring the fact that, as the Permittee's letter made clear, the missing documents were supposed to have been provided to Region I, and should therefore have been part of Region I's administrative record. No supplementation of the administrative record for the draft permit to include these omitted documents or any other omitted documents or communications occurred. AR #3020.

Petitioner continued to press MADEP for access to review its administrative record. Not until nearly three weeks after issuance of the final Permit did MADEP finally release its records. Those records confirm that material information was requested from MADEP by Region I, that MADEP provided the information for Region I's consideration, and that Region I in fact considered it but failed to place it in the administrative record. The missing information is by no means trivial: it relates directly to key terms of the final Permit. Its omission plainly leads to an incomplete and "unbalanced" record.

For example, MADEP provided comments to Region I on Brayton Point Station's comments that included information about the Massachusetts noise regulations. *See* E-mail correspondence of June 6, 2003 from Lee MacEachern to Region 1 transmitting Memorandum, entitled "Comments on LMS Comments to Brayton Pt. NPDE[S] Permit" (Attachment D to the Petition). This information bears directly on the cost and feasibility of the technology on which Region I based the Permit. Yet, the noise analysis presented by Region I in the Permit conflicts with the information provided by MADEP. The MADEP information should be part of the record.

Similarly, Region I failed to include in the record important information provided by MADEP about how the state interprets its own water-quality regulations. The information provided by MADEP to Region I conflicts with the description provided by Region I. *See* E-mail correspondence of Richard Lehan, MADEP Office of General Counsel (Attachment G to the Petition). Hence, the MADEP documents are relevant in considering whether Region I's interpretation was arbitrary or legally in error.

Significantly, the Permittee notes that many, if not all, of the documents and communications in question are specifically identified as components of the administrative

record by EPA's own NPDES Permit Writer's Manual. In pertinent part, that manual requires that:

"The administrative record should include all meeting reports and correspondence with the applicant and *correspondence with other regulatory agency personnel*. In addition, trip reports and *telephone memos should be included in the record*."

Permit Writer's Manual (December 1996) at 194 (emphasis added). Several of the documents identified above plainly constitute "correspondence" between Region I and MADEP and therefore fall squarely within the requirements of the Manual. To the extent that some communications may have been by telephone, they also fall within the language of the Manual, and a telephone memo should have been submitted to the record.

The delay in receiving full access to the documents has imposed significant burdens on the Permittee's ability to review the record. Nonetheless, at this time a partial list of missing documents can be provided by Region I.

1. A letter dated December 17, 2002 from Permittee to Region I to which was attached data and other information requested by Region I at a meeting in November, 2002;
2. Transcripts and/or tapes of public meetings held in Massachusetts and Rhode Island on August 5th and 6th, 2002;
3. A response to a letter by Rhode Island Department of Environmental Management Biologist Mark Gibson, which Permittee learned was accepted by Region I into the record on or about September 26, 2003 and to which Permittee submitted a response on October 6, 2003;
4. A videotape on cormorant predation submitted on behalf of Permittee by Deborah French-McCay on October 4, 2002;
5. A report submitted by MADEP to Region I on June 6, 2003, at the Region's request, providing responses to selected comments on the draft permit;
6. A MADEP report on a conversation with Region I regarding interpretation of Massachusetts water quality standards;

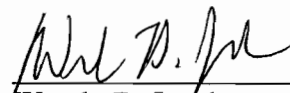
7. A series of communications between Region I and MADEP regarding the text of the Massachusetts water quality certification;
8. A communication from Region I to MADEP concerning the high cost of locating cooling towers at the southern end of the Permittee's property; and
9. A Memorandum reporting on a MADEP discussion with Region I regarding the impact of this Permit on other permits in Massachusetts.

CONCLUSION

For the foregoing reasons, the Petitioner respectfully requests that Region I be directed to supplement the administrative record in this action with the documents referenced herein and others that may be identified or, in the alternative, that the Permittee be allowed to supplement the record with these documents for purposes of this appeal. In doing so, the Petitioner reserves the right to request additional supplementation of the record should its ongoing review of the records recently received from the MADEP administrative record reveal additional documents or information pertinent to Region I's development of this NPDES permit.

Respectfully,

USGen New England, Inc.
By its attorneys,



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In re: USGen New England, Inc.)
Brayton Point Station)
NPDES Permit No. MA 0003654)
)

REQUEST FOR ORAL ARGUMENT

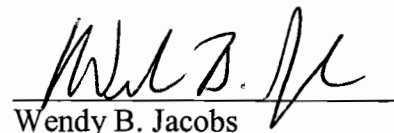
The Petitioner-Permittee in this appeal, USGen New England, Inc., hereby requests that the Board order oral argument in the above-captioned matter. Oral argument would assist the Board in its deliberations on the issues presented by the case for the following reasons:

1. The issues presented are complex and numerous.
2. Some of the issues present novel questions of federal law.
3. Some of the issues present novel questions concerning the relationship between federal and state law.
4. Some of the issues involve detailed technical, biological, economic and engineering analyses.

Oral argument will provide the parties an opportunity to assist the Board in its review of a voluminous and complex record and provide the Board an opportunity to clarify the matters at issue and the positions of the parties.

Respectfully submitted,

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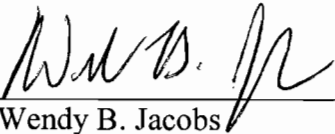
Attorneys for Petitioner

Date: November 4, 2003

CERTIFICATE OF SERVICE

I hereby certify that copies of the documents listed below were served by Federal Express on Linda Murphy, Director, Office of Ecosystem Protection, Environmental Protection Agency, Region 1, One Congress Street, Suite 1100, Boston, MA 02114-2023, this 4th day of November, 2003:

1. Petition for Review of NPDES Permit No. MA 0003654;
2. Motion for Leave to Submit Brief in Connection with the Petition;
3. Motion to Supplement the Administrative Record;
4. Motion for Evidentiary Hearing;
5. Request for Oral Argument; and
6. Certificate of Service



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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re: USGen New England, Inc.)
 Brayton Point Station)
)
NPDES Permit No. MA 0003654)

MOTION FOR EVIDENTIARY HEARING

USGen New England, Inc. (the "Petitioner," the "Permittee" or "USGenNE") hereby moves for an evidentiary hearing with respect to NPDES Permit No. MA 0003654 (the "Permit"), which was issued to USGenNE jointly by Region I of the Environmental Protection Agency ("EPA") and the Massachusetts Department of Environmental Protection on October 6, 2003 and which USGenNE is requesting the Board to review by a petition filed herewith. The Board should grant this motion because, under the governing law of the Federal Judicial Circuit with jurisdiction to review the Permit, USGenNE is entitled to an evidentiary hearing with respect to its issuance as a matter of statutory right.

This legal entitlement was established by the decision of the United States Court of Appeals for the First Circuit in *Seacoast Anti-Pollution League v. Costle*, 572 F.2d 872 (1st Cir. 1978) and recently re-affirmed in *Dantran, Inc. v. United States Dep't of Labor*, 246 F.3d 36, 48 (1st Cir. 2001). The First Circuit issued the *Dantran* decision after EPA had eliminated the

process for evidentiary hearings. 65 Fed. Reg. 30896 (May 15, 2000). Accordingly, EPA must still provide an evidentiary hearing when requested by a Permittee in the First Circuit.¹

ANALYSIS

Seacoast presented precisely the same question that is at issue here: whether there is a right to a formal hearing under Section 554(a) of the Administrative Procedure Act (the “APA”) with respect to an application to EPA for a permit to discharge heated water under sections 316 and 402 of the Clean Water Act (33 U.S.C. §§ 1326, 1342). 572 F.2d at 874. Section 554(a) of the APA comes into effect for every adjudication required by statute to be on the record after an opportunity for an agency hearing. 572 F.2d at 876. Although, as the Court observed, neither section 316 nor 402 of the Clean Water Act, the provisions of the Act applicable both there and here, stated that the hearing to be afforded was to be on the record, the Court ruled that those words were not necessary to confer a right to a formal hearing. *Id.* Rather, the right to a hearing turned on the “substantive nature of the hearing Congress intended to provide.” *Id.* In that regard, the Court concluded, Congress intended the APA to govern adjudications with “serious impact on private rights.” *Id.*, quoting *Wang Yang v. McGrath*, 339 U.S. 33, 36-37 (1950). The Court held that decisions made by EPA under sections 316 and 402 of the Clean Water Act are just such adjudications. Such decisions do not involve general policy making but affect only the rights of specific applicants. 572 F.2d at 876. Moreover, these adjudications frequently involve sharply contested factual issues, including disputes regarding experts’ interpretations of data, where determinations as to the experts’ credibility are important. 572 F.2d at 876, 880.

Notwithstanding the *Seacoast* decision, in 2000, EPA abolished the requirement in its regulations for provision of an evidentiary hearing in connection with NPDES permits. *See* 65

¹ Counsel for EPA was contacted on November 3, 2003, and has indicated that Region I is unwilling to assent at this time, but it intends to continue to consider the matter and issue a final decision at a later date.

Fed. Reg. 30896-900 (May 15, 2000). The asserted legal basis for that promulgation was EPA's "conclusion that, due to the progress of the law in the Courts of Appeals, [*Seacoast*] is no longer good law." *Id.* at 30896. The supposed progress of the law was a reference to decisions by Courts of Appeals in *Buttrey v. United States*, 690 F.2d 1170 (5th Cir. 1982), and *Chemical Waste Management v. EPA*, 873 F.2d 1477 (D.C. Cir. 1989), and to the decision of the United States Supreme Court in *Chevron U.S.A. v. NRDC*, 467 U.S. 837 (1984). In fact, none of those decisions rendered *Seacoast* bad law.

The two decisions of the Courts of Appeals cited by EPA in connection with its rulemaking in 2000 did not overrule *Seacoast*. Indeed, in denying a right to a formal evidentiary hearing in a proceeding under section 404 of the Clean Water Act on the basis of legislative history suggesting that Congress did not intend such hearings to be required, *Buttrey* did not even disapprove *Seacoast* but rather cited and distinguished the First Circuit's decision as applying to a different section of the Clean Water Act for which there was no analogous legislative history. *Chemical Waste Management* also involved a section of the Clean Water Act involving decisions different in material respects from those involving the issuance of NPDES permits. Most significantly, neither of those decisions could have overruled *Seacoast*: they were made by Courts of Appeals other than the Court of Appeals for the First Circuit, and different Courts of Appeals are free to reach conflicting results unless and until such conflicts are resolved by the United States Supreme Court.

The Supreme Court did not overrule *Seacoast* in *Chevron*. The issue in *Chevron* was the interpretation of the term "stationary source" for purposes of the 1977 amendments to the Clean Air Act, a statute Congress had charged EPA with administering. The decision of the Supreme Court was that the Court of Appeals had erred in not deferring to the EPA's interpretation. 467

U.S. at 840-42. The reasoning of the Court was that, when a court reviews an agency's construction of a statute which it administers, if the statute is silent or ambiguous on the precise question at issue such that the intent of Congress is not clear, then the court should accept the agency's position if it is based on a permissible construction of the statute. 467 U.S. at 842-43. As to the latter point, the Court observed that the concept of a "stationary source" was a part of a technical and complex regulatory scheme in a field in which judges are not experts. 467 U.S. at 865.

Chevron does not provide grounds for questioning the result in *Seacoast*. Indeed, not one of the three prerequisites established by *Chevron* for mandating judicial deference to an agency's construction of a statute was even present in *Seacoast*. Nor are they present here. First, *Seacoast* did not involve review of an agency's construction of a statute which it administers. As the Court expressly stated in *Seacoast*, the matter at issue there centered not on the interpretation of the Clean Water Act but on the construction of a section of the Administrative Procedure Act. 572 F.2d at 875. In a subsequent case, that same Court cited with approval the observation by Justice Blackmun that, "[b]ecause the . . . APA applies to all agencies and is not administered by any one in particular, deference to the interpretation by any particular agency is inappropriate." *Dantran*, 246 F.3d at 48.

Second, although there was no explicit statutory mandate of a formal evidentiary hearing in precisely those words, the *Seacoast* Court saw no ambiguity in Congress' intent. It discerned a clear intent that APA formality should apply to adjudications with "a serious impact on private rights." 572 F.2d at 876. Because a decision to issue an NPDES permit is just such an adjudication, a hearing complying with the requirements of the APA is required. *Id.*

Third, EPA was not making a permissible construction of the applicable statute in its 2000 rulemaking. Indeed, EPA explicitly was not engaging in statutory construction at all but rather was determining whether the rudimentary procedures it proposed to offer met the minimum standard of procedural protection mandated by the constitutional requirement of due process. 65 Fed. Reg. at 30898. To the extent EPA was commenting on the import of statutory provisions, it opined that determinations of credibility likely to be facilitated by an evidentiary hearing were not important to choosing from among the differing expert opinions likely to be put forward in connection with the issuance of NPDES permits. EPA's view is completely at odds with that advanced by the Court in *Seacoast*. Compare 65 Fed. Reg. at 30899 with 572 F.3d at 880. As to who has the better of this debate, it may well be, as the Supreme Court stated in *Chevron*, that courts are not experts in complex, technical environmental compliance regimes, but they are -- by definition -- experts in adjudication, including determining the procedures appropriate for particular types of adjudication.

