NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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May 15, 2020

Mr. Joseph Dean
Manager, Environmental Health and Safety
Transcontinental Gas Pipe Line Company, LLC
2800 Post Oak Boulevard (77056)
P.O. Box 1396
Houston, TX 77251-1396

Re: Notice of Denial of Water Quality Certification
Transcontinental Gas Pipe Line Company, LLC
Northeast Supply Enhancement Project
DEC ID: 2-9902-00109/00006 – Water Quality Certification

Dear Mr. Dean:

On May 17, 2019, Transcontinental Gas Pipe Line Company, LLC ("Transco") submitted a federal Clean Water Act ("CWA") Section 401[1] Water Quality Certification ("WQC") application ("2019 WQC Application") to the New York State Department of Environmental Conservation ("NYSDEC" or "Department") for the proposed Northeast Supply Enhancement Project ("Project").[2] Based on its review of the 2019 WQC Application and supplemental information provided by Transco, the record before the Federal Energy Regulatory Commission ("FERC") regarding the Project,[3] and the over 16,000 public comments received from individuals or organizations during the Department's public comment period,[4] the Department hereby provides notice to Transco that the 2019 WQC Application is denied.[5] As required by Title 6 of the New York Codes,

[1] 33 U.S.C. § 1341.
[2] Transco originally submitted a Joint Application for Permits on June 30, 2017, which included applications for Endangered/Threatened Species (Part 182 Incidental Take Permit), Environmental Conservation Law ("ECL") Article 15 Excavation & Fill in Navigable Waters permit, and a WQC ("Joint Application"). The Department denied the original June 30, 2017 WQC application without prejudice on April 20, 2018. Transco subsequently submitted a new WQC application on May 16, 2018, which the Department denied without prejudice on May 15, 2019 ("2019 Denial"). *See* Notice of Denial, May 15, 2019, *available at*: https://www.dec.ny.gov/docs/administration_pdf/nodtgp.pdf. The 2019 WQC Application is the subject of this Notice of Denial letter. The Part 182 Incidental Take Permit and ECL Article 15 Excavation & Fill in Navigable Waters applications remain pending before the Department and are not the subject of this letter.
[3] *See* FERC Docket No. CP17-101.
[4] The Department received over 16,000 written public comments during the public comment period on the 2019 WQC Application from May 29, 2019 to July 13, 2019.
[5] Separate from the Joint Application for Permits, Transco applied on June 21, 2018 for a State Pollutant Discharge Elimination System ("SPDES") to discharge hydrostatic test discharge water into the Atlantic Ocean. The SPDES permit application remains pending before the Department and is not the subject of this letter.

Rules, and Regulations ("6 NYCRR") Section 621.10, a statement of the Department's basis for this denial is provided below.

Project Background and FERC Application

Along with other components located in Pennsylvania and New Jersey, the Project would involve the installation of approximately 17.4 miles of 26-inch diameter natural gas loop pipeline within New York State waters, to be known as the Raritan Bay Loop. The Raritan Bay Loop would be entirely underwater from New Jersey through Richmond and Queens Counties and would connect to the existing Rockaway Delivery Lateral in Queens, New York. The Project would provide 400,000 dekatherms per day of incremental natural gas capacity to National Grid to serve customers in Brooklyn, Queens, and Long Island.

On March 27, 2017, Transco submitted an application for a Certificate of Public Convenience and Necessity ("Certificate") to FERC under Section 7(c) of the Natural Gas Act[6] for construction and operation of the Project.[7] FERC issued a Draft Environmental Impact Statement ("DEIS") on March 23, 2018. The Department submitted comments to FERC regarding the DEIS on May 14, 2018. FERC issued a Final Environmental Impact Statement ("FEIS") for the Project on January 25, 2019. The FEIS outlined some of the numerous environmental impacts FERC anticipates from the construction and operation of the Project and recommended certain conditions to mitigate some of the impacts. On May 3, 2019, FERC issued Transco a Certificate for the Project,[8] subject to certain environmental conditions recommended in the FEIS. According to FERC, these conditions would mitigate many of the environmental impacts associated with the Project.

2019 WQC Application and Procedural Background

In addition to FERC's issuance of a Certificate for the Project, Transco must obtain a WQC from the Department prior to commencing construction of the Raritan Bay Loop portion of the Project in New York State. Pursuant to Section 401 of the CWA, no federal license for a project can be granted until a WQC is issued or waived by the relevant state agency, which, in this case, is the Department.[9] Likewise, pursuant to Section 401 of the CWA, no federal license for a project can be granted if a WQC is denied.[10]

For the Project, the Certificate issued by FERC recognizes the need for a WQC from the Department. For example, to obtain authorization to commence construction of the Project, Transco must provide FERC with "documentation that it has received all applicable authorizations required under federal law (or evidence of waiver thereof)."[11]

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[6] 15 U.S.C. § 717f(c).
[7] *See* FERC Docket No. CP17-101.
[8] FERC Order Issuing Certificate, 167 FERC ¶ 61,110 (May 3, 2019) ("FERC Order").
[9] 33 U.S.C. § 1341.
[10] *Id.*
[11] FERC Order at 41, Appx. A, Environmental Conditions at ¶ 10.

The FEIS issued by FERC expressly acknowledges that among such authorizations is a WQC from the Department.[12]

As cited above, on June 30, 2017, Transco originally submitted a Joint Application to the Department for the Project. The Department denied the original June 30, 2017 WQC application without prejudice on April 20, 2018, due to incomplete information and the ongoing environmental review by FERC.[13] On May 16, 2018, Transco submitted to the Department a new WQC application for the Project that included additional information ("2018 WQC Application"). The 2018 WQC Application was supplemented on multiple occasions with further additional information, including in response to requests from NYSDEC. A public comment period and public statement hearings were held in early 2019[14] and the Department subsequently denied the 2018 WQC Application without prejudice on May 15, 2019.[15]

On May 17, 2019, Transco submitted to the Department a new WQC application ("2019 WQC Application") for the Project, which is the subject of this Notice of Denial letter. The 2019 WQC Application included changes from the 2018 WQC Application in response to the 2019 Denial and otherwise. Transco supplemented the 2019 WQC Application on May 23, 2019 and June 19, 2019. As previously mentioned, over 16,000 public comments were received from individuals or organizations during a public comment period held between May 29, 2019 through July 13, 2019.

