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**A report by the staff of the
Public Utilities Commission of Ohio**

**IN THE MATTER OF THE COMMISSION'S
INVESTIGATION INTO OHIO RURAL NATURAL GAS
CO-OP AND RELATED MATTERS**

Case Number 16-1578-GA-COI

July 15, 2016

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Background

The Ohio Rural Natural Gas Co-op (ORNG) is a natural gas pipeline company¹ subject to the jurisdiction of the Public Utilities Commission of Ohio (Commission) under Section 4905.91 of the Ohio Revised Code (ORC) and rules adopted by the Commission in the Ohio Administrative Code (OAC) relevant to pipeline safety.² The company is known to be operating systems in Ashtabula, Geauga, Lake, Mahoning and Trumbull Counties and is currently providing gas to 77 customers. The Commission initiated this case after a series of investigations by Gas Pipeline Safety Staff (Staff) established multiple instances of non-compliance by ORNG within a 16 month period between February of 2015, and May of 2016.

On February 10, 2015, Staff investigated a complaint of natural gas pipelines being installed in the Newton Falls area by Ohio Rural Natural Gas, LLC, which was an operator that was not registered with the Commission as a gas distribution company. On March 10, 2015, Staff cited ORNG with failure to have developed the plans, procedures and programs that are required under Title 49 of the Code of Federal Regulations (CFR) 192 (Pipeline Safety Regulations).³

On July 21, 2015, ORNG contacted Staff saying it had developed the plans, procedures and programs necessary to operate in accordance with the Pipeline Safety Regulations. Staff responded on July 24, 2015, identifying several remaining deficiencies that needed to be addressed prior to commencing operation of the pipelines.⁴

On September 3, 2015, Staff discovered that approximately 7,300 feet of piping had been pressurized by ORNG prior to completing the corrective action required by Staff in the July 24, 2015, response. Staff required ORNG to commence pressure testing and leak surveys to demonstrate the integrity of the pipeline and to complete action on the remaining deficiencies previously identified by Staff. ORNG completed the pressure testing and leak surveys on September 18, 2015.

On November 20, 2015, Staff investigated a complaint regarding improper installation of service lines and gas meters by ORNG at another site. On December 1, 2015, Staff issued a Notice of Probable Non-Compliance (Notice) citing multiple violations of the Pipeline Safety Regulations, requiring the company to provide a corrective action plan and proposing a monetary penalty of \$100,000.⁵

On April 5, 2016, Staff identified multiple violations of the Pipeline Safety Regulations while observing new pipeline construction at a separate site, and issued another Notice, requiring the

¹ See ORC 4905.03(A)(7).

² Chapter 4901:1-16 OAC, (Gas Pipeline Safety) and 49 CFR Part 191 and 192 (Pipeline Safety Regulations) as enabled through ORC 4905.91 and OAC 4901:1-16-03.

³ See Appendix A: Notice of Probable Noncompliance dated March 10, 2015.

⁴ See Appendix B: Staff Response to ORNG Letter of Compliance, July 24, 2015.

⁵ See Appendix C: Notice of Probable Noncompliance dated December 1, 2015.

company to provide a corrective action plan and proposing an additional monetary penalty of \$500,000.⁶

On May 12, 2016, Staff completed a scheduled annual inspection of the company's Operations and Maintenance (O&M) procedures and records. Staff discovered multiple violations of the Pipeline Safety Regulations, many of which were the same violations first noted by Staff in the Notices issued on December 1, 2015, and April 5, 2016. Based upon the results of that audit, along with the history of non-compliance by ORNG, Staff is initiating this case.

Staff Investigation

On February 10, 2015, Staff received a complaint of natural gas pipelines being installed in the Newton Falls area by an unknown operator. Upon investigation it was determined that the operator was Ohio Rural Natural Gas, LLC, and that the company was not registered with the Commission as a gas distribution company and was reportedly owned by Richard Osborne. Upon being contacted by Staff, the company changed its registration with the Ohio Secretary of State to the Ohio Rural Natural Gas Co-op in an attempt to avoid regulatory jurisdiction.

Staff issued a Notice on March 10, 2015, citing the following violations of the Pipeline Safety Regulations:

1. *49 CFR 192.13(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.*

The Ohio Rural Natural Gas company has installed approximately 7,300 feet of 4" plastic line and has installed a tap to a transmission line for the purpose of supplying gas to customers without maintaining plans, procedures, and programs that are required under 49 CFR 192 including procedures for the design, installation, construction, inspection and testing of piping, an O&M manual, emergency response plan, public awareness plan, operator qualification plan, and integrity management plan.