There is, in any event, no doubt that the Court which will review issuance of the Permit, if the Board allows it to stand, believes that *Seacoast* remains good law after *Chevron*. The First Circuit decided *Dantran* in 2001, long after *Chevron*. *Dantran* involved a question analytically identical to the issue in *Seacoast*: whether a hearing in the course of a debarment proceeding under the Service Contract Act was a hearing under section 554 of the APA. 246 F.3d at 45. Defendant Department of Labor had, by regulation, interpreted the Service Contract Act hearing not to be an APA hearing. 246 F.3d at 47. The Court considered this opinion to be of little value and rejected it on the ground that an agency's regulations interpreting a statute relating to matters outside the agency's area of expertise is entitled to no special deference. 246 F.3d at 47-48. Having dismissed the agency's interpretation, the Court ruled that a debarment hearing was to be

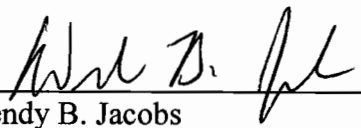
an APA hearing on the basis of precisely the same reasoning it had employed in *Seacoast* before the decision in *Chevron*. 246 F.3d at 46.

CONCLUSION

In sum, *Seacoast* remains good law in the Judicial Circuit in which the Permit is to be reviewed. *Seacoast* mandates that USGenNE be afforded a formal evidentiary hearing in connection with the Permit's issuance. Accordingly, the Board should either conduct such a hearing itself or remand to Region I with directions to withdraw the Permit and to issue a new permit on the record following a formal evidentiary hearing presided over by an impartial hearing officer.

Respectfully submitted,

USGen New England, Inc.
By its attorneys,



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PETITION FOR REVIEW

OF NPDES PERMIT ISSUED BY REGION I ON OCTOBER 6, 2003

SUBMITTED ON BEHALF OF USGEN NEW ENGLAND, INC.

BY: Wendy B. Jacobs
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I. INTRODUCTION

Pursuant to 40 C.F.R. § 124.19(a), USGen New England, Inc. (the “Petitioner”, “Permittee” or “USGenNE”) petitions for review of certain conditions of renewed NPDES Permit No. MA 0003654 (“the Permit”), which was issued to USGenNE on October 6, 2003, jointly by Region I of the U.S. Environmental Protection Agency (“Region I”) and the Massachusetts Department of Environmental Protection (“MADEP”). The Permit authorizes Brayton Point Station (“BPS” or “the Station”) to withdraw water for cooling purposes from the Taunton and Lee Rivers and discharge that water into Mount Hope Bay in Somerset, Massachusetts. The Permit also authorizes other discharges and imposes monitoring requirements.

Certain conditions of the Permit are based on clearly erroneous findings of fact and conclusions of law, are arbitrary and capricious, and/or are not based on substantial evidence in the record. Among the errors of law are Region I’s failure to provide USGenNE a formal evidentiary hearing. Even within the context of the informal hearing conducted by Region I, procedural irregularities occurred that deprived Petitioner of its right to review and comment on the basis for the Permit. On these grounds, the Petitioner challenges the following permit conditions:

- (1) Requirements that the Station be completely retrofitted with closed-cycle cooling towers and piping and that once-through cooling be limited to 122 hours annually with a complete prohibition on once-through cooling between the first day of February and the last day of May each year. *See* Permit Sections 1.A.4.a., 1.A.4.c., 1.A.4.d., 1.A.11.d.
- (2) Requirement that the Station’s annual discharge of heated water be limited to 1.7 tBTUs¹ (note: the current permit sets no limit; the actual operation discharges approximately 42 tBTUs annually; Permittee requested a limit of 28 tBTUs). *See* Permit Sections 1.A.4.a. and 1.A.4.b.

¹ BTUs refer to British thermal units, a measure of heat.

- (3) Monitoring requirements contained in Permit Sections 1.A.5.a., 1.A.6.a., 1.A.7.a., 1.A. 26.1.iii.

The following permit limits and conditions need to be clarified:

- (1) Expression of total iron limit. *See* Permit Section 1.A.9.a. The Permit expresses the iron limit in pounds per day. However, according to the Response to Comments, Region I has agreed with the Permittee's request to express the limit as the concentration 1 mg/l. Response at VI-4.
- (2) Silence in the Permit on the issue of chlorination of each unit condenser. Targeted chlorination as described in the 1993 permit would remain necessary in a closed-cycle system.

Three other limits are integrally related to the permit conditions being challenged and, as such, also need to be stayed pending the outcome of this appeal. These are:

- (1) Copper Limit. *See* Permit Section 1.A.4.a.
- (2) Temperature rise of 22°F. *See* Permit Section 1.A.4.a.
- (3) Limits on screen wash use. *See* Permit Section 1.A.11.d.

For these reasons, and because the Permit presents important policy considerations involving the need for principled decision-making of general applicability by the Agency, USGenNE requests that the Board either grant the petition and review the challenged Permit conditions or, in the alternative, refer this matter to the Administrator pursuant to 40 C.F.R. §124.2.

II. FACTUAL AND STATUTORY BACKGROUND

This case does not involve a new project. Nor does it involve a request by a permittee to increase an existing project's impacts on the environment. Rather, it involves unprecedented and unjustified overreaching by Region I in response to the Permittee's request to renew its permit and voluntarily agree to substantial reductions in its withdrawal and discharge of water used to cool equipment at the plant. The Permit involves a power plant, Brayton Point Station, that was

built on the shores of Mount Hope Bay a decade before the enactment of the Clean Water Act and years before the promulgation of state water quality standards. The Station has repeatedly been permitted to withdraw water for cooling purposes and to discharge that water back to Mount Hope Bay but is now caught up in political skirmishing about how to deal with the depletion of fish stocks following decades of over-fishing up and down the eastern seaboard, including Mount Hope Bay.

Controversy began to brew in the mid 1990's as recognition grew that fish were quickly disappearing. Because it was difficult to impose -- and consistently enforce -- requirements that limited fishing, regulators began to examine other sources of human stress on fish and their habitat. As a consequence, attention turned to Brayton Point Station, which sits at the confluence of the Taunton, Lee and Cole Rivers at the northernmost tip of Mount Hope Bay. Mount Hope Bay itself occupies the northernmost 14 square miles of Narragansett Bay, a 146-square mile bay that borders Rhode Island Sound, an arm of the Atlantic Ocean. *See generally* AR #555, Vol. I, A-1, A-7 to A-8; AR #555, Vol. II, D-1.²

In 1996, Mark Gibson, a scientist with the Rhode Island Department of Environmental Management ("RIDEM") issued a report ("Gibson 1996 Report") concluding that, if one compares one of several data sets collected in Mount Hope Bay with data collected from Narragansett Bay and Rhode Island Sound, it appears that the declines in a number of fish species in Mount Hope Bay are greater than the declines of the same species observed in either Narragansett Bay or Rhode Island Sound. That single report led Rhode Island to petition Region I to modify the NPDES permit for Brayton Point Station ("BPS" or "the Station"). That

² References to "AR #___" are to documents in the Administrative Record compiled by Region I for the permit renewal proceeding. References to "Response at ___" are to Region I's October 6, 2003 Response to Comments received by it during the proceeding. References to "Determinations" are to the Determinations Document issued by Region I on July 22, 2002 in support of the Draft Permit.

single report has also led Region I to impose improper conditions on the Station's renewed permit which is at issue in this appeal. *See generally* AR #3263, Vol. I, at 1-8, 17-20.

Although the Permittee has submitted to Region I extensive, comprehensive and ample demonstrations that it is over-fishing and other factors unrelated to Brayton Point Station's operations that have caused the decline and/or lack of recovery of fish in Mount Hope Bay, Narragansett Bay, elsewhere in the United States and abroad, the Permittee nevertheless recognized that regardless of the science, it should volunteer to reduce its own impacts on Mount Hope Bay. Accordingly, in connection with this permit renewal proceeding, the Permittee volunteered substantial reductions. AR #555 at 5; AR #3262, Vol. I, Tab 2. Whereas the permit up for renewal contained no limits on the Station's discharge of heat to Mount Hope Bay, the Permittee requested a permit that would reduce its actual thermal discharges by 33%. *Id.* The Permittee also volunteered to accept a new permit limit reducing its withdrawal of cooling water by 50% below the current permit limit and by 33% below its actual operation. *Id.*

To support the proposed permit limits, the Permittee submitted to Region I comprehensive, detailed analyses prepared by a preeminent team of internationally renowned and locally knowledgeable scholars and scientists with expertise in marine biology, hydrothermal dynamics, fish population dynamics, commercial and recreational fisheries, environmental economics, fisheries statistics, and power plant engineering.³ Much of this material was submitted to Region I nearly a year before issuance of the Draft Permit. *E.g.*, AR # 555; AR

³ *See, e.g.*, AR #551, AR #555; AR #3263, Vol. I, Tab 4; AR #3263, Vol. II, *collecting* Comments of Dr. Joseph DeAlteris (Tab 1); Comments of Dr. Ray Hilborn (Tab 2); Comments of Dr. Deborah French-McCay, Applied Science Associates (Tab 3); Comments of Dr. Kenneth Rose (Tab 4); Comments of Professor Robert Stavins (Tab 5); Comments of Professor Ivar Strand (Tab 6); Comments of Dr. Peter Valberg, Gradient Corporation (Tab 7); Comments of Bechtel Power Corporation (Tab 8); Comments of Dr. Lloyd Schulman, Earth Tech (Tab 9); Comments of Joseph Scire, Earth Tech (Tab 10) Comments of Lawler, Matusky & Skelly Engineers, LLP (Tab 11); Comments of Stone & Webster (Tab 12); Comments of TRC Environmental Corp. (Tab 13); Testimony of Meredith Simas, Senior Environmental Engineer for BPS (Tab 14); Testimony of Barry Ketschke, General Manager of BPS (Tab 15); Comments of Dr. Michael Scherer, Marine Research, Inc. (Tab 16); Comments of Dr. Craig Swanson, Applied Science Associates (Tab 17).

#551. Some of the material was submitted in response to a letter issued by Region I to the Station on March 13, 2002 (AR #666). *See* AR #3263, Vol. II, Tabs 1 & 2. Unfortunately, there is evidence that Region I did not fully consider those submittals prior to issuing the Draft Permit. *E.g.*, Determinations at 6-2, 7-102; MADEP email correspondence dated Jan. 4, 2002 (Attachment A hereto).⁴ Although the analyses were supplemented and resubmitted in the form of comments to the Draft Permit, Region I still has failed to provide any responses to much of the material and has failed to provide meaningful responses as to the remainder in connection with its issuance of the Final Permit. The analyses produced by Region I to support the Permit contain numerous factual and legal errors, and the contested Permit conditions are not supported by substantial evidence.

Notably, at the same time that the Permittee has been conducting its analyses, a variety of grants have been issued to scientists at, among other oceanographic centers, the University of Rhode Island and the University of Massachusetts to conduct independent studies of the ecosystem in and around Narragansett Bay. The results of those studies are just beginning to emerge. By and large, their conclusions support those of the Permittee's scientists. Moreover, the same RIDEM scientist whose work led the State of Rhode Island to fault Brayton Point Station's operations has now himself conducted additional analyses utilizing all available data, and those new analyses produce results consistent with those of the Permittee's scientists. *See e.g.*, AR #3248, Exhibits A and C. The Permittee brought all of this information to Region

⁴ This document is one of several identified in the course of reviewing the documents produced by the Massachusetts Department of Environmental Protection that provides important information regarding the basis for the Draft Permit and Final Permit that is not included in Region I's Administrative Record. The Permittee has requested that the Region I record be supplemented to include this and other pertinent missing documents. *See Motion to Supplement Administrative Record*, filed herewith.

I's attention prior to issuance of the Permit.⁵ Nonetheless, Region I has been unwilling and remains unwilling to take these studies into account in shaping this Permit, instead unreasonably closing its eyes to the evolving science and knowledge and appreciation of conditions in and around Mount Hope and Narragansett Bays. AR # 3020, AR #3068.

This response by Region I is particularly inappropriate given that the Permit developed by Region I forecloses the possibility of changes later. Once the Station is physically converted to meet the contested Permit limits, there is no turning back.

Furthermore, EPA is in the process of concluding a major national rule-making under Section 316(b) of the Clean Water Act in connection with one of the issues at the heart of this appeal; namely, the best technology available for cooling water intake structures at existing facilities such as Brayton Point Station. By court order, that rulemaking will be completed in the next three months (there is a February 2004 deadline). All indications in the Federal Register are that the final Permit just issued by Region I will not be consistent with the national rule-making. *See* 67 Fed. Reg. 17122, 17142 (April 9, 2002).

Region I's requirement that BPS undertake a massive⁶ retrofit of the entire Station to convert it from a once-through, open-cycle to a closed-cycle cooling process⁷ in the

⁵ Region I accepted material that only became available after the close of the comment period into the Administrative Record but has failed to take it into account or otherwise to respond in any meaningful way. *See* discussion throughout this Petition.

⁶ The task is massive both because of engineering complexity and because it will cost close to \$250 million. AR #3263 at 41, 34-36; AR #555, Vol. IV at 3.3-26.

⁷ Once-through cooling discharges the waste heat back to the source of the cooling water. Closed-cycle cooling is the process where waste heat is dissipated directly to the atmosphere. Relatively little water is pumped from the water body to support the closed-cycle cooling system. According to page 2 of the Fact Sheet: "This draft permit does not authorize the discharge of 'once-through' cooling water and is based on the assumption that the facility will employ mechanical-draft cooling tower technology to meet the draft permit's flow and heat load allowances." AR #3264.

“hope”⁸ that it may “help”⁹ bring fish back to a tiny fraction of a much larger ecosystem is unprecedented, unwarranted, unlawful and inconsistent with EPA’s national policy. Region I admits that the national standard for existing plants is once-through, open-cycle cooling. Response at VIII-7-8. The consequence of this Permit is to single out this one Station for extreme and disparate treatment without any substantial basis in the record.