Basis for Denial

The Department denies the 2019 WQC Application based on Transco's inability to demonstrate the Project's compliance with all applicable water quality standards. To obtain a WQC from the Department, an applicant must, among other requirements, demonstrate compliance with State water quality standards. *See* 6 NYCRR § 608.9. Transco has not demonstrated that construction and operation of the Project would comply with applicable water quality standards. Because the Department lacks

[12] FEIS at 1-19, Table 1.5-1.

[13] *See* Notice of Denial/Notice of Incomplete Application, April 20, 2018 ("2018 Denial"), available at https://www.dec.ny.gov/docs/water_pdf/transcodenial42018.pdf. As stated in the 2018 Denial, FERC's environmental review of the Project, conducted pursuant to the National Environmental Policy Act ("NEPA"), takes the place of an environmental review that would otherwise be conducted under the State Environmental Quality Review Act (ECL Article 8). FERC's NEPA review of the Project was incomplete at the time of the 2018 Denial. As mentioned above, notwithstanding the sufficiency or lack thereof of FERC's environmental review, FERC has since issued an FEIS for the Project and issued the Certificate for the Project.

[14] During a public comment period from January 30, 2019 to March 15, 2019, the Department received over 14,000 public comments on behalf of over 45,000 individuals or organizations. Pursuant to 6 NYCRR Section 621.8, legislative public comment hearings were held on February 26, 2019 in Brooklyn, and March 6, 2019 in Rockaway Park.

[15] *See* 2019 Denial. As stated in the 2019 Denial, the Department determined that Transco had not demonstrated that the Project would comply with all applicable water quality standards and that the construction of the Project would likely have significant water quality impacts in New York State. Most notably, according to Transco's own submissions and as acknowledged by FERC [FEIS at 4-123, Table 4.5.2-8], water quality standards for both mercury and copper were projected to be exceeded in certain areas in New York State waters.

reasonable assurances that the Project would comply with applicable water quality standards, particularly without the use of a default 500-foot mixing zone for mercury and copper, the Department hereby denies the 2019 WQC Application.

Transco's projections in the 2019 WQC Application are based on the presumed use of a default 500-foot mixing zone. But as the Department noted in its 2019 Denial, the Department maintains discretion to assign a smaller mixing zone or no mixing zone, based on its assessment of relevant factors including the nature of sediment contamination, the proximity of sensitive habitats, and other qualitative assessments. The Department has considered the Project in light of these criteria and has determined that the default 500-foot mixing zone is not appropriate at all locations proposed to be crossed by the Project. Without the use of a default mixing zone at all locations, the Project would not comply with all applicable water quality standards, and therefore, the Department is denying the 2019 WQC Application.

Based on the Department's review of the 2019 WQC Application for the Raritan Bay Loop portion of the Project, including all supplemental materials, review of the over 16,000 public comments received on the 2019 WQC Application for the Project, and review of the FEIS and other record materials associated with the Project, the Department has determined that the construction of the Project would have adverse water quality impacts in New York State. This includes significant water quality impacts from the resuspension of sediments and other contaminants, including mercury and copper, particularly without the use of a default 500-foot mixing zone in certain areas. The Project would cause impacts to habitats due to the disturbance of shellfish beds and other benthic resources. The water quality impacts would be especially problematic within the productive hard clam area in Raritan Bay located between milepost ("MP") 14 and MP 20, which is considered both a "sensitive habitat"[16] and a "critical resource area" [17] (the "hard clam critical resource area").

Given the nature of anticipated sediment contamination, the importance of the hard clam critical resource area that would be crossed by the Project, along with the overall nature and need for the Project, the use of a default 500-foot mixing zone is not appropriate in all Project areas, particularly in the hard clam critical resource area. Furthermore, in some locations, Transco proposes to bury the Project only four feet under the seafloor, rather than the minimum six-foot burial depth more recently sought by the Department for other offshore projects. Were Transco to maintain a minimum six-foot burial depth throughout the entire Project route, it would also need to propose construction methods that would address any water quality impacts from such a burial depth.

[16] "Sensitive habitat" as referenced in the Technical & Operational Guidance Series ("TOGS") 5.1.9, In-Water and Riparian Management of Sediment and Dredged Material, November 2004 – available at https://www.dec.ny.gov/docs/water_pdf/togs519.pdf

[17] "Critical resource areas" as referenced in the United States Environmental Protection Agency ("EPA") 820-B-14-004 September 2014 Water Quality Standards Handbook, include breeding or spawning grounds, habitat for threatened or endangered species areas with sensitive biota shellfish beds, fisheries, drinking water intakes and sources and recreational areas.

Statutory and Regulatory Basis

The Department, in accordance with CWA Section 401, is required to certify that a facility meets State water quality standards prior to a federal agency issuing a federal license or permit in conjunction with its proposed operation.[18] An applicant for a WQC must provide the Department sufficient information to demonstrate compliance with the State's water quality regulations found at 6 NYCRR Section 608.9 (Water Quality Certifications). Pursuant to this regulation, an applicant must demonstrate compliance with Sections 301, 302, 303, 306 and 307 of the CWA, as implemented by applicable water quality standards set forth in 6 NYCRR Parts 701, 702, 703, 704, and 750, and State statutes, regulations and criteria otherwise applicable to such activities. Denial of a WQC may occur, for example, when an application fails to contain sufficient information to demonstrate compliance with the above-referenced State water quality standards and other applicable State statutes and regulations, or when an application contains information that construction and operation of a project may violate or exceed an applicable water quality standard.

