UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION I - NEW ENGLAND

IN THE MATTER OF	)	DOCKET NO. 08-007
	)	
Dominion Energy Brayton Point, LLC,	)	
Brayton Point Power Station	)	
Somerset, Massachusetts	)	
NPDES Permit No. MA0003654	)	FINDINGS
	)	
	)	AND
	)	
Proceedings under Section 309(a)(3)	)	ORDER FOR COMPLIANCE
of the Clean Water Act, as amended,	)	
33 U.S.C. § 1319(a)(3)	)	

I. STATUTORY AUTHORITY

The following Findings are made and ORDER issued pursuant to Section 309(a)(3) of the Clean Water Act, as amended (the "Act"), 33 U.S.C. § 1319(a)(3), which grants to the Administrator of the U.S. Environmental Protection Agency ("EPA") the authority to issue orders requiring persons to comply with Sections 301, 302, 306, 307, 308, 318 and 405 of the Act and any permit condition or limitation implementing any of such sections in a National Pollutant Discharge Elimination System ("NPDES") permit issued under Section 402 of the Act, 33 U.S.C. § 1342. This authority has been delegated to EPA Region I's Regional Administrator, and in turn to the Director of the Office of Environmental Stewardship.

The Order herein is based on a finding that the Company will be in violation of Section 301 of the Act, 33 U.S.C. § 1311, and the conditions of NPDES Permit No. MA0003654 upon the effective date of the previously stayed permit conditions ("Effective Date"). Pursuant to Section 309(a)(5)(A) of the Act, 33 U.S.C. § 1319(a)(5)(A), the Order provides a schedule for compliance which the Director of the Office of Environmental Stewardship has determined to be reasonable.

II. DEFINITIONS

Unless otherwise defined herein, terms used in this Order shall have the meaning given to those terms in the Clean Water Act, 33 U.S.C. § 1251 et. seq., the regulations promulgated thereunder, and any applicable NPDES permit. For the purposes of this Order, "NPDES Permit" means the Dominion Energy Brayton Point, LLC, (the "Company" or the "Permittee" or "Dominion") Brayton Point Power Station NPDES Permit No. MA0003654, and all amendments or modifications thereto and renewals thereof as are applicable, and in effect at the time.

III. FINDINGS

The Director of the Office of Environmental Stewardship makes the following findings of fact:

1. Dominion Energy Brayton Point, LLC, Brayton Point Power Station has a place of business in Somerset, Massachusetts from which it discharges condenser cooling water, process wastewater and storm water.

2. The Company is a person under Section 502(5) of the Act, 33 U.S.C § 1362(5). The Company is the owner of an electrical power generating station (the "Facility") from which it discharges pollutants, as defined in Section 502(6) and (12) of the Act, 33 U.S.C. § 1362(6) and (12), from a point source, as defined in Section 502(14) of the Act, 33 U.S.C. § 1362(14), to Mount Hope Bay. Mount Hope Bay flows into Narragansett Bay which, in turn, empties into the Atlantic Ocean. All are waters of the United States as defined in 40 C.F.R. § 122.2 and, therefore, navigable waters under Section 502(7) of the Act, 33 U.S.C. § 1362(7).

3. On October 6, 2003, the Director of the Office of Ecosystem Protection of EPA, Region I,

issued the Permit under the authority given to the Administrator of EPA by Section 402 of the Clean Water Act, 33 U.S.C. § 1342. On November 5, 2003, the company filed a petition for review of the Permit with EPA's Environmental Appeals Board ("EAB"). The contested provisions of the Permit were stayed and all other provisions of the Permit became effective on May 26, 2004. Following resolution of the appeal before the EAB, EPA notified the Company by letter dated October 1, 2007 that the conditions of the Permit that had been stayed pending appeal would take effect on November 1, 2007. Those terms of the Permit were again stayed until December 17, 2007 and will take effect on December 18, 2007.

4. The Permit authorizes the Permittee to discharge pollutants from the Facility to Mount Hope Bay, subject to the effluent limitations, monitoring requirements and other conditions specified in the Permit.

5. Part I.A.4.a. of the Permit establishes a flow limit for outfall serial number 001, Discharge Canal, of 40 million gallons per day (average monthly) and 42 million gallons per day (maximum daily).[1]

6. Part I.A.4. b. of the Permit for outfall serial number 001, Discharge Canal, establishes an annual heat load limit to Mount Hope Bay of 1.7 Trillion BTUs.

7. Part I.A.4. c. of the Permit establishes a limit for the combined withdrawal of intake water of 56.2 million gallons per day ("MGD").