2. *OAC 4901:1-16-06(D) In accordance with the training program requirements pursuant to the pipeline safety regulations, subpart N 49 CFR 192.801 to 192.809, as effective on the date referenced in paragraph (D) of rule 4901:1-16-02 of the Administrative Code, distribution operators shall incorporate new construction, including riser installation, as a part of their operator qualification requirements.*

The Ohio Rural Natural Gas company is performing new construction of pipeline segments without establishing operator qualification requirements.

⁶ See Appendix C: Notice of Probable Noncompliance dated April 5, 2016.

On July 21, 2015, ORNG notified Staff that it had purchased an O&M plan from a consultant and had the plans, procedures and programs necessary to operate its facilities in accordance with the Pipeline Safety Regulations. After reviewing the plan, Staff responded on July 24, 2015, listing several remaining deficiencies that needed to be addressed prior to operation. Staff asserted that ORNG had failed to establish a Maximum Allowable Operating Pressure (MAOP) for piping installed prior to February 10, 2015, and informed ORNG that it is required to take additional steps to demonstrate the integrity of this piping including pressure testing and leak surveys.

On September 3, 2015, Staff discovered that ORNG had pressurized the approximately 7,300 feet of piping in question without complying with the July 24, 2015, letter. Staff required ORNG to demonstrate the integrity of the pipeline by completing the required corrective actions and to complete action on the remaining deficiencies previously identified by Staff. ORNG completed the pipeline integrity procedures on the 7,300 feet in question on September 18, 2015.

On November 20, 2015, ORNG cut an Orwell Natural Gas main in order to assume service to customers at 6272, 6273, and 6275 Tin Man Road in Mentor, Ohio (Tin Man Storage). A metering and regulation (M&R) station was installed along with a distribution main that connected to 44 service lines supplying 57 separate customer meters. ORNG did not contact representatives from Orwell Natural Gas and did not obtain consent to the cutting of the Orwell main. Further, ORNG did not provide any notice to the customers at Tin Man Storage regarding the change of operator or emergency contact information as required.⁷

Staff was alerted to this situation by a complaint and investigated ORNG construction activity at Tin Man Storage. Staff noted that the M&R station was installed improperly. The facility was installed without a pressure sensing line;⁸ access to the emergency shutoff valves was not secured;⁹ and pressure testing of newly installed mains, services, and meter settings was not performed.¹⁰ Again, Staff discovered that ORNG employees at the scene did not have Operator Qualifications required to install meter sets and reestablish service to customers,¹¹ and an MAOP for installed piping was not established.¹² These are all requirements for safe operation of a gas pipeline facility in Ohio. ORNG management was immediately informed by Staff that the company must install sensing lines for their pressure regulators and an emergency shut off valve, secure the station bypass valve from unauthorized operation, and pressure test the newly installed system.

⁷ See 49 CFR 192.616(d).

⁸ See 49 CFR 192.199(g).

⁹ See 49 CFR 192.181(b).

¹⁰ See 49 CFR 192.503(a).

¹¹ See 49 CFR 192.807(b).

¹² See 49 CFR 192.619(a).

The M&R station's primary purpose is to maintain a safe operating pressure to downstream customers. Without properly installed sensing lines, the pressure regulators at the M&R station cannot function and would result in an over-pressuring of downstream piping, because it would fail to reduce the incoming pressure. As a result of the inspection, ORNG hired a contractor (Big Oats Supply) to install the missing sensing lines on the M&R station on November 21, 2015. It was determined that an emergency shutoff valve was in fact installed upstream of the M&R station but was buried and the ORNG personnel at the scene on November 20, 2015, were not aware of its existence. Staff was present to ensure that the sensing lines were properly installed and emergency shutoff valve made operable.

On November 23, 2015, Staff began drafting a Notice to be issued to ORNG detailing the issues uncovered at the November 20 inspection. However, before the Notice could be issued, Staff received a call regarding the report of a natural gas leak at the Tin Man Storage site.

On November 25, 2016, Staff was contacted by an employee of Orwell Natural Gas who received complaints of a gas leak from Tin Man Storage tenants. These complaints were initially made by the tenants calling 911, and representatives of the City of Mentor Fire Department contacted Orwell Natural Gas as they were unaware ORNG was providing service to Tin Man Storage.

