

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

In the matter of the Request of NGO :
Transmission, Inc. for Waiver Pursuant to :
49 C.F.R. 192 and O.A.C. 4901:1-16-02(E) : Case No: 17-1751-GA-WVR
for Installation of Reinforced :
Thermoplastic Pipe to Replace :
Approximately 28,500 feet of Steel
Transmission Pipeline

REQUEST OF NGO TRANSMISSION, INC. FOR A WAIVER

Now comes the applicant, NGO Transmission, Inc. (“NGOT”), and respectfully requests that the Public Utilities Commission of Ohio (“Commission”) grant a waiver of 49 C.F.R. Sections 192.53(c), 192.121, 192.123, 192.619(a), and 192.283(b) pursuant to 49 C.F.R. 60118(d) and O.A.C. 4901:1-16-02(E) to allow NGOT to install Reinforced Thermoplastic Pipe (“RTP”) to replace approximately 28,500 feet of bare steel six inch (6”) transmission pipeline. In support of this request, NGOT represents to the Commission that:

I. Project Background

1. NGOT is a pipeline company and NGOT owns and operates natural gas pipeline facilities transporting natural gas in Ohio.
2. NGOT is required to comply with the gas pipeline safety (GPS) standards in O.A.C. 4901:1-16-03, which incorporated the United States Department of Transportation’s GPS standards contained in 49 C.F.R. Part 192.
3. The Commission is a certified State authority pursuant to the Pipeline Safety Act of 1994, as amended, 49 U.S.C. 60105, and has authority to grant a waiver of compliance under that Act, 49 U.S.C. 60118(d).
4. NGOT requests a waiver of 49 C.F.R. Sections 192.53(c), 192.121, 192.123, 192.619(a), and 192.283(b) to permit the installation and use of a non-metallic, reinforced thermoplastic pipe

(“RTP”) manufactured by Specialty RTP, LLC. NGOT wishes to use RTP to replace approximately 28,500 feet of six inch (6”) bare steel natural gas transmission pipeline in Rich Hill and Salt Creek Townships, Muskingum County, Ohio. The pipeline was originally installed in 1955 and is scheduled to be replaced to address historic leaks on this section of pipeline.

5. NGOT intends to replace the section of pipeline from its tap into Kinder Morgan’s Tennessee Gas Pipeline (known as Spratt Station) in Rich Hill Township, Muskingum County, Ohio to NGOT’s new McDonald Road Station in Salt Creek Township, Muskingum County, Ohio. The general location of the pipeline segment to be replaced is depicted in reference 1 to Exhibit A, attached hereto and incorporated herein. This section of existing pipeline is located in a primarily rural area.

II. Proposed Replacement

1. NGOT proposes to replace the pipeline with a four inch outer diameter, 3.45 inch inner diameter RTP. RTP is a concentric pipe configuration with an outer layer made of Polypropylene with a UV inhibitor additive, a reinforcement layer made of Aramid Twaron Aramid fiber, and an inner layer comprised of Nylon 6 Polymer. The pipe is terminated with metallic stainless steel couplings swaged into the RTP to “lock” the reinforcement layer in place. The specifics of the project, including operating pressures, is attached as Exhibit A and is incorporated herein.

2. NGOT proposes installing the RTP in two phases. The first phase is approximately one to two miles adjacent to the Tennessee Gas Pipeline connection and is anticipated to commence construction in October of 2017. This will be installed using trenching, boring, plowing, and/or pull-through in accordance with 49 C.F.R. Part 192 regulations for construction. The balance of

the line (approximately three to four miles) will be completed in the spring of 2018. The estimated construction time is 10 days for Phase 1 and 15 days for Phase 2.

3. Some portions of the RTP will be installed by pulling through the existing pipeline using synthetic rope and other sections will be installed by boring, trenching, or plowing.

4. After installation, the new RTP section will be hydro-tested pursuant to the written procedures specified in Exhibit A before placed into commission. A pressure transmitter will be installed on the downstream portion of the pipeline as part of NGOT's supervisory control and data acquisition (SCADA) system to ensure the ongoing integrity of the pipeline.

5. NGOT will provide reasonable advance notice to the PUCO Pipeline Safety section and federal Pipeline and Hazardous Materials Safety Administration ("PHMSA") staff prior to NGOT's commencement of field activities involving the handling and installation of RTP to provide an opportunity for such staff to be present.

6. RTP is designed to accommodate internal inspection devices in accordance with 49 C.F.R. 192.150(a) applicable to new transmission lines. However, due to its inherent resistance to hydrocarbon degradation and oxidation, RTP does not corrode or pit like steel pipe and thus the use of internal inspection devices are not necessary.

7. The pipeline will be operated and maintained in accordance with 49 C.F.R. 192 and NGOT shall adhere to the procedures and specifications set forth in this Request for Waiver and Exhibit A attached hereto.

III. Benefits of Reinforced Thermoplastic Pipe

1. NGOT proposes use of the RTP technology because it offers a number of advantages over traditional coated steel pipe and plastic pipe, including superior strength and flexibility, low

installation costs, and low ongoing maintenance costs. Technical information regarding the specifications and benefits of RTP are attached as Exhibit A.

2. RTP utilizes high strength fabric and fibers wound over a thermoplastic (high density polyethylene) core pipe. RTP using fiber reinforcement and/or fabric wrap is common in the gas and oil industry and is widely used for high-pressure hoses in many applications, including marine loading lines and fire hoses. RTP introduces a new design for a pipeline capable of handling high pressures that is immune to both internal and external corrosion and offers better resistance to third-party damage. RTP is designed and manufactured in accordance with the American Petroleum Institute Recommended Practice 15S “Qualification of Spoolable Composite Pipe” and meets the quality standards of ISO 9001.

