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CERTIFICATE OF THE SECRETARY OF ENERGY AND ENVIRONMENTAL AFFAIRS
ON THE
DRAFT ENVIRONMENTAL IMPACT REPORT

PROJECT NAME : Tennessee Gas Pipeline 261 Upgrade Projects
PROJECT MUNICIPALITY : Agawam and Longmeadow
PROJECT WATERSHED : Connecticut River
EEA NUMBER : 15879
PROJECT PROPONENT : Tennessee Gas Pipeline Company LLC
DATE NOTICED IN MONITOR : January 9, 2019

Pursuant to the Massachusetts Environmental Policy Act (MEPA; M.G.L. c. 30, ss. 61-62I) and Section 11.08 of the MEPA regulations (301 CMR 11.00), I have reviewed the Draft Environmental Impact Report (DEIR) and hereby determine that it **adequately and properly complies** with MEPA and its implementing regulations. The Proponent may prepare and submit for review a Final Environmental Impact Report (FEIR).

Project Description

As described in the DEIR, the project is proposed to increase capacity and enhance reliability of the Tennessee Gas Pipeline (TGP) system to provide gas to Columbia Gas of Massachusetts (CMA) and the Holyoke Gas and Electric Department (HG&E). The Department of Public Utilities (DPU) issued an Order (DPU 17-172) on May 31, 2018 authorizing the transportation contract between TGP and CMA (Precedent Agreement).

The DEIR identified three projects: construction of a 2.1-mile long pipeline loop in Agawam; replacement of two turbine compressors with a single, larger compressor at TGP's

Compressor Station 261 (CS 261) in Agawam; and construction of a new meter station in Longmeadow. It also identified appurtenant structures and access roads and removal of a portion of an inactive pipeline. The pipeline loop will increase capacity by 17,000 dekatherms per day (Dth/d). The capacity of CS 261 will increase from approximately 1,191,000 Dth/d to 1,244,000 Dth/d. The new turbine compressor will provide an additional 30,800 Dth/d to the nearest delivery point on the CMA system and 25,000 Dth/d to TGP's regional delivery system.

Pipeline Loop

The pipeline loop will include a 12-inch diameter pipe that will tie in to existing structures at CS 261, cross under Suffield Street to the gas transmission right-of-way (ROW) on the west side of the street, and continue north within or adjacent to the ROW to the terminus of the pipeline loop approximately 500 feet (ft) north of Silver Street. Facilities for the cleaning and inspection of the pipeline loop by "pig" devices will be installed at either end of the project, including a pig launcher at CS 261 and a pig receiver at the northern terminus.

Approximately 1.9 miles (90 percent) of the pipeline loop will be constructed either within the existing ROW (1.5 miles) or on the CS 261 site (0.4 miles). To avoid a residential apartment complex and power line structures, the pipeline route will be located within a new 40-ft wide ROW easement in two areas totaling 0.2 miles. In areas where the pipeline loop will be constructed within the existing ROW, the permanent ROW will be expanded by 20 ft. The project will add a total of 5.51 acres of new ROW. Three new permanent access roads (PAR) to maintain the pipeline are proposed on existing farm roads and utility easements. The PARs will require 1.07 acres of new easements.

Construction activities will affect 32.5 acres of land, including the existing and proposed permanent ROW, a 75-ft wide construction ROW centered on the pipeline loop, additional temporary workspaces (ATWS), the PARs, four temporary access roads (TAR) and a pipeyard. The pipeyard will be located on an 11.3-acre parcel adjacent to CS 261. The pipeyard includes 3.3 acres in Massachusetts and 8 acres in Connecticut.

The pipeline will be installed primarily by the following means:

1. Clearing and grading of the construction zone;
2. Trenching;
3. Delivery and assembly of pipe joints;
4. Lowering of the pipeline into the trench;
5. Backfilling and grade restoration; and
6. Hydrostatic testing.

The trench will be approximately 28 inches wide and the pipeline loop will be buried to a depth of three to five feet. In areas where the pipeline loop will be installed adjacent to the abandoned 6-inch pipe, the trench will be wide enough to install the new pipe and to remove the existing one. Horizontal Directional Drilling (HDD) will be used to install an approximately 0.3-mile long section of the pipeline. Approximately 1.1 miles of the abandoned 6-inch diameter pipe will be removed. A conventional bore technique will be used to install the pipeline loop at

the four roadway crossings along the route to avoid disturbing the surface of the road using. As described in more detail below, the project will use specialized construction procedures in wetlands and waterbodies to avoid and minimize impacts.

In the section to be installed using HDD, entry and exit points/slurry pits will be located at each end of the pipeline. A drill rig and other equipment will be set up at the entry point and drill a hole to the exit point. The pipeline segment will be prefabricated and hydrostatically tested at the exit end, then pulled back through the hole toward the entry point.

