

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NEW ENGLAND - REGION I
ONE CONGRESS STREET
BOSTON, MASSACHUSETTS 02114
FACT SHEET**

**DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)
PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES**

NPDES PERMIT NO.: **MA0004928**

PUBLIC COMMENT PERIOD: **December 12, 2008 through January 15, 2009**

PUBLIC NOTICE NO.: **MA-004-09**

NAME AND ADDRESS OF APPLICANT:

**Mirant Canal, L.L.C.
9 Freezer Road
Sandwich, MA 02563**

NAME AND ADDRESS OF FACILITY WHERE DISCHARGE OCCURS:

**Mirant Canal, L.L.C.
9 Freezer Road
Sandwich, MA 02563**

SIC CODE: **4911** NAICS Code(s): **221112**

RECEIVING WATER: **Cape Cod Canal (Basin code 96 CAPE)**

CLASSIFICATION: **Class SB**

CURRENTLY EFFECTIVE PERMIT ISSUED: **June 23, 1989**

(The final permit signed on July 31, 2008, and issued on August 1, 2008, is currently stayed due to permit appeal filed with the EPA Environmental Appeals Board on September 2, 2008.)

1.0 Summary of Proposed Action

Proposed Action

Pursuant to 40 C.F.R. § 124.19(d), EPA Region 1 is withdrawing certain provisions of the final NPDES permit that the Region and MassDEP issued to Mirant Canal Station (referred to hereafter as either Canal Station, the Station or the Facility) on August 1, 2008 (August 2008 Final Permit) and re-noticing these provisions in the form of draft permit conditions for public review and comment. This action will address requests by certain parties for additional opportunity to comment on these permit conditions.

Specifically, the Region is withdrawing and re-noticing those provisions of the August 2008 Final Permit that are based on Region 1's determination under section 316(b) of the Clean Water Act, 33 U.S.C. § 1326(b), that closed-cycle cooling is the best technology available for minimizing adverse environmental impact (BTA) with regard to reducing the entrainment of aquatic organisms by Canal Station's cooling water intake structures (CWISs). The particular provisions of the August 2008 Final Permit now being withdrawn and re-noticed as draft permit conditions are **Parts I.A.2.f, I.A.7.f, I.A.8, I.A.13.g, and I.A.13.h.**

Consistent with section 124.19(d), EPA Region 1 and MassDEP are only withdrawing and re-proposing certain provisions of the Final Permit and are not re-noticing or seeking comment on the other permit provisions. Nevertheless, the permitting agencies recognize the possibility that a commenter might wish to comment on additional permit conditions that the commenter believes are inextricably intertwined with the BTA determination for entrainment. Region 1 will consider and respond to any significant comments in this regard that it determines to be within the scope of this proposed action. For example, the proposed action clearly includes permit condition I.A.13.g, which would require the facility to achieve entrainment reduction levels comparable to those that could be obtained by using closed-cycle cooling at Canal Station. This permit condition does not mandate the use of closed-cycle cooling *per se*, but it requires a technological and/or operational approach that would achieve comparable performance. Consistent with this, the August 2008 Final Permit also included condition I.A.2.f, which sets effluent limits for cooling tower blowdown to apply *if* Canal Station decides to install closed-cycle cooling. Because condition I.A.2.f is also based on the Region's closed-cycle cooling BTA determination for entrainment reduction, Region 1 is also re-noticing that provision at this time.

Relevant Background Information Regarding Canal Station's NPDES Permit

The entrainment requirements in the Draft Permit for Mirant Canal Station, issued on December 22, 2005 (the 2005 Draft Permit), were imposed under CWA §§ 316(b), 301(b)(1)(C), and 401(a)(1) and (d), and were developed using Best Professional Judgment (BPJ). *See* 33 U.S.C. § 1342(a)(1)(B); 40 C.F.R. § 125.3(c)(2). EPA's then-effective CWA § 316(b) Phase II Rule set

categorical technology-based requirements for cooling water intake structures (CWISs) at large, existing power plants, such as Canal Station, and also created procedures for determining BTA-based permit limits under the Rule. *See generally* 40 C.F.R. Part 125 Subpart J (the “Phase II Rule”) (suspended as of July 9, 2007). The Phase II Rule also provided, however, that for permits being issued before the full Phase II process could be carried out, the BTA determinations should be rendered on a BPJ basis. *See* 40 C.F.R. § 125.95(a)(2)(ii). Because Canal Station permit fell into this category, Region 1 applied § 316(b) on a BPJ basis. Still, although the Region was exercising its BPJ, it concluded that its BPJ should be informed by the terms of the then-effective Phase II Rule. Thus, while the Region considered a variety of technological and operational alternatives as possible BTA options, Region 1 ultimately wrote Part I.A.13.g of the 2005 Draft Permit to require that:

For the reduction of adverse impacts from entrainment, the permittee shall follow the procedures for developing, selecting, and implementing one of the five compliance alternatives, mandated by the Phase II Regulations at 40 C.F.R. § 125 Subpart J.