As will be shown in this petition and the brief to follow, Region I has committed a number of fundamental procedural, factual, and legal errors in issuing the Permit. In order to defend the contested provisions of the Permit, Region I had to ignore reliable data, cast aside fundamental principles of marine biology and environmental economics, abandon governing legal precedent, misinterpret state water quality regulations, and misapply several provisions of the Clean Water Act. In addition, Region I has added to the Permit certain monitoring requirements that were not included in the Draft Permit and as to which the Permittee had no opportunity to comment.

In sum, the Permittee’s proposed reductions are more than adequate to advance the goals of the Clean Water Act and to provide time for ongoing studies and the ongoing national rulemaking to be completed and taken into account. From an engineering perspective, the Permittee’s proposal allows for further reductions, if needed; Region I’s Permit does not provide any flexibility. Region I’s Permit would so alter the Station physically that there would be no opportunity for adjustments in the future if ongoing studies continue to demonstrate that the Station’s operations are not causing appreciable harm to Mount Hope Bay.

⁸ Response at II-3.

⁹ Response at VII-1.

III. THRESHOLD PROCEDURAL REQUIREMENTS

The Petitioner satisfies the threshold requirements for filing a petition for review under Part 124:

1. It has standing to petition for review of the permit decision because it presented comments to Region I during the public comment period on the permit. *See* 40 C.F.R. § 124.19(a). *See, e.g.*, Comments submitted on behalf of Brayton Point Station set forth at AR #3263, Vols. I & II.

2. The issues raised in this petition were raised during the public comment period and therefore were preserved for review. *See, e.g.*, citations in footnote 3, above.

IV. IMPORTANT POLICY CONSIDERATIONS IN SUPPORT OF THIS APPEAL.

This Permit is inconsistent with thirty years of prior practices and regulatory interpretations. Requiring the Station to convert from a once-through, open-cycle cooling process to a closed-cycle process is, as Region I recognizes, tantamount to a requirement that the entire Station be retrofitted with closed-cycle cooling towers and piping. Region I Fact Sheet, AR # 3264. *See* Response at IV-9. This is a major engineering feat with an enormous price tag. AR #3263, Vol. II, Tab 12 at 5; AR #555, Volume IV, App. H at 3.3-1. Such a requirement is virtually unprecedented. Indeed, Region I cannot point to a single instance in which a like financial burden has been imposed on an existing power plant in order to reduce withdrawals and discharges of cooling water.

The fact that the Clean Water Act directs EPA to make technological determinations for thermal discharges and cooling water intake structures on a case-by-case basis is not a blank check for a Region to ignore prior permitting decisions and ongoing regulatory developments

relevant to a particular permit. In fact, EPA's own regulations governing case-by-case determinations of technology standards specifically require it to consider what the appropriate standard would be for the "category or class" of sources -- in this case, all existing power plants nationwide -- in order to ensure reasonable consistency of its case-by-case decisions. 40 C.F.R. § 125.3(c)(2)(i). Here, Region I admits that the national technological standard for existing power plants is open-cycle cooling. Response at VIII-7-8. Furthermore, EPA is now in the process of finalizing a national rule on cooling water withdrawals by existing facilities, due to be issued in final form in February 2004, which is based on open-cycle cooling -- the method by which BPS currently operates -- as the national norm.

Region I has failed to explain how the facts of this case distinguish it from literally hundreds of historic and recent permitting decisions in which closed-cycle cooling has been rejected as an appropriate technology. Moreover, correspondence between MADEP and Region I concerning the "precedent and ripple effects" of this Permit clarifies that Region I does not intend this Permit to represent a change of its own prior practice in granting variances, but instead intends to restrict its stringent requirements to this one case. MADEP e-mail correspondence dated June 7, 2002 (Attachment B hereto). Region I's unreasoned failure to act in a manner consistent with prior EPA permitting decisions and EPA regulatory determinations, and its avowed intent to single out this one facility for disparate treatment, is wholly incompatible with its duties to follow its own precedent, to apply its precedent fairly in individual cases, and more broadly, to make principled decisions of general applicability.

V. SUMMARY OF PROCEDURAL, FACTUAL, AND LEGAL ERRORS

A variety of errors pervade this Permit proceeding. They include clear errors of both fact and law made by Region I in the Permit and Response to Comments it issued on October 6, 2003 (“Response”). The body of the petition enumerates and briefly explains, initially, the purely procedural errors of law, then, the primarily substantive legal errors, and, finally, the principal errors of fact. Solely to ensure compliance with the Board’s requirement regarding “Specificity of Petition” and to make certain that all points are preserved for judicial review, there are attached hereto and incorporated herein by reference detailed tables of procedural, factual and legal errors in the agency documents supporting the Permit. Tables 1, 2, and 3. The Petitioner seeks leave to submit a brief that will assist the Board in addressing the substance of these attachments, as well as the errors enumerated in the body of the Petition. (A motion to submit such a brief is being submitted herewith.)

A. CLEAR PROCEDURAL ERRORS OF LAW

1. FAILURE TO RESPOND TO COMMENTS SUBMITTED BY PERMITTEE AS REQUIRED BY 40 C.F.R. §124.17.¹⁰

Region I has steadfastly and repeatedly failed to respond to - or take account of - significant submittals and comments on the Draft Permit, the Fact Sheet, and the Determinations Document issued in July 2002 that pertain to the core substantive matters at issue: the condition of Mount Hope Bay and whether and to what extent the Permittee’s proposed operating limits would cause appreciable harm to Mount Hope Bay. The Administrative Record¹¹ clearly

¹⁰ The obligation to respond meaningfully to comments is also a necessary component of reasoned decision-making, see, e.g., Chemical Waste Manuf. v. EPA, 28 F.3d 1259, 1265-66 (D.C. Cir. 1994) and a component of due process.

¹¹ Petitioner’s reference to the “Administrative Record” is not a concession that such record was properly compiled or is complete as required by applicable law.

documents the Permittee's submittal of pivotal information and analyses to Region I. Notably, the Permittee did not wait until after issuance of the Draft Permit, although entitled to as a matter of law.¹² It submitted more than five volumes of legal, biological, engineering, and economic analyses to Region I well in advance of issuance of the Draft Permit. AR #511; AR #555; AR #724; AR #720-722; AR #723. Region I decided to issue the Draft Permit without taking into account much of the information provided in those submittals. *E.g.*, Determinations at 6-2 and 7-102. *See also* Attachment A to this Petition. The Permittee then resubmitted those analyses together with additional comments in response to the Draft Permit. *E.g.*, AR #3263, Vol. II. Region I's Response, by and large, refers the reader back to the Draft Permit and fails in any meaningful way to address the Permittee's extensive, substantial, and persuasive demonstrations. Among the information Region I ignored is information it requested the Permittee to provide. Several examples are listed here.

a. **Documents submitted by Dr. Joseph DeAlteris on December 17, 2002 and February 11, 2003.**

At a meeting on November 4, 2002, Region I requested the Permittee to provide certain analyses and documents. The Permittee did so on December 17, 2002, and February 11, 2003, in submittals addressed to the permit writer and keeper of the Administrative Record for this proceeding at Region I. It also sent copies of each submittal to Region I's lawyer for this proceeding. Region I failed to place the December 2002 submittal in the Administrative Record and failed to address it in the Response. Although the February 2003 submittal was placed in the Administrative Record (AR # 3132), Region I's Response fails to address the analyses and, indeed, generally is written as if they were never submitted. Response at VII-32 and VII-34 (rejecting DeAlteris comparative analysis on the basis of errors in data supplied by RIDEM even

¹² *See* 40 C.F.R. 122.21(l) (allowing variance application to be submitted during comment period).

though DeAlteris corrected for the RIDEM data errors at Region I's request in the February submittal); Response at VII-35 and VII-38 (discussing the statistical "power" of surveys without mentioning, here or elsewhere, the extensive analyses of statistical robustness, including power analyses, included in DeAlteris' submittal, again at Region I's request).

b. Gibson 2003 Biomass Dynamics Model.

During the same meeting on November 4, 2002, the parties discussed at length the Permittee's concern that Region I and the state agencies were not utilizing all available data in their analyses of the condition of Mount Hope Bay and the impacts of Brayton Point Station. To address the concern, the RIDEM representative (Mr. Mark Gibson) agreed to complete a biomass dynamics model he had begun the prior summer in order to utilize all available data, as had previously been done by the Permittee's biologists and fish population dynamics experts. Mr. Gibson presented the results of the model on May 10, 2003, at a symposium of scientists and scholars focused on Mount Hope Bay. AR # 3248. The results are dramatically different from Mr. Gibson's 1996 results, on which Region I continues to rely. *See* AR # 3248 and Attachment C to this Petition (particularly Hilborn letter). During the Symposium, Mr. Gibson distributed copies of his draft report on the model. AR # 3248, Exhibit C. Subsequent to the Symposium, in correspondence with one of the Permittee's scientists, Mr. Gibson agreed that his model results closely resemble the results of the Permittee's various analyses that had already been submitted to the agencies:

"You're right that company and government assessments are converging. That usually happens in a credible process. It seems to me the issue will move to what can reasonably be done to provide the best chance for resource rebuilding."

See Gibson email attached to letter from Foley Hoag to Region I dated Oct. 6, 2003 (Attachment C hereto).

Accordingly, because it represented material new information directly pertinent to the permit decision, the Petitioner submitted copies of Mr. Gibson's 2003 draft report, together with analyses of that report, to Region I for inclusion in the Administrative Record. AR #3248. Region I accepted the documents but then in its Response simply dismissed key portions of the Gibson 2003 model as though they were of no import whatsoever.¹³ In fact, this model contained the only predictive analysis put forward by anyone other than the Permittee, and supports the Permittee's showing that the Station's impacts on Mount Hope Bay are dramatically lower than Region I claimed in the Draft Permit and continues to claim in the Response in support of the Final Permit. *Compare* Determinations at 7-119, Table 7.5-8 with AR #3248 Tab C at 11 & Figures 24-26 and with Response at IV-54, IV-66 and VII-29. *See also* Attachment C to this Petition (cover letter and Hilborn letter).

c. July 3, 2002 submittals by DeAlteris and Hilborn.

On March 13, 2002, Region I's biologist, Mr. Phil Colarusso, wrote a letter to the Permittee presenting the results of a calculation he had performed based on information from Mr. Gibson. AR #666. Mr. Colarusso's calculation assumed that the population of winter flounder in Mount Hope Bay was extremely small and accordingly calculated that the Station's current withdrawal of water is removing upwards of 80% of the fish. The Station retained Dr. DeAlteris and nationally-known fisheries expert, Dr. Ray Hilborn, to perform independent reviews of Mr. Colarusso's analysis. Their reports, submitted to Region I on April 4, 2002 and July 3, 2002, found that Mr. Colarusso had incorrectly calculated both the number of winter flounder and the percentage lost to the Station's withdrawal. AR #2342; AR #724; AR #720-722 (Report

¹³ At one point, the Response indicates that the Gibson 2003 Report should not be considered because it is a draft. Response at IV-54. Yet, Region I cites and relies on other presentations made at the same Symposium, even though those presentations reported preliminary analyses of the speakers and were not written up in report form as was the Gibson 2003 model. *See, e.g.*, Response at III-19 (discussing Taylor presentation).

of Dr. Hilborn, resubmitted as AR #3263, Vol. II, Tab 2); AR #723 (Report of Dr. DeAlteris, resubmitted as AR #3263, Vol. II, Tab 1). The error resulted from selective use of data in the underlying Gibson report. Independent estimates by Dr. Hilborn showed the population of winter flounder to be almost 50 times larger and the Station's impacts to be a tiny fraction of those Mr. Colarusso had estimated.¹⁴ Region I acknowledged that it did not review these independent calculations prior to issuing the Draft Permit, Determinations at 6-2, 7-102, and then addressed them only perfunctorily, and dismissively, in the Response to Comments. Response at VII-39, 40. The Permit is predicated on the erroneous Colarusso calculation. Response at IV-67, VII-29.

d. December 6, 2001 Demonstration of Permittee.

Rather than awaiting issuance of the Draft Permit before providing the scientific, engineering, and legal support for its proposed permit limits, the Permittee submitted five volumes of analyses to Region I on December 6, 2001. AR #555. As indicated above, Region I failed to take much of this analysis into account in the Draft Permit and then failed meaningfully to respond to them in either the Response or the Final Permit, although many of them were resubmitted together with additional analyses in comments to the Draft Permit. AR #3263, Vols. I and II.

2. BY ADOPTING NEW POSITIONS IN THE FINAL PERMIT, REGION I DENIED THE PERMITTEE ITS RIGHT TO COMMENT ON THE PERMIT.

Region I has retreated from a variety of analyses that attracted significant criticism during the comment period on the Draft Permit. In some instances, Region I claims to have abandoned key premises of the Draft Permit but fails to explain, in their absence, what information now supports the Final Permit. Indeed, Region I's retrenchment from key premises of the Draft

¹⁴ Notably, Mr. Gibson's 2003 model also contradicts the Colarusso calculation and demonstrates that the Station's impacts are but a tiny fraction of those estimated by Colarusso. See AR #3248, Exhibit C at 11 and Figures 19-26.

Permit is so dramatic that there is no apparent basis for a Final Permit which manifestly does not differ materially from the Draft. In Region I's own words: the "Final Permit is substantially identical to the Draft Permit ...". Response at I-6.

