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May 23, 2008

CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
ENVIRONMENTAL NOTIFICATION FORM

PROJECT NAME : Brayton Point Generating Station
PROJECT MUNICIPALITY : Somerset
PROJECT WATERSHED : **Mount Hope Bay**
EOEA NUMBER : 14235
PROJECT PROPONENT : USGen New England, Inc.
DATE NOTICED IN MONITOR : April 23, 2008

Pursuant to the Massachusetts Environmental Policy Act (G. L. c. 30, ss. 61-62H) and Section 11.06 of the MEPA regulations (301 CMR 11.00), I determine that this project **does not require** the preparation of an Environmental Impact Report (EIR).

While the project will provide a significant benefit to the Mount Hope Bay marine environment, the proponent will be required to demonstrate that the project, in conjunction with other air emissions at the facility, will not cause or significantly contribute to exceedance of National Ambient Air Quality Standards (NAAQS) for any air pollutant. I note that the Department of Environmental Protection's (MassDEP) comment letter identifies a number of technical issues that must be addressed in order to assess the project's air quality impacts for MassDEP's permitting purposes. I am confident that MassDEP's rigorous, ongoing review will adequately address these remaining air quality impacts.

As described in the Environmental Notification Form, the proposed project consists of a retrofit to Brayton Point Station's existing open-cycle cooling system with a closed-cycle cooling system to comply with heat and flow limits specified in the October 2003 final National Pollutant Discharge Elimination System (NPDES) permit issued by the United States Environmental Protection Agency. The closed-cycle cooling system will consist of two natural draft cooling towers and supporting equipment.

The Brayton Point Station site consists of approximately 250 acres of land on Brayton Point, a peninsula in Somerset. The site is bordered by the Lee River to the west, the Taunton River to the east, a residential neighborhood and U.S. 195 to the north, and Mount Hope Bay to the south. This existing industrial facility, which has been operating since the 1960's, generates approximately 1,600 megawatts (MW) of power. It consists of boilers and associated air pollution control systems, including emission stacks. An Ash Reduction Process (ARP) enables the proponent to recycle 100% of the fly ash created. Coal ash is re-burned to produce a high quality ash with low carbon content that can be used as a replacement of Portland cement in the production of concrete. The facility includes a coal pile, a pier for barge deliveries, storage domes, an electrical distribution system, a stormwater treatment system, wastewater treatment system, access roads and parking lots.

Permits and Jurisdiction

The project is subject to environmental review pursuant to Section 11.03 (1)(b)(2), Section 11.03 (3)(b)(1)(e) and Section 11.03 (8)(b)(2) because it requires a state permit and consists of the creation of five or more acres of impervious land, the new fill or structure or Expansion of existing fill or structure in a velocity zone or regulated floodway, and the modification of an existing major stationary source resulting in a "significant net increase" in actual emissions of greater than 15 tons per year (tpy) of particulate matter (PM) as PM10. The project requires a Major Comprehensive Air Plan Approval, a Wastewater Treatment System Plan Approval, a modification to the Chapter 91 License, and a 401 Water Quality Certification from the MassDEP and Federal Coastal Zone Consistency Review from the Office of Coastal Zone Management (CZM). The project will also require an Order of Conditions from the Somerset Conservation Commission (and a Superseding Order of Conditions from the MassDEP if the local Order is appealed), a Federal Aviation Administration (FAA) Notification, a Prevention of Significant Deterioration (PSD) Permit from the US Environmental Protection Agency (EPA) and a Section 10/404 Permit from the Army Corps of Engineers (ACOE).

The proponent is not seeking financial assistance from the Commonwealth. Therefore, MEPA jurisdiction applies to those aspects of the project within the subject matter of required permits with the potential to cause Damage to the Environment. In this case, MEPA jurisdiction extends to air quality, water quality, tidelands, land and wetlands.