8. The Permittee discharges process water from outfall serial number 001, Discharge Canal,

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[1] This flow rate is the total blowdown from any cooling tower(s) used at the facility plus flow from the wastewater treatment facility. During periods of once-through cooling, the permittee may increase the flow rate to a flow rate of 56 million gallons per hour. The permittee may not increase to this flow rate for more than 122 hours per year.

at a flow rate that will exceed the Permit's effluent limitation for flow upon the Effective Date.

9. The Permittee discharges a heat load from outfall serial number 001, Discharge Canal, to Mount Hope Bay that will exceed the Permit's annual heat load limitation upon the Effective Date.

10. The Permittee's total water intake will exceed the Permit's limit for water intake of 56.2 MGD upon the Effective Date.

11. Section 301(a) of the Act, 33 U.S.C. § 1311(a), makes unlawful the discharge of pollutants to waters of the United States except in compliance with, among other things, the terms and conditions of a NPDES permit issued pursuant to Section 402 of the Act, 33 U.S.C. § 1342.

12. The Permittee's discharge of pollutants to Mount Hope Bay in excess of the limits contained in its NPDES Permit, will violate Section 301(a) of the Act, 33 U.S.C. § 1311(a) upon the Effective Date.

13. The Company will need to install closed-cycle cooling in order to comply with the previously stayed Permit limits. EPA issues this Order to provide a schedule for the Company to come into compliance with the Permit.

14. The Company has worked cooperatively with EPA in the development of this Order.

IV. ORDER

Accordingly, pursuant to Section 309(a)(3) of the Clean Water Act, it is hereby ordered that the Permittee shall:

1. Comply with the following schedule for construction and implementation of closed cycle

cooling at Brayton Point Power Station and for meeting the limits contained in the Permittee's NPDES Permit:

a. By January 2, 2008, commence the process to obtain all permits and approvals necessary to convert Brayton Point Station to closed cycle cooling in order to meet NPDES permit limits. This shall include the engineering to support the permitting, the permit applications, and all necessary supplementary data.

b. From January 2, 2008 until all permits and approvals are issued, provide timely and complete responses to all requests from each permitting and approval authority.

c. By January 10, 2008, initiate requests for pre-application meetings with permitting authorities.

d. By January 15, 2008, request approval from the United States Coast Guard for placement of monitoring equipment necessary to comply with Part I.26.a.1.iii of the Permit

e. By February 28, 2008, submit air modeling protocol to agencies for review.

f. By July 1, 2008, submit applications for all local permits.

g. By September 1, 2008, submit application(s) for air permit(s).

h. By October 1, 2008, complete submission of all other necessary permit applications and notices necessary to convert Brayton Point Station to closed cycle cooling.

i. Within five days of obtaining all permits and approvals or April 6, 2009, whichever is later, issue the Notice to Proceed with Engineering and Procurement for cooling tower construction to Dominion's contractor.

j. Within five days of obtaining all permits and approvals or April 6, 2009, whichever is later, issue the Notice to Proceed with Engineering and Procurement for the Pump Structure and Piping System.

k. Within nine months of obtaining all permits and approvals, commence construction of foundations for cooling towers.

l. No later than May 15th of the calendar year prior to the anticipated tie-in date for each unit, Dominion shall request a planned outage for that unit from ISO New England in accordance with, and pursuant to, ISO New England Operating Procedure No. 5, Revision No. 8, effective October 13, 2006 or as amended.

m. Within 29 months of obtaining all permits and approvals, complete tower construction.

n. Within 29 months of obtaining all permits and approvals, complete all piping installation for tie-in of condenser units to cooling towers.

o. Within 29 months of obtaining all permits and approvals, commence tie-in of condenser units to cooling towers.

p. Within 31 months of obtaining all permits and approvals, complete tie-in of condenser units 4 and 3.

q. Within 33 months of obtaining all permits and approvals, complete tie-in of condenser unit 2.

r. Within 36 months of obtaining all permits and approvals, complete tie-in of all condensor units such that all permit limits are met.

2. Where any compliance obligation requires Dominion to obtain a federal, state, or local permit or approval, Dominion shall submit timely and complete applications and responses to requests for information and take all other actions necessary to obtain all such permits or approvals. Dominion may seek relief under the Force Majeure provisions below for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Dominion has submitted timely and complete applications and has taken all other actions necessary to obtain all such permits or approvals.