On January 25, 2007, the United States Court of Appeals for the Second Circuit issued a decision in litigation that had been filed to challenge the Phase II Rule. *See Riverkeeper, Inc., et al. v. United States EPA*, 475 F.3d 83 (2d Cir. 2007) (“*Riverkeeper II*”). The Court of Appeals remanded significant portions of the Phase II Rule to EPA, holding that certain provisions of the Rule were either inadequately explained, inconsistent with Section 316(b) of the Clean Water Act, and/or inconsistent with the requirements of Section 4 of the Administrative Procedure Act, 5 U.S.C. § 553. As a result of this court decision, on July 9, 2007, EPA published a notice in the Federal Register formally suspending the Phase II Rule. *See* 72 Fed. Reg. 37,107 (July 9, 2007). This notice suspended 40 C.F.R. Part 125 Subpart J except for section 125.90(b), which provides that “[e]xisting facilities that are not subject to requirements under [Part 125] must meet requirements under section 316(b) of the CWA determined by the Director on a case-by-case, best professional judgment (BPJ) basis.” The “suspension provides a clear statement by the Agency that the existing Phase II requirements (with the exception of [section 125.90(b), which was] unaffected by the Riverkeeper decision ...) are suspended and are not legally applicable.” 72 Fed. Reg. at 37,108.

For the August 2008 Final Permit, Region 1 also applied CWA § 316(b) on a BPJ basis. This was consistent with EPA’s suspension of the Phase II Rule (except for 40 C.F.R. § 125.90(b), which remained in effect). *Id.* However, the Region’s BPJ determination of the BTA for entrainment reduction changed because it was no longer informed by the terms of the Phase II Rule, which had been remanded by the court and suspended by the Agency. *See*, Part I.A.13.g of the August 2008 Final Permit. Instead, Region 1’s BTA determination was based on consideration of the administrative record, including public comments, the 2005 Fact Sheet, the Region’s updated technical analyses, and the current state of the law surrounding CWA § 316(b). All of this is explained in the Region’s August 1, 2008, Responses to Comments (August 2008 RTC), issued in conjunction with the August 2008 Final Permit. Ultimately, Region 1

determined for the August 2008 Final Permit that closed-cycle cooling was the BTA for reducing entrainment by Canal Station's CWISs. As a result of this revised BTA determination, the Region made a number of corresponding changes to the conditions of the August 2008 Final Permit from what had been in the 2005 Draft Permit. *See, e.g.*, Part I.A.2.f of the August 2008 Final Permit.

On September 2, 2008, Mirant petitioned EPA's Environmental Appeals Board (EAB) to review the August 2008 Final Permit. Consequently, the August 2008 Final Permit has been stayed and is not in effect. The NPDES permit last issued to Canal Station in 1989 remains in effect. In Mirant's appeal to the EAB, the company argued, among other things, that Region 1 should allow for additional public comment on the revised entrainment control provisions of the August 2008 Final Permit because of the revised BTA determination underlying them. Region 1 had considered this issue before issuing the August 2008 Final Permit and concluded that seeking additional public comment was not required because the final permit conditions were a "logical outgrowth" of the draft permit proceeding and did not raise substantial new questions, and was not desirable as a discretionary matter because, among other things, a new Canal Station permit is long overdue. Meanwhile, the Town of Sandwich (Sandwich) wrote to Region 1 requesting an additional opportunity to comment on the new permit conditions related to the determination that closed-cycle cooling would represent the BTA for entrainment control at Canal Station. During October 2008, the EAB required preliminary briefing by the parties to address "Mirant Canal's contention that it was not provided an adequate opportunity to comment on the contents of Part I.A.13.g of the final permit [addressing entrainment reductions] due to changes between the draft and final permits." EAB Order Directing Briefing (September 12, 2008). Following the submission of briefs by both parties, the EAB also convened a status conference on November 19, 2008, that was attended by Region 1 and Mirant at which the EAB discussed logistical and practical issues related to the options of either litigating the notice issue to resolution or the Region's voluntarily allowing additional public comment on the new entrainment control provisions.

After considering the notice and comment issue in light of the above events, EPA Region 1 and MassDEP have, as stated above, decided pursuant to 40 C.F.R. § 124.19(d) to withdraw the provisions of the August 2008 Final Permit that were based upon the agencies' determination that closed-cycle cooling is the BTA for entrainment reduction, and to re-propose those provisions as draft permit conditions for public review and comment. While the permitting agencies do not regard this withdrawal and re-proposal to be legally required, they have the discretionary authority to take this action and have decided to do so because it will moot concerns related to the procedural issue before the Board. Furthermore, the final permit may benefit from EPA's and MassDEP's consideration of additional public comments. EPA Region 1 will consider the comments received during the comment period and then prepare final permit conditions and written responses to all significant comments.