In other instances, Region I has issued completely new analyses to support the Permit. The Permittee has been afforded no opportunity to review or comment on these new analyses. It is important to note that these new analyses are not merely refinements of work previously done by Region I in support of the Draft Permit; they represent entirely new approaches, methods, and analyses. The Permittee is entitled to a meaningful opportunity to review and comment on these new analyses before -- not after -- issuance of the Final Permit.¹⁵

a. **Comparison of Mount Hope Bay with other waterbodies.**

In articulating the rationale for the Draft Permit, Region I claimed that some species of fish had declined at a greater rate in Mount Hope Bay than in Narragansett Bay. *See, e.g.,* Determinations at 2-3. The Region based its conclusion primarily on the 1996 Gibson Report. In comments to the Draft Permit, several scientists conducted detailed analyses and demonstrated the absence of a difference between Mount Hope Bay and Narragansett Bay. AR #3263, Vol. I at 17-31, Vol. II at Tab 1 & Tab 11 at II.3. In addition, Mr. Gibson himself produced a new analysis in 2003 that is inconsistent with his 1996 analysis. AR #3248, Exhibit C. Rather than addressing any of these demonstrations in any meaningful way or explaining how they affect the Region's decision about the Final Permit, Region I simply asserts in its Response that it no longer considers the differential decline to be the basis for the Permit. Response at VII-21. Despite that purported shift in position, throughout the Response, Region I continues to assert

¹⁵ The critical importance of making analyses on which a permit relies available for public comment has been repeatedly acknowledged by the EAB. *See, e.g., In re: Hawaii Electric Light Co., Inc.*, 8 E.A.D. 66, 102-103 (Environmental Appeals Board, November 25, 1998); *In re: Knauf Fiber Glass*, 8 E.A.D. 121, 175-76 (Environmental Appeals Board, February 4, 1999).

that a differential decline exists. (“EPA maintains that the decline in Mount Hope Bay is substantially greater than the changes in Narragansett Bay.” Response at II-4.) *See* Response at II-2; III-6; III-12; VII-21; VII-24. It is evident from the Response that this issue continues to inform the Region’s views, and it was a fundamental error for the Region to fail to provide meaningful responses to significant comments on the issue or to articulate the basis for its “new” position.

b. Cause of decline in fish.

As a second key premise for the Draft Permit, Region I took the position that Brayton Point Station’s historic operations were largely responsible for the decline of fish in Mount Hope Bay. Determinations at 2-3, 6-4 to 6-46, 6-55, 7-120, 7-157, 7-164. Numerous analyses of the past, present, and proposed impacts of Brayton Point Station were performed by a variety of scientists, statisticians, and other experts in the fields of marine biology, fish population dynamics, and power plant operations. These analyses were submitted to Region I in advance of and in response to the Draft Permit. *See* footnote 3, above. These analyses utilized a variety of different methodologies and produced consistent results. The results demonstrate that over-fishing and other factors unrelated to the operation of Brayton Point Station caused the decline of fish in Mount Hope Bay, Narragansett Bay, and elsewhere along the East Coast.

In the Final Permit and in its Response, Region I fails meaningfully to address these analyses, instead now asserting that the assumption that the Station caused the decline is not necessary to the Final Permit. Response at VII-3; *see* Response at VII-27 (acknowledging that a causal connection has not been demonstrated). Despite this change in position, Region I improperly continues throughout the Response to take the position that Brayton Point Station was a primary cause of the decline. Response at III-15, III-24, VII-22. Hence, that view continues to permeate the Region’s decision. Region I erred in failing to provide meaningful

responses to comments, failing to explain how they affect the Region I's decision about the Final Permit, and failing to articulate the "new" basis for the Permit.¹⁶

c. **The Permit relies on new methods to calculate purported "benefits" of the Permit that were not subjected to comment.**

Having failed to address the Permittee's criticisms of calculations used to provide fundamental support for the Draft Permit in any meaningful fashion, Region I now improperly introduces two entirely *new* methods for calculating the economic benefits of the Permit. Response, Vol. II, Appendices E, G & H. These new methods are used to analyze the benefits of the Permit to people who do not even use Mount Hope Bay. Region I estimates these "benefits" to be *tens of millions of dollars*. Significantly, 99.6% of **all** the benefits asserted to result from the Permit are calculated using one of these two methods.

The Permittee has not been afforded any opportunity for review and comment on these new analyses. However, its preliminary review confirms that these methods are no more consistent with EPA's Guidelines for Economic Analyses or sound economic practice than were the calculations used by Region I to support the Draft Permit. Furthermore, Region I's new calculations rely on fundamental assumptions that are inconsistent with each other and with the methods used to support the Draft Permit. For example, depending on the method, Region I has now variously assumed that the people *who do not use Mount Hope Bay* but who will theoretically "benefit" from mere knowledge that the Permit has reduced Brayton Point Station's impacts include some combination of:

- (i) all members of New England environmental organizations;
- (ii) all members of environmental organizations *across the country*;
- (iii) all households in counties abutting Mount Hope Bay;
- (iii) all households within 32.4 miles of Mount Hope Bay; and/or

¹⁶ Indeed, if Region I actually now acknowledges the lack of a causal connection, it would appear that the Permittee has prevailed on a key aspect of its variance demonstration -- namely, the lack of a historic impact on Mount Hope Bay.

- (iv) all recreational saltwater fishermen in New England.

Determinations, App. 11; Response, Apps. E, G and H. The number of people assumed to benefit under the various methods ranges from *under 400,000 to more than 14 million*, and the dollar value of the benefit that each person will experience -- according to Region I -- ranges from less than \$5 to more than \$100 per year. *Id.* These valuations, as the Permittee could readily have demonstrated, are not only widely divergent but also arbitrarily -- and ridiculously -- high. In fact, they would imply a value of \$136 for every adult fish -- of any species -- in Mount Hope Bay.

d. **The Permit relies on engineering analyses that were not subjected to comment.**

Region I's justification of the Final Permit relies on a number of engineering analyses that have not been subject to review and comment, including analyses of the number of cooling towers that the Permit would require and of the noise and plume impacts of operating the cooling towers. Response at IV-86; App. T at 1. Deferring significant new engineering analyses until the Petitioner would have no opportunity to respond is both fundamentally unfair and a denial of the Permittee's statutory right to comment.

The unfairness of Region I's approach is manifest given that, even on cursory review, the Permittee has identified a number of flaws in the new analyses relied on by Region I. *See* Table 2, identifying, *inter alia*, errors in Response Apps. L, M, N, O, Q, and T. For example, even if the new and "simplified"¹⁷ analysis were correct and fewer than 72 cooling towers would be needed to comply with the Permit, such outcome would not have a significant impact on either the cost of the cooling towers or plume impacts resulting from operation of the towers.

¹⁷ Response, App. T at 4.

Region I's new and unreviewed plume analysis relies on modeling of the plume using a model known as SACTI. Region I's own consultant acknowledges that the SACTI model is inferior to the model used by the Permittee's consultant. Response, App. M at 4. In particular, the SACTI model is incapable of reflecting the fact that an important receptor, the Braga Bridge on Interstate Highway 195, is 100 feet higher in elevation than the Station, even though such changes in altitude are critical to assessing the severity of plume impacts.

e. **The Permit relies on a noise impacts analysis that was not subjected to comment.**

In comments on the Draft Permit, TRC Environmental Corporation, one of the Permittee's engineering experts, explained that converting the Station to closed-cycle cooling would generate noise well above the Massachusetts requirement to keep increases to less than 10dBA above background. AR #3263, Vol. II, Tab 13 at 3. In response, Region I now offers its own Noise Impact Assessment ("NIA"), prepared by Hatch Incorporated. Response, App. L. The NIA does not simply assess or critique the Station's comments, but instead presents a wholly new assessment of noise impacts and of the costs of technologies to address them. In the circumstances, the NIA should not be considered by the Board in determining whether there is any substantial evidentiary support for the Permit.¹⁸

f. **The Permit contains several requirements not even included in the Draft Permit and hence not subjected to comment.**

i. **Monitoring of blowdown**

The monitoring requirements set forth in Section 1.A.5.A, 1.A.6.a, and 1.A.7.a for flow, temperature and heat load of the Permit were not included in the Draft Permit. Thus, the Permittee did not have any opportunity to provide comments. Had it been given an opportunity

¹⁸ Preliminary analysis indicates that the noise assessment is also seriously flawed due to, among other things, reliance on an incorrect interpretation of state noise requirements. See discussion in section V.C.6.e. below.

to comment, the Permittee could have demonstrated that the new requirements are duplicative of the monitoring requirements set out at Section 1.A.4.a. Furthermore, the new requirements are onerous in that they would require the installation of new equipment to take duplicative measurements.

ii. Temperature monitoring of Mount Hope Bay

Likewise, the new monitoring requirements set forth in Section 1.A.26.a.1.iii. are unnecessarily burdensome and duplicative due to Region I's prior requirement that the Permittee develop a sophisticated, year-round hydrothermal model of temperatures in Mount Hope Bay. The Permittee has spent over \$1 million in the development of the hydrothermal model, and Region I has accepted it. The new monitoring requirement would produce duplicative information at additional unnecessary expense to the Permittee.

3. REGION I FAILED TO PREPARE A PROPER ADMINISTRATIVE RECORD AS REQUIRED BY 40 C.F.R. §124.18 AND THE NPDES PERMIT WRITERS MANUAL.

The Response to Comments and the Administrative Record are assembled in a way as to substantially impede meaningful review of Region I's decision-making process. For example, throughout the Response, Region I states repeatedly that it has addressed the point at hand "elsewhere" without giving the reader any clue about where to look in the thick two-volume package. The Permittee has scrutinized the Response and concludes that there is no "elsewhere" for most of the references.¹⁹

Compounding this deterrent to meaningful review is the jumbled, disorganized and incomplete condition of the Administrative Record. The Permittee pointed out to Region I during the comment period that the record is incomplete and not organized with any rhyme or

¹⁹ For example, Region I states that the rationale for its selection of a critical temperature threshold is "discussed in greater detail elsewhere in this document." Response at III-27, 30. In fact, that detailed discussion is nowhere to be found.

reason. AR # 3020; AR # 3003. More than a year later, the record is still a mess. Worse, until October 21, 2003, several weeks after issuance of the Final Permit, Region I refused even to provide an electronic index to assist the Permittee to locate material in the Record. The Petitioner has no confidence that the Record contains all of the material on which Region I relied, much less pertinent information that Region I had and chose to ignore. Although the Petitioner cannot reasonably be expected to identify missing material of which it is as yet unaware, it can -- and has -- identified those of its own submittals that are missing from the record. *See* Motion to Supplement the Administrative Record that has been filed herewith.

Petitioner has also identified a number of inter- and intra-agency communications that are missing from the Record. *Id.* For example, significant substantive information received by Region I from the MADEP and relied on by Region I for both the Draft Permit and Final Permit is missing from the Record. As the result of a Public Records Act request issued under state law to the MADEP, the Petitioner has learned that MADEP submitted comments and memoranda to Region I that shaped the Final Permit. Virtually none of these documents appears in either the record Region I provided for the Draft Permit or the record for the Final Permit.²⁰ As a result, the Permittee has been denied a meaningful opportunity to understand and comment on the basis for the Permit. By motion accompanying this petition, the Permittee is requesting this Board to direct Region I to supplement, properly compile and certify the Administrative Record.

4. REGION I FAILED TO MAKE ITS DECISION ON THE ADMINISTRATIVE RECORD AS REQUIRED BY 40 C.F.R. §124.18 AND THE ADMINISTRATIVE PROCEDURES ACT.

Substantial evidence in the Administrative Record suggests that the outcome of this permit proceeding had been predetermined and that the Permittee's analyses were not evaluated

²⁰ To single out but one prime example, the Administrative Record does not even include a June 6, 2003 memorandum from MADEP to Region I explaining MADEP's responses to comments Region I asked MADEP to focus on. *See* E-mail from Lee MacEachern of MADEP to Region I (Attachment D hereto).

objectively and based on the evidence by Region I. This result could have been avoided if Region I had afforded the Permittee an evidentiary hearing and not commingled its advocacy and adjudicatory functions.²¹

a. Evidence of bias.

Numerous statements in the Response to Comments reflect a lack of objectivity. For example, although it is the responsibility and right of the Permittee to submit comments on the Draft Permit, Region I repeatedly throughout the Response refers to them as “complaints” rather than as comments. E.g., Response at III-25, IV-30, IV-46, IV-58, IV-99, V-2, and VII-48.

Region I also goes to great lengths in the Response to Comments to suggest that the Permittee dragged its feet and unduly delayed the process. E.g., Response at IV-9. That this evidences Region I’s biased and derogatory view of Permittee is clear from the fact that (a) such delays (if they did exist) are wholly irrelevant to the substantive issues in the permit, and (b) in fact it was Region I and its own Technical Advisory Committee (“TAC”) that slowed the permit renewal process by two or more years by withholding approval of the work scopes for numerous studies they asked the Permittee to perform. On April 6, 1998, Region I requested the Permittee to prepare work plans and schedules for a list of extensive studies. AR #113. Region I instructed the Permittee not to initiate any of the requested studies until the plans were approved by the Region. *Id.* at 2. On May 26, 1998, the Permittee submitted the plans and schedules. AR #111. Region I did not respond until February 23, 2000, nearly two years later. AR #80. Upon receipt of the approval, the Permittee promptly initiated the numerous studies. The results

²¹ Indeed, given the significance of the issues presented, the need for principled and consistent decision-making by EPA in all regions, and the evidence of bias in the decision rendered in this case, the Permittee challenges whether the purported delegation of adjudicatory responsibilities without opportunity for review by the Administrator violates the Clean Water Act and due process.

were submitted to Region I in 2000 and 2001. *See, e.g.*, AR #555, Vol. II, Apps. G and H; AR #511, ch. 5 and 6; AR #213; AR # 516; AR #514; AR #99; AR #111.