Applicable Water Quality Standards for Mercury and Copper

As described above, and pursuant to 6 NYCRR Section 608.9, Transco must demonstrate that the Project will comply with all applicable water quality standards in order for the Department to issue a WQC for the Project. Among these water quality standards are both narrative and numerical standards, which in turn depend on the regulatory classification of the particular waterbody or waterbodies at issue. *See generally* 6 NYCRR Part 703. The waters that would be crossed by the Project are primarily classified by the Department as either Class SA or Class SB saline surface waters. *See* 6 NYCRR § 890.6.[19] The best usages of Class SA saline surface waters "are shellfishing for market purposes, primary and secondary contract recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival." 6 NYCRR § 701.10.[20] The best usages of Class SB saline surface waters "are primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival." 6 NYCRR § 701.11.[21]

Numerical water quality standards are established by the Department for particular substances and waterbody classifications. For copper, the aquatic chronic standard for SA and SB waters is 3.4 ug/L dissolved, except in the New York/New Jersey harbor where it is 5.6 ug/L dissolved. *See* 6 NYCRR § 703.5. For mercury, the regulatory Health (Fish Consumption) water quality standard is 0.70 ng/L or $7x10^{-4}$ ug/L (dissolved). *See* 6 NYCRR § 703.5, Table 1. The applicable standard for mercury relevant to the Project, however, is higher and is based on a multiple discharge variance procedure developed

[18] 33 U.S.C. § 1341.
[19] *See also* FEIS at 4-50.
[20] *See also id.*
[21] *See also id.*

according to 6 NYCRR Section 702.17(h).[22] The resulting mercury water quality standard variance concentration is 50 ng/L or 0.05 ug/L total mercury. Along with other applicable water standards, the construction and operation of the Project must comply with these numerical standards for copper and mercury.

Transco's Contaminant Modeling

Transco conducted contaminant modeling for various compounds, including copper and mercury. This modeling projected concentrations of compounds at the edge of a default 500-foot mixing zone at various locations. As acknowledged by FERC in both the FEIS and the FERC Order, based on a review of the modeling information submitted by Transco itself, "[f]or some of the modeled scenarios, water quality standards for mercury and copper would not be met at the edge of the mixing zone."[23]

Transco's earlier models projected exceedances of the numerical water quality standard variance concentration for mercury at the edge of a default 500-foot mixing zone within the hard clam critical resource area at Vibracore sites VC6, VC16, and VC17.[24] Within this hard clam critical resource area, the highest projected concentration for mercury was 0.1 ug/L, which would have been double the variance-based water quality standard of 0.05 ug/L.[25] In addition to the modeling results within the hard clam critical resource area, Transco's earlier modeling projected exceedances for mercury by as much as more than double the variance-based water quality standard of 0.05 ug/L, with a maximum projected concentration of 0.12 ug/L.[26] As described above, and as was described in the 2019 Denial, the variance concentration is already significantly higher than the regulatory water quality standards for mercury in 6 NYCRR Section 703.5. Similarly, exceedances of the numerical water quality standards for copper were projected in Transco's original modeling to occur at the edge of a default 500-foot mixing zone within the hard clam critical resource area at Vibracore sites VC7 and VC16.[27]

Transco submitted Addendum B to its Contaminant Transport Modeling Results as part of the 2019 WQC Application that included additional pollutant dispersion calculations for Vibracore sites VC7, VC37 and VC42. Addendum B modified the rate of dredging for each of the segments around VC7 to 4,800 cubic feet per hour, and for segments around VC37 and VC42 to 4,500 cubic feet per hour. For segments around VC37 and VC42, Addendum B also incorporated a "slack-tide pause." On June 19, 2019, Transco submitted Addendum C to its Contaminant Transport Modeling Results that included additional pollutant dispersion calculations for Vibracore sites VC6, VC16, VC17, and VC38. Addendum C modified the rate of dredging for each of the segments around

[22] *See* NYSDEC TOGS 1.3.10 Mercury - available at: https://www.dec.ny.gov/docs/water_pdf/tog1310final.pdf.
[23] FEIS at ES-12; FERC Order at p.19, ¶ 49.
[24] Supplemental Informational Filing #A-2, Table 3-3 "Summary of Addendum A Contaminant Modeling Results – October 2018." *See also* FEIS at ES-12, 4-122 to 4-123, Table 4.5.2-8; FERC Order at 19, 49.
[25] *Id.*
[26] *Id.*
[27] FEIS at 4-123, Table 4.5.2-8; Supplemental Informational Filing #A-2, Table 3-3 "Summary of Addendum A Contaminant Modeling Results – October 2018."

VC6, VC16, VC17, and VC37 from 11,250 cubic feet per hour to 4,800 cubic feet per hour. Addendum C notes that the reduced dredging rate lengthens the time necessary to complete the proposed Project. As a result of the reduction in dredging rates and implementation of selective "slack-tide pause," Transco's revised modeling results (Addendum B and Addendum C) now project no exceedances of the variance-based water quality standard of 0.05 ug/L for mercury or the standard of 5.6 ug/L for copper at the edge of a presumed default 500-foot mixing zone. This analysis improperly assumes application of a default 500-foot mixing zone at all locations. As explained below, however, the use of the default 500-foot mixing zone has not been established at all locations and is not appropriate in certain areas along the proposed Project route.

