



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE SUITE 100
BOSTON, MASSACHUSETTS 02109-3912

August 13, 2020

Mr. Buck Booth
Senior Environmental Manager
Excelerate Energy, L.P.
2445 Technology Forest Blvd., Level 6
The Woodlands, TX 77381

Mr. Christopher Williams
Tetra Tech, Inc.
160 Federal Street, 3rd Floor
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Dear Messrs. Booth and Williams:

This letter provides EPA's views regarding permitting requirements for air pollutant emissions from proposed changes to liquified natural gas (LNG) cargo transfer operations at the Northeast Gateway Deepwater Port (NEG). NEG is owned and operated by Northeast Gateway Energy Bridge, L.L.C. (Northeast Gateway), a subsidiary of Excelerate Energy, L.P. (Excelerate). NEG is licensed to operate under the Deepwater Port Act¹ (DPA) for the purpose of importing LNG to supply natural gas to the New England region.

NEG currently consists of two subsea Submerged Turret Loading (STL) buoys and equipment connecting each STL buoy to the natural gas Pipeline Lateral. A fleet of purpose-built floating storage regasification units (FSRU) deliver LNG to NEG by vaporizing LNG stored on the FSRU to natural gas and transferring it to NEG through an STL buoy. The current New Source Review (NSR) permit for NEG² applies to equipment aboard any FSRU while moored and regasifying at NEG. Northeast Gateway proposes to change its operations to enable an FSRU to be refilled via transfers from conventional LNG carriers while the FSRU is moored on the buoy. The LNG carrier would run its own electric pumps to transfer LNG to the FSRU using power generated by the LNG carrier's electricity generating system. These proposed new LNG transfer operations that will occur at NEG are not covered by its existing NSR permit.

On November 26, 2019, Tetra Tech (representing Northeast Gateway) provided to EPA a memorandum entitled "Regulatory Status of LNG Carriers During Ship-to-Ship Cargo

¹ 33 U.S.C. 1501 et seq.

² Modification to Northeast Gateway Energy Bridge, L.L.C. Deepwater Port, Permit number RG1-DPA-CAA-01M. Issued 12/30/2014. Available at: <https://www.epa.gov/sites/production/files/2015-08/documents/ngeb-final-cao-mod-permit.pdf>.

Transfers.” In the November 2019 memorandum, Tetra Tech argued that air emissions from the proposed LNG transfers from the LNG carrier to FSRU would not be subject to Clean Air Act (CAA) permitting via the DPA because LNG carriers are vessels, and vessels are excluded from the definition of a deepwater port in the DPA. (The letter did not challenge the applicability of the CAA to FSRU transfer operations occurring at NEG, which are covered under NEG’s NSR permit, nor did it articulate how those permitted operations differ in CAA applicability from the LNG carrier to FSRU transfer operations.) The EPA sent Tetra Tech a letter requesting additional information about characteristics of the proposed LNG carrier to FSRU transfer operations on December 23, 2019. Tetra Tech provided responses to EPA’s request for information in a letter dated January 15, 2020.

The information provided supports the conclusion that air pollutant emissions occurring during LNG carrier to FSRU LNG transfers at NEG are subject to CAA permitting requirements. This conclusion is based on the air permitting framework applicable to deepwater ports in Federal waters adjacent to Massachusetts. Regardless of whether the LNG carriers are considered vessels or part of the deepwater port itself, when the LNG carriers are moored to NEG, the air pollutant emissions resulting from the transfer of LNG to the FSRU are subject to applicable Massachusetts CAA permitting requirements because they are air pollutant emitting activities that are associated with NEG. Thus, the EPA requests that Northeast Gateway prepare an NSR air permit application that will address the additional emitting activities proposed at NEG. Northeast Gateway should also include such proposed emitting activities when evaluating the necessity of submitting a timely operating permit application for NEG.

The remainder of this letter describes our reasoning supporting this view.