Further, Region I inappropriately and repeatedly states that the Permittee has “reaped an economic benefit” because it was not previously required to make the proposed upgrades to its cooling technology. *E.g.*, Response VII-8 (stating that Region I “agrees that damage to natural resources by BPS’s cooling system has occurred at the expense of Massachusetts and Rhode Island citizens”); Response VII-15 (Region I “agrees that the permittee has been able to use substantial public resources at no expense and that this is a substantial economic benefit to the company.”).²² These statements are at best disingenuous, given that Region I issued the earlier permits under which BPS operated. The statements also distort historical fact: since BPS operated for much of the time in question as a regulated utility, any “benefit” was presumably returned to consumers of electricity in the form of lower costs.

Region I’s assertion that “killing fish and harming habitat in order to make electricity ... is not a beneficial use of [public resources]” is particularly troubling. It is plainly not within Region I’s authority to make choices about what is or is not a “beneficial use”. Generation of electricity also benefits the public. Congress explicitly struck a balance between water resources and electricity production in Section 316 of the Clean Water Act.

b. Inclusion of Outdated Information in the Response to Comments.

In various places the Response cites to and relies on information that is outdated and demonstrably incorrect. Information that was corrected or revised during the comment period and new information presented during the comment period is overlooked in the Response. For example, on February 11, 2003, at Region I’s request, Dr. DeAlteris submitted a revised and

²² Region I’s willingness to speculate about alleged “benefits” to Brayton Point Station that are completely irrelevant to the permitting proceeding stands in stark contrast to its unwillingness to properly consider the costs of closed-cycle cooling to Brayton Point Station -- a factor that Region I is *required* to consider. *See* section V.B.2.a.

updated version of his analysis of trends in fish abundance in Mount Hope Bay and Narragansett Bay. This submittal corrected for an incorrect data set previously provided by RIDEM. The Response to Comments acknowledges at one point that this revised information had been received, Response at IV-73, but then continues to refer elsewhere to incorrect data's having been used in the DeAlteris analyses and cites those errors as a reason to reject the analysis. Response at VII-32, 34.

c. No new Fact Sheet.

Region I did not even go to the trouble of preparing a new fact sheet to accompany the Final Permit, so confident was it that there would be no material changes despite the fact that thousands of pages of significant comments and analyses were submitted by the Permittee and others during the period between issuance of the Draft Permit and issuance of the Final Permit.²³

B. CLEAR SUBSTANTIVE ERRORS OF LAW

1. THIS PERMIT ARBITRARILY AND UNLAWFULLY DEPARTS FROM PAST AND PENDING POLICIES OF EPA CONCERNING THE APPROPRIATE TECHNOLOGY FOR EXISTING POWER PLANTS.

Technology assessments form the starting point for permit limits developed under Section 316(a) and 316(b) of the Clean Water Act. For thermal discharges, EPA determines the "Best Available Technology" or "BAT". For cooling water intake structures, EPA determines the "Best Technology Available" or "BTA". For nearly thirty years, EPA has routinely concluded that open-cycle cooling is the appropriate technology (BAT and BTA) for facilities the size and age of Brayton Point Station. AR #3263, Vol. I at 31-32. EPA is now poised to codify its prior practice with respect to BTA determinations in a national rulemaking due to be issued in February 2004. Without meaningfully disputing this history (*See* Response at VIII-7-8)

²³ The lack of a new fact sheet also leads to some inconsistencies between the Draft and Final Permits, due to the fact that some changes to the permit were made. For example, monitoring, copper and iron limits in the Final Permit

or the import of the forthcoming rule, Region I has chosen simply to ignore both in order to require closed-cycle cooling technology for Brayton Point Station. Response at VIII-2-3. Region I's casual disregard of its prior decisions and improper singling out of Brayton Point Station for disparate treatment a few short months before a national rulemaking rejects its position constitute clear legal error. *Massachusetts Dept. of Education v. United States Dept. of Education*, 834 F.2d 536, 544-45 (1st Cir. 1988) (Once an agency has "buil[t] a body of precedent" in its application of a statutory provision, it must "follow, distinguish or overrule it."); *Puerto Rico Sun Oil v. U.S. EPA*, 8 F.3d 73, 78-79 (NPDES permit vacated where Region I improperly singled out facility for disparate treatment).

2. REGION I IGNORED OR MISAPPLIED FACTORS REQUIRED TO BE CONSIDERED IN DETERMINING APPROPRIATE TECHNOLOGY.

Region I engaged in an erroneous analysis of the technology options for BAT and BTA. Specifically, Region I's technology determination relies on clear misinterpretation and misapplication of the factors that the agency is required to consider in making case-by-case determinations of technology and ignores the agency's burden of proof. These errors include, among others, the following:

a. No consideration of cost effectiveness

Region I refused to consider the cost effectiveness of technological options in reducing thermal discharges as required by *Appalachian Power v. Train*, 545 F.2d 1351 (4th Cir. 1976). Response at VIII-8-9. See *Petitioner's Request* at AR #3263, Vol. I at 33. Furthermore, Region I did not even address the cost-effectiveness analysis submitted by Permittee, despite precedent requiring that such analyses be considered, if submitted, in order to "avoid the risk of hidden

have changed significantly since the Draft Permit despite Region I's statement that the Final Permit is "substantially identical" to the Draft Permit. Response at I-6.

imbalances between cost and benefit.” *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1048 (D.C. Cir. 1978).

b. Cost and benefits analyses not performed

Region I failed to perform cost and benefits analyses that it acknowledges are appropriate to evaluate the technologies. These include:

i. Missing cost estimates

Region I acknowledges that it received comments -- including some from sources not related to the Permittee -- suggesting the need for a more realistic estimate of costs by a firm with experience in power plant construction and retrofitting. Response at IV-76; AR #1012. It nonetheless declined to perform one on the ground that it would be too expensive. Response at IV-76.

ii. Missing economic benefits analyses

Although Region I agrees with the Permittee that “it might be preferable” to use a site-specific study to calculate the economic benefits of the Permit to those who do not use Mount Hope Bay for commercial or recreational fishing, Response at IV-27, Region I admits that it did not perform one and instead blames the Permittee for failing to do so even though Region I carries the burden. Response at IV-41. Region I then avoids responding to criticisms of the methods it did use to calculate the benefits by declaring incorrectly that it was not required to perform any monetary estimates of benefits at all.²⁴ Response at IV-20, IV-24.

²⁴ Region I also deflects criticism of both its benefit and costs estimates by repetitively asserting that it is not required to provide “precise” estimates in either case. *E.g.*, Response at IV-14 to IV-17, IV-21, 28, 32, 42, 52, 75, 91, 100, 119, 127; VII-10, 14, 15; VIII-20, 23. These assertions are completely misleading. The Permittee never said that Region I’s calculations were not sufficiently “precise;” it pointed out serious conceptual and procedural flaws demonstrating that the methods used were inconsistent with accepted practice and invalid. AR# 3263, Vol. I at 36-42, 88-91.

c. Noise impacts evaluated under erroneous standard

Region I acknowledges in the Response that the Station will have to comply with Massachusetts regulations concerning noise, Response at IV-83; Response, App. L at 3, but then misconstrues those regulations. The MADEP measures noise increases against a true background, which would require the Station to consider the noise effect of the cooling towers *and the basic station operations*. See E-mail from Lee MacEachern of MADEP to David Webster, Mark Stein, Phil Colarusso and Damien Houlihan, Region I, dated June 6, 2003, ¶ 23 (Attachment D hereto). Region I did not even attempt to demonstrate that the 72 cooling towers needed for closed-cycle cooling, taken together with existing station operations, could be operated within the regulatory limit,²⁵ and therefore has not demonstrated that the state noise requirements can be met.

3. REGION I APPLIES AN INCORRECT BURDEN OF PROOF AND MISINTERPRETS WATER QUALITY STANDARDS IN REJECTING THE PERMITTEE'S PROPOSED VARIANCE.

Beginning from an erroneous premise as to the appropriate technology for reducing thermal discharges, Region I then misapplies the “variance” provision of the Clean Water Act, Section 316(a). Although the Petitioner called to Region I’s attention determinative decisions issued by EPA’s General Counsel establishing the legal standard for granting variances and the effect of variances on otherwise-applicable standards, including water quality standards, AR# 3263, Vol. I at 47-50, Region I disregards those decisions. Instead, Region I imposes a novel and excessively stringent burden of proof on the Permittee and seeks to justify it by misinterpreting the role of water quality standards in the variance process.

²⁵ This error is compounded by Region I’s decision to ignore the impacts of the noise from the air pollution control equipment that the Station is legally required to install, on the ground that “such predictions use conservative assumptions”, Response App. L at 4, notwithstanding that Region I does not dispute either the legal obligation to install the equipment or the long-standing DEP practice that noise impacts be conservatively modeled.

a. **Improper burden of proof**

The correct standard is well-established in precedent and requires only that the Permittee provide “reasonable assurance” that the population of organisms currently occupying Mount Hope Bay will be protected if the Station reduces its discharge to 28 tBTUs from 42 tBTUs. AR #3263, Vol. I at 48; *see also* AR #555, Vol. I, Part 3. It does not require Brayton Point Station to prove that its discharge will have no measurable effect on that population.²⁶ AR #3623, Vol. I at 46-51. Nor does it require Brayton Point Station to demonstrate, as Region I suggests, that the Station’s reduced discharge will not “delay” the possible recovery of fish species no matter what the cause of their current decline, or will sufficiently offset losses from other sources so as to allow for commercial fishing to return to Mount Hope Bay. *Compare* Response at III-7-8, 42 *with* AR #3263, Vol. 1 at 48-51. The Permittee met its legal burden. Region I applied the wrong standard to conclude otherwise.

b. **Misinterpretation of role of water quality standards**

Region I also misinterprets the role of water quality standards in a variance decision under Section 316(a) of the Clean Water Act. A variance trumps and replaces otherwise applicable water quality standards for temperature. AR # 3263, Vol. I at 46-47 and n.86. With no more than a vague statement of “disagreement” with prior decisions of EPA on this point, Response at V-4, Region I relies on water quality standards to justify its variance decision. Response at III-3. In fact, as MADEP recognized in a memorandum responding to the Permittee’s, Region I’s so-called variance is essentially a restatement of water quality requirements in the form of a variance. *See* MADEP Memorandum entitled “Comments on the LMS comments on Brayton Pt. NPDE[S] permit (undated) (Attachment E hereto).

²⁶ Nor does the standard permit Region I to deny a variance on the mere suggestion Brayton Point Station “has contributed to the failure to maintain” the population, Response at III-6, a standard so slight that virtually no variance applicant could meet it. *Compare* BPS Comments, AR # 3263, Vol. I at 46-48.

4. REGION I'S VARIANCE DECISION IS BASED ON ARBITRARY THERMAL DISCHARGE STANDARDS.

Although Region I acknowledges that it carries the burden of proof with respect to the variance it proposes, Response, p. III-70, Region I provides no analysis in its Response to justify its choice of a thermal variance in the amount of 1.7 tBTUs. Rather, the Region merely refers the reader back to the Determinations Document it issued in July 2002. Response at III-57. The Region's failure to respond to the detailed, extensive comments submitted by the Permittee and numerous scientists on the Draft Permit underscores the arbitrariness and unlawfulness of the 1.7 tBTU limit. AR #3263, Vol. I at 70-72, Vol. II, Tab 11 at I-12 & I-13. The Permittee placed substantial evidence in the record, including extensive, comprehensive biological analyses, showing that the approach used by Region I to develop the 1.7 tBTU limit was (1) not supported by the scientific literature; (2) not supported by real-world observations of fish behavior; and (3) not supported by any analysis of biological impacts associated with the limit. AR #555, App. B at B-18 to B-23; AR #3263, Vol. II, Tab 11, §§ I.4, I.8. In sum, evidence already in the record showed that Region I's approach was simply incapable of doing what Section 316(a) requires; namely, identify and consider the incremental impact of the Station on the fish populations in Mount Hope Bay. Region I merely declares that it disagrees with these comments and bases the Final Permit on the same approach.²⁷

a. No basis in the record to support the variance limit in the Permit.

The Clean Water Act expressly bases the determination of whether a variance should be granted or denied on a biological assessment of whether resident fish populations will be protected by the applicant's proposed discharge limit. *See* Section 316(a). The effect of Section 316(a) is to override application of absolute, numeric water quality standards and fixed

²⁷ In expressing its disagreement, Region I mischaracterizes the analyses presented and miscites several articles in the scientific literature. These errors are presented in Table 1. *See also* AR #3263, Vol. I, Tab 11, Part I.

technology standards in favor of a flexible evaluation based on the specific population in question. AR #3623, Vol. I at 46-48. Region I's approach to determining a variance limit for Brayton Point Station defeats the very purpose of a variance by applying fixed numeric thresholds and failing to connect them to actual biological effects.