Hydrostatic testing of the pipeline loop will require approximately 70,000 gallons of water. Hydrostatic testing of the new compressor will require 40,000 gallons of water. The water will be obtained from the municipal water service. Upon completion of hydrostatic testing, the water will be transferred to holding tanks, tested and transported for off-site disposal.

Compressor Station

Two gas turbines with a combined horsepower (hp) of 6,689 hp will be replaced with an 11,107 hp gas turbine. An emergency generator will also be replaced. A 2,600-square foot (sf) building will be constructed and an exhaust stack will be improved and extended from 62.5 ft to 67.5 ft. The new turbine and all associated facilities and construction activities will be located within the fenced area of CS 261.

Longmeadow Meter Station

The meter station will be constructed on a 0.8-acre portion of the Longmeadow Country Club south of the intersection of Shaker Road and Hazardville Road. The station will provide a second gas delivery point to the CMA system on the east side of the Connecticut River; according to the DEIR, this will increase the reliability and redundancy of the CMA distribution system and increase operational flexibility by allowing bi-directional flow through the pipeline crossing the Connecticut River on the Memorial Street Bridge in Agawam.

According to the DEIR, a 14,479-sf portion of the site will be fenced and include two 8-inch taps on TGP's 200-1 and 200-2 mainlines, two meters with 10-inch headers and 8-inch meter station piping. Approximately 7,271 sf of the fenced in area will be impervious. The site will be accessed by an existing driveway off Hazardville Road. Additional information received from commenters and from the Proponent at a site visit on March 27, 2019 indicates that the meter station will include additional structures that were not identified in the DEIR. A more detailed description of the meter station must be provided in the FEIR.

Project Site

The pipeline loop and gas compressor will generally be installed within the Proponent's pipeline ROW and CS 261 facility. The 41.07-acre compressor station site is located on Suffield Street near the Massachusetts-Connecticut state line. The compressor station is adjacent to undeveloped land to the west and east. An apartment complex north of the compressor station and several single-family homes along Suffield Street to the south are at least 500 ft from the

station and separated from it by vegetated buffers. The gas compressors and associated equipment are located within a fenced portion of the eastern half of the site that is largely cleared and maintained as lawn. Three small areas of Bordering Vegetated Wetlands (BVW) are located along the perimeter of the station, including an area of BVW that extends through the western half of the site. Office space, a parking lot, Worthington Brook and associated BVW are located on the western half of the site. The pipeyard will be located on land owned by the Proponent that is adjacent to CS 261 and extends south into Suffield, Connecticut. The pipeyard area is maintained as a field; wetlands areas are located along the east and west sides of the pipeyard.

The existing ROW includes a 10-inch pipeline (Line 261B) and an abandoned 6-inch pipeline. It begins at the compressor station and travels in a northerly direction through the residential apartment complex north of CS 261 and across Suffield Street. It passes to the west of residential and commercial properties along Suffield Street and through commercial and industrial parks on Gold Street and Silver Street. The ROW crosses three perennial streams and two intermittent streams. Much of the ROW, particularly its southern half, passes through BVW. Most of the ROW is located within or adjacent to Priority Habitat for State-listed rare species, including the Eastern Box Turtle (*Terrapene carolina*), a Species of Special Concern, and the Eastern Worm Snake (*Carphophis amoenus*), a Threatened species.

The meter station will be constructed in the southeastern section of the Longmeadow Country Club. The Longmeadow Country Club (MHC# LON.220) and Longmeadow Country Club Grounds Building (MHC# LON.1845) are listed in the Massachusetts Historical Commission's (MHC) Inventory of Historic Assets of the Commonwealth and are eligible for listing in the National Register of Historic Places.

Environmental Impacts and Mitigation

Potential impacts are associated with construction and operation of the pipeline, compressor turbine and emergency generator and meter station. The DEIR identified impacts and mitigation for the pipeline loop and compressor station. The project will increase emissions of air pollutants from the compressor station, including: Greenhouse Gas (GHG) emissions, measured as carbon dioxide equivalent (CO₂e), from 102,763 tons per year (tpy) to 114,448 tpy; sulfur dioxide (SO₂), from 2.2 tpy to 6.6 tpy; and particulate matter (PM) from 9.0 tpy to 9.4 tpy. The project will alter approximately 38.4 acres of land, including 25.24 acres for the pipeline loop, 9.35 acres for the gas turbine replacement and 3.81 acres for the pipeyard and access roads, and will add 4.29 acres to the permanent ROW. The project will impact approximately 5.66 acres (approximately 246,550 sf) of BVW, including 0.49 acres of permanent conversion of wetland type; 0.22 acres (9,583 sf) of Isolated Vegetated Wetlands (IVW); 841 linear feet (lf) of Bank; 7.2 acres of Riverfront Area; 0.11 acres of Land Under Water (LUW); and 7.7 acres of rare species habitat, resulting in a Take of the Eastern Worm Snake and Eastern Box Turtle.