Interim Effluent Limits

3. In the interim period from the effective date of this Order and during the Permittee's compliance with paragraphs 1 and 2 of this Section IV, the Permittee shall comply with the following effluent standards and limits:

a. for thermal discharges, intake cooling water withdrawals, and effluent flow,

comply with all the requirements and conditions of the Memorandum of Agreement II ("MOA II") (Attachment 1) except that:

(1) During the period from the beginning of tie-in of condensor unit 4 and continuing until tie-in of condensor unit 3, the flow limitations of part 8.b. of MOA II will not be required to be met through "piggyback operation." Instead, the flow limitations will be met by blocking the existing unit 4 discharge at the tri-bridge and directing warm water from the tied-in unit to the cooling tower(s).

(2) During the period from the beginning of tie-in of condensor unit 4 and continuing until complete tie-in of all condensor units, the "delta T" limitation of part 8.c. of MOA II will apply when unit 4 is not in "piggyback operation" as long as the tie-in occurs between October 1 and May 31.

b. operate the intake screen wash for condenser units 1, 2, and 3 whenever the intake is in use.

c. during "targeted" chlorination, as discussed in Attachment 2, the total residual oxidant concentration shall not, at any time, exceed 0.2 milligrams/liter at the discharge from the unit being chlorinated during any one chlorination cycle as measured at the seal pit. The sampling type and frequency will be a daily grab sample for each generating unit.

d. comply with all other effluent limitations, monitoring requirements and other conditions specified in its NPDES Permit.

4. Within three (3) weeks of Coast Guard approval for the placement of monitoring

equipment necessary to comply with Part I.26.a.1.iii of the Permit, Dominion shall install monitoring equipment at the locations identified in Figure 6 of the Permit and commence monitoring in accordance with the Permit requirements.

5. As the following power generating units are tied into the cooling towers, the discharge from Brayton Point Station must comply with the following interim effluent limitations:

Unit 3	flow = 518 million gallons per day heat = MOA II limit
Unit 2	flow = 259 MGD heat = 2.01 trillion BTUs total per month

V. REPORTS ON COMPLIANCE

6. Beginning on the fifteenth day of April, 2008 and continuing until completion of construction, tie-in, and compliance with all of the NPDES limitations, Dominion shall report to EPA on its compliance with its obligations pursuant to paragraphs 1 through 5 every three months. Each progress report submitted under this Paragraph shall:

   a. Describe activities undertaken during the reporting period directed at achieving compliance with this Administrative Order;

   b. Describe the expected activities to be taken during the next reporting period in order to achieve compliance with this Administrative Order; and

   c. Report on compliance with the provisions outlined in paragraphs 3, 4 and 5 above.

7. Where this Order requires a specific action to be performed within a certain time frame, Dominion shall submit a written notice of compliance or noncompliance with each deadline. Notification must be mailed within fourteen (14) calendar days after each required deadline. The timely submission of a required report shall satisfy the

requirement that a notice of compliance be submitted.

8. If noncompliance is reported, notification should include the following information:

   a. A description of the noncompliance;

   b. A description of any actions taken or proposed by the Permittee to comply with the lapsed schedule requirements;

   c. A description of any factors that explain or mitigate the noncompliance; and

   d. An approximate date by which the Permittee will perform the required action.

9. After a notification of noncompliance has been filed, compliance with the past-due requirement shall be reported by submitting any required documents or providing EPA with a written report indicating that the required action has been achieved.

10. The reporting requirements set forth in this Section do not relieve Dominion of its obligation to submit any other reports or information as required by State, Federal or local law.

11. Within fourteen days of learning that it will fail, or has failed, to comply with a requirement of this Order, the Dominion shall provide written notice of such failure to EPA.

12. Submissions required by this Order shall be in writing and shall be mailed to the following address:

    USEPA - New England
    Office of Environmental Stewardship
    1 Congress Street
    Suite 1100 (SEW)
    Boston, MA 02114-2023
    Attn: Steven Couto

VI. FORCE MAJEURE

13. "Force majeure," for purposes of this Administrative Order, is defined as any event arising from causes beyond the control of Dominion, of any entity controlled by Dominion, or of Dominion's contractors, that delays or prevents the performance of any obligation under this Administrative Order despite all practicable efforts by Dominion to fulfill the obligation. The requirement that Dominion exercise "all practicable efforts to fulfill the obligation" includes using all practicable efforts to anticipate any potential force majeure event and all practicable efforts to address the effects of any such event (a) as it is occurring and (b) after it has occurred to prevent or minimize any resulting delay to the greatest extent possible. "Force Majeure" does not include normal inclement weather, unanticipated or increased costs or expenses of work, the financial difficulty of performing such work, or the failure of Dominion to make complete and timely application of any required approval or permit unless caused by a separate force majeure event. "Force Majeure" may include, but is not limited to, acts of God including floods, blizzards, hurricanes, and other extreme weather, labor strikes, fires, judicial orders, orders by governmental officials or ISO New England that direct Dominion to operate Brayton Point to supply electricity, ISO New England's failure to grant Dominion's request for an outage to permit unit tie-ins when that request was timely as specified in paragraph 1, and an inability to tie-in a unit due to the restrictions in paragraph 3 of this Order, including the Delta T, that are not waived by EPA. Under the definition of "Force Majeure" as set forth above in this paragraph, "Force Majeure" may or may not include construction, labor, and equipment delays.