In accordance with 40 C.F.R. § 124.19(d), Region 1 has notified the EAB, Mirant, and other interested parties of its decision to withdraw and re-notice **Parts I.A.2.f, I.A.7.f, I.A.8, I.A.13.g, and I.A.13.h** of the Final Permit. While the Region is only re-noticing particular provisions of the Final Permit as draft permit conditions for public comment, the Region will make the entire permit and permit record physically available for review so that the full context of the permit will be readily evident to reviewers.

In addition, Region 1 has moved the EAB to stay the current permit appeal so that Region 1 can undertake this action. Once new final permit conditions are issued, participants in this permit proceeding will have the opportunity to appeal the new conditions to the EAB and any new appeal can be consolidated with the existing appeal for resolution.

2.0 Basis for Draft Permit Conditions

As stated above, the Region is specifically withdrawing from the August 2008 Final Permit and re-noticing as draft permit conditions for public comment those conditions that were based on Region 1's determination that closed-cycle cooling is the BTA for reducing entrainment by Canal Station's CWISs, namely **Parts I.A.2.f, I.A.7.f, I.A.8, I.A.13.g, and I.A.13.h**. The rationale for these now draft permit conditions, including the Region's BTA determination for Canal Station's CWISs, is presented in detail in the August 2008 RTC, especially Sections III.E, VIII.A, and IX. The August 2008 RTC is attached hereto and incorporated by reference in this Fact Sheet. The August 2008 RTC can also be found at:

<http://www.epa.gov/region1/npdes/mirantcanal/index.html>

In taking the current action, there are a number of additional documents that the Region has considered since it issued the August 2008 Final Permit. These additional documents have been added to the administrative record for this permit and may be reviewed at Region 1's offices in Boston, upon request.

3.0 Type of Facility, Discharge Location, and Quantity of Wastes

The Canal Station power plant is an 1120 megawatt (MW) fossil fuel electrical generation facility. The Station has in the past been a "base-load" facility, with an average yearly capacity utilization rate of 48%. More recently, however, the Facility's capacity utilization has been significantly lower at around 20 percent. Canal Station generates electricity by means of two 560 MW_{net} oil/gas fired steam turbine units. Unit 1 began commercial operation on July 1, 1968, and uses #6 fuel oil. Unit 2 began commercial operation on February 1, 1976, and has dual fuel capability (#6 oil or natural gas). There are also two smaller Babcock Wilcox auxiliary boilers.

Canal Station discharges pollutants to, and withdraws cooling water from, the Cape Cod Canal (the Canal) in Sandwich, MA. The Station discharges various pollutants, including heat, to the Canal. Steam turbine condenser waste heat is rejected to the Canal by means of a once-through

cooling water system. Water for this cooling system is withdrawn from the Canal by the Station at a rate of approximately 518 million gallons per day (MGD) through two cooling water intake structures and the heated water is then discharged back to the Canal through two of the Facility's discharge outfalls. The pollutant discharges to the Canal from the Station include the following:

- once-through cooling water;
- intake screen sluice water;
- ash sluice water;
- metal cleaning waste (feed water heater chemical cleaning, equipment cleaning, precipitator wash water, air preheater wash water, boiler fireside wash water, stack and breach wash water, boiler chemical cleaning);
- low volume waste (floor drains, boiler blowdown, boiler seal water, laboratory wastewater, demineralizing and condensate waste water); and
- storm water.

For information regarding the type and quantity of wastes, fluids, or pollutants which are proposed to be or are being treated, stored, disposed of, injected, emitted, or discharged, as well as the amount of cooling water withdrawn by the Facility's cooling water intake structures, *see* August 2008 RTC, Sections III through IX, and Section 4.3 of the 2005 Fact Sheet. In addition, a schematic drawing of the flow of water at the facility including the various discharges and the site location plan showing the location of the outfalls are presented on Attachments A and B of the 2005 Fact Sheet, respectively. Finally, the cooling water intake issues are primarily in Section IX of the August 2008 RTC.