Measures to avoid, minimize, and mitigate project impacts include minimizing expansion of the ROW, use of timber mats to prevent permanent impacts to wetland resource areas during construction, restoration of wetland areas, off-site wetland restoration and conservation, installation of erosion and stormwater best management practices (BMPs) and replacement of older turbines with a high-efficiency turbine.

Changes Since the Filing of the EENF

The DEIR described refinements to the construction procedures for pipeline installation, including the use of HDD, instead of a trench, for a 0.3-mile section of pipeline and a temporary access road that will provide a direct connection between the compressor station and the Hickory Street pipeyard. The DEIR provided conceptual-level information about the location and components of the meter station in Longmeadow.

Jurisdiction and Permitting

The project is undergoing MEPA review and is subject to a mandatory EIR pursuant to 301 CMR 11.03(3)(a)(1)(a) of the MEPA regulations because it requires Agency Actions and will alter one or more acres of BVW (approximately 7.5 acres). The project will require a Section 401 Water Quality Certification (WQC) and a Non-major Comprehensive Plan Approval from the Massachusetts Department of Environmental Protection (MassDEP) and a Conservation and Management Permit (CMP) from the Natural Heritage and Endangered Species Program (NHESP). It is subject to review under the May 2010 MEPA Greenhouse Gas (GHG) Emissions Policy and Protocol (GHG Policy).

The project requires an Order of Conditions (OOC) from the Agawam Conservation Commission (and, if the OOC is appealed, a Superseding Order of Conditions (SOC) from MassDEP), a Section 404 approval by the Army Corps of Engineers under the General Permits for Massachusetts and a National Pollutant Discharge Elimination System (NPDES) Construction General Permit (CGP) from the Environmental Protection Agency (EPA). It requires approval from the Federal Energy Regulatory Commission (FERC) under Section 7(c) of the Natural Gas Act and review by the Massachusetts Historical Commission (MHC) pursuant to Section 106 of the National Historic Preservation Act and M.G.L. c.9, ss.26-27C (950 CMR 70-71).

Because the Proponent is not seeking Financial Assistance from the Commonwealth for the project, MEPA jurisdiction extends to those aspects of the project that are within the subject matter of required or potentially required State Agency Actions and that may cause Damage to the Environment as defined in the MEPA regulations. In this case, MEPA jurisdiction extends to land alteration, wetlands and water quality, rare species, air and GHG emissions.

Public Comments

I received comments from over 60 individuals, organizations and agencies, including testimony provided at a joint hearing conducted by the Energy Facilities Siting Board (EFSB) and the MEPA Office. Many comments were submitted by residents of Longmeadow and expressed concern about pipeline safety, potential environmental and health impacts associated with the Longmeadow meter station and the lack of information provided in the DEIR about that proposed facility. Comments were also submitted in opposition to the project because it will promote and expand the use of fossil fuels rather than carbon-free renewable energy sources.

The Scope included in this Certificate identifies additional information and analysis that should be provided in the FEIR. MEPA is an environmental review process through which the Proponent identifies potential environmental impacts, considers alternatives to avoid impacts, and proposes mitigation measures. A key purpose of MEPA is to assist each State Agency “in using (in addition to applying any other applicable statutory and regulatory standards and requirements) all feasible means to avoid Damage to the Environment or, to the extent Damage to the Environment cannot be avoided, to minimize and mitigate Damage to the Environment to the maximum extent practicable” (301 CMR 11.01(1)(a)). MEPA provides a valuable forum for review of the project and public input; however, MEPA does not approve or deny a project.

Review of the DEIR

The DEIR was generally responsive to the Scope included in the EENF Certificate. It provided updated project plans based on refinements to the project design, confirmed wetland boundaries, identified changes to the project since the EENF, and described construction techniques and impacts. It provided additional plans and information about existing and proposed conditions, including CS 261 and the Longmeadow meter station. The DEIR included a list of required permits from State, local and federal agencies and reviewed how the project will comply with applicable environmental regulatory standards. It included responses to comments on the EENF, identified conceptual mitigation measures for impacts to wetlands and rare species habitat and provided draft Section 61 Findings.

Climate Change

As required by the Scope, the DEIR included an assessment of the project’s vulnerability to the effects of climate change, including storms and flooding, and identified measures incorporated into the project design that will increase the resiliency and ability of the site to adapt to climate change. It provided additional documentation of GHG emissions associated with the proposed turbine and CS 261 under existing and proposed conditions.