14. If any event occurs or has occurred that may delay the performance of any obligation under this Administrative Order or causes Dominion to be in potential violation of any provision of this Order, whether or not caused by a force majeure event, Dominion shall provide notice orally or by electronic or facsimile transmission to:

Steven Couto, SEW
Water Technical Unit
Office of Enforcement
One Congress Street
Boston, Massachusetts 02114
617-918-1765
fax: 617-918-0765
couto.steven@epa.gov

within five (5) business days of when Dominion first knew that the event might cause a delay. In addition, Dominion shall notify the EPA in writing as soon as practicable but in no event later than ten (10) days following the date Dominion first knew that the event caused or may cause such delay or potential violation. In this written notice, Dominion shall provide an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Dominion's rationale for attributing such delay to a force majeure event if it intends to assert such a claim; and a statement as to whether, in the opinion of Dominion, such event may cause or contribute to an endangerment to public health, welfare or the environment. Dominion shall include with any written notice all reasonably obtainable documentation supporting the claim that the delay was attributable to a force majeure. Failure to comply with the above requirements shall preclude Dominion from asserting any claim of force majeure for that event for the period of time

of such failure to comply, and for any additional delay caused by such failure. Dominion shall be deemed to know of any circumstance of which Dominion, any entity controlled by Dominion, or Dominion's contractors knew or should have known by the exercise of due diligence.

15. If EPA agrees that the delay or anticipated delay is attributable to a force majeure event, the time for performance of the obligations under this Administrative Order that are affected by the force majeure event will be extended by EPA for such time as is necessary to complete those obligations. Any subsequent schedule deadlines that EPA agrees are affected by the force majeure event will also be extended. An extension of the time for performance of the obligations affected by the force majeure event shall not, of itself, extend the time for performance of any other obligation. EPA will notify Dominion in writing of the length of the extension, if any, for performance of the obligations affected by the force majeure event.

16. If EPA does not agree that the delay or anticipated delay has been or will be caused by a force majeure event, EPA will notify Dominion in writing of its decision.

VII. DISPUTE RESOLUTION

17. If Dominion objects to any EPA determination made pursuant to this Order regarding the adequacy of the work performed hereunder or whether a force majeure has occurred, it shall notify EPA in writing of its objection(s) within 15 days of such action, unless the objection(s) has been resolved informally. EPA and Dominion shall engage in a period of formal negotiations for 30 days from EPA's receipt of Dominion's written objection(s).

18. Any agreement reached by the parties pursuant to this Section shall be in writing and shall, upon signature of both parties, be incorporated into and become an enforceable part of this Order.

VIII. GENERAL PROVISIONS

19. This Order does not constitute a waiver or a modification of the terms and conditions of the NPDES Permit. The NPDES Permit remains in full force and effect. EPA reserves the right to seek any and all remedies available under Section 309 of the Act, 33 U.S.C. § 1319, as amended, for any violation cited in this Order.

20. This Order shall become effective upon receipt by Dominion.

12/17/07
Date

Susan Studlien
Susan Studlien, Director
Office of Environmental Stewardship
Environmental Protection Agency, Region 1

BRAYTON POINT STATION
MEMORANDUM OF AGREEMENT II

The New England Office of the United States Environmental Protection Agency (U.S. EPA), the Massachusetts Department of Environmental Protection (MA DEP), the Massachusetts Executive Office of Environmental Affairs (EOEA), the Rhode Island Department of Environmental Management (RIDEM) (hereinafter collectively referred to as the "Government Signatories"), and New England Power Company (NEP) hereby enter into this Memorandum of Agreement (MOA II) regarding the operations of the NEP Brayton Point Station and NPDES issues related thereto.

1. The Brayton Point Station is currently operating under the terms of an NPDES permit co-issued by U.S. EPA and MA DEP under the federal Clean Water Act and the Massachusetts Clean Waters Act, respectively (the "Discharge Permit"). The Discharge Permit was issued on June 16, 1993, became effective on July 16, 1993, and is scheduled to expire on July 16, 1998.