Finally, without further documentation, the Department cannot accept the modeled sediment loss rate of 5%, which was used to project sediment loss due to jet trencher activities. The 5% loss rate is applied in the hard clam critical resource area (MP 16.6 to MP 17.3 and MP 17.9 to MP 19.7) where jetting installation is proposed. From the FEIS, in Table 3.6-1, the percent dispersed rate from the jet trencher is listed as 5% whereas the dispersed rate from a jet sled is listed as 90%, with a 10% dispersed rate for a mechanical plough. The footnotes to the Table indicate that the jet sled equipment dispersed rate is based on information received from LL&G Construction Company and the mechanical plough equipment dispersed rate is based on information received from Royal IHC. However, there is no basis for the jet trencher dispersed rate listed in this table. Contained in Transco's submission dated May 16, 2019, is Addendum 5 - February 15, 2019 Regarding: NESE Modeling Results (Addendum). In this Addendum, Transco assumes losses from the jet trencher to be 5% of the total disturbance volume. Modeling results from other comparable jetting installation projects that NYSDEC has reviewed have assumed a 25% to 30% sediment loss rate for jetting installation activities. Without a reference to the basis for the 5% loss rate assumed for jet trenching, it is not possible to verify this 5% loss rate assumption. This loss rate is likely to affect the water quality projections contained in Transco's Contaminant Transport Modeling Results and associated addenda.

Use of Default Mixing Zone of 500 feet

All of the water quality standard exceedances previously projected by Transco were based on the presumed use of a default 500-foot mixing zone, as explained in the 2019 Denial. Similarly, as explained above, Transco's updated projections in the 2019 WQC Application – which projected no exceedances for applicable mercury or copper standards – were all based on the use of a default 500-foot mixing zone. Without the use of a 500-foot mixing zone in certain locations along the proposed Project route, Transco's projections do not provide reasonable assurances that construction and operation of the Project would meet all applicable water quality standards.[28]

[28] The Department's discretion to apply a mixing zone other than the default 500-foot mixing zone is consistent with guidance by EPA Office of Water EPA 820-B-14-004 September 2014 Water Quality Standards Handbook Chapter 5: General Policies.

As noted in the 2019 Denial, the Department has discretion to reduce the size of a mixing zone from the default 500-foot size, or eliminate a mixing zone altogether, based upon a case-by-case analysis of the facts particular to each application and location. While the Department previously noted the default 500-foot mixing zone value, the Department has made no final discretionary determination regarding the appropriate mixing zone at all locations for the Project. In fact, the Department noted in the 2019 Denial that, in this case, the Department could assign a mixing zone of less than 500 feet. Neither the 2019 Denial nor any other previous document with Transco assigned a particular mixing zone for the Project because it was not necessary to do so at that time. That is, based on the previous application that was before the Department at the time, Transco had projected exceedances for mercury and copper even with the use of a default 500-foot mixing zone.

The Department's discretion in determining the size and shape of a mixing zone allows the Department to ensure that natural resources are protected by minimizing the suspension of contaminated sediment during permitted activities. As outlined in TOGS 5.1.9 - *In-Water and Riparian Management of Sediment and Dredged Material*, this case-by-case analysis examines the following factors: (1) the nature of the sediment contamination; (2) proximity of sensitive habitats or water use areas; (3) proximity of sensitive life stages of important biological resources; and (4) other qualitative assessment factors relevant to the project, including a comparison of the proposed project to similar projects.[29] This approach is consistent with the EPA's guidance on mixing zones, which provides: "States and tribes should conclude that mixing zones are not appropriate … where they may endanger critical areas such as breeding and spawning grounds, habitat for threatened or endangered species, areas with sensitive biota, *shellfish beds*, fisheries, drinking water intakes and sources, and recreational areas."[30] Transco's sediment sampling indicates the presence of a water quality limiting substance (mercury) and analytes detected in the sediment at greater than Class A threshold values (metals and polychlorinated biphenyls ("PCBs"). Based on a consideration of these factors, as described below, the Department concludes that the use of a default 500-foot mixing zone is inappropriate in certain locations proposed to be crossed by the Project, namely, the hard clam critical resource area of Raritan Bay.

1. Nature of the Sediment Contamination

As mentioned above, sediment sampling in the Project area has identified both mercury and copper as well as arsenic, silver, nickel, lead, zinc, PCB and dioxin/furan sediment contamination buried in the hard clam critical resource area (VC6, VC7, VC16, VC17). As part of its review of the 2019 WQC Application, the Department considered the historical background contaminant concentrations in the area proposed to be crossed by the Project, including for mercury and copper. In particular, NYSDEC asked Transco for ambient water column concentration information.[31] Transco supplied historical water

[29] TOGS 5.1.9, Section V. Permit Conditions for Dredging and Dredged Material Management at 35-37.
[30] *See* EPA 820-B-14-004, September 2014 Water Quality Standards Handbook, Chapter 5 (emphasis added).
[31] *See* Supplemental Informational Filing #A-2, at 12.

column monitoring data, including historical background contaminant concentrations in the water column.[32] Resuspension of contaminated sediment caused by the construction of the Project will release contaminants into the water column and these contaminant concentrations will exceed background levels. Consequently, construction activities are projected to cause the exceedances for mercury and copper.

Copper is a critical contaminant that is closely regulated in the environment due to its potential to have drastic and immediate effect on aquatic life. Suspending copper-laden sediments may adversely affect and harm aquatic life, inhibit reproduction, or kill aquatic life. Similarly, mercury is a metal that contaminates the environment from human activities, and suspension of mercury-laden sediments may adversely affect aquatic life, including harming, inhibiting reproduction, or killing aquatic life.

Due to the bioaccumulative effect of mercury, there is also potential for such adverse effects to migrate up the food chain, adversely affecting other organisms. Although analysis of contaminant transport has thus far utilized the variance-based water quality standard of 0.05 ug/L for mercury, the Department notes that the Health (Fish Consumption) standard for dissolved mercury is 0.0007 ug/L, due to mercury's bioaccumulative properties. *See* 6 NYCRR § 703.5, Table 1. Increased scrutiny of mixing zone usage for such bioaccumulative pollutants is consistent with EPA guidance, which goes further and "recommends that state and tribal mixing zone policies do not allow mixing zones for discharges of bioaccumulative pollutants."[33] Bioaccumulation is particularly a concern in areas designated as Class SA waterbodies where shellfishing is a best use. *See* 6 NYCRR § 701.10.