Adaptation and Resiliency

The DEIR reviewed projected changes in climate conditions described in the 2018 Massachusetts State Hazard Mitigation and Climate Adaptation Plan (SHMCAP). The SHMCAP identifies changes projected for the end of this century, including higher temperatures, sea level rise, changes in precipitation and more extreme weather events. According to the DEIR, climate change effects most likely to threaten the project include flash flooding caused by more intense rainfall, wildfires caused by hotter and drier summers and infrastructure damage resulting from intense storms with high winds and heavy snowfall. Intense rainfall may cause flooding that erodes streambeds above pipeline crossings; these crossings will be designed to minimize impacts from high velocity flows. The SHMCAP indicates that parts of Agawam will be at greater risk of wildfires in the summer. In addition, strong winds and heavy snowfall may bring down power lines and damage buildings. The project will be designed in accordance with federal safety standards to protect pipelines, buildings and other structures from storm and fire related damage. In the event of a loss of power, operations at the compressor station will be maintained

by a backup generator. System pressure and flow will be monitored remotely and the Proponent will prepare Emergency Response Manuals that will be followed in the event of an emergency.

Greenhouse Gas Emissions

The DEIR reviewed renewable energy alternatives to the project, including wind, solar and hydroelectric generation. The substitute of these non-carbon sources of energy for natural gas to be delivered to customers by the project would minimize GHG emissions. According to the DEIR, none of these sources are available to the extent necessary and at the same cost of the gas that will be provided by the project.

The DEIR provided revised estimates of total GHG emissions from the project, including additional information regarding GHG emissions from the compressor station under existing and proposed conditions. GHG emissions from the compressor station are discussed in the Air Quality section below. The following sources contribute to GHG emissions from the pipeline and compressor station:

1. Construction: release of vented gas associated with connecting the pipeline loop and disconnecting the existing compressors, and diesel emissions from construction vehicles;
2. Commissioning: release of gas when the new pipeline is inspected and filled with natural gas;
3. Normal operations: fugitive leaks in the pipeline, primarily at valves at either end of the pipeline, and operation of the combustion turbine and compressor; and,
4. Non-routine operations: long-term maintenance procedures, such as in-line inspections, or unplanned blowdowns when a section of pipeline must be vented for maintenance or repair purposes.

The GHG emissions associated with the pipeline loop and new turbine are summarized in Table 1. Total emissions, including GHG, from the compressor station under proposed conditions are shown in Table 2.

Table 1: GHG Emissions (tons) for the Preferred Alternative

Source	Duration/Frequency	CO ₂	CH ₄	N ₂ O	CO ₂ e
Construction	Once	3,922.3	21.52	0.23	4,529
Commissioning	Once	0.001	1.24	-	31
Normal Operation	Annual	46,731	189.1	0.09	51,485
Non-routine Operation	Every 5 to 7 years	0.00006	0.07	-	2
	Infrequent/when needed	0.01	8.80	-	220

Mitigation measures that will be implemented to minimize GHG emissions from the project include:

- The use of a hot-tap to minimize the amount of vented gas when pipelines are connected;

- Cathodic protection of pipes to minimize leaks caused by pipeline corrosion;
- The use of a gas odorizer to allow for quicker leak detection;
- Periodic flyovers of the pipeline to inspect the condition of the ROW;
- Maintaining readily available leak repair equipment to minimize releases of gas;
- Reducing pressure prior to venting;
- Incorporating design features in the new turbine to minimize the release of natural gas, including a dry seal system;
- Using an electric start for the new turbine; and,
- Inspecting and maintaining the compressor units to minimize leaks.

The DEIR compared the GHG emissions of the proposed gas turbine to those generated by an electric turbine. The analysis indicated that the use of an electric turbine would minimize GHG emissions by over 13,000 tpy based on the current electrical grid emissions rate. The DEIR suggested that the difference in emissions between the gas and electric turbines would not be as significant if the grid were supplied with power from generating plants using coal, oil or other carbon-based fuels. I note that pursuant to MassDEP's Clean Energy Standard regulations (310 CMR 7.75), electricity provided to the grid will be increasingly generated by renewable energy sources; by 2050, the grid emission rate for GHG will be less than 30 percent of its current rate. Therefore, GHG emissions reductions associated with an electric turbine would increase over time.

Air Quality

The Proponent must submit a Non-major Comprehensive Plan Application (NMCPA) for review and approval by MassDEP and the project will require a modification to the Title V Operating Permit for the compressor station. According to the DEIR, the proposed emergency generator will be certified under MassDEP's Environmental Results Program (ERP). The DEIR included a review of the emissions of air pollutants by the compressor station under existing and proposed conditions. It provided a revised discussion of the project's air quality impacts and mitigation measures based on the replacement of the 5,490-hp Solar Centaur H turbine and 1,199-hp Solar Saturn T-1001 turbine with an 11,107-hp Solar Taurus 70 gas compressor unit. The DEIR reviewed pollution emission controls through a series of Best Available Control Technology (BACT) analyses and provided dispersion modelling that includes all regulated emissions from CS 261 under proposed conditions. It described the project's air quality impacts based on the selected emissions controls and in comparison to National Ambient Air Quality Standards (NAAQS) or Massachusetts Ambient Air Quality Standards (MAAQS).