2. On October 22, 1996, RIDEM wrote to U.S. EPA and MA DEP requesting that those agencies "expedite such permitting actions as are necessary in order to ensure that operational changes necessary to reverse unprecedented declines in Mount Hope Bay fisheries stocks are underway before the spawning season next spring." In its letter, RIDEM also stated that it "believes that sufficient grounds exist for EPA and DEP to initiate the process of modifying or revoking and reissuing the permit." RIDEM's views were, in part, based on concerns raised in an August 1996

report issued by RIDEM titled, "Comparison of Trends in the Finfish Assemblage of Mt. Hope Bay and Narragansett Bay in Relation to Operations at the New England Power Brayton Point Station" (the "August 1996 RIDEM Fishery Report"). Based on the August 1996 RIDEM Fishery Report and other information, U.S. EPA, MA EOEA and MA DEP shared the concerns of RIDEM and decided to commence a process for determining near-term revisions to the Brayton Point Station Discharge Permit.

3. The Government Signatories believe that the RIDEM report, other data, and the studies in progress provide an ample basis to require action to be taken to limit the impacts on Mount Hope Bay of the Brayton Point Station prior to the renewal of the Discharge Permit. NEP believes that there is insufficient evidence of causality of or continuing potential impact by the Brayton Point Station on the restoration of a healthy fishery in Mount Hope Bay to require permit changes prior to the renewal.

4. The Government Signatories believe that the unique factors described below combine to support entering this MOA II, including what they believe is a need for immediate action to reduce impacts to the environment, the impending expiration of the existing Discharge Permit, and the desire to avoid costly potential litigation and enable their staffs to focus attention on the pending permit reissuance.

5. This MOA II is intended to present a joint statement of the parties' voluntary agreement as to their plans and intentions regarding NEP's operation of Brayton Point Station with respect to circulating water discharges and flows, and regarding the

Government Signatories' response to such operations pending formal reissuance of the Discharge Permit. This MOA II is intended to state the commitment of each party to carry out its terms. This MOA II is not, however, a regulatory action, such as a permit or rule.

6. On February 6, 1997, the parties to this MOA II entered into a short-term Memorandum of Agreement (MOA I) pursuant to which NEP agreed to short-term immediate modifications to operations at Brayton Point Station.

7. This MOA II is effective upon completion of signatures and each of its conditions will continue in effect until the effective date of corresponding conditions in a new permit, or if there are not corresponding conditions in such permit, until the effective date of that permit. However, any party may seek to negotiate a modification to the terms of this MOA II at any time. All the parties to this MOA II agree to work cooperatively toward expediting the reissuance process of the five year Discharge Permit.

8 Pursuant to this MOA II, NEP agrees to institute the following measures.

a. With respect to the heat rejection from Brayton Point Station, the following limits shall apply.

(i) For the months of April and May, 1997, the maximum monthly heat rejection for each month will be 4.1×10^{12} Btus, and the total for the two month period will not exceed 7.25×10^{12} Btus.

(ii) For the months of June, July, August and September of each year this MOA II is in effect, the maximum monthly heat rejection for each month will be 3.4×10^{12}, and the total for the four month period will not exceed 13×10^{12} Btus. However, the Government Signatories and NEP recognize that providing electricity during periods of high load when the NEPOOL Operating Procedure No. 4 ("OP-4") is in effect necessitates additional measures. Therefore, if projections by NEPOOL anticipate the potential of Brayton Point Unit No. 4 being called upon to start-up and operate during OP-4, once OP-4 actions 1 through 6 have been implemented and to the extent necessary to accommodate such conditions, NEP shall be granted up to an additional 0.25×10^{12} Btus per month, not to exceed a total of up to an additional 0.5×10^{12} Btus for the period of June through September; the heat rejection covered by such additional allocations which will only be granted if NEPOOL implements OP-4 action 6 would include all heat rejection associated with that OP-4

event during actions 1 through 6 and beyond. Any amount of additional Btus as provided in the sentence above will be accounted for and deducted from the total maximum heat rejection as provided in subparagraph 8.a.(iii) for the succeeding eight month period. Furthermore, NEP will consult with NEPOOL dispatch to minimize the heat rejection associated with Brayton Point Unit No. 4 during OP-4, consistent with maintaining the reliability of electric supply.