Deepwater Port Act

In a June 25, 2019 letter to the Maritime Administration (MARAD), Northeast Gateway acknowledged that the CAA is applicable to deepwater ports via 33 U.S.C. 1518(a)(1), a provision of the DPA. NEG also acknowledged that the CAA applies via 33 U.S.C. 1518(b) to NEG as if it were located in Massachusetts. However, Northeast Gateway’s analysis did not consider the additional language of 33 U.S.C. 1518(a)(1) applying the CAA, not only to the deepwater port itself, but also “to activities connected, associated, or potentially interfering with the use or operation of any such port.”³ The CAA is a law of the United States that is applicable to deepwater ports, and to activities associated with the use or operation of any such port via section 1518(a)(1) of the DPA.⁴ In addition, section 1518(b) of the DPA federalizes the law of the nearest adjacent state, in this case the Commonwealth of Massachusetts, declaring it to be

³ Though Northeast Gateway’s June 25, 2019 letter to MARAD acknowledged section 1518(a)(1) of the DPA, it did not consider whether the proposed activities at NEG would be subject to CAA permitting via this statutory language.

⁴ Reinforcing the fact that the CAA is applicable to deepwater ports, Congress specifically indicated in section 1502(9)(D) of the DPA that the CAA applies to deepwater ports by defining a “deepwater port” as “a ‘new source’ for purposes of the Clean Air Act.” See also 33 CFR 148.73 including the Clean Air Act in a “list of Federal environmental statutes and Executive Orders (E.O.s) that may apply” to deepwater ports and 33 CFR 148.700(c)(1) listing “the Environmental Protection Agency, for Clean Air Act” as a Federal agency for which a deepwater port requires certification.

“the law of the United States” and applying it “to any deepwater port licensed pursuant to this chapter, to the extent applicable and not inconsistent with any provision or regulation under this chapter or other Federal laws and regulations now in effect or hereafter adopted, amended, or repealed.” Therefore, as acknowledged by Northeast Gateway in its June 25, 2019 letter to MARAD, the Massachusetts regulations for NSR and Title V apply to NEG and “to activities connected, associated, or potentially interfering with the use or operation of any such port.”

Massachusetts CAA Permitting Regulations

The CAA permitting requirements applicable in Massachusetts are found in the Commonwealth’s Air Pollution Control regulations at 310 CMR 7.00. Under Massachusetts regulations, both projects that meet major source applicability thresholds (i.e., major sources) and those that do not but meet lower applicability thresholds (i.e., “non-major” sources) must obtain the appropriate NSR permit prior to construction or operation.⁵ The Commonwealth’s major nonattainment NSR permit provisions under the CAA are located in its Emission Offsets and Nonattainment Review regulations at 310 CMR 7.00: Appendix A. The Commonwealth’s NSR permit provisions for non-major sources are located in its Plan Approval and Emission Limitations regulations at 310 CMR 7.02.⁶ In addition, the Commonwealth’s Operating Permit and Compliance Program requirements are located at 310 CMR 7.00: Appendix C and apply to facilities with emissions higher than pollutant-specific thresholds, as well as some other facilities subject to sections 111, 112, or 129 of the CAA.

The quantity of air pollutant emissions from, and those associated with, the proposed LNG carrier to FSRU transfer activities at NEG will, in part, determine which Massachusetts air permit regulations (and corresponding definitions) apply, as described in 310 CMR 7.02(1)(d).⁷

⁵ For non-major sources, “a plan approval is required prior to any construction, substantial reconstruction, alteration, or subsequent operation of a facility or emission unit that may emit air contaminants to the ambient air.” See 310 CMR 7.02(1)(b). Plan approval requirements apply to any facility that operates fuel utilization equipment (i.e., internal combustion engines or boilers) with heat input capacities greater than the thresholds identified in 310 CMR 7.02(4)(a)(2) or 310 CMR 7.02(5)(a)(2) for the respective fuel types fired, e.g., natural gas, distillate fuel oil, or residual fuel oil. For major sources, the owner or operator who constructs or operates a stationary source or modification without a corresponding permit would be considered in noncompliance. See, e.g., 310 CMR 7.00: Appendix A(10)(a)(1). Sources subject to 310 CMR 7.00: Appendix A are also subject to Comprehensive Plan Approval regulations at 310 CMR 7.02(5).

⁶ As specified at 310 CMR 7.02(5)(d), new major sources of air pollutants located in attainment areas are subject to Prevention of Significant Deterioration (PSD) regulations at 40 CFR 52.21, which Massachusetts was delegated authority to implement on April 11, 2011. See Agreement for Delegation of the Federal Prevention of Significant Deterioration (PSD) Program by the United States Environmental Protection Agency, Region 1 to the Massachusetts Department of Environmental Protection, available at <https://www.epa.gov/sites/production/files/2015-08/documents/epa-massdep-psd-delegation-agreement.pdf>.