BACT Analysis

The DEIR included a "Top-Down" BACT analysis for the facility. In general, a top-down BACT analysis considers the feasibility of technologies that vary in their effectiveness for controlling emissions. The technologies are first ranked by effectiveness, and then evaluated on the basis of economic, energy, and environmental impacts. The most effective feasible technology must be selected for use. The DEIR provided Top-Down BACT analyses for control of NO_x, CO, VOC, HAPs, SO₂ and PM from the proposed gas turbine and for control of emissions from venting and piping.

The selected BACT for NO_x includes the use of a SoLoNox combustion control system that minimizes NO_x formation by thoroughly mixing the fuel and lowering the flame temperature. At temperatures below 0 degrees Fahrenheit (F), the BACT includes the use of sensors that will adjust the fuel to the turbine. The DEIR also evaluated the use of selective catalytic reduction (SCR), Selective Non-Catalytic Reduction (SNCR) and SCONO_x nitrous oxide removal systems as NO_x control measures. SNCR and SCONO_x were eliminated from consideration because the turbine exhaust temperature is either too low or too high, respectively, for effective use of those systems. According to the DEIR, the unique flow and pressure characteristics of gas compression turbines are not conducive to the use of SCR injection.

The BACT for CO and VOC/HAPs include good combustion practices, such as maintaining the proper ratio of air and fuel, and the use of an oxidation catalyst. At temperatures below 0 degrees F, the BACT also includes the use of sensors to adjust fuel flow. The use of a SCONO_x system was eliminated from consideration as a BACT for these contaminants because the temperature of the turbine exhaust is too high for its use. The only BACT considered for SO₂ was the use of low-sulfur natural gas as fuel. Good combustion practices and low-sulfur fuel were adopted as the BACT for PM. The BACT for venting includes minimizing the release of gas consistent with the safe operation of the facility and the use of compressor dry seals. The Proponent will minimize VOC emissions from piping by transporting and using low-VOC natural gas.

Modeling and Potential Impacts

The DEIR provided an air dispersion modeling analysis of the project that was included in the NMCPA application. This analysis was performed to demonstrate that the project will not cause or contribute to the violation of NAAQS or MAAQS. The DEIR described the methodology and models used in the analysis, including limitations and assumptions, and the sources of data used to establish concentrations for all pollutants. The analysis was completed for the proposed turbine and the compressor station as a whole.

The EPA-approved AERMOD model was used for the analysis. This analysis was prepared by developing a conservative scenario for emissions from the turbine, including a low stack height, high exhaust velocity and maximum emission rate over a range of ambient temperatures. Pollutant concentrations were modeled for a range of short-term and long-term averaging periods applicable to each pollutant. The concentrations were compared to Significant Impact Levels (SILs) established by the EPA. SILs are the levels below which a source is expected to have an insignificant impact on air quality. Modeled pollutant concentrations from both the proposed gas turbine and the compressor station as a whole were below SILs. The DEIR also included a model of the combined effect of the compressor station emissions and ambient air concentrations. Combined concentrations of Nitrous Oxide (NO₂), CO, PM₁₀, PM_{2.5} and SO₂ were compared to the NAAQS/MAAQS to determine if the project will cause any of the contaminants to exceed the standards. The analysis concluded that the modeled concentrations of all pollutants are below the corresponding NAAQS/MAAQS.

Air emissions of the compressor station under existing and proposed conditions are summarized in Table 2.

Table 2. Compressor Station Emissions (tpy)

Contaminant	Existing	Proposed
PM ₁₀	9.0	9.4
PM _{2.5}	9.0	9.4
CO	77.0	40.7
SO ₂	2.2	6.6
VOC	28.5	21.6
NO _x	122.5	67.6
HAP	0.90	0.82
CO _{2e}	102,763	114,448

Wetlands and Water Quality

The DEIR provided updated estimates of impacts to wetland resource areas based on resource area delineations approved by the Agawam Conservation Commission. Construction of the pipeline loop will impact approximately 5.64 acres of BVW, including 0.49 acres of permanent conversion of wetland type; 0.22 acres of IVW; 788 lf of Bank; 6.3 acres of Riverfront Area; and 0.11 acres of LUW. The pipeline loop will cross five streams. The gas turbine replacement will impact 0.02 acres of BVW and 0.6 acres of Riverfront Area. The construction of a temporary access road to the Hickory Street pipeyard will impact 53 lf of Bank and 0.3 acres of Riverfront Area associated with an intermittent stream.