Instead of conducting a biological assessment, Region I selected arbitrary temperature thresholds (24°C in the summer and 5°C in the winter) and tabulated the percent of Mount Hope Bay that would exceed those numbers between July 15 and August 15 (for the summer) and March 1 to 31 (for the winter). Determinations at 6-56 and 6-57. After viewing the tabulation, Region I then decided, without any explanation, that it would allow 10% of the Bay to reach those numeric thresholds for up to 5 (not necessarily consecutive) days in a month. AR #3263, Vol. I, p. 70-72; AR #3263, Vol. II, Tab 11, Part 1; Response at III (no explanation provided). Nowhere did Region I demonstrate how these thresholds relate biologically to the 1.7 tBTU limit established in the Permit. It cannot make any defensible biological connection.²⁸ AR #3263, Vol. I at 70-72; AR #3263, Vol. II, Tab 11, Part 1; AR #555, Apps. B and C.

The MADEP apparently agrees with the Permittee on this point. In its review of comments submitted on behalf of the Permittee, MADEP stated:

"LMS may have a point in asserting that EPA's demand that the thresholds 'cannot be exceeded by more than 10% of the bay's volume for more than 5 days per month' is not directly biologically justifiable. This sounds more like a mixing zone condition (i.e. minimizing the area where numeric water quality criteria can be exceeded)."

Page 3 of MADEP Memorandum (Attachment E hereto.)

²⁸ Indeed, there are suggestions in the Determinations Document that the real purpose of the 1.7 tBTU limit was to allow 122 hours of open-cycle cooling to protect the Braga Bridge and highway from dangerous fog and ice attributable to the cooling towers. Determinations at 8-3.

In their comments, the Permittee and its scientists demonstrated why the temperature thresholds selected by Region I were arbitrary and without biological justification and why the approach used by the Region did not rise to the level of a biological assessment. AR #3263, Vol. I at 56-61, Vol. II, Tab 11, Part 1; AR #555, App. B at B-18 to B-23; AR #516, Cover Letter at 1; AR #386 at p. 7, 14, 31, 51, 57 and 73. The Permittee also pointed out that Region I's approach, by failing to connect the temperature thresholds to biological results, was incapable of predicting how fish populations would actually respond under *any* of the proposed operating scenarios, including that proposed by the Permittee. AR #3263, Vol. I at 57-59 & 61. For these reasons, there is simply no basis in the record for Region I to address or answer in the way it has, the basic question of what level of reduction, if any, is needed to protect fish populations in Mount Hope Bay.

Region I's rejection of the Permittee's substantial biological analyses lacks substance. With respect to its temperature thresholds, Region I suggests that the arbitrary 24°C and 5°C temperature thresholds are higher than they might otherwise have been, but provides no information to justify the actual temperatures that were chosen. In fact, the record contains substantial evidence that winter flounder and other species of concern continue to feed, reproduce and function normally in water temperatures greater than 24°C (AR #3263, Vol. II, Tab 11 at I.1 to I.3) and that the water temperature naturally rises above these thresholds in the summer time. AR #386 at 14 and 57. *See also* Memo of October 15, 2001, from T. Callahan, to P. Colarusso, Region I biologist, attaching document detailing steps the TAC and the agencies took to develop critical temperature tables and stating:

"For most species evaluated there was no one critical temperature, rather, there was a range of critical temperatures. Part of the reason for this is that critical temperatures are dependent upon the acclimation of the individual."

Page 4 of Attachment F hereto.

In addition, Region I's approach cannot be used to determine the incremental change in biological effects when water temperatures rise above and below the absolute thresholds. A biothermal response is properly delineated by a range of temperatures, not by one isolated value. Reliance on a single thermal threshold (*i.e.*, where either 0% or 100% of the population is affected) provides erroneous results. AR #3263, Vol. II, Tab 11 at I-14.

The record is equally without support for the 10% areal cutoff and 5 day maximum. Region I states that its "analyses" indicate that 5 days was a reasonable measure but neither identifies nor produces those analyses. Response at III-30. With respect to the 10% figure, Region I acknowledges that it cannot quantify what biological effects will result and simply states that it "believes" that a 10% limit will "allow for the protection and propagation of the [fish]." Id. Nowhere, however, does -- or can -- Region I articulate where in Mount Hope Bay and its tributaries the 10% temperature exceedance will even occur, much less whether the exceedance will occur in areas actually occupied by the species being "protected."

b. Region I acknowledges acclimation occurs but refuses to apply it.

In numerous comments to the Draft Permit, the Permittee and a host of marine biologists cautioned Region I that there is no reliable biological conclusion that one can draw from the areal extent of a thermal plume. *E.g.*, AR # 386 at 1. Rather, one must actually undertake a specific analysis of a number of variables that affect the behavior of fish in the real world environment, including their natural and biological ability to acclimate to changes in temperature. AR #3263, Vol. I at 56-61, Vol. II, Tab 11 at I-1-2; AR #555, App. B at B-20; AR #2312. The variables also include the length of time to which an organism is exposed to heat at varying temperatures. The Permittee and several marine biologists with particular expertise in

Mount Hope Bay and Narragansett Bay undertook comprehensive and detailed analyses and presented them. *Id.*; AR #555, App. 3.

Region I acknowledges that acclimation occurs (Response at III-12, 24-25, 29) but nonetheless arbitrarily rejects the Permittee's use of it and fails to incorporate the rational biological response into its own selection of a variance limit. Response at III-10,11. Instead, Region I arbitrarily bases its variance limit on a single temperature threshold and on the spatial coverage of the discharge (Response at III-13), neither of which is consistent with acclimation or keyed to where the species being protected are present.

4. REGION I MISSTATES ITS AUTHORITY AND MISREADS STATE WATER QUALITY STANDARDS TO REGULATE COOLING WATER WITHDRAWALS.

Section 316(b) of the Clean Water Act regulates the "location, design, construction and capacity" of cooling water intake structures. This provision was enacted to establish a uniform technology standard for cooling water withdrawals. Under Section 316(b), Region I carries the burden of proof to demonstrate that the costs of any proposed changes in a facility's system for withdrawing cooling water (referred to as a cooling water intake structure) are not "wholly disproportionate" to any resulting environmental benefits. *Central Hudson Gas and Electric Corp.*, OGC No. 63 at pp. 382-83 (July 29, 1977); *In re Public Service Co. of New Hampshire (Seabrook Station)*, 1 E.A.D. 332, 340 (June 10, 1977). Region I's decision misstates its authority under Section 316(b) and then relies on a novel and manifestly incorrect reading of state water quality standards to support its position.

a. Region I misinterprets its authority in requiring closed-cycle cooling.

Region I's interpretation of Section 316(b) to authorize limitations on flow that would require closed-cycle cooling is not consistent with the plain language of the statute. 33 U.S.C. § 1326(b). By its terms, this section only authorizes the agency to regulate the physical characteristics of intake structures, such as the types of screens used to prevent fish from entering

the intake pipes, the location of the intake itself, and the use of fish ladders and other structures that allow fish to bypass the intake.

b. Region I invents a novel and unsupported interpretation of Section 316(b) and state water quality standards to backstop its decision.

Region I incorrectly tries to justify its limits on cooling water withdrawals by stating that they “could not be made any less stringent” because of state water quality requirements. Response at V-6. To reach this conclusion, Region I misreads and misapplies Section 316(b) of the Act and the language and scope of the Massachusetts and Rhode Island water quality standards. Significantly, Region I’s interpretation would allow water quality standards to swallow not only the express requirements of Section 316(b) but also the thermal variance provided in Section 316(a), effectively reading Section 316 out of the statute altogether.

i. Section 316(b) sets the standard for cooling water withdrawal requirements

Section 316(b) expressly states that *any* standards applicable to Brayton Point Station under Section 301 of the Clean Water Act -- which include state water quality standards -- “shall require” compliance with Section 316(b)’s “best technology available” standard. Section 316(b) thus creates a single, national technology-based standard for regulating cooling water withdrawals. This standard is consistent with the manifest intent of Section 316 as a whole, which was to develop a uniform approach for regulating the two sides of the cooling water coin: thermal discharges and cooling water withdrawals.

In an attempt to evade the obvious intent of the language, Region I engages in a strained reading of case law discussing a *state’s* general ability to establish certain more stringent standards during the certification process as if it effectively overrides the more specific language of Section 316(b) *for both states and Region I*. Response at V-8. Not surprisingly, Region I offers no precedent in support of this interpretation, which is at odds with established rules of

statutory construction holding that a more specific requirement -- like Section 316(b) -- takes priority over provisions of general applicability.

ii. Water quality standards do not apply to cooling water withdrawals

Region I's approach also requires it to misread and misapply the state water quality standards on which it claims to rely. Nothing in the language of either state's water quality regulations purports to preclude cooling water withdrawals. In fact, Rhode Island's regulations expressly permit them, providing that both SA and SB waters -- the designations for Mount Hope Bay -- "shall be suitable for aquacultural uses, navigation, and *industrial cooling*." RI Water Quality Regulations, Rule 8B(2)(a & b) (emphasis added).²⁹ Nor has Region I presented any substantive analysis explaining how the *specific* limits on water withdrawals imposed in the Final Permit, rather than the limits proposed by the Permittee, were found to be required to meet the water quality standards of either state. To the contrary, MADEP's administrative record reflects that the agency informed Region I that Massachusetts does *not* interpret its water quality standards to impose any particular limit on cooling water withdrawals. MADEP e-mail (Attachment G hereto) (stating that DEP staff "do not presently read our WQS as dictating or specifically determining the intake design capacity of a CWIS [cooling water intake structure]"). Region I's reinterpretation and expansion of state law to backstop its chosen result is unsupported, arbitrary and exceeds its authority under the Clean Water Act.

Finally, the Region's use of Rhode Island water quality standards to regulate a withdrawal located in Massachusetts effectively rewrites Section 401(a)(2) of the Clean Water

²⁹ In this context, the Permittee notes that that Rhode Island's statement in a letter to Region I that Brayton Point Station's withdrawals would "violate the general criteria for the protection of aquatic life specified in Rule 8.D(1)", Response at V-14, is clearly wrong and could not reasonably have been relied upon by Region I. Rule 8.D(1) only states that all "waters of the state" -- meaning, of course, Rhode Island waters -- must be "free from . . . anthropogenic activities" affecting fish and wildlife. To the extent that Brayton Point Station constitutes such an "anthropogenic activity" it is located in Massachusetts, not in Rhode Island waters.

Act, which allows an “affected state” to influence a permit only to the extent that it will “affect the quality of [the affected state’s] waters.”³⁰ By confusing effects on *fish* with effects on *water quality*, Region I’s approach would authorize any state on the eastern seaboard to impose their own water quality standards on Brayton Point Station because many of the fish species affected by Brayton Point Station’s intake structure are part of large populations that migrate up and down the east coast of the United States.

5. THE PERMIT IS BASED ON SPECULATIVE “BENEFITS”.

In order to justify its imposition of the unprecedented standards in this permit, Region I relies on speculative and vastly inflated calculations of the biological and economic benefits of the permit.

a. Region I does not justify the biological benefits of the Permit.

Region I repeatedly refers to the recovery of fish populations as the principal biological benefit of its proposed withdrawal limits. Determinations at p. 7-129, 7-131, 7-167; Response at IV-22. Yet Region I has produced no predictive analysis that demonstrates this recovery will occur, relying instead on an unexplained faith that, “if you build it, they will come.” In fact, the only predictive modeling in the record indicates that a recovery will require imposition of stringent limits on fishing that have not been enacted and as a political matter may never be. AR #3263, Vol. II, Tab 11, Part II.6; AR #3248, Exh. C, Figs. 22, 24 & 26. The predictive models show that the Station’s operations are not preventing the fish, specifically winter flounder, from recovering. Id.

³⁰ The principle that a permit will be conditioned to meet affected state water quality standards *in the affected state’s waters* is also acknowledged in a number of EAB decisions, including: *In the Matter of City of Waskom, Texas*, 1991 WL 735106, 3 E.A.D. 500 (NPDES Appeal No. 90-18, Jan 28, 1991) and *In the Matter of: Champion International Corporation, Canton Mill*, 1990 WL 324291, 3 E.A.D. 309 (NPDES Appeal No. 90-1, Sept. 5, 1990).

b. **Region I has utilized flawed calculations to justify the economic benefits of the Permit.**

Between issuing the Draft and the Final Permit, Region I's calculation of the actual economic benefits resulting from closed-cycle cooling for the commercial and recreational fisherman who use Mount Hope Bay was reduced by about two-thirds, from approximately \$240,000 to \$84,000 a year. Determinations at 7-158; Response at IV-25. Region I treats this change as irrelevant, asserting that closed-cycle cooling is nonetheless justified by perceived benefits which are attributable simply to knowing impacts on fish in Mount Hope Bay have been reduced and which are Determinations at 7 supposedly worth *tens of millions of dollars a year* to people who do not even use the Bay. Determinations at 7-158; Response at IV-29, IV-31. In fact, these "non-use" values far outweigh the values calculated for people who actually do use Mount Hope Bay: the non-use values account for 99.6% of the final benefits" Region I calculates. *Compare* Response at IV-29 (total "non-user" values estimated at \$23.4 million a year) *with* Response at IV-25 (total use values to recreational and commercial fisherman estimated at \$84,376 a year).