Copper and mercury, as well as other heavy metals such as silver, zinc, and nickel, can have negative impacts on metamorphosis, growth and survival of larval clams, which are at a critical life stage and are more susceptible to impacts from metals and contaminants than their adult counterparts. Larval stage hard clams are more vulnerable to the negative impacts of exposure to heavy metals during this critical life stage that results in increased mortality and impacts to growth and successful metamorphosis to the "setting" stage. In addition to the impact of such exposure on the mortality of hard clam larvae when exposed to toxic levels of copper or mercury, these and other heavy metals in seawater, particulate matter and algae would be filtered by larvae, juvenile, and adult clams. The vulnerability of hard clams to such pollutants is of particular concern to the Department because the proposed Project is located in an important area for shellfish propagation and survival, as is discussed in greater detail below.

2. Proximity of Sensitive Habitats

The Project is proposed to be located in an important area for shellfish propagation and survival. Currently, Raritan Bay supports a healthy abundance of diverse resident and migratory marine species and specifically a valuable hard clam critical resource area. In particular, Raritan Bay is one of last known highly productive hard clam beds in the

[32] *See id.* at 14-15.
[33] *See* EPA 820-B-14-004, September 2014 Water Quality Standards Handbook, Chapter 5.

State, and its benthic habitat is particularly critical and sensitive. Specifically, the hard clam critical resource area in Raritan Bay is located between MP 14.0 and MP 20. Transco estimated that the hard clam density between MP 14.4 and MP 21.6 to be approximately 69.6 individuals per square foot. The majority (approximately 74%) of hard clam individuals collected in this area were less than one inch (25 millimeters) in size.[34] Part of this area is currently an uncertified shellfish area, meaning that shellfish harvest is currently prohibited except pursuant to a Department-managed transplant program. Due in large part to high-quality habitat with no current harvest, there is currently a thriving hard clam population in these areas.

Overall, the construction of the Project would likely have significant adverse impacts to shellfish propagation and survival.[35] As stated by FERC in the FEIS, "the primary impacts associated with construction of the Raritan Bay Loop would be the potential adverse effects on aquatic species due to sediment disturbance, increased turbidity and sediment redeposition (including contaminated sediments)."[36] In particular, seabed disturbance from the construction of the Project would have direct impacts including "mortality, injury, or temporary displacement of the organisms living on, in, or near the 87.8 acres of seafloor directly affected by the Project."[37] Moreover, indirect impacts from construction of the Project "would include suspension of sediments in the water column, which could clog fish gills and obscure visual stimuli, and the redistribution of sediments that fall out of suspension, which could bury benthic and demersal species, resulting in mortality of eggs and other life stages. Benthic invertebrates and demersal (bottom-dwelling) fish species in or near areas directly impacted by construction would be most affected."[38] The Project would disrupt early life stages of hard clams settled on the bottom sediments that would be buried by sediment deposition with an expected high rate of mortality. Smaller clams might experience as high a mortality rate as 100%. Adult clams may also experience mortality but to a lesser degree than juvenile clams.

As described above, and as acknowledged by both Transco and FERC, if construction of the Raritan Bay Loop portion of the Project were to proceed, there would be various environmental impacts, including to water quality, shellfish beds, and other benthic resources. Based on information contained in Transco's Contaminant Transport Modeling Results (including Addenda B and C), the Project would result in a 1,000-foot-wide corridor along which water quality standards for copper and mercury are projected to be exceeded. This corridor is currently proposed to cut directly through the Raritan Bay hard clam critical resource area. As noted above, the Health (Fish Consumption) standard for dissolved mercury is 0.0007 ug/L, due to the bioaccumulative effect of mercury. *See* 6 NYCRR § 703.5, Table 1. Given the Project proposes to create a 1,000-foot-wide

[34] FEIS at 4-101 to 4-102.
[35] As mentioned above, pursuant to 6 NYCRR Section 701.10, the best usages of Class SA saline surface waters are shellfishing for market purposes, primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival. And pursuant to 6 NYCRR Section 701.11, the best usages of Class SB saline surface waters are primary and secondary contact recreation and fishing. These waters shall be suitable for fish, shellfish and wildlife propagation and survival.
[36] FEIS at ES-10.
[37] FEIS at ES-11. *See also* FERC Order at 17-18, ¶ 46.
[38] FEIS at ES-11.

corridor through the hard clam critical resource area where mercury-laden sediment is suspended at levels roughly 100 times more concentrated than the Health (Fish Consumption) standard, the application of a default 500-foot mixing zone is not appropriate.

Given the severity of the potential adverse impact to the unique natural resource of the hard clam critical resource area, Transco's proposed use of a default 500-foot mixing zone is not appropriate in this location. Furthermore, because the model predicts only achieving the water quality standard concentration for copper and mercury at the edge of the default mixing zone, the concentrations of these contaminants within the confines of the default mixing zone would be expected to exceed the water quality standards. This will be especially true closer to the source of resuspension. Therefore, reducing the size of the default mixing zone in a specific area would likely lead to additional and greater exceedances of mercury and copper water quality standards in that area and may also lead to exceedances of other applicable standards. None of the material submitted by Transco to the Department or to FERC appears to address Transco's ability to reduce the size of the mixing zone, nor does Transco address what actions could be taken to avoid the hard clam critical resource area or minimize the likely adverse effects of the Project on the hard clam critical resource area (beyond the Best Management Practices ("BMPs") already proposed, such as the use of an environmental bucket or elimination of barge overflow). Therefore, given the proximity of sensitive habitats to certain areas along the proposed Project route, the application of this factor also weighs towards the use of a smaller or no mixing zone.