(iii) For the months of October through May of each year this MOA II is in effect, the maximum monthly heat rejection for each month will be 4.1×10^{12}, and the total for the eight month period will not exceed 29 $\times 10^{12}$ Btus.

b. From the date of this MOA II through May 31, 1997, and from October 1 through May 31 of each year this MOA II is in effect, (i) the Brayton Point Station circulating water discharge flow rate, excluding service water and waste water system discharges, will not exceed a monthly average of 0.925 billion gallons per day, and (ii) to meet the discharge flow rate, NEP shall implement a flow reduction/minimization program that includes

piggyback operation on Unit No. 4, unless piggyback operations will substantially interfere with operation of the plant or can reasonably be anticipated to cause an increase in the "delta T" above the 30°F as provided in paragraph 8.c. below, and, at NEP's discretion, scheduled maintenance, pump optimization and/or any other necessary measures.

c. When in piggyback operation on Unit No. 4, the "delta T" at Brayton Point Station will not exceed 30°F.

d. From June 1 through September 30 of each year this MOA II is in effect, the Brayton Point Station circulating discharge flow rate, excluding service water and wastewater system discharges, (i) shall not exceed a monthly average daily flow of 1.13 billion gallons per day, (ii) shall not exceed an average daily flow of 1.08 billion gallons per day for the combined months of June through September, and (iii) NEP will use best management practices to minimize the circulating water discharge flow rate during these periods of time and these best management practices will be included in a standard operating procedure to be developed by NEP and submitted to the Government Signatories for review and comment.

e. During the life of this MOA II, Brayton Point Station will continuously operate the traveling screens at Units 1, 2, 3 and 4 whenever the intake for each unit is in use in order to minimize the impingement of fish and other marine organisms resulting from the intake of cooling water, unless the screens are inoperable due to repair/maintenance requirements. When the screens are operated continuously for Units 1, 2 and 3, flow limits for the intake screen wash for those units (discharge number 017) must be increased to 5.2 MGD for both the daily average and the daily maximum to accommodate increased screen wash.

f. The Government Signatories support and desire and have requested that NEP reduce flow by achieving a flow limitation and by operating Unit No. 4 in the piggyback operation mode in accordance with paragraph 8(b.) of this MOA II, and to continuously operate the traveling screens. The Government Signatories believe that the reduction in flow and the piggyback operation as well as the continuous operation of the traveling screens will reduce potential entrainment and impingement of marine organisms and thus provide environmental benefits. NEP has agreed to this flow and screen operation regime, but has not determined what, if any, impact it believes such actions will have on

the marine environment. However, both the Government Signatories and NEP understand and acknowledge that to enable NEP to conduct piggyback operations and continuously operate the traveling screens, Brayton Point Station may experience a "delta T" of up to 30°F when Unit 4 is conducting piggyback operations, and an increase of the flow at discharge number 017 to 5.2 MGD daily average and daily maximum to accommodate increased screen wash; and the Government Signatories will not in any way discourage NEP from operating Unit No. 4 in piggyback consistent with this MOA II, notwithstanding the other terms or conditions of this MOA II or other requirements.

g. No later than the 15th day of each succeeding month, NEP will provide the Government Signatories a written report on performance of the conditions of this paragraph 8.

9. Under the MOA I, NEP stated that it was conducting or agreed to conduct certain listed studies in order to increase knowledge about environmental conditions in Mount Hope Bay and to determine the role, if any, of Brayton Point Station in influencing those conditions. The parties to this MOA II agree that the list of studies shown in Attachment 1 may help support decisions relating to renewal of the Discharge Permit and agree to consider these studies along with other relevant information

in developing the new permit. NEP agrees to immediately begin evaluation of advanced technologies, focusing on but not limited to helper cooling towers, in order to assess relative benefits to environmental resources, reliability, design considerations, performance under field testing, costs, and length of time needed for implementation, as well as an overall assessment of the advantages and disadvantages of the technologies, as part of Study 19 of Attachment 1 so that NEP may expedite installation of such technologies should EPA and MA DEP approve of such measures in the context of decisions regarding reissuance of the Discharge Permit. Nothing in this MOA, however, shall limit any authority of the U.S. EPA or MA DEP to require any additional studies or analyses by NEP beyond those listed in Attachment 1 to this MOA II, including any authority to require additional studies to support renewal of the Discharge Permit.

10. The Government Signatories and NEP agree that the measures to be implemented by NEP pursuant to this MOA II will not in any way be considered as precedent for any future renewal, modification, or reissuance of the Brayton Point Station's Discharge Permit; provided, however, that nothing in this MOA II is intended to preclude any of the studies or information to be generated by the studies under Paragraph 9 of this MOA II from being used as appropriate to support future permit modification, renewal or reissuance.