Region I's approach reflects numerous errors and inconsistencies and produces calculations that are facially unreasonable. In its comments on the Draft Permit, the Permittee and its economist, Dr. Stavins, identified numerous, fundamental flaws in the calculations Region I performed to establish non-use benefits. AR #3263, Vol. II, Tab 5 at 30-39; AR #3248, Exh. B at 16-22. Region I's responses are uniformly dismissive, uninformative and misleading. *See* Table III.

i. **Region I has not followed EPA's own Guidelines for Economic Analyses**

In their comments, both Brayton Point Station and Dr. Stavins pointed out that neither of the methods used by Region I to calculate non-use benefits were consistent with the methods and

practices identified in EPA's Guidelines for Conducting Economic Analyses. AR #3263, Vol. I at 88-91; Vol. II, Tab 5 at 34, 36. Instead of addressing Brayton Point Station's criticisms, Region I asserts in its Response to Comments that it has no obligation to follow the widely accepted best practices that are summarized in the Guidelines. Response at IV-17 n.3. The agency subsequently states that "it believes its analyses are, in fact, consistent with the Guidelines" but offers no further explanation or response to Brayton Point Station's specific comments. *Id.*; *see also* Table III.

ii. **Region I has not adequately responded to criticisms or justified its methods.**

Fundamental criticisms of the appropriateness and validity of Region I's methods met with misleading and nonresponsive answers. For example, Region I responds to methodological criticisms of what it calls its "Per-Person" approach for calculating non-use benefits by stating that it "disagrees" and then simply referring the reader back to the same section of the Determination on which the criticisms were based. Response at IV-56.

Similarly, Region I acknowledges that the Permittee's criticism of the agency's "Habitat Replacement Cost" calculation as conceptually inappropriate as a measure of benefits is "probably fair," Response at IV-30, and states that it "did not rely significantly" on this particular analysis. But Region I unjustifiably continues to refer to the results it calculated this way elsewhere in the Response and even uses those numbers to justify similarly high numbers that were calculated using other methods. Response to IV-43.

iii. **Region I erroneously claims it does not have to calculate benefits at all.**

In an apparent attempt to deflect the criticisms of its methods, Region I now claims it may evaluate costs and benefits without calculating them at all. Region I simply states that the Station's current impacts are "severe" and affect "vast numbers of individual organisms" and

then argues that closed-cycle cooling is appropriate and chosen because it will produce a “very substantial reduction” in those impacts. Response at IV-21, 22. Nothing in the history of EPA’s implementation of Section 316(b) suggests that such an arbitrary and conclusory “analysis” can replace sound economics in applying the “wholly disproportionate” standard.

C. CLEAR ERRORS OF FACT

1. REGION I’S CONCLUSIONS ABOUT THE “DIRE” CONDITION OF MOUNT HOPE BAY ARE BASED ON FACTUAL ERRORS.

Region I has introduced errors into and biased the results of its review by (i) failing to consider all of the available data for Mount Hope Bay; (ii) extrapolating from one data set to geographic areas not actually sampled by that data set while ignoring data actually collected in the geographic area of concern; (iii) failing to take into account the results of Mr. Gibson’s 2003 biomass dynamics model; and (iv) failing to take into account studies by Dr. DeAlteris and Dr. Hilborn demonstrating that the fish in Mount Hope Bay are not faring any worse than the fish in neighboring Narragansett Bay.³¹

a. Selective and biased use of data.

The Permittee and several marine biologists and fisheries’ scientists submitted extensive comments explaining why it was erroneous for Region I to base key analyses of Mount Hope Bay on a single data set known as the MRI standard trawl when several other data sets, including one collected by RIDEM, also exist. AR #3263, Vol. I at 8-10, Vol. II, Tabs 1, 4. The comments explained how use of a single data set skews the results dramatically. AR #3263, Vol. II, Tabs 1, 2, 4, 11. Region I fails to address those comments. Instead, in its Response, Region I simply asserts -- without meaningful explanation -- that the MRI standard trawl is “the

³¹ The errors of fact discussed here are one example of the kinds of factual conflicts that would have benefited from an evidentiary hearing, including cross-examination.

best data set.” Response at II-2, 4; VII-31. Even if it were considered a valid data set,³² reasonable experts all agree that all available data should be examined. AR #3248, Exhibit C. It is for that reason that Mr. Gibson conducted additional analyses in 2002 and 2003 utilizing all available data. Mr. Gibson explained:

“The overall modeling approach was to use all available data with equal credibility given to the various sources so as to reduce subjective biases.”

AR #3248, Exhibit C at 2. As is shown repeatedly in the Administrative Record, when all available data is used, the results do not support the Permit limits chosen by Region I. *See, e.g.*, AR #3248, Exh. C at 11, Fig. 18, 22, 24 & 26; AR #3263, Vol. II, Tabs 1, 2 & 11-38 to II-43.

b. Factual errors in analyzing Brayton Point Station’s impacts on Mount Hope Bay.

Region I errs in suggesting that Brayton Point Station must somehow be responsible for the steep decline of some fish in Mount Hope Bay. Response at III-15, III-24, VII-22. There is substantial evidence in the record that fish have been in similar steep decline in many places far removed from -- and indisputably unaffected by -- Brayton Point Station. AR #555, App. C at 18-25; AR #3263, Vol. II, Tab 1. Fueling and compounding this error is Region I’s continued reliance on (i) the 1996 Gibson Report despite new analyses produced by Gibson and others between 2000 and 2003 casting doubt on the validity of the 1996 Report, AR #3132 at 1-3, AR #3248, Exh. C; (ii) factually erroneous presentation of data concerning historic operations at the Station; and (iii) incorrect calculations.

³² In its comments, Brayton Point Station identified discrepancies between the MRI data and other data measuring trends in Mount Hope Bay. AR #3263, Tab 1. Subsequently, at Region I’s request, Dr. DeAlteris evaluated this discrepancy in detail and demonstrated that there was a pronounced, statistically significant discontinuity in the MRI standard trawl for the critical 1985-1986 timeframe. AR # 3132 at 22. This discontinuity occurred at the same time as dredging in the trawl area and a gear replacement affecting the validity of the data. *Id.* Both LMS and DeAlteris have noted in their comments that Region I also erroneously extrapolates information from the MRI standard trawl to draw conclusions about geographical areas that were not sampled by the MRI trawl and ignores data actually collected from the geographical areas at issue *See* Table 1.

i. Station's data.

Region I erroneously states that the Station's data show an increase in its discharges of heat and withdrawal of cooling water before a decline of fish in 1985 - 1986 when in fact the data show that the increases in thermal discharge did not occur until after the 1985-86 decline in fish populations. AR #555 at 18 and App. D, Table 4-3.

ii. Incorrect calculations.

Cooling water withdrawals affect fish in two ways. Adult fish can be trapped against screens at the intake structure, an effect known as "impingement." Fish eggs and larvae may also be drawn through the cooling system, an effect known as "entrainment." Region I's calculations of Brayton Point Station's impingement and entrainment impacts contain numerous methodological and factual errors, including its failure to use current data.

Region I errs in basing its calculation of the Station's impingement and entrainment impacts on data that is decades old and refers to a time when there were many more fish breeding and swimming up and down the East Coast, including Mount Hope Bay. Determinations at 7-115; Response at IV-47. Region I compounds this error by comparing inflated historical impingement and entrainment data to current lowered fish populations, concluding erroneously that the Station's intake is affecting a very high percentage of that population. Region I purports to justify its use of historical data by suggesting that the higher population levels of the past may be more representative of those of the future. Region I offers no evidence to support its prediction that the number will in fact increase. It was an error for it to use those higher historic population levels in calculating future percentage impacts.

Region I's determination of the Station's impacts is also infected by an erroneous calculation that the current population of winter flounder in Mount Hope Bay consists of only 7,500 fish. Determinations at 7-119; Response at IV-67. Using that flawed number and also not

adjusting for the larvae that originate in Narragansett Bay, the agency produces a flawed result, concluding that Brayton Point Station has an 80% impact on the Mount Hope Bay population. Numerous studies prepared by Dr. Hilborn, Lawler, Matusky & Skelly Engineers, LLP (LMS), and RIDEM biologist Mark Gibson demonstrate that the Permittee's entrainment and impingement impacts on winter flounder populations in Mount Hope Bay are much lower, in the acceptable range of 5% to 15%. AR# 555, App. F at F-77. Moreover, these studies, including Gibson's 2003 analysis, also indicate that the actual population of adult winter flounder is between 300,000 and 400,000, not 7,500. AR #3263, Vol. II, Tab 2 & Tab 11 at II.4 and II.6; AR #3248, Exh. A and C. The Permittee and various scientists provided this information to Region I before and after the Draft Permit was issued. *Id.* Region I has not identified any methodological errors that would justify rejecting the results.

2. CHOSE ARBITRARY FISH COMMUNITY AGAINST WHICH TO MEASURE THE STATION'S IMPACTS.

Region I unlawfully invented an arbitrary and hypothetical community of fish to use for measuring the impacts of the Station's thermal discharge. That hypothetical community is the community that Region I surmises may have existed before the Station began operation. Determinations at 6-4 to 6-5; Response at III-4. In fact, there is no fish abundance data that predates construction of BPS. Determinations at 6-28. Therefore, there is no record of what comprises the community of fish in Mount Hope Bay until beginning in 1972, a decade after the Station began operating.

There is, however, reliable long-term data available documenting the community of fish "next door" in Narragansett Bay which is not affected by BPS' discharge. Analyzing the impacts of the Station's proposed variance limit against this actual community of fish in a geographically-proximate and biologically-similar ecosystem is the correct approach. AR #3263, Vol. I at 8-10, 49-50 & n.93; Vol. II, Tab 1. Region I, however, rejects that approach and

instead invents an arbitrary and hypothetical community of fish against which any limit except Region I's preferred 1.7 tBTU limit must fail. This approach is completely inconsistent with Region I's position throughout the documents supporting the Permit that differences between the fish in Narragansett Bay and Mount Hope Bay indicate the impacts of BPS. Determinations at 2-3, 6-33, 6-49; Response at II-4; III-6; III-12; VII-21; VII-24. When it supports the Final Permit, Region I has no difficulty claiming that but for BPS, the fish in Mount Hope Bay would resemble the fish in Narragansett Bay.

3. REGION I'S CONCLUSIONS THAT THE PERMITTEE IS "PREVENTING" THE RECOVERY OF FISH AND EELGRASS ARE PREDICATED ON FACTUAL ERRORS.

a. Winter Flounder

Repeatedly in its analyses, Region I asserts that winter flounder are rebounding in Narragansett Bay but not in Mount Hope Bay. *E.g.*, Response at VII-27. Region I concludes that BPS is, in fact, "preventing" the recovery in Mount Hope Bay. Response at III-7. There is no substantial evidence in the record supporting Region I's assertion and conclusion. There is no rebound of winter flounder in Narragansett Bay.³³ Hence, one does not expect to see a rebound in Mount Hope Bay. AR #3263, Vol. I at 27, Vol. II, Tab 1 (Regional Trends Report).

In addition, the only two predictive models in the Administrative Record, one submitted by the Permittee and one developed by Mark Gibson, demonstrate that, even under *current* operations, BPS is not "preventing" a recovery of winter flounder. AR #511 at 6-22; AR #3263, Vol. II, Tab 11, at II-36; AR #3248, Exh. C, Figs. 22, 24. Furthermore, given that BPS has proposed to reduce its thermal discharge, the proper analysis for evaluating the requested variance would focus on the impact that BPS' proposed future operation at 28 tBTUs will have,

³³ Region I incorrectly cites to an article by Collie and DeLong` to support its statement that fish are recovering in Narragansett Bay. Response at VII-26,27. In fact, Collie and DeLong state that recovery is occurring in many places but not in Narragansett Bay. Region I makes other erroneous citations to Collie and DeLong. See Response at II-2, III-26, III-43, IV-63, VII-23, 24, 36, 37, 41, 42.

not the hypothetical impact of continued operation at 42 tBTUs. 40 CFR 125.73(a) (variance evaluation to be based on the effluent limit “desired by the discharger”).

Region I continues to assert that it “hopes” that the more stringent effluent limit of 1.7 tBTU will bring the fish back to Mount Hope and Narragansett Bays. *E.g.*, Response at II-3. There is substantial evidence in the record that no amount of control, even shut down, of Brayton Point Station will, in fact, bring the fish back.. AR #3248; BPS Comments, AR #3263, Vol. I at 65-68, Vol. II, Tab 11 at 11-36; AR #511 at 6-22. Region I simply ignores these facts. There are other substantial reasons for the decline of fish completely unrelated to any activities at Brayton Point Station. The predominant cause of the decline is overfishing.³⁴

b. Eelgrass.

Region I also suggests that thermal discharges from Brayton Point Station are delaying the recovery of eelgrass. Response at III-20. This is completely lacking in basis: the eelgrass disappeared from Mount Hope Bay, Narragansett Bay, and much of the eastern seaboard in the 1930s -- thirty years before Brayton Point Station was even constructed. AR #3263, Vol. II, Tab 3. There is no evidence in the record that it would be alive but for the Station. While experimental plantings are underway in parts of Narragansett Bay, there is no evidence in the record of any plan to plant eelgrass in Mount Hope Bay. Region I lacks any support for the suggestion that 1.7 tBTUs will help restore eelgrass in Mount Hope Bay but that 28 tBTUs will not.

³⁴ Another substantial contributing factor to the non-recovery of fish is the explosive growth of the cormorant population during the 1980’s. Cormorants are a species of bird that preys on small fish in shallow water, including winter flounder. AR #3263, Vol. II, Tab 3.