3. RTP offers a number of unique advantages that lowers the need for ongoing maintenance:

- a. eliminates the need for cathodic protection systems, including rectifiers, ground beds, insulation joints, test stations, and anodes;
- b. eliminates the need for internal or external corrosion inspections;
- c. eliminates the need for coating inspection and repair; and
- d. eliminates need for welding of pipe.

4. In comparison to traditional steel pipelines, RTP technology, because of its strength and the abrasion resistance of its outer layer, can be installed through insertion in the existing pipeline and through plowing. These installation methods minimize cost and impact to the environment.

5. RTP’s inner layer has an inherent resistance to hydrocarbon degradation and its reinforcement layer provides strength and cyclic load resistance. The outer jacket is polypropylene which has better abrasion resistance than steel to remove the risk of damage to

pipe during pull-through and plowing installation. RTP technology's resistance to corrosion also improves the life of the pipeline and reduces future maintenance costs.

6. RTP is also engineered to ensure a specific gas velocity to carry any fluids associated with the natural gas stream to suitable collection points to avoid collection in the pipeline, thereby increasing the safety and efficiency of the pipeline.

7. Overall, NGOT believes RTP is more advantageous than traditional coated steel pipeline because it will improve the efficiency, reliability, and safety of NGOT's existing transmission system while lowering installation, operation, and maintenance costs.

IV. Request for Waiver

1. NGOT believes a waiver of 49 C.F.R. Sections 192.53(c), 192.121, 192.123, 192.619(a), and 192.283(b) is necessary because RTP is not expressly addressed in 49 C.F.R. 192 and because NGOT's requested use of RTP anticipates operation at pressures higher than 125 psig. NGOT notes that 49 C.F.R. 192 does not expressly restrict the use of other qualified materials.

2. 49 C.F.R. 192.53(c) requires that materials for pipe and components must be "[q]ualified in accordance with the applicable requirements of this subpart." NGOT seeks a waiver of this requirement as RTP is not specifically addressed in 49 C.F.R. 192.

3. 49 C.F.R. 192.121 sets forth the design requirements for plastic pipe. NGOT seeks a waiver of this requirement as the design formula set forth in Section 192.121 is for a monolithic plastic pipeline and does not address design requirements for RTP.

4. 49 C.F.R. 192.123 sets forth the pressure limitations for plastic pipe. NGOT seeks a waiver of this requirement as the pressure limitation of 125 psig for plastic pipe is not applicable to RTP.

5. 49 C.F.R. 192.619(a) requires plastic pipe to be pressure tested to 1.5 times desired MAOP. NGOT seeks a waiver of this requirement as the design formula set forth in Section 192.619(a) is for a monolithic plastic pipeline and does not address RTP. NGOT notes that the pressure test set forth in Section 192.619(a) can easily be achieved by RTP. NGOT will pressure test the RTP segments in accordance with 49 C.F.R. Section 192.619. See Exhibit A for the Hydrostatic Testing procedures.

6. The pipeline segments will be joined using mechanical fittings. These fittings meet the requirements of 49 C.F.R. 192.273(a) as described in Exhibit A. Each joint will be made pursuant to written procedures proven by test to produce gastight joints pursuant to 49 C.F.R. 192.273(b) as described in Exhibit A. NGOT seeks a waiver of the qualification requirements for the testing procedures under 49 C.F.R. 192.283(b) as these requirements are not applicable to RTP. The written testing and installation procedures specified in Exhibit A demonstrates that the pipe and couplings exceed the qualification requirements of 49 C.F.R. 192.283(b). A trained technician from Specialty RTP, LLC will be onsite for the entire installation to ensure adherence to the written installation and testing procedures.

7. While the new RTP technology is not currently provided for under 49 C.F.R. 192, its use has been approved by PHMSA and Alabama and Texas state commissions. See Application of Jefferson Block 24 Oil and Gas, LLC, Railroad Comm. Tex., Gas Utilities Docket No. 9995, 2011 Railroad Commn. Tex. LEXIS 644; PHMSA-2015-0153, with the relevant decisions attached to and referenced in Exhibit A. RTP technology has been used to replace existing jurisdictional gathering and flow lines in both on- and off-shore oil and gas development. Case studies regarding the use of RTP in West Virginia, Malaysia, and the Gulf of Mexico are attached and referenced in Exhibit A.

8. Approval of this Request for Waiver is warranted because the installation and use of RTP will improve the integrity of NGOT's system by eliminating corrosion, reducing environmental impact and cost of alternative construction methodologies, lowering maintenance costs, and increasing resistance to third-party damage.

V. Conclusion

1. Based on the foregoing, NGOT asserts that the requested waiver to use RTP technology will allow NGOT to replace its existing six inch (6") pipeline using enhanced technology that will lower installation, operation, and maintenance costs while improving the reliability and safety of its existing transmission system. This Request for Waiver by NGOT is not inconsistent with gas pipeline safety, and therefore should be approved.

WHEREFORE, NGOT respectfully requests that the Commission grant a waiver of 49 C.F.R. Sections 192.53(c), 192.121, 192.123, 192.619(a), and 192.283(b) pursuant to 49 C.F.R. 60118(d) and O.A.C. 4901:1-16-02(E) to allow NGOT to install Reinforced Thermoplastic Pipe ("RTP") to replace approximately 28,500 feet of bare steel six inch (6") transmission pipeline.

Respectfully Submitted,

NGO Transmission, Inc.

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Summary: Request of NGO Transmission, Inc. for Waiver Pursuant to 49 CFR 192 and OAC 4901:1-16-02(E) for Installation of Reinforced Thermoplastic Pipe to Replace Approximately 28,500 feet of Steel Transmission Pipeline