11. This MOA II does not constitute a permit or approval. Brayton Point Station's Discharge Permit under federal and state law remains in effect and nothing in this MOA II excuses NEP, or

its successors in interest with respect to Brayton Point Station, from compliance with the Discharge Permit and all other applicable federal, state or local requirements. The Government Signatories expressly reserve any rights they may have in response to violations of the permit to seek all remedies available under Sections 309 and 505 of the federal Clean Water Act, 33 U.S.C. §§ 1319 and 1365, Massachusetts General Laws Chapter 21, §§ 42-46, and Rhode Island General Law 46-12. Furthermore, nothing in this MOA II shall limit U.S. EPA from taking any action it deems necessary under Section 504 of the Clean Water Act, 33 U.S.C. § 1364.

12. Either the Government Signatories or NEP may seek to reopen the terms of this MOA II or terminate this MOA II upon a showing of good cause, based upon new information and/or analysis not available at the date this MOA II was entered into. It is the intent of the Government Signatories not to take action to modify, revoke-and-reissue, or revoke the Discharge Permit unless there is new information and/or analysis that was not available when this MOA II was entered into, NEP violates this MOA II, or the action is with regard to conditions of the Discharge Permit not covered by the terms of this MOA II.

13. To the extent that this MOA II requires any actions to be taken by NEP, any failure of performance of NEP under this MOA II shall be excused by the Government Signatories to the extent that such failure arises from (a) causes beyond the reasonable control of NEP, or (b) the need to generate electricity in order to prevent blackouts that might endanger public health or safety.

NEP will notify by telephone, as soon as possible, the U.S. EPA and the MA DEP of conditions arising under subparagraphs (a) and (b) of this paragraph 13, and provide, as soon as possible thereafter, the U.S. EPA and MA DEP a written explanation of the reasons for the actions taken by NEP to respond to the conditions arising under subparagraphs (a) and (b) of this paragraph 13.

14. By entering into this MOA II, NEP does not admit to any liability or responsibility for actions relating to the Brayton Point Station's Discharge Permit that are the subject of this MOA II; does not admit to any violation of any applicable federal, state, or local law, rule, regulation, permit, or ordinance; reserves all its rights and does not waive any defenses or positions it may have in any ongoing or future administrative or judicial proceeding relating to the issues addressed in this MOA II, including the renewal of the Discharge Permit. Also, neither NEP or the Government Signatories admit, confirm, or acquiesce in any fact, allegation, or conclusion of law contained in this MOA II.

15. In the event that NEP should ever sell, lease, or transfer ownership or control of its Brayton Point Station, NEP agrees to inform the purchaser, lessee, or transferee of the existence and terms of this MOA II, and NEP will not sell, lease, or transfer ownership or control of its Brayton Point Station unless the purchase, lease, or transfer agreement includes the express requirement to comply with the terms of this MOA II and the purchaser, lessee, or transferee conveys to the Government

Signatories a written agreement to comply with the terms of this MOA II.

16. This MOA II shall be executed in multiple counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

Attachment 1

Studies Related to Mount Hope Bay and Brayton Point Station

1. Enhanced Trawl Survey
2. Winter Flounder Tagging Program
3. Benthic Survey
4. Brown University Study
5. Hydrothermal Model
6. Thermal Plume Mapping
7. DO Model
8. DO Field Survey
9. Nutrients
10. Primary Productivity
11. Phyto and Zooplankton Study
12. BOD Survey
13. Thermobiotic Assessment
14. Creel Survey
15. Discharge Canal Census
16. Effluent Toxicity Testing
17. Entrainment/Impingement Impact
18. Fine Mesh Screen Study
19. Heat and Flow Reductions with Alternative Technologies and/or Existing Station Equipment
20. Population Model
21. Heat Balance

Brayton Point Station Memorandum of Agreement II Signature Page

Signed the 3rd day of April, 1997,

For: **THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, NEW ENGLAND REGION**

By: _____

JOHN P. DEVILLARS
Regional Administrator

Brayton Point Station

Memorandum of Agreement II

Massachusetts Executive Office of Environmental Affairs

Signature Page

Signed this day, April 3, 1997

For: Massachusetts Executive Office of Environmental Affairs

Trudy Coxe

Trudy Coxe
Secretary

Brayton Point Station Memorandum of Agreement II Signature Page

Signed this 4 day of April, 1997, for:

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Timothy R. E. Keeney, Director

April 4, 1997
Date

BRAYTON POINT STATION
MEMORANDUM OF AGREEMENT II

SIGNATURE PAGE

Signed this 3rd day of April, 1997.