3. Proximity of Sensitive Life Stages of Important Biological Resources

Based on the requirements in TOGS 5.1.9, Table 3, for Class C sediment, Transco is already implementing the BMPs of no barge overflow and the use of an environmental bucket for dredging. Transco also proposes to slow its proposed rate of dredging as a means of addressing compliance with water quality standards. Further slowing the rate of dredging, however, would also potentially interfere with the required no work windows for important biological species because there is already minimal buffer, or float, built into the schedule.

Transco would be subject to various construction work windows for the Project, including to protect certain threatened and endangered species such as Atlantic Sturgeon and species in decline such as Winter Flounder.[39] Applicable work windows in locations that would be crossed by the Project already result in a relatively tight construction schedule due to the presence of these and other species. As part of the Joint Application, Transco applied for a Part 182 Incidental Take Permit from the Department. As an example of an applicable construction work window, if Transco cannot comply with the

[39] *See* Species-related Time-of-year (TOYR) Flexibility Requests – revised December 14, 2018 Northeast Supply Enhancement Project. *See also* FERC Order at 42, Appx. A Environmental Conditions, ¶ 14 (addressing requirement for Transco to provide, prior to commencing construction of the Raritan Bay Loop portion of the Project, documentation of timing restriction commitments and allowable work within these periods).

following conditions for MP 30 to MP 35.5, then an incidental take of Atlantic Sturgeon may occur:

- No work May 1st through June 30th and no work October 1st through November 30th, with the exception of limited low-impact activities (hand jetting, spool installation, hydrotesting and drying), only.
- From March 1st through April 30th, work can occur provided that no sturgeon are present. Absence of sturgeon must be confirmed with acoustic monitoring prior to work being conducted.

Transco's construction schedule does not appear to provide any buffers to avoid impacts to or take of important biological species. As a result, even if a reduced construction rate would ensure compliance with water quality standards, it may not be possible for Transco to employ such a reduced rate while still complying with applicable construction work windows to protect species. Thus, Transco has not provided sufficient documentation to the Department that any identified need to reduce the rate of dredging to comply with water quality standards would be possible within applicable work windows to protect important biological species.

4. Other Qualitative Assessments

In determining whether to assign the default 500-foot mixing zone or a different value, the Department may also consider "[q]ualitative assessments which compare the proposed project to similar projects . . . ."[40] Based on the factors discussed above related to the sensitive hard clam area that would be crossed by the Project, it is not necessary to reach this factor to determine the appropriate mixing zone. While the application of this factor is not necessary for the Department to determine that the default 500-foot mixing is inappropriate in the hard clam critical resource area, consideration of this criterion is consistent with the application of the other factors. As discussed further below, this includes qualitative assessments of the Project's greenhouse gas ("GHG") emissions and climate change impacts, especially given the State's recently-enacted Climate Leadership and Community Protection Act ("Climate Act"),[41] as well as the need for the Project in light of anticipated natural gas supply and demand in the downstate region. The assessment of these additional qualitative factors provides further supplemental support for the Department's determination that the default 500-foot mixing zone is inappropriate for the hard clam critical resource area.

Overall, based on a consideration of the factors explained above, the Department concludes that the use of the default 500-foot mixing zone is not appropriate at certain locations for the proposed Project, including the hard clam critical resource area.

[40] TOGS 5.1.9 at 37.
[41] Chapter 106 of the Laws of 2019.

Compliance with Water Quality Standards without Default Mixing Zone

Given NYSDEC's case-specific determination that the assignment of the default mixing zone of 500 feet is not appropriate in all locations for this Project, particularly at the hard clam critical resource area, NYSDEC must assess the Project's projected compliance with applicable water quality standards without the use of the default mixing zone. Based on its review of the 2019 WQC Application and other materials outlined above, the Department does not have reasonable assurances that construction of the Project would comply with applicable water quality standards once the default 500-foot mixing zone is removed from the analysis.

During review of the 2019 WQC Application, NYSDEC also considered Transco's proposal to bury the pipeline only four feet under the seafloor in some locations. This burial depth is less than the six feet minimum depth sought by the Department in other contexts, such as newly proposed underwater electric transmission lines within the New York Bight. A six-foot burial depth is generally aimed at providing additional protection from a fishing and fisheries perspective, to avoid exposing or snagging the line and to minimize risk of vessel or gear impact that might compromise the pipeline.[42] Additionally, the Project is proposed in an area where transmission cables may be sited in the future to transmit renewable energy generated by offshore wind projects to both New York and New Jersey. As such, the design of any new offshore cable or pipeline must consider and avoid potential conflicts with future projects, including installation at a minimum depth of six feet.[43] An evaluation of a deeper burial depth to avoid gear interaction and conflicts with future projects in the Raritan Bay and more broadly, the New York Bight, was not considered in the 2019 WQC Application. However, absent an evaluation by Transco, the Department cannot make a determination regarding water quality impact of the more appropriate six-foot burial depth.

Additional Impacts and Qualitative Assessment

In addition to the water quality standard exceedances for mercury and copper projected to be caused by the construction of the Project without the application of a default mixing zone that are the basis for this denial, the construction and operation of the Project would cause numerous other significant adverse environmental impacts. This includes impacts to shellfish propagation and survival, as well as impacts to other

[42] For example, in a letter to the Bureau of Ocean Energy Management on November 19, 2018, New York State agencies recommended a six-foot burial depth for offshore wind transmission lines: https://www.regulations.gov/document?D=BOEM-2018-0010-0085. The letter cites to conflicts with, "vessel anchorage, effective fishing bottom-gear deployment, finfish and shellfish stocks, and related habitat that may be harmed or inaccessible to fishing due to transmission cable protection measures and [inadequate] cable burial depth." New York State agencies requested, "a focused cumulative impacts analysis that considers planned offshore wind development in sites in the same geographic region over the next 5 years." Additionally, New York State agencies recommended removal of cable and protective measures when projects are decommissioned.