The DEIR reviewed stream crossing techniques, construction methods in wetlands areas and restoration and mitigation measures. HDD, flume or dam-and-pump techniques will be used to construct the pipeline loop across streams with flow. As described above, HDD will eliminate direct impacts to surface waters and wetlands by drilling below the surface. A flumed crossing would redirect flow through one or more pipes to allow for passage of aquatic organisms while providing dry conditions in the stream for trenching. This technique will be used where stream bank soils will remain stable during trenching and where the flow volume can be accommodated by pipes. The dam-and-pump method will be employed where pumps and hoses can transfer stream flow from the upstream area to the downstream side and it is not necessary to provide for passage of aquatic organisms. This technique involves the construction of a cofferdam to prevent material from entering the waterbody. Conventional trenching may be used in streams with no discernable flow. To minimize impacts, the stream crossings will be located perpendicular to the channel, high flow and spawning periods will be avoided, construction will be expedited and the amount of equipment in the stream will be limited and sediment and erosions controls will be used and the stream will be restored immediately upon installation of the pipeline across the stream. Upon completion of construction, the stream channels and bottoms will be restored to their original configurations and contours and stream banks will be stabilized.

Pipeline installation through wetlands will be conducted using conventional wetland construction or HDD. Conventional wetland construction will be used in wetlands with saturated soils or soils unable to support construction equipment. Timber mats or corduroy roads will be placed on the surface of the wetland to provide a stable surface to support construction equipment. A 12-inch layer of wetland topsoil will be removed, stored directly adjacent to the trench and reused as the top layer of backfill over the trench. The trench will remain open until pipe segments are assembled and lowered into the trench. Trees within the workspace will be cut down to facilitate access to the ROW by construction equipment. All wetland areas will be restored to pre-construction grades, contours, and drainage patterns, and reseeded or replanted with native wetlands plant species.

According to the DEIR, the Proponent is evaluating the project's work spaces in wetlands to identify measures to minimize impacts. Potential measures to minimize wetland impacts may include reorienting work spaces to minimize their footprint in wetlands, relocating work space from wetland areas, reducing the 75-ft construction ROW in wetlands and shifting operations or construction corridors to the opposite side of the ROW. The results of this review will be provided in the FEIR. Mitigation for permanent impacts to wetlands will include off-site wetlands restoration and conservation of existing wetland areas. The Proponent will also develop an Invasive Species Management Plan to prevent colonization of disturbed wetland areas by invasive species. Wetlands within the permanent ROW will be subject to ROW maintenance practices. Wetland vegetation within a 10-ft area centered on the pipelines will be maintained as low-growing emergent or scrub-shrub wetland. Woody wetland vegetation will be allowed to reestablish in the remainder of the ROW, with the exception of trees that are within 15 ft of a pipeline that are taller than 15 ft high. These trees may be cut and removed from the ROW.

Upon installation of the pipeline, it will be filled with water and maintained at pressure (hydrostatic testing) to ensure the pipeline meets applicable engineering and regulatory standards. The project will use 119,000 gallons of municipal water for this purpose. The pipeline to be installed by HDD will be hydrostatically pre-tested before it is installed within the drilled route; this testing will take place within the pull-back fabrication and staging area adjacent to wetlands. Final hydrostatic testing will occur after the entire pipeline loop has been installed. The pipeline will be filled with water through a manifold at a location that will be at least 85 ft from the nearest wetland. After testing is completed, the water will be withdrawn from the pipe, transferred to holding tanks and disposed of at a licensed off-site facility.

Rare Species

Pipeline construction will impact 7.7 acres of rare species habitat. Approximately 0.9 miles of the 6-inch diameter pipeline are proposed to be removed. The DEIR evaluated an alternative in which the existing pipeline would be abandoned in place in order to minimize impacts to rare species habitat. According to the DEIR, installing the new pipeline while leaving the existing pipeline in place would require a 15-ft permanent expansion of the ROW necessary to provide the required 25-ft offset between the pipelines. The Preferred Alternative includes the use of the lift-and-relay construction technique, which involves the excavation of a single trench that will accommodate the removal of the existing pipeline and the installation of the new pipe; for this reason, the impacts to rare species habitat are similar regardless of whether the pipeline is

removed. In addition, the DEIR notes that the abandoned pipeline has asbestos-containing material and its removal will have the added benefit of properly disposing of the asbestos.

According to the DEIR, the Proponent is continuing to meet with NHESP to develop a mitigation plan. Potential mitigation measures identified in the DEIR include:

- Pre-construction surveys,
- Pre-construction monitoring for at least one active season prior to tree clearing immediately prior to pipeline construction;
- Use of exclusion fencing and pre-construction sweeps to remove individuals;
- Contractor training; and,
- Providing written reports to NHESP.