⁷ Under the Commonwealth’s regulations for major nonattainment NSR at 310 CMR 7.00: Appendix A(2), the definition of “major stationary source” means “any stationary source of air pollutants which emits, or has the federal potential emissions greater than or equal to, 100 tpy or more of any pollutant subject to regulation under the Act, except” for oxides of nitrogen (NO_x) and volatile organic compounds (VOC), for both of which the threshold is 50 tons per year. These thresholds are in some cases (e.g., for 50 tpy for NO_x) lower than the applicable threshold would be under the delegated federal PSD program (e.g., 100 tpy for any regulated NSR pollutant for certain source categories). Compare 310 CMR 7.00: Appendix A(2) with 40 CFR 52.21(b)(1)(i).

Since the existing NEG facility is not currently a major source, the major source NSR permitting requirement would be triggered if the proposed new activities would result in increases, either in actual emissions or in the federal potential to emit, greater than or equal to the major stationary source thresholds contained in the Commonwealth's regulations.⁸ Additionally, under the Commonwealth's regulations, non-major sources emitting below certain emissions thresholds are permitted under Limited Plan Approvals at 310 CMR 7.02(4), whereas higher emitting non-major sources are permitted under Comprehensive Plan Approvals at 310 CMR 7.02(5).

Under the Commonwealth's rules, the major NSR requirements apply to a "stationary source," the definition of which includes the separate phrase "building, structure, facility, or installation," and the definition of that phrase or its component terms differs depending on the applicable NSR program.⁹ For non-major sources, the NSR requirement to obtain a plan approval prior to construction or operation applies to the emitting activities of a "facility" or "emission unit."¹⁰ Under the Commonwealth's major nonattainment NSR rules at 310 CMR 7.00: Appendix A, the definition of "building, structure, facility, or installation" provides that "[a]ny marine vessel is a part of a facility while docked at the facility."¹¹ Under the general definitions of the Commonwealth's Air Pollution Control regulations at 310 CMR 7.00, which at least applies to 310 CMR 7.02(4) and (5), the term facility means "any installation or establishment and associated equipment, located on the same, adjacent or contiguous property, capable of emissions." The Massachusetts Department of Environmental Protection (MassDEP) has interpreted the term "facility" under the general definition to include marine vessels while docked at the facility, under 310 CMR 7.02(4) and (5).¹² That is, MassDEP considers vessels to be part of a "stationary source" facility while docked at the facility under the regulations applicable to both major nonattainment NSR sources and non-major NSR sources. For example, the Commonwealth included marine vessel engines engaged in unloading LNG in a 2008

⁸ Definition of Major Stationary Source in 310 CMR 7.00: Appendix A(2) ("any physical change that would occur at a stationary source not previously qualifying as a major stationary source will be considered a major stationary source, if the physical change would result in ... increases either in actual emissions or in the federal potential to emit, greater than or equal to" the major source thresholds set forth in this regulation.)

⁹ 310 CMR 7.00: Appendix A(2) (nonattainment major NSR definitions); 40 CFR 52.21(5)&(6)(i) (definitions for delegated PSD program for major sources).

¹⁰ 310 CMR 7.02(1)(b)

¹¹ Approved by EPA as part of the Massachusetts State Implementation Plan. *See* 40 CFR 52.1120(c).

¹² *See* letter from Barbara A. Kwetz, Director of Planning and Evaluation Division for MassDEP, to Brendan McCahill, EPA Region 1 (April 18, 2007). MassDEP's letter is in response to questions by Northeast Gateway about whether hotelling emissions from marine vessels docked at the facility are treated as part of the facility. According to the letter, hotelling is associated with the normal seagoing activities of ships and not with industrial activities associated with the port, per the Commonwealth's regulations for major nonattainment NSR permitting at 310 CMR 7.00: Appendix A. The letter states that because "in-transit" marine vessels are exempted from the definition of stationary source under 310 CMR 7.00: Appendix A, marine vessel hotelling emissions are not considered to be part of the port. Conversely, according to the letter, "[e]missions from industrial activities of marine vessels associated with the port are properly included in the port emissions." Finally, according to the letter, the Commonwealth applies the same reasoning to defining a facility and its applicability to the Commonwealth's minor NSR program at 310 CMR 7.02(4) and (5).