[43] NYSDEC submitted a comment letter to the New York State Public Service Commission ("PSC") for Case 18-T-0604 on July 12, 2019, indicating that offshore wind transmission cables should be buried at least six feet to avoid interactions with fishing gear and to prevent potential exposure of the cable.

important biological species. Moreover, the Project would result in GHG emissions, which cause climate change and thus indirectly impact water and coastal resources, including from the construction and operation of the Project, and from reasonably foreseeable upstream and downstream GHG emissions.[44] The Project's climate change impacts due to GHG emissions are especially important in light of the State's recently-enacted Climate Act. Finally, recent trends in the supply and demand of natural gas do not necessarily demonstrate the need for the Project and suggest at least one other alternative to meeting any projected supply shortages or reliability concerns. While none of these additional impacts are necessary for the Department to determine the inappropriateness of the default mixing zone within the hard clam critical resource area, the following qualitative assessment of these impacts is consistent with NYSDEC's determination to deny the 2019 WQC Application.

Because of these impacts from the construction and operation of the Project, mitigation would be required if the Project were to proceed and should adequately address them. Indeed, pursuant to the FERC Order, prior to commencing construction of the Raritan Bay Loop, Transco must provide FERC with "documentation of consultation with [the Department and other agencies] regarding its final proposed mitigation for fisheries and aquatic resources."[45]

Greenhouse Gas Emissions and Climate Impacts

While the 2019 WQC Application was pending before the Department, the State enacted the Climate Act. Among other things, as described further below, the Climate Act codifies the State's energy policy and goals, requires Statewide reductions in GHG emissions, and necessitates a transition away from the use of natural gas to produce electricity. Particularly without the identification of alternatives or GHG mitigation measures, the Project appears to be inconsistent with these requirements, as set forth below.

First, the Project will result in GHG emissions, which cause and contribute to climate change. GHG emissions associated with the Project include those from the full lifecycle of natural gas that will be transported through the Project. This includes upstream emissions, GHG emissions associated with the construction and operation of the Project, and downstream emissions. Upstream GHG emissions from the Project include those associated with the extraction and transmission of natural gas, including the extraction or production of the natural gas that is transported through the pipeline. This would include GHG emissions associated with the extraction of natural gas in Pennsylvania through high-volume hydraulic fracturing, provided such gas is ultimately transported for consumption in the State through the Project. GHG emissions associated with the operation of the Project would include leakage and other losses of gas transported through the pipeline. Downstream GHG emissions from the Project include those caused

[44] *See* FERC Order at 33-34, ¶ 90; Opinion of LaFleur, Commissioner, Concurring; and Opinion of Glick, Commissioner, Dissenting in Part. *See also* Order Denying Rehearing and Stay, April 16, 2020, 171 FERC ¶ 61,031; Opinion of Glick, Commissioner, Dissenting in Part.
[47] FERC Order at 42, Appx. A Environmental Conditions, ¶ 14.

by the combustion, by end-users in the National Grid service territory in New York City and Long Island, of the natural gas that is transported through the pipeline.

Second, in order to achieve the State's critical and ambitious climate change and clean energy policies, the State needs to continue its ongoing transition away from natural gas and other fossil fuels. While the Department recognizes that many building assets in the State currently rely on natural gas for heating and other energy uses, the continued long-term use of fossil fuels is inconsistent with the State's laws and objectives and with the actions necessary to prevent the most severe impacts from climate change. Therefore, the State must continue to support the ongoing transition to renewable and other clean sources of energy, as it works to ultimately eliminate all fossil fuel combustion sources that cannot be counterbalanced by guaranteed permanent carbon sequestration. Without appropriate alternatives or GHG mitigation measures, the Project could extend the amount of time that natural gas may be relied upon to produce energy, which could in turn delay, frustrate, or increase the cost of the necessary transition away from natural gas and other fossil fuels.

Third, the Climate Act requires a reduction of GHG emissions, a transition to renewable and other clean sources of energy, and a pathway for the ultimate achievement of net zero GHG emissions in all sectors of the economy. The Project would be inconsistent with or interfere with the Statewide GHG emission limits and other requirements established in the Climate Act, without the identification of additional alternatives or GHG mitigation measures.

In particular, the Climate Act adds a new Article 75 to the ECL. ECL Article 75 establishes Statewide GHG emission limits, requiring a 40 percent reduction in Statewide GHG emissions from 1990 levels by 2030, and an 85 percent reduction in Statewide GHG emissions from 1990 levels by 2050.[46] Moreover, as set forth in the Climate Act, Statewide GHG emissions include all emissions of GHGs from sources within the State, as well as GHGs "produced outside of the State associated with either the generation of electricity imported into the State or the extraction and transmission of fossil fuels imported into the State."[47] Thus, because natural gas that is extracted outside of the State would be transmitted through the Project to serve National Grid customers in New York City and Long Island, upstream GHG emissions associated with the Project would be considered part of Statewide GHG emissions under the Climate Act, in addition to the remaining portion of lifecycle GHG emissions associated with the Project. In addition, the Climate Act specifies that Statewide GHG emission limits be measured on a carbon dioxide equivalent basis, using a 20-year global warming potential.[48] The methane emissions associated with the Project are more impactful in terms of carbon dioxide equivalents when measured on this shorter-term basis, as specified in the Climate Act.

Moreover, the Climate Act includes the addition of Section 66-p to the Public Service Law ("PSL"). Among other things, PSL Section 66-p requires the PSC to establish

[46] ECL § 75-0107(1).
[47] ECL § 75-0101(13).
[48] ECL § 75-0101(2) and (8).

a program to ensure that 70 percent of the State's electricity is generated by renewable energy sources by 2030, and that 100 percent of the State's electricity is generated by carbon-free energy by 2040. The use of natural gas, such as that transported through the Project, to produce electricity would be inconsistent with these renewable and carbon-free energy generation requirements.