4.0 Endangered Species Act (ESA)

The Endangered Species Act of 1973, as amended (ESA), grants authority to, and imposes obligations on, Federal agencies with regard to the protection of endangered or threatened species of fish, wildlife, or plants ("listed species") and habitat of such species that has been designated as critical ("critical habitat"). Section 7(a) of the ESA requires Federal agencies, in consultation with, and with the assistance of, the Secretary of Interior, to ensure that any action that it authorizes, funds, or carries out, in the United States or upon the high seas, is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat. The United States Fish and Wildlife Service (USFWS) typically administers Section 7 consultations for bird, terrestrial, and freshwater aquatic species, while the Fisheries office of the National Oceanic and Atmospheric Administration (NOAA Fisheries) typically administers Section 7 consultations for marine species and anadromous fish. EPA has reviewed the federal endangered or threatened species of fish, wildlife, and plants to see if any such listed species might potentially be impacted by this permit re-notification. See Section XIII of the August 2008 RTC, incorporated by reference in this Fact Sheet, and Section 7.0 of the 2005 Fact Sheet. EPA believes that the proposed draft permit conditions are not likely to adversely affect endangered species that may migrate through or inhabit areas in the vicinity of

Mirant Canal Station, and that formal consultation under section 7 of the ESA is not required for this permitting action. EPA notes in this regard that the Services did not call for formal consultation in conjunction with issuance of the August 2008 Final Permit. EPA will informally consult with NOAA Fisheries and the USFWS under the ESA concerning this action, and has provided a copy of the re-noticed draft permit conditions to both NOAA Fisheries and the USFWS as part of that process, as well as for comment as part of the public comment period.

5.0 Essential Fish Habitat (EFH)

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. §§ 1801 et seq. (1998)), EPA is required to consult with NOAA Fisheries if actions that EPA funds, permits, or undertakes may adversely impact any essential fish habitat such as: waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (16 U.S.C. § 1802 (10)). Section 6.0 of the 2005 Fact Sheet identifies the designated EFH species in the vicinity of Canal Station and provides a detailed discussion of the Station's impacts to the EFH. The EFH consultation for the August 2008 Final Permit is also discussed in Sections IX.A.2, IX.A.4.a, and IX.A.5 of the August 2008 RTC, which is incorporated in this Fact Sheet.

EPA is concerned about the entrainment losses from Canal Station and has determined that the steps outlined in the proposed draft permit conditions should be taken to minimize entrainment under CWA § 316(b). EPA is also concerned about impingement losses at Canal Station and the August 2008 Final Permit contains requirements intended to minimize such losses.

As the federal agency charged with authorizing pollutant discharges and cooling water withdrawals from this facility, EPA is consulting with the NMFS under section 305 (b)(2) of the Magnuson-Stevens Act for EFH. As mentioned above a number of EFH species have been entrained by Canal Station. This consultation will be completed before the permit is finalized.

6.0 State Certification Requirements

Under CWA § 401(a)(1), EPA may not issue a permit in the Commonwealth of Massachusetts unless the MassDEP either certifies that limits contained in the permit are stringent enough to assure that pollutant discharges and cooling water withdrawals will not result in violations of the State's Water Quality Standards or waives certification. The staff of the MassDEP has reviewed the draft permit conditions. EPA has requested a CWA § 401(a)(1) certification by the state pursuant to 40 C.F.R. 124.53 and expects that the state will certify these draft permit conditions. EPA notes that MassDEP previously certified the August 2008 Final Permit, but Region 1 will address the water quality certification process again with regard to the withdrawn permit conditions.

7.0 Comment Period, Public Hearing, and Procedures for Final Decisions

All persons, including applicants, who believe that any provision of these draft permit conditions is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period, to the U.S. EPA, Office of Ecosystem Protection, Industrial Permits Branch, 1 Congress Street, Suite 1100, Boston, Massachusetts 02114-2023, or to the presiding officer at the scheduled public hearing. As set forth in more detail in the public notice issued by EPA regarding this permit action, the hearing will be held in Sandwich, Massachusetts on January 14, 2009.

In reaching a final decision on the draft permit conditions, the EPA will respond to all significant comments and make these responses available to the public at EPA's Boston office.

Following the close of the comment period, and after the public hearing, the EPA will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within 30 days following the notice of the final permit decision, any interested person may submit a petition for review of the permit to EPA's Environmental Appeals Board to review any condition of the permit decision. See 40 C.F.R. § 124.19(a).

8.0 EPA Contact

Additional information concerning these draft permit conditions may be obtained between the hours of 9:00 A.M. and 5:00 P.M., Monday through Friday, excluding holidays from the EPA and MassDEP contacts below:

Ms. Sharon DeMeo, Environmental Engineer
U.S. Environmental Protection Agency
Office of Ecosystem Protection
1 Congress Street, Suite 1100 (CIP)
Boston, Massachusetts 02114-2023
Telephone: (617) 918-1995 / FAX: (617) 918-0995

Paul Hogan, Environmental Engineer
Massachusetts Department of Environmental Protection
Division Of Watershed Management
Surface Water Discharge Permit Program
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Telephone: (508) 767-2796 / FAX: (508)791-4131

Mirant Canal Re-notice
December 2008 Fact Sheet

MA0004928

December 12, 2008

Date:

**Stephen S. Perkins, Director
Office of Ecosystem Protection
U.S. Environmental Protection Agency**