Conditional Plan Approval for a non-major LNG import terminal proposed to be located in State waters.¹³

As stated above, the relevant Massachusetts major nonattainment NSR definition explicitly states that “[a]ny marine vessel is a part of a facility while docked at the facility.” In addition, the general facility definition includes “any installation or establishment and associated equipment, located on the same, adjacent or contiguous property, capable of emissions.” The offloading operations of an LNG carrier at the port are associated with the port and capable of emissions. Massachusetts interprets both definitions to include industrial activities of marine vessels associated with the port and not to include emissions associated with vessel transit and typical hoteling emissions.¹⁴ EPA agrees with the Commonwealth’s interpretation of its own regulations and, for the same reasons as Massachusetts described in its April 18, 2007 correspondence cited above, plans to apply this approach and interpretation in a manner consistent with MassDEP’s precedent when EPA is permitting operations at facilities subject to federalized Massachusetts major nonattainment NSR and non-major NSR air permitting regulations.

Plan Approval Applicability to the Proposed LNG Carrier to FSRU Cargo Transfers

Based on information provided to us about the proposed project and our analysis of applicable regulations, interpretations, and past air permitting precedent by MassDEP, EPA’s view is that Massachusetts regulations require an NSR Plan Approval for air emissions resulting from the transfer of LNG from an LNG carrier to the FSRU at NEG. Specifically, those emissions from the LNG carrier’s electric generation system while transferring LNG to the FSRU should be included as emissions of the facility because these transfer operations are activities connected and associated with the use and operation of NEG and because the applicable Massachusetts regulations define a stationary source to include vessels while docked at a stationary source.

¹³ March 13, 2008. Non-Major Comprehensive Plan Approval at Weaver’s Cove Energy LLC, Transmittal No. W041433, MassDEP Southeast Regional Office. Of note, the Weaver’s Cove permit reflects a recent interpretation of the current Massachusetts regulations at issue, unlike, for example the operating permit issued to Distrigas of Massachusetts LLC for the Everett Marine Terminal facility (available from the Commonwealth’s website at <https://www.mass.gov/doc/everett-distrigas-of-massachusetts-llc/download>). The Everett Marine Terminal facility began operation in 1971, and based on conversations with MassDEP, it appears that the original construction permit for that facility likely was issued before the currently applicable requirements for vessel emissions at dockside existed in Massachusetts regulations.

¹⁴ See *supra* note 12. Of note, while based on the relevant federalized Massachusetts regulations, rather than federal regulations, this interpretation is also consistent with the D.C. Circuit’s holding in *NRDC v. EPA*, 725 F.2d 761, 763-64 (D.C. Cir. 1984) (reversing “the agency’s categorical exclusion of ‘the activities of any vessel’ from the relevant definitions of a ‘stationary source’ of pollution” while affirming “that portion of EPA’s 1982 repeal which excluded ‘to-and-fro’ vessel emissions from the definition of ‘secondary emissions’”). This approach is also consistent with EPA’s prior NEG permitting action in regard to the FSRU. See Response to Comments on Draft Air Permit RG1-DWPA-CAA-01 at 7-8 (emissions occurring while the vessel is “moored at the port but not regasifying . . . are unrelated to the regasification process; therefore EPA will revise the permit and exclude emissions during these periods from the permit conditions designed to limit NEG’s potential emissions as a stationary source.”). The prior permit application did not envision LNG carrier transfers occurring at NEG. Thus, while this language is relevant to the exclusion of transit and hoteling emissions which were considered in that action, it is not relevant to the inclusion of emissions associated with LNG carrier transfers because such emissions did not occur prior to the currently proposed changes to NEG’s operations.

Since available information indicates that the proposed operational change at NEG will result in an increase in emissions at a stationary source, the proposed change requires an NSR permit under applicable Massachusetts regulations. The permit should either be a major or non-major permit depending on the quantity of increased emissions resulting from the proposed additional activity of transferring LNG from the LNG carrier(s) to FSRU at NEG.

Based on the annual quantities of pollutant emissions provided on page 3 of the January 15, 2020 response letter from Tetra Tech, it is not clear to EPA whether the quantity of emissions of air pollutants from the proposed LNG carrier to FSRU transfer operations would cause the facility to be subject to major nonattainment NSR requirements under 310 CMR 7.00: Appendix A, or to non-major air plan approval obligations under 310 CMR 7.02(4) or (5).¹⁵ Nevertheless, Massachusetts regulations, and therefore federal law via the DPA, require both major sources and non-major sources to obtain the appropriate NSR permit prior to construction or operation.