Furthermore, the Climate Act establishes a Climate Action Council, which among other things will be required to develop a Scoping Plan. The Scoping Plan must outline recommendations for attaining the Statewide GHG emission limits established pursuant to ECL Section 75-0107, including regulatory measures to be implemented by NYSDEC.[49] The Scoping Plan to be developed by the Climate Action Council must also include recommendations for the reduction of GHG emissions beyond the 85 percent by 2050 reduction requirement, to achieve net zero emissions in all sectors of the economy.[50] Many details regarding implementation of the Climate Act will be determined by the Climate Action Council in the Scoping Plan, and during the regulatory process by NYSDEC and other agencies, with substantial input from environmental justice and other stakeholders. Notwithstanding these important processes, it is already clear that achievement of the Statewide GHG emission limits established pursuant to ECL Section 75-0107, as well as achievement of net zero emissions in all sectors of the economy, will ultimately require a transition away from natural gas and other fossil fuels to produce energy. As this Project would facilitate the use of natural gas for an extended period of time, and may frustrate or delay the necessary transition away from natural gas to renewable and other clean sources of energy, it is clear that the Project as it is currently envisioned is inconsistent with the energy and climate policies, laws, and goals of the State. While not necessary for the Department's determination, this inconsistency further supports the Department's determination that the default mixing zone is inappropriate at all locations of the Project. This is especially true given that the State should not sacrifice its water quality, sensitive habitats, and important biological resources for a project that would have adverse climate impacts and one that runs counter to the State's policy to significantly reduce GHGs by transitioning away from the use of natural gas to produce electricity.

Need for and Alternatives to Project

The Department focused its review of the 2019 WQC Application on assessing whether the construction and operation of the Project would comply with applicable water quality standards. Whether the Project is needed, and whether alternatives to the Project are available to supply natural gas and meet long-term demand in the downstate region, are questions not directly at issue in the Department's review of the 2019 WQC Application. Thus, this denial does not represent a determination by the Department regarding whether the Project is necessary to meet long-term demand for natural gas in the downstate region. However, as part of its consideration of the appropriateness of applying the discretionary default mixing zone of 500 feet, the Department may review the overall impacts of the project as compared to alternatives in assessing the impacts to

[49] ECL § 75-0103(11)-(14).
[50] ECL § 75-0103(11).

the nature of the sediment contamination, the proximity of sensitive habitats or water use areas, and proximity of sensitive life stages of important biological resources. As discussed above, Transco's sampling indicating the presence of a water quality limiting substance (mercury) and analytes detected in the sediment at greater than Class A threshold values (metals and PCBs), are grounds to withhold providing the default 500-foot mixing zone. The availability of a less impactful alternative is relevant and provides further support to the Department to fully protect its natural resources and water quality.

While not necessary for the Department in determining the inappropriateness of the default mixing zone, the Department recognizes consideration by the public, National Grid, the PSC, and other entities regarding the need for and potential alternatives to the Project. For example, this issue is part of an ongoing proceeding instituted by the PSC to address and investigate denials of service requests by National Grid.[51] On February 23, 2020, National Grid released its Natural Gas Long-Term Capacity Report for Brooklyn, Queens, Staten Island, and Long Island ("Capacity Report").[52] National Grid issued a Supplemental Report on May 8, 2020, taking into account additional input from the public and other sources, as well as the potential economic impacts in the State from the COVID-19 pandemic ("Supplemental Report").[53]

National Grid's Supplemental Report found natural gas demand reductions in the downstate region due to the impact of COVID-19 and identified additional incremental supply. Based on this updated analysis, the Supplemental Report forecasts a smaller gap between gas demand and supply than previously estimated by National Grid in the Capacity Report. The Supplemental Report also identifies an additional option to close the future gap between demand and supply, as projected by National Grid. Finally, the Supplemental Report includes additional analyses of various options in terms of their potential environmental impacts, GHG emissions, and consistency with the Climate Act.

Based on this updated analysis, National Grid's Supplemental Report identifies and recommends at least one alternative to the Project. This alternative would include enhancements to existing infrastructure combined with incremental energy efficiency and demand response measures. While the precise details of this alternative are not relevant to this denial, according to National Grid, this alternative would meet the projected gap between demand and supply of natural gas even without the installation of the Project. Critically, as compared to the Project, National Grid concludes that this alternative is less environmentally impactful, in terms of water quality, GHG emissions and otherwise, and more consistent with the requirements of the Climate Act.

Therefore, while 100 percent of the natural gas to be transported through the Project would be provided to National Grid to serve customers in the downstate region, National Grid itself has identified at least one potential alternative to the Project that could

[51] *See* PSC Case No. 19-G-0678.
[52] National Grid, Natural Gas Long-Term Capacity Report, PSC Case No. 19-G-0678 (filed Feb. 24, 2020).
[53] National Grid, Natural Gas Long-Term Capacity Supplemental Report, PSC Case No. 19-G-0678 (filed May 8, 2020).

meet the same demand. Moreover, National Grid's analysis concludes that this alternative would have less of an environmental impact and be more in line with the long-term energy policies of the State as set forth in the Climate Act. Thus, in assessing the appropriate mixing zone for the Project, the apparent lack of need for the Project, as well as its increased impacts to water quality as compared to identified alternatives, provides further support of the Department's determination that the default 500-foot mixing zone is inappropriate at certain locations.

Conclusion

For the reasons described above, the Department denies the 2019 WQC Application.

Pursuant to 6 NYCRR Section 621.10(a)(2), Transco has the right to an adjudicatory hearing regarding this denial of the 2019 WQC Application. Any such request for a hearing must be made in writing to me within 30 days of the date of this letter.

If you have any questions regarding this letter or the Project, you may contact me or Karen Gaidasz in my office, or Jonathan Binder in the Office of General Counsel.

Sincerely,

Daniel Whitehead, Director
Division of Environmental Permits

cc: FERC (Docket No. CP17-101)
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