Cultural Resources

The DEIR included a copy of a letter from MHC to the Proponent regarding the pipeline loop and compressor station components of the project. According to MHC, the archaeological survey conducted by the Proponent did not identify any significant resources in the project area. MHC concluded that no historic properties will be affected by the project. As recommended by MHC, the Proponent should update its cultural resources contact list so that the appropriate person is identified if human remains are discovered at the site.

Conclusion

Based on review of the DEIR, consultation with public agencies and consideration of public comments, I have determined that the Proponent may file an FEIR consistent with the Scope included below. The DEIR provided additional information about the pipeline and compressor station components of the project. The DEIR provided minimal information about the meter station. It did not provide a plan or dimensions of the facility or describe its operation or construction. The DEIR did not evaluate alternatives to the meter station or identify potential impacts and mitigation measures. In the FEIR, the Proponent should confirm the potential impacts of the project and commit to specific mitigation measures related to impacts on rare species, wetlands, air quality and GHG.

SCOPE

General

The FEIR should follow Section 11.07 of the MEPA regulations for outline and content, as modified by this Scope. It should respond to comments received on the DEIR. The FEIR should identify and commit to specific environmental mitigation measures and provide draft Section 61 Findings. It should include a list of required State Agency Permits, Financial Assistance, or other State approvals, as well as any local or federal permitting for all components of the project. The FEIR should provide a brief description and analysis of applicable statutory and regulatory standards and requirements, and a description of how the project will meet those

standards. The FEIR should provide updated project plans based on refinements to the project design and verified conditions along the proposed pipeline route and other work areas, and identify any changes to the project since the DEIR. It should include existing conditions site plans, including the meter station, and provide plans at a legible scale. It should identify all existing and proposed project components. It should review construction procedures for all components of the project and highlight any changes in procedures from the DEIR. The FEIR should document that all feasible measures to minimize Damage to the Environment will be undertaken.

The Proponent should consult with the MEPA office prior to filing the FEIR regarding the format and information necessary to facilitate its review by State Agencies and the public. The FEIR should clearly document any changes to the project or additional details concerning the project design, impacts and mitigation measures developed since the DEIR filing. The FEIR should be structured to address the information and analyses required in this Scope. The FEIR should provide data and analysis in a format consistent with State regulatory programs, including MassDEP's air quality and WQC permits and NHESP's CMP. The Proponent should ensure that the information provided in the FEIR is consistent with the applications submitted to MassDEP and NHESP.

Longmeadow Meter Station

During the review period, the Proponent provided additional information about the meter station. The FEIR should describe the design, construction and operation of the meter station and identify potential environmental impacts. It should include plans of the facility showing all components of the meter station and adjacent sections of existing and/or proposed transmission and distribution pipelines to which it will be connected. The FEIR should include an alternatives analysis and identify impacts to land, air quality, noise, wetlands, water quality and cultural/historical resources of each alternative. It should describe any climate change resiliency measures incorporated into the design of the meter station and provide an analysis of its GHG emissions. The FEIR should provide a summary table of the project's land alteration, impervious area, air emissions, GHG emissions and wetland impacts, including impacts from the meter station. It should identify operational and construction-period mitigation measures related to the meter station. The FEIR should describe safety measures that will be used during operation and construction of the meter station.

Wetlands and Water Quality

Prior to filing the FEIR, the Proponent should confirm the delineation of wetland resource areas with MassDEP, which will be necessary during review of the WQC application. The FEIR should include an updated wetlands delineation, if necessary. It should document impacts to wetlands from HDD entry and exit points and associated equipment. It should clarify whether slurry pits will be used and review measures to prevent and minimize unintentional releases of slurry. The FEIR should describe refinements to the design and construction of the pipeline loop that will be implemented to minimize impacts to wetlands, including work space changes, ROW reduction, placement of construction mats and additional use of HDD. It should provide plans of and quantify all impacts to State wetlands resource areas. It should include

specific commitments to minimize and mitigate impacts to wetlands, including on-site or off-site wetland restoration.

Rare Species

To the extent they are available, the FEIR should provide the results of any rare species surveys conducted in connection with the pipeline looping project. The FEIR should review construction-period measures, such as work space changes, ROW reduction, placement of construction mats and additional use of HDD to minimize impacts to rare species and their habitats. It should provide an update on the Proponent's consultations with NHESP and provide a plan with specific measures to mitigate impacts to rare species and their habitats.

Mitigation and Draft Section 61 Findings

The FEIR should include a section that summarizes proposed mitigation measures and should provide draft Section 61 Findings for each Agency Action. It should contain clear commitments to implement these mitigation measures, estimate the individual costs of each proposed measure, identify the parties responsible for implementation, and contain a schedule for implementation.