FOR:

NEW ENGLAND POWER COMPANY

Jeffrey D. Tranen
President

Chlorine may be used as a biocide. Bromine compounds also may be used on an experimental basis, subject to approval of a test plan by the Regional Administrator and the Director. No other biocide shall be used without explicit approval from the Regional Administrator and the Director.

(1) A chlorine management program "Targeted Chlorination" shall be used for controlling biological growths in the condenser system. Units 1 and 2 presently use Targeted Chlorination. Targeted Chlorination will be installed in Units 3 and 4 before chlorination commences on these units. Current plans include installation of Targeted Chlorination on Unit 3 and not Unit 4. The Targeted Chlorine program may use higher local chlorine injection concentrations and longer application durations (exceeding 2 hours) than guideline (40 CFR 423) values providing the mass (pounds) of TRO consumed by the unit being chlorinated shall be less than the mass of chlorine that would be consumed by the conventional chlorination methods allowed by the guideline values of 0.2 mg/l TRO discharge concentration multiplied by the cooling water flow in the discharge for a maximum of 2 hours in any one day.

The multiple nozzle system shall be so interlocked either electronically or mechanically or by an alternate design to prevent more than one nozzle simultaneously injecting high concentration chlorine (sodium hypochlorite) into the condenser inlet. The Total Residual Oxidant, TRO, concentration shall not at any time exceed 0.2 mg/l at the discharge from the unit being chlorinated during any one chlorination cycle as measured at the seal pit.

(2) Each unit shall be independently chlorinated: simultaneous multi-unit chlorination is prohibited. Units 1, 2, and 3 shall use Targeted Chlorination. Unit 4 shall not be chlorinated until such time that the Regional Administrator and the Director approves in writing a chlorination program for this unit.

(3) The Discharge 001 shall be sampled and analyzed for TRO once per week during the chlorination cycles, and, when possible, during Unit 3 treatment.

The TRO Instantaneous Maximum concentration shall not exceed 0.065 mg/l at the point of discharge into Mt. Hope Bay, Par. I.A.2.a. based upon samples manually taken and analyzed or based upon a continuous TRO monitor installed at the same location.

For the steam electric power plants, the terms "Maximum Concentration" and "Instantaneous Maximum" are intended to mean the maximum TRO concentration in the short term (2 hours or less) as defined in the guidelines, 40 CFR 423. This interpretation differs from the NPDES Permit requirement, 40 CFR 122.2 and Part II of this permit, where the two terms of "Maximum Daily Discharge" and "Average Daily Discharge" concentrations are limited to the 24-hour duration values. Therefore, the "Maximum Concentration" and "Instantaneous Maximum" TRO concentrations shall always mean the "value that shall not be exceeded" for both the guideline value (40 CFR 423) 0.2 mg/l or the State Water Quality value of 0.1 mg/l.

(4) Continuous chlorination of each service water system may be used. The Total Residual Oxidant (TRO) concentration shall not exceed 0.2 mg/l daily average and 0.4 instantaneous maximum in the service water discharge prior to mixing with any other stream (Par. I.A.2.a). At least one grab sample shall be taken daily of each service water discharge.

(5) There shall be no chlorination of the circulating condenser cooling water systems of any unit should the Discharge 001 temperature exceed 95 °F. The continuous chlorination of the service water systems will be allowed during these maximum temperature exceedances.

(6) The use of the typical (bulk) chlorination process as defined in 40 CFR 423 must be approved by the Regional Administrator and the Director prior to its use on any unit.

The chlorination cycle for the circulating cooling water systems shall not exceed a total of two hours in any one day for each unit cooling water discharge unless the permittee can demonstrate that it is needed for macro-invertebrate control or for the targeted chlorination process.

The Total Residual Oxidant (TRO) concentration shall not exceed 0.2 mg/l at any time prior to mixing at the seal pit, prior mixing with any other steam, Par. I.A.2.a. A minimum of 4 samples (not less than 10 minutes between samples) shall be taken during any one chlorination cycle each day that a unit is treated. Only 1/2 of a unit condenser will be treated at one time.

(7) A permanent log must be maintained at each unit available for inspection by EPA and the State showing as a minimum: the date and time of each chlorination cycle (cooling water and service water systems), the reported TRO values for all samples analyzed, the pounds of chlorine injected per treatment cycle, and the name of the technician performing the chlorination (when manual analyses are conducted).

The number of exceedances of the TRO maximum concentration during any chlorination cycle will be reported for each unit in the monthly DMR (Par. I.A.2.a).