Water Quality and Habitat

Brayton Point is the largest industrial discharger to Mount Hope Bay. The station currently withdraws a total of approximately one billion gallons of water from the Taunton River and/or the Lee River intake structures and circulates it through the facility to condense the steam used to produce electricity. The water is then discharged back to the Bay at elevated temperatures of up to 95° Fahrenheit.

The NPDES permit for Brayton Point has been the subject of review by EPA, MassDEP, the Rhode Island Department of Environmental Management, Coastal Zone Management, the Division of Marine Fisheries (Marine Fisheries), Conservation Law Foundation, Save the Bay and many other state and federal agencies and public advocacy groups. EPA, in close coordination with MassDEP the RI Department of Environmental Management, issued a NPDES

permit to ensure compliance with state and federal water quality standards and address the facility's impact on Mount Hope Bay. The decision established limitations on the volume, temperature and composition of the discharge, and established monitoring and reporting requirements. The permit does not authorize continued use of "once-through" cooling water and is based on the assumption that the facility would convert to closed-cycle and use mechanical-draft cooling tower technology to meet the permit's flow and heat load allowances. The volume of water and generation of waste heat will be reduced by over 95%.

The cessation of once-through cooling will ensure that Brayton Point will no longer withdraw and discharge nearly one billion gallons of water per day from Mount Hope Bay, greatly reducing the entrainment and impingement impacts on fish and other aquatic life, in addition to alleviating impacts associated with discharging large quantities of heat to the Bay. These changes are expected to help restore important estuarine habitat in the bay.

It is well established and documented that the Mount Hope Bay and the Taunton River provide valuable habitat for a diverse assemblage of finfish and invertebrates. The cooling process will result in the evaporation of 9,000 to 14,000 gallons of Taunton River water per minute. Marine Fisheries has raised concerns that the plume drift over nearby salt marshes could at times cause a high salinity precipitate adversely impacting these resource areas. In addition, the salinity of the discharge waters will increase up to 1.5 times that of the ambient intake waters. The proponent should consult with Marine Fisheries to address the concerns raised in its comment letter.

Wetlands

Because Brayton Point is surrounded by the Lee and Taunton Rivers, much of the site may be included within the Riverfront Protection Area (RPA). The facility has been committed to this industrial use since the 1960s. The impacts to wetlands are limited to modification of discharge structures on site. Approximately 19,000 square feet of Land Under the Ocean, 300 linear feet of Coastal Bank, Designated Port Area, and Riverfront Area will be impacted. The site is also proximate to Salt Marsh, Coastal Beach, Land Containing Shellfish, and Bordering Vegetated Wetland. There were no plans available in the ENF to determine whether the extent of construction proposed would alter these areas.

The ENF indicates that compliance with the Stormwater Management Standards effective in January 2008 will be affected. Structures associated with and essential to an electric generating facility may be permitted pursuant to 310 CMR 10.24(7)(a)(5). I note that those portions of the project subject to jurisdiction under Chapter 91 are exempt from the Riverfront Area requirements pursuant to 310 CMR 10.58(6)(i).

I advise the proponent that any Notice of Intent or 401 Water Quality Certification application submitted to MassDEPs' Wetlands Program must include plans illustrating the wetlands resource areas and details of the proposed construction and any temporary and/or permanent impacts to the each wetland resource; a narrative and plans showing how wetlands impacts have been avoided or minimized, as well as mitigation measures that are proposed to be taken; and detailed analyses, plans and calculations for compliance with Stormwater Management Standards.

Waterways

The project site is located within a Designated Port Area within the Town of Somerset. As indicated within the ENF, submittal of a Chapter 91 Waterways License application for a water-dependent use, as defined at 310 CMR 9.12, is required for this project. I note that any application submitted to the Chapter 91 Waterways Program shall include historic documentation, including copies of authorizations and/or licenses together with their accompanying plans, as further described pursuant to 310 CMR 9.11(3)(b) and (c). I advise the proponent to contact MassDEP's Waterways Program to address the Chapter 91 required material.

Air Quality

The ENF indicates that actual emissions would increase by 15 tons per year (tpy) of particulate matter (PM) as PM10. MassDEP has noted in its detailed comment letter that the potential emissions of 379 tons/year of PM 10 and PM2.5 may need to be permitted which could result in PM10 and PM2.5 actual emissions to be far in excess of 15 tons/year.

MassDEP agrees that currently there is uncertainty on how the potential PM2.5 and PM10 emissions will be predicted and how compliance with the future PM10 emission limit will be demonstrated. In consideration of this uncertainty, the proponent must provide in the plan approval application, to be submitted to MassDEP, information supporting the use of the ENF referenced methodology. The plan approval application will need to address, as a minimum, the following: copies of peer reviews on the calculation methodology; identification of projects that utilized this calculation methodology in air quality permitting and project(s) current status; a summary of available PM10 and PM2.5 stack (tower) emission test data in comparison to predicted emissions based on the referenced methodology; and proposed stack (tower) emission test method(s) and monitoring, including water droplet size distribution of the drift exiting the towers, to document compliance with PM10 and PM2.5 proposed emission limits developed utilizing the referenced calculation methodology.

I note that on a related matter concerning PM10 and PM2.5 emissions, Brayton Point Station will include additional modifications to Unit 3, a 633 MW net coal fired boiler, in the cooling tower plan approval application that must be submitted to MassDEP. The modifications will consist of the construction of spray dryer absorber (SDA) and fabric filter (FF) for the control of acid gases and particulate. This action may be subject to a Notice of Project Change from the MEPA Office for a previously submitted ENF (EEA No. 13022). The SDA/FF is likely to cause a net emission increase of potential PM emissions.

The ENF indicates that modeling will be performed to document that the project will not cause or significantly contribute to the violation of National Ambient Air Quality Standards (NAAQS) for any air pollutant. Condensed water vapor from the cooling towers will cause a visible exhaust plume and depending on weather conditions the condensed water vapor may cause ground level fogging or icing. MassDEP has stated in its comment letter that fogging and icing impacts are mitigated through the use of natural draft towers, which are much taller than

mechanical draft cooling towers and reduce the likelihood of condensed water vapor reaching ground level.

A Major Comprehensive Plan Application (CPA) Approval will be required base upon a potential emission rate of 379 tons/year of PM10 and PM2.5. As indicated the CPA will need to include a demonstration of compliance with NAAQS, application of Best Available Control Technology (BACT) for particulate matter, and a demonstration of compliance with the MassDEP's noise policy.

Visual/Historic

As a general matter, the cooling towers will have significant visual impacts to the immediate area. I strongly encourage the proponent to implement all feasible means of minimizing and mitigating these impacts.


The Massachusetts Historical Commission (MHC) will be reviewing the project as a consulting party in compliance with Section 106 of the National Historic Preservation Act of 1966 as amended (36 CFR 800). MHC requests that the proponent undertake a visual effect study to evaluate the visual effects of the project on the character and setting of historic properties and historic districts in the visual area of potential effect for the project. Prior to undertaking this study, the proponent should consult with the Lead Federal Agency, which should notify the MHC and other consulting parties directly to consult on determining an appropriate study area and the methods and scope for the visual effect study (36 CFR 800.4(a)).

Conclusion

The ENF and ongoing permit processes have disclosed the potential impacts and proposed mitigation in detail; these issues are subject to ongoing review under local, state and federal permitting processes. Based on a review of the information provided in the ENF and consultation with relevant public agencies, I find that the potential impacts of this project do not warrant the preparation of an EIR.

May 23, 2008

Date



Ian A. Bowles

Comments Received:

04/24/08	Massachusetts Aeronautics Commission (forwarded by K. Lesser, Epsilon)
04/25/08	Russell Castonguay
05/08/08	Petition from the Mount Hope Condominium Resident Association
05/09/08	MA Office of Coastal Zone Management
05/12/08	Mass Audubon and the Taunton River Watershed

Comments Received(continued):

05/13/08 Department of Environmental Protection SERO
05/13/08 Division of Marine Fisheries
05/16/08 Massachusetts Historical Commission

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