4. **REGION I ACKNOWLEDGED ERRORS IT MADE IN THE DRAFT PERMIT BUT FAILED TO CORRECT THOSE ERRORS IN THE FINAL PERMIT.**

In a number of instances in the Response to Comments and elsewhere Region I admits to errors in the analyses it conducted in support of the Draft Permit. However, the Region then proceeds to issue the Final Permit without correcting the errors that it acknowledges. These errors are significant to the ultimate conclusion and support for the Final Permit and render the Permit untenable. Examples include the following:

a. **Fish losses due to Station's water withdrawal**

Region I admitted that the method it employed for this calculation (known as production forgone) contained a significant error. Response at IV-47; Response, Vol. II, App. X. That error resulted in a purported loss of 54 million pounds of fish, when in fact the amount is 300 times less -- 180,000 pounds. Yet Region I elsewhere in the Response continues to refer to the 54 million pound figure to justify its result. Response at IV-69.

b. **Impact of regional factors on decline of groundfish.**

Prior to issuance of the Draft Permit, Region I's biologist conceded in a memorandum to MADEP that "If regional factors were responsible for the decline, then trawl abundance curves would look similar." AR #199. Both before and during the comment period, on behalf of the Permittee, Dr. DeAlteris conclusively demonstrated to Region I that the fish abundance trends for Mount Hope Bay and Narragansett Bay are statistically similar. Also, the Permittee submitted an analysis based on data from a trawl that has been conducted in both Narragansett Bay and Mount Hope Bay for the past several years. BPS Comments, AR #3263, Vol. II, Tab 1. This data demonstrates, conclusively that present fish abundance in both areas are the same.³⁵

³⁵ This trawl is called the Wilcox trawl and was initiated at the request of Region I's Technical Advisory Committee to be able to compare Narragansett and Mount Hope Bays. AR # 3263, Vol. 1, p. 24, fn. 49 (referencing the TAC meeting summaries).

AR #3263 Vol. II, Tab 11, Part II.B. Region I fails to adjust its analysis to correct for this material information.

c. Impact of heat on winter flounder.

Juvenile winter flounder are the single most heat-sensitive of all the fish required to be analyzed in connection with this permit renewal. Page 4 of Attachment F (TAC flagged juvenile winter flounder as benthic species/lifestage with the lowest critical temperature); AR #555, App. B, p B-27. Region I now acknowledges that the analyses of how prolonged exposure to heat affects juvenile winter flounder which were submitted on behalf of the Permittee (AR #555, App. B, pp. B-37 to B-38) were “reasonable” and correct. Response at III-29. These analyses demonstrate that the direct mortality due to the Station’s current discharge of heat on the most heat-sensitive species of fish in the receiving water is negligible. AR #555, App. B, pp. B-37 to B-38; AR #3263, Vol. II, Tab 11, p. 1-25. This, in turn, means that the direct mortality impacts of the Station’s thermal discharge on less sensitive species is also negligible. Region I’s acceptance of these results, and thereby the methods used to develop them (*e.g.*, use of acclimation, definition of thermal effects over a range of temperatures, incremental effects of slight increases in temperature, and employment of the Permittee’s habitat delineations), is completely inconsistent with Region I’s continued use of single critical temperature thresholds to set the heat limit in the Permit. Region I’s acceptance of these analyses also evidences its arbitrariness and error in rejecting the Permittee’s proposal to reduce its thermal discharge.

5. REGION I ERRONEOUSLY CONCLUDES THAT THE PERMITTEE’S PROPOSED DISCHARGE AND WITHDRAWAL LIMITS WOULD NOT BE ADEQUATELY PROTECTIVE OF MOUNT HOPE BAY

Region I errs repeatedly in viewing past operations of the Station as essentially interchangeable with the substantial proposed reductions that would be achieved by the proposed 28 tBTU limit, either dismissing the change summarily or failing to acknowledge it at all. For

example, in describing its dissatisfaction with the Permittee's proposed limit, Region I relies on a figure that depicts impacts from the Station's current thermal discharge, not its proposed reduced discharge. Response at III-16 (referencing Figure 1). *See also* III-20; III-59 to III-60. Region I also fails to account for actual fishing pressures and impacts and substantial evidence that the current fishing restrictions are not being implemented consistently and, in any event, are not sufficient to protect the fish or ensure their recovery.³⁶ II-4; VII-25.

Region I repeatedly implies that the Permit's strict limits on Brayton Point Station's withdrawal of water and discharge of heat are justified because only these limits will "allow the fishery a chance to recover," Response at IV-42; *see also* Response at IV-54; Determinations at 7-128, 8-4. There is no evidence to support the Region's position. Only two predictive models of fish populations were submitted to the record, one prepared by the Permittee and the other by RIDEM biologist Mark Gibson, and both demonstrate that even *current* levels of Station impact will not prevent a recovery. AR #3263, Vol. II, Tab 11 at II.6; AR #3248, Exhibit C, Figure 24.

Region I also improperly and arbitrarily attempts to "raise the bar" for determining what level of impacts will support recovery. In its Determination, Region I stated that a percentage impact on winter flounder of 26% would "foster the recovery of specific fish populations and the Mount Hope Bay ecosystem as a whole." Determinations at 7-126. Responding to persuasive evidence, including Gibson's 2003 report, demonstrating that current Station impacts are significantly lower than 26%, Region I now denies that it said this. Response at III-48, IV-51, VII-29. It then asserts, without explanation or support, that it now views even a 5% effect as an "adverse impact that warrants minimization." Response at VII-29.

³⁶ In fact, the Stock Assessment Review Committee of the Northeast Fisheries Science Center found in 2003 that winter flounder continue to be substantially "overfished" in this area. AR #3248, Exh. A. Gibson also found in his 2003 report that fishing continued to be well above sustainable levels. AR #3248, Exh. C at 11.

6. REGION I'S COST ESTIMATES CONTAIN SIGNIFICANT ERRORS

In its Response, Region I acknowledged that it had made significant errors in its original cost estimates, and that its estimate of the cost to convert to closed-cycle cooling had risen from \$80.7 million to \$103.3 million. Response, App. A, Table 2. This change in the Region I cost estimates was primarily due to a change in the labor wage and productivity rates made in response to criticisms by the Permittee and others that labor was incorrectly calculated. Region I's engineering consultant, SAIC changed the wage rates from about \$37 in the Draft Permit analysis to about \$58 (the Permittee's Engineering Consultant Stone & Webster (S&W) had used \$61), and approximately doubled the number of manhours required (S&W had used three times the number of hours that SAIC used in the draft). Even so, Region I's cost estimates contain significant additional errors that have not been corrected.

a. No independent estimate

Instead of producing an independent estimate, Region I relied on arbitrary and unrealistic adjustments to Permittee's cost estimates. Although SAIC acknowledged that a site-specific, independent estimate of construction costs is the preferred approach to cost estimation, Response, Vol. II, App. O at 3, Region I failed to perform a truly independent cost estimate in which they would have developed the scope, evaluated the quantities of materials, collected bids on the engineered equipment, and evaluated the wages and labor units required to install all of those materials and engineered equipment. Response at IV-76. Instead, Region I relied on a reworking by SAIC of a biased subset of the cost calculations performed by Permittee's engineering consultant, Stone & Webster. The approach used by SAIC was flawed and did not meaningfully respond to the estimates the Permittee submitted to the record.³⁷

³⁷ Region I acknowledges that SAIC has never designed or built a power plant. Response at IV-76. Although Region I obtained a cost estimate from a firm with experience, the Region did not retain the experienced firm because of the expense. See Response, App. O at 12.

(i) SAIC's estimated labor costs, though adjusted from the Determination, App. O, at 6, remain significantly below the actual costs determined by Stone & Webster to be available in the BPS market area. SAIC's wage rates were still low and the labor productivity did not reflect construction experience associated with an operating power plant where the work space is encumbered with other equipment necessary for the continued functioning of the power plant. Instead, in the Draft Permit cost evaluation SAIC used labor rates from RS Means, a generic commercial -- not industrial -- costing data base. Id. at 6-7. For the final permit cost evaluation, SAIC adjusted their labor productivity (essentially going half way to the level of effort that S&W originally estimated) with no effort to reconcile its estimates with those from Stone & Webster or to justify its use of any other data sources they used for labor productivity when actual data had been placed in the record by Permittee.

(ii) In place of a true independent estimate, SAIC developed estimates for a small number of the costs -- approximately 16% of the entries³⁸ -- and compared them to Permittee's estimates to develop a ratio. It then applied this ratio to Permittee's total cost estimate. *See* Response, App. O at 7-9. Because the items reviewed included significant labor costs, which SAIC had underestimated, the ratio resulted in the overall estimate being reduced by approximately 41%. Significantly, SAIC applied this ratio even to engineered equipment costs, including cooling towers, for which SAIC and the Permittee had developed actual and similar cost estimates. AR #3263, Vol. II, Tab 12, Table 1. As a result, even these capital costs -- which are a significant part of the total capital costs -- were arbitrarily reduced by the same 41% adjustment factor.

³⁸ These entries accounted for an even smaller proportion 8%, of the total costs.

b. Errors in calculation of system outages.

Region I adopted reduced downtime estimates based on an arbitrary and unrealistic change in design. The need for system shutdowns for construction is a significant part of the cost of retrofitting closed-cycle cooling at an existing facility. In its cost estimate, Region I reduced the predicted downtime by almost 50%, from 27 unit-months to 15 unit-months by assuming a significant change in design that it did not justify and that Permittee's consultants have determined is infeasible. *Id.* at 13; Stone & Webster, Response to Page 13 of App. O. The additional twelve unit-months of outage adds \$17 million to the total, present value cost of implementing closed-cycle cooling at Brayton Point Station. AR #3263, Vol. II, Tab 5 at 14.

c. Erroneously low cost of Station retrofit

Region I's low estimated cost to retrofit the new cooling water system is not based on substantial evidence, and Region I failed to respond to the Station's comments in this regard. In its cost estimate based on the methodology proposed in its draft regulations under section 316(b), Region I's consultant, SAIC, assumed that the cost to retrofit the facility would require a 25% adjustment factor. In comments on the draft permit, Stone & Webster explained in detail why the 25% factor was "just too low." AR #3263, Vol. II, Tab 12 at 18-19. SAIC's technical memorandum, App. O, p. 5, responds to this substantial criticism with a one line reference to three other responses (Responses A.1.1 to A.1.3) to comments. None of those responses even attempts to address Stone & Webster's comments. Response, App. O at 1-5.³⁹

³⁹ Although response A.1.1, App. O at 3, contains a statement that the "appropriateness of this 25% factor is discussed elsewhere in the response to comments," Permittee has found no such discussion.

d. Failed to account for noise mitigation costs

Based on its consultant's analysis, Region I concluded that the cost of necessary noise mitigation could increase project costs by as much as eight percent (8%). Response at IV-43, n.34. Region I nonetheless did not include the cost for noise mitigation in its overall cost estimate for compliance with the permit, because "[e]ven if these costs were included, it would not alter our conclusion concerning the wholly disproportionate cost test." *Id.* In other words, because Region I has concluded that this amount of costs would not have changed the outcome, those costs simply do not exist.⁴⁰

7. PLUME ANALYSES ARE WRONG.

a. Errors in analysis of fogging associated with operation of cooling towers.

Region I substantially underestimates the number of hours that fogging or icing would require shut-down of the cooling towers. Response at IV-79; Response, Vol. II, App. M at 6. In particular, Region I fails to account for the fact that the Station has to be able to predict when fogging from the cooling towers will create a problem. The Station cannot simply have an observer on the Braga Bridge reporting whether there is fog in the area and, if there is fog on the Bridge and highway, allow the towers to continue to operate on the theory that they cannot make things any worse than they already are. The Station has to act on *predictions* and shut down the Station in order to avoid tower-induced fogging or icing that endanger users of the Bridge and highway. Were the station to get it wrong, the Station -- not Region I -- would bear the consequences.

⁴⁰ Significantly, the cost for noise mitigation was not based on cooling towers equipped with plume abatement equipment. This would have an additional effect on noise.

Moreover, the model, known as SACTI, used by Region I to support its assertion that the Permittee overestimated the impact of fogging and icing is fundamentally flawed. For example, in predicting hours of fogging on the Braga Bridge near the Station, the model failed to take account of the Braga Bridge's being 100 feet higher than the Station in elevation. This elevation difference has significant impact on the amount of fog predicted on the Bridge. AR #2363, Vol. II, Tab 13.

b. Errors in assumptions about locating the cooling towers.

Region I's consultant asserts that it may be possible to move the towers to the southwest in order to reduce noise impacts. Response, Vol. II, App. M at 8. This assertion is inconsistent with applicable Massachusetts regulations and information provided by BPS concerning location of air pollution control equipment (*See* AR #555, App. H, p. 3.3-3, 3.3-9, 3.3-15) and would also dramatically increase the cost of the towers, due to increased piping requirements. In fact, Region I has acknowledged that it would not be feasible to locate the towers to the southwest, for engineering and cost reasons. Memo from Damien Houlihan, Region I, dated January 30, 2002 (Attachment H hereto).

VI. RELIEF REQUESTED

For all of the foregoing reasons, USGenNE requests that the Board grant it the following relief:

(1) Grant the petition and the motions (for leave to file a brief, to supplement the administrative record, for an evidentiary hearing, and for oral argument) which have been submitted herewith and conduct a review of the Permit, including an evidentiary hearing, **and**

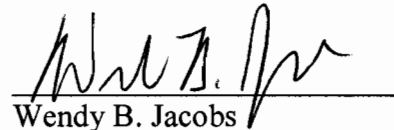
(2) Upon such review, remand the permit proceeding to Region I with directions to issue a permit containing the conditions proposed by USGenNE with respect to the withdrawal and discharge of cooling water and monitoring requirements; **or, in the alternative,**

(3) Upon review of the petition, remand the proceeding to Region I with directions to issue a new permit after conducting an evidentiary hearing presided over by an impartial hearing officer and correcting the clear errors of law and fact upon which the Permit is based; **or, in the alternative,**

(4) Upon review of the Petition, refer the appeal to the Administrator pursuant to 40 C.F.R. §124.2.

Respectfully submitted,

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