APPENDIX F

DRAFT GENERAL CONFORMITY DETERMINATION

Appendix F

Draft General Conformity Evaluation for Proposed

Broadwater LNG Project

[Additional information from Broadwater is required to finalize this document as indicated by highlighted text within this document.]

November 2006

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ACRONYMS

AQCR	New Jersey-New York-Connecticut Interstate Air Quality Control Region
bcfd	billion cubic feet per day
CAA	Clean Air Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DEP	Department of Environmental Protection
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
FIP	Federal Implementation Plan
FR	Federal Register
FSRU	floating storage and regasification unit
IGTS	Iroquois Gas Transmission System
LNG	liquefied natural gas
m^3	cubic meters
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NO_2	nitrogen dioxide
NOx	Nitrogen oxides
NSR	New Source Review
NYSDEC	New York State Department of Environmental Conservation
OTR	ozone transport region
$PM_{2.5}$	particulate matter with an aerodynamic diameter less than or equal to 2.5 microns
PM_{10}	particulate matter with an aerodynamic diameter less than or equal to 10 microns
RACT	Reasonably Available Control Technology
STV	shell-and-tube vaporization
SIP	state implementation plan
SO_2	sulfur dioxide
VOCs	volatile organic compounds

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1.0 INTRODUCTION TO PROPOSED ACTION

Broadwater Energy is filing an application with the Federal Energy Regulatory Commission (FERC) seeking all of the necessary authorizations pursuant to the Natural Gas Act to construct and operate a marine liquefied natural gas (LNG) terminal and subsea connecting pipeline for the importation, storage, regasification, and transportation of natural gas. The Broadwater LNG Project (the Project) would increase the availability of natural gas to the New York and Connecticut markets through an interconnection with the Iroquois Gas Transmission System (IGTS).

The proposed Broadwater LNG terminal would be in New York State waters of Long Island Sound, approximately 9 miles from the nearest shore of Long Island. It would be designed to receive, store, and regasify LNG at an average throughput of 1.0 billion cubic feet per day (bcfd) and would be capable of delivering a peak throughput of 1.25 bcfd. The proposed LNG terminal would consist of a floating storage and regasification unit (FSRU) that is approximately 1,215 feet in length, 200 feet in width, and rising approximately 80 feet above the water line to the trunk deck, as shown on Figure 1-2. The FSRU's draft is approximately 40 feet. The FSRU would be designed with a net storage capacity of approximately 350,000 cubic meters (m^3) of LNG (equivalent to 8 bcf of natural gas), with base vaporization capabilities of 1.0 bcfd using a closed-loop shell-and-tube vaporization (STV) system. The LNG would be delivered to the FSRU via independently owned and operated LNG carriers with cargo capacities ranging from approximately 125,000 m^3 up to a potential future size of 250,000 m^3, at the frequency of two to three carriers per week. The FSRU would be attached to a yoke mooring system (YMS) that includes a mooring tower embedded in the sea floor. The LNG delivered by LNG carriers would be stored and vaporized (regasified) onboard the FSRU. The Project also would include a new natural gas pipeline, extending from the seafloor below the FSRU to an offshore connection with the existing IGTS pipeline. Natural gas would be transferred from the FSRU to the subsea pipeline and into the IGTS pipeline for delivery to customers south of the FSRU (Long Island and New York City) and north of the FSRU (primarily Connecticut). All Project-related facilities would be located within Suffolk County, New York.

Air emissions would be generated during both construction and operation of these facilities. Construction equipment would generate emissions during construction of the LNG terminal and pipelines. Operation of the LNG facility also would generate emissions from the LNG carriers and tugs that transport LNG to the FSRU, and from onboard equipment used to vaporize the LNG prior to transport via the pipelines.

The proposed Project would be located within Suffolk County, New York, entirely within the New Jersey-New York-Connecticut Interstate Air Quality Control Region (AQCR). Suffolk County currently has the following designations for the federal/state air quality standards:

- Attainment or nonclassified for the carbon monoxide (CO), lead, nitrogen dioxide (NO_2), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM_{10}), and sulfur dioxide (SO_2) standards;
- Moderate nonattainment of the 8-hour ozone standard; and
- Nonattainment of the particulate matter with an aerodynamic diameter less than or equal to 2.5 microns ($PM_{2.5}$) standards.