After contacting ORNG, it was approximately one hour before an ORNG employee responded to the leak. The situation was exacerbated because the ORNG employee who arrived on the scene did not have any leak detection equipment and was unfamiliar with leak detection and leak grading procedures. Just days before, while Staff members were on site on November 20, 2015, they observed the proper installation of several meters. However, upon investigation of the leak complaint, it was discovered that 30 of the meters installed before Staff arrived at the scene on November 20, 2015, were assembled without the gaskets designed to prevent leakage at mechanical couplings. The installation of these gaskets is specifically required by the manufacturers of the meters in order to safely operate them. These meters were the source of the leak in the complaint.

Because of the leaks discovered during the investigation of the complaint, the City of Mentor Fire Department disconnected service at the Tin Man Storage site on the recommendation of Staff until ORNG could install the meters in accordance with the manufacturer's instructions and properly test the gas lines to ensure no leaks were present. Between December 3 and December 11, 2015, ORNG completed these repairs on the Tin Man Storage facilities under Staff supervision.

Staff issued a Notice on December 1, 2015, citing the following specific violations and recommending a monetary penalty of \$100,000.

1. 49 CFR 192.181 *Distribution line valves.*

- (b) *Each regulator station controlling the flow or pressure of gas in a distribution system must have a valve installed on the inlet piping at a distance from the regulator station sufficient to permit the operation of the valve during an emergency that might preclude access to the station.*

ORNG installed an M&R station designed to control the pressure of gas to customers at Tin Man Storage without an emergency valve installed at a distance sufficient to permit operation during an emergency that might preclude access to the station.

- 2. 49 CFR 192.199 *Requirements for design of pressure relief and limiting devices.*
 - (g) *Where installed at a district regulator station to protect a pipeline system from overpressuring, be designed and installed to prevent any single incident such as an explosion in a vault or damage by a vehicle from affecting the operation of both the overpressure protective device and the district regulator.*

ORNG installed an M&R station without a sensing line on the downstream pressure regulator at the station required for correct operation. This incorrect installation resulted in the downstream pressure regulator being unable to function, causing the regulator station to be unprotected from a single incident affecting its operation.

- 3. 49 CFR 192.199 *Requirements for design of pressure relief and limiting devices.*
 - (h) *Except for a valve that will isolate the system under protection from its source of pressure, be designed to prevent unauthorized operation of any stop valve that will make the pressure relief valve or pressure limiting device inoperative.*

ORNG installed an M&R station without locking devices or other method of securing valves against unauthorized operation.

- 4. 49 CFR 192.503 *General requirements.*
 - (a) *No person may operate a new segment of pipeline, or return to service a segment of pipeline that has been relocated or replaced, until-*
 - (1) *It has been tested in accordance with this subpart and §192.619 to substantiate the maximum allowable operating pressure; and*
 - (2) *Each potentially hazardous leak has been located and eliminated.*

ORNG did not perform pressure testing of the service line and tap from an Orwell Trumbull high pressure main to the ORNG M&R station, the M&R station that was connected to a system operating at an MAOP of 500 psig, or the distribution system running from the M&R station to customer meters at Tin Man Storage before pressurizing the piping and placing it in operation.

- 5. 49 CFR 192.605 *Procedural manual for operations, maintenance, and emergencies.*

- (a) *Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.*
- (b) *The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations:*
 - (11) *Responding promptly to a report of a gas odor inside or near a building.*

ORNG took approximately one hour to respond to a report of a gas odor inside or near the Tin Man Storage building, and the ORNG employee sent did not have any leak detection equipment and appeared unfamiliar with leak detection and leak grading procedures.

6. *49 CFR 192.616 Public awareness.*

- (d) *The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:*
 - (1) *Use of a one-call notification system prior to excavation and other damage prevention activities;*
 - (2) *Possible hazards associated with unintended releases from a gas pipeline facility;*
 - (3) *Physical indications that such a release may have occurred;*
 - (4) *Steps that should be taken for public safety in the event of a gas pipeline release; and*
 - (5) *Procedures for reporting such an event.*

ORNG did not educate the customers at Tin Man Storage or appropriate government organizations responsible for responding to emergency events such as the Mentor Fire Department on steps that should be taken for public safety in the event of a gas pipeline release. Customers trying to report a gas leak on November 25, 2015, were unaware that ORNG was providing their gas service and did not know how to contact them. The Mentor Fire Department also was unaware ORNG was operating in the area.