In order to ensure that all GHG emissions reduction measures adopted by the Proponent as the Preferred Alternative are actually constructed or performed by the Proponent, the Proponent must provide a self-certification to the MEPA Office indicating that all of the required mitigation measures, or their equivalent, have been completed. The commitment to provide this self-certification in the manner outlined above should be incorporated into the draft Section 61 Findings included in the FEIR.

Responses to Comments

The FEIR should contain a copy of this Certificate and a copy of each comment letter received. In order to ensure that the issues raised by commenters are addressed, the FEIR should include direct responses to comments to the extent that they are within MEPA jurisdiction and refer to sections of the FEIR only for the purpose of supporting the direct response. This directive is not intended, and shall not be construed, to enlarge the scope of the FEIR beyond what has been expressly identified in this certificate.

Circulation

The Proponent shall circulate the FEIR to each Person or Agency who previously commented on the EENF and/or DEIR, including anyone who made verbal comments at the EFSB hearing; any Agency from which the Proponent will seek a "Permit" as defined in 301 CMR 11.00; and any other Person or Agency identified in the Scope or thereafter, or otherwise specified in 301 CMR 11.16(3). A copy of the FEIR should be made available for review at the Agawam and Longmeadow public libraries.



April 5, 2019

Date

Matthew A. Beaton

Comments received:

02/07/2019 Berkshire Environmental Action Team
 02/08/2019 Berkshire Environmental Action Team
 02/08/2019 Pipe Line Awareness Network for the Northeast
 02/25/2019 Natural Heritage and Endangered Species Program (NHESP)
 02/27/2019 Holyoke Taxpayers Association
 03/08/2019 Holyoke Chamber of Commerce
 03/13/2019 Xiao Feng
 03/27/2019 Representative Brian M Ashe, 2nd Hampden District
 03/27/2019 Andrea Chasen
 03/27/2019 June Greig
 03/27/2019 Peter C. Judd
 03/27/2019 Gary Levine
 03/27/2019 Kathy M. Mullins
 03/27/2019 Martha A. Nathan, MD
 03/27/2019 Timothy Wright
 03/27/2019 Xuan Li
 03/28/2019 Marie Angelides, Longmeadow Select Board
 03/28/2019 Kit Sang Boos
 03/28/2019 Jonna Gaberman, MD
 03/28/2019 David Morse
 03/28/2019 Susanne Osofsky
 03/28/2019 Pipe Line Awareness Network for the Northeast
 03/28/2019 Cynthia Sommer
 03/28/2019 James and Elaine Tourtelotte
 03/28/2019 Town of Longmeadow
 03/29/2019 Jinlin Zhang
 03/29/2019 Fei Zeng
 03/29/2019 Yuan Li
 03/29/2019 Tennessee Gas Pipeline Company
 03/29/2019 Halina and James Sullivan
 03/29/2019 Peter and Barbara Sudnick
 03/29/2019 Anping Ruan
 03/29/2019 Jennifer Qian
 03/29/2019 Mark Pohlman, MD
 03/29/2019 Yan Ou
 03/29/2019 Ming Ni

03/29/2019 Xiaochuan Luo
03/29/2019 Rabbi Amy Wallk Katz
03/29/2019 Massachusetts Department of Environmental Protection (MassDEP) /
Western Regional Office (WERO)
03/29/2019 Eva Zhang
03/29/2019 Xiao Feng
03/29/2019 Tara Howe
03/29/2019 Yujie Hu
03/29/2019 Sara Krohn
03/30/2019 Chong Zhang

Testimony Provided at Public Hearing on March 27, 2019

Robin Frechette on behalf of Representative Brian Ashe
Mark Gold, Longmeadow Select Board
Michael Clark on behalf of Senator Eric Lesser
Tom Lachiusa, Longmeadow Select Board
Jessie Lederman, Springfield City Council
James Tourtelotte
Laurie Robinson
Gary Levine
Karen Tallman
Bruce Tallman
Cynthia Sommer
Valerie O'Connell
Patricia Hawkins
Elaine Tourtelotte
Deborah Levy
Lihua Zhou
Xiao Feng
Kathy Mullins
Michele Marantz
Andrea Chasen
Steve Kennedy
Kathy Andrew
Bruce Colton
Jan Hill
Richard Purcell
Betsy Port
Dr. Marty Nathan
Rosemary Wessel, No Fracked Gas
Jan Winn, Berkshire Environmental Action Team
Cathy Kristofferson, Pipe Line Awareness Network for the Northeast
Mary Jones, Toxics Action Center
Susan Theberge
Marsha Harbison

Elizabeth Elam
John Fitzgerald
Anthony Melting Tallow
Polly Ryan
Jeanette Friedenson

MAB/AJS/ajs