Regarding the scope of the stationary source for NSR permitting, only emissions from LNG carrier to FSRU transfer operations that occur while the LNG carrier is docked at the facility would be included. While LNG is being transferred at NEG, equipment onboard the LNG carrier would generate and use onboard power to operate pumps to transfer LNG to the FSRU. The use of electric pumps for transfer of LNG from the LNG carrier to the FSRU, and the generation of electricity to power those pumps through use of the LNG carrier's electric generation system, is an operation connected and associated with NEG.

Further, MassDEP interprets the definition of facility under the Commonwealth's relevant major nonattainment NSR and general permitting definitions such that "[a]ny marine vessel is a part of a facility while docked at the facility."¹⁶ EPA agrees. So under the Massachusetts requirements, emissions from LNG transfer operations are considered emissions from the stationary source when determining NSR applicability under the incorporated Massachusetts law.

The EPA notes that vapor emissions resulting from LNG carrier to FSRU transfer operations are subject to the requirements of NEG's existing permit under Massachusetts regulations for Organic Material Storage and Distribution at 310 CMR 7.24. However, the applicability of these existing permit requirements to vapor emissions does not obviate the need for NSR permitting of emissions from the LNG carriers' boilers and engines which are part of the electricity generating system to power the LNG cargo transfer pumps.

In summary, based on the DPA, the CAA, and Massachusetts regulations, EPA's view is that the air pollutant emissions from LNG carrier to FSRU transfer operations are subject to the Massachusetts CAA permit requirements, to be implemented by EPA Region 1 via the DPA.

¹⁵ Based on this same information, it appears that the potential annual pollutant emissions increase from the proposed LNG carrier to FSRU transfer operations would not be equal to or greater than the 100 tpy major source PSD applicability threshold for fossil-fuel boilers established in 40 CFR 52.21(b)(1)(i)(a) under the Commonwealth's delegated program. Thus, the remainder of this section will focus on the Commonwealth's major nonattainment NSR and non-major NSR requirements and corresponding definitions.

¹⁶ 310 CMR 7.00: Appendix A(2)

Therefore, Northeast Gateway should submit an NSR Plan Approval application to EPA Region 1 and obtain a permit prior to implementation of the proposed change at NEG.

Finally, based on our review of the available facts and the Commonwealth's operating permit regulations at 310 CMR 7.00: Appendix C, EPA notes that the additional activities that should be addressed in a new NSR air permit, i.e., those emissions from LNG carrier transfers to the FSRU, may also require that the source obtain an operating permit. The available facts¹⁷ indicate that the transfers of LNG from conventional LNG carriers to FSRUs while moored at NEG are under "common control" with other activities at the port, if EPA were to apply its previously articulated interpretation and policy that focuses its inquiry on "the power or authority of one entity to dictate decisions of the other that could affect the applicability of, or compliance with, relevant air pollution regulatory requirements."¹⁸

The EPA is closely coordinating with MARAD and U.S. Coast Guard on this matter. In addition, this response was coordinated with various offices in EPA Headquarters. We look forward to continuing to engage with you in constructive dialogue regarding your planned change in operations at NEG. EPA believes the next step is for you to submit an NSR air permit application, possibly combined with an operating permit application, to EPA for the proposed new operations and activities connected and associated with NEG. The information you convey in your CAA permit application(s) will inform further determinations regarding the nature of the NSR requirements applicable to this proposed change in operations at the facility. The fact that the LNG carriers' boiler and engine emissions should be permitted under the DPA and CAA is consistent with the information conveyed verbally to Excelerate in a teleconference on May 21, 2020 and in conversations with Tetra Tech on March 25, 2020. If you have any questions regarding this letter, please contact Leiran Biton of my staff at (617) 918-1267.

Sincerely,

**DENNIS
DEZIEL**

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Dennis Deziel
Regional Administrator

Cc: Charles Ruehl, Emily Dondzila, Nicole Picot (Excelerate)
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¹⁷ Including facts from Northeast Gateway's April 2020 draft Environmental Impact Assessment

¹⁸ See the Meadowbrook letter from William L. Wehrum, Assistant Administrator, Office of Air and Radiation, EPA, to the Honorable Patrick McDonnell, Secretary, Pennsylvania Department of Environmental Protection (April 30, 2018), available at https://www.epa.gov/sites/production/files/2018-05/documents/meadowbrook_2018.pdf.