7. *49 CFR 192.619 Maximum allowable operating pressure: Steel or plastic pipelines.*

- (a) *No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following:*
 - (1) *The design pressure of the weakest element in the segment, determined in accordance with subparts C and D of this part...*
 - (2) *The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:*
 - (i) *For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.*
 - (ii) *For steel pipe operated at 100 p.s.i. (689 kPa) gage or more, the test pressure is divided by a factor determined in accordance with the following table:...*

ORNG is operating steel and plastic piping at Tin Man Storage without having determined the MAOP.

8. 49 CFR 192.707 *Line markers for mains and transmission lines.*

(d) The following must be written legibly on a background of sharply contrasting color on each line marker:

- (1) The word "Warning," "Caution," or "Danger" followed by the words "Gas (or name of gas transported) Pipeline" all of which, except for markers in heavily developed urban areas, must be in letters at least 1 inch (25 millimeters) high with ¼ inch (6.4 millimeters) stroke.*
- (2) The name of the operator and telephone number (including area code) where the operator can be reached at all times.*

ORNG did not place line markers at required locations. The line markers present at the site show Orwell Natural Gas as the operator with the emergency phone number for Orwell Natural Gas listed.

9. 49 CFR 192.725 *Test requirements for reinstating service lines.*

(b) Each service line temporarily disconnected from the main must be tested from the point of disconnection to the service line valve in the same manner as a new service line, before reconnecting.

ORNG reinstated 44 disconnected service lines at Tin Man Storage without testing for leakage.

10. 49 CFR 192.805 *Qualification program.*

Each operator shall have and follow a written qualification program. The program shall include provisions to:

(b) Ensure through evaluation that individuals performing covered tasks are qualified;

Staff observed two ORNG employees correctly installing multiple gas meters on November 20, 2015, at the Tin Man Storage site. However, it was later discovered that the meters installed before Staff's arrival on November 20, 2015, were installed without gaskets designed to prevent leakage of gas at the connection with the service riser and house piping, resulting in approximately 30 of the meters leaking and leading to the leak complaint on November 25, 2015. Further, it was later determined that neither of these employees were qualified under the operator's Operator Qualification plan to install domestic meter and regulator sets.

Staff witnessed an ORNG contractor (Big Oats Supply) perform work on the M&R station to install a missing sensing line. Upon investigation it was determined that this employee was not qualified under the operator's Operator Qualification plan to perform this task.

The ORNG employees responding to a leak complaint on November 25, 2015, did not arrive with the necessary leak detection equipment capable of determining the percentage of gas in air and was unable to determine whether the reported leaks were hazardous. The ORNG employee responding to the leak complaint also was unfamiliar with the location of the shutoff valve to the system and once it was located did not have a valve key long enough to operate it.

11. 49 CFR 192.807 *Recordkeeping.*

(b) Records supporting an individual's current qualification shall be maintained while the individual is performing the covered task.

ORNG was unable to provide records showing the qualification status of any of their employees to Staff upon request.

12. OAC 4901:1-13-05 *Minimum customer service levels.*

(A) Service initiation and upgrades. Each gas or natural gas company shall complete the installation of new service as set forth in this paragraph. Percentages shall be calculated as monthly averages.

(3) Prior to initial operation or reestablishment of residential or nonresidential gas service (including after an outage), the gas piping downstream of the meter shall be tested to determine that no leaks exist. Testing may be accomplished by pressure testing or dial testing as set forth in paragraphs (A)(3)(a) to (A)(3)(d) of this rule.

Staff observed two ORNG employees install 57 gas meters and reestablish gas service to customers without testing the gas piping downstream of the meter to determine that no leaks exist.

Staff issued a Compliance Order requiring ORNG to complete corrective actions within an established timetable. Subsequent Staff investigation showed that ORNG only corrected violations that were noted at Tin Man Storage without correcting the violations at other areas where ORNG provides service, or in some cases failed to correct the violations altogether.

On March 16, 2016, and again on March 22-23, 2016, Staff observed ORNG employees attempting to make plastic joints while installing a gas distribution main without following manufacturer's instructions or company procedures. Work was ceased on Staff's instruction and on April 5, 2016, Staff issued a Notice citing the following specific violations and recommending a monetary penalty of \$500,000:

1. 49 CFR 192.273 *Joining of Materials Other than by Welding – General*

(a) The pipeline must be designed and installed so that each joint will sustain the longitudinal pullout or thrust forces caused by contraction or expansion of the piping or by anticipated external or internal loading.

- (b) Each joint must be made in accordance with written procedures that have been proved by test or experience to produce strong gastight joints.