2.0 GENERAL CONFORMITY – REGULATORY BACKGROUND

The U.S. Environmental Protection Agency (EPA) promulgated the General Conformity Rule on November 30, 1993, in Volume 58 of the Federal Register (FR), Page 63214 (58 FR 63214) to implement

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the conformity provision of Title I, Section 176(c)(1) of the federal Clean Air Act (CAA). Section 176(c)(1) requires that the federal government not engage, support, or provide financial assistance for permit or license, or approve any activity that fails to conform to an approved CAA implementation plan. States identified in the ozone transport region (OTR) are required to submit to the EPA a state implementation plan (SIP) for regulation of air emissions and enforcement of air quality rules to satisfy the National Ambient Air Quality Standards (NAAQS) for ozone. If a state SIP is not approved, then the EPA will establish a federal implementation plan to ensure that air quality is maintained and enforced per the NAAQS.

The General Conformity Rule is codified in Title 40 of the Code of Federal Regulations (CFR) Part 51, Subpart W and Part 93, Subpart B, "Determining Conformity of General Federal Actions to State or Federal Implementation Plans." The General Conformity Rule applies to all federal actions, except programs and projects that require funds or approval from the U.S. Department of Transportation (DOT), the Federal Highway Administration, the Federal Transit Administration, or the Metropolitan Planning Organization. In lieu of a conformity analysis, these latter types of programs and projects must comply with the Transportation Conformity Rule promulgated by DOT on November 24, 1993 (58 FR 62197).

3.0 GENERAL CONFORMITY REQUIREMENTS

As defined in the CAA, Title I, Section 176(c)(1), "conformity" means to uphold air quality goals through reduction or elimination of NAAQS violations in order to achieve attainment with NAAQS standards. Accordingly, an action or activity can achieve conformity only if it does not generate additional air pollutant emissions that:

- Cause or contribute to new violations of any NAAQS in any area;
- Increase the frequency or severity of any existing violation of any NAAQS; or
- Delay timely attainment of any NAAQS or interim emission reductions.

The General Conformity Rule establishes conformity in coordination with and as part of the National Environmental Policy Act (NEPA) process. The rule affects air pollution emissions associated with actions that are federally funded, licensed, permitted, or approved; and ensures that emissions do not contribute to air quality degradation or prevent the achievement of state and federal air quality goals. In short, General Conformity, if applicable, refers to the process to evaluate plans, programs, and projects to determine and demonstrate that they satisfy the requirements of the CAA and applicable SIP. The purpose of the General Conformity requirement is to ensure that federal agencies consult with state and local air quality districts so that these regulatory entities are aware of the expected impacts of the federal action and therefore can include expected emissions in their SIP emissions budget.

4.0 GENERAL CONFORMITY PROCESS

The process to determine conformity for a proposed action involves two distinct steps: applicability and determination. Applicability is an assessment of whether a proposed action is subject to the Conformity Rule. If the Conformity Rule is applicable for the proposed action, then a conformity determination may be required. The conformity determination is an assessment of whether the proposed action conforms to the applicable state or federal implementation plan.

An applicability evaluation is required for any action that is federally funded, licensed, permitted, or approved where the total direct and indirect emissions for criteria pollutants in a nonattainment or maintenance area exceed the rates listed specified in Title 40 CFR 93.153(b)(1) and (2). If emissions exceed these rates, or if the emissions are determined to be regionally significant, a General Conformity

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Determination is required. The proposed action is considered regionally significant if the total direct and indirect emission for any criteria pollutant represents 10 percent or more of a nonattainment or maintenance area emission inventory for that pollutant. The General Conformity Review process is not necessary for a new source or existing source modification that is subject to New Source Review (NSR).

If the Conformity Rule is determined to be applicable for the proposed action, an evaluation must be performed to determine whether or not the action conforms to the SIP. Positive conformity can be shown through state emission budgets, emission offsets, air quality models, or any combination of these.

5.0 GENERAL CONFORMITY APPLICABILITY

The General Conformity Rule applies only to proposed actions in a nonattainment or maintenance area. In addition, a General Conformity evaluation is not required for proposed actions that fall under an NSR Program or Operating Permit Program. The AQCR's ozone nonattainment designation would not require an analysis of FSRU emissions of NO_x and volatile organic compounds (VOCs) under the General Conformity regulation because these emissions already would be subject to NSR. Likewise, Suffolk County's designation as a nonattainment area for $PM_{2.5}$ would not require a General Conformity analysis for $PM_{2.5}$ emissions because NSR would be applicable. However, emissions of $PM_{2.5}$, NO_x, and VOCs from Project-related sources such as vessels, motor vehicles, and construction equipment that are not governed by stationary source permits would be considered under the General Conformity Rule. Construction and vessel activity emissions (including auxiliary engines and pumps but excluding propulsion engine emissions) associated with the Proposed Action are not addressed in the NSR and Operating Permit Programs and therefore are subject to General Conformity Review.

6.0 GENERAL CONFORMITY DETERMINATION

[Broadwater needs to provide information indicating the methodology and emission factors used to determine construction and vessel activity emissions.]

Suffolk County is considered a moderate nonattainment area for ozone and is nonattainment for $PM_{2.5}$ but is in attainment for all other NAAQS criteria pollutants. The New York State Department of Environmental Conservation (NYSDEC) plans to revise their required SIP for ozone by the year 2008, which would result in application of moderate ozone nonattainment thresholds. If the SIP is not revised, the 1-hour severe ozone nonattainment designation would still apply. For a severe nonattainment area, the 40 CFR 93.153 thresholds for ozone precursors, NO_x and VOCs, are 50 and 100 tons per year (tpy), respectively. An increase of 40 tpy of NO_x or VOCs is considered a significant increase. Table 6-1, based on information to be provided by Broadwater, illustrates the anticipated construction and vessel activity emissions for the proposed action.

[Insert Table 6-1 summarizing anticipated Project emissions from mobile sources.]

Based on the data in Table 6-1, the anticipated emissions due to construction of the Broadwater LNG Project facilities and related vessel activities **are/are not** significant, and therefore a General Conformity Determination **is/is not** required. It is possible that a determination could be required for one or two pollutants, and not necessarily all three. In accordance with General Conformity requirements listed in Title 40 CFR Part 93.158(a) and (c), the following items apply to the Project:

- The Project must comply with the control measures and regulations that are relied upon in the applicable SIP; and

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- The total of direct and indirect emissions for the proposed Project must be specifically identified and accounted for in the SIP's attainment demonstration; or
- The total of direct and indirect emissions for the proposed Project must be offset through a revision in the SIP or similar enforceable measure so that there is no net increase in emissions; or
- For any criteria pollutant, except ozone, the total of direct and indirect emissions for the proposed Project must be evaluated through an area-wide and/or local air quality modeling analysis that shows that the action does not cause or contribute to any new violation of any standard in any area – or increase the frequency of severity of any existing violation of any standard in any area.

6.1 CONSISTENCY WITH RELEVANT SIP REQUIRMENTS

[Broadwater needs to provide information on the emission control measures and regulations included in the New York SIP that may potentially apply to the Broadwater LNG Project (Table 6-2)]

[Broadwater needs to provide a description of which, if any, of the regulations and control measures identified in Table 6-2 would indirectly affect the emissions from the proposed Project through implementation of new standards and if Broadwater would be in compliance with these regulations.]

6.2 EMISSION BUDGET AND ATTAINMENT DEMONSTRATION FOR THE AQCR

[Broadwater must determine whether or not the New York SIP identifies specific emission budgets for point sources or maritime vessel activities. Broadwater needs to define how conformance with the SIP can be demonstrated if necessary.]

6.3 PROJECT EMISSION OFFSETS

[Broadwater needs to define how conformance with the SIP can be demonstrated if necessary. This may include development of an air mitigation plan that includes emission reduction strategies that would offset the proposed project emissions for which a conformity determination is required. Broadwater should develop a table to indicate which project emissions require offsets].

[Insert Table 6-3 that identifies any Project emissions that require offset]

Table 6-3 does not include emissions from operation of LNG terminal stationary sources. Stationary source emissions are authorized through the federal NSR and permit programs, and offsets for these sources already would have been required. If necessary, Broadwater would coordinate with NYSDEC to develop an air mitigation plan. Once completed and approved by EPA and NYSDEC, the plan would be included in the final Draft General Conformity Determination.

7.0 CONCLUSION

The purpose of the General Conformity requirement is to ensure that federal agencies consult with state and local air quality districts so that these regulatory entities are aware of the expected impacts of the federal action and can include expected emissions in their SIP emissions budget. The General Conformity Rule applies only to nonattainment and maintenance areas. The AQCR's ozone nonattainment designation would not require an analysis of FSRU emissions of NO_x and VOC under the

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General Conformity regulation because these emissions already would be subject to NSR. Likewise, Suffolk County's designation as a nonattainment area for $PM_{2.5}$ would not require a General Conformity analysis for $PM_{2.5}$ emissions because NSR would be applicable. However, emissions of $PM_{2.5}$, NO_x, and VOCs from Project-related sources such as vessels, motor vehicles, and construction equipment that are not governed by stationary source permits would be considered under the General Conformity Rule. For these activities, Broadwater would be required to file documentation with FERC that demonstrates conformity with the New York SIP in accordance with Title 40 CFR Part 93.158. Until such filing, the General Conformity Determination is not complete. A full analysis must be completed and approved before a positive Conformity Determination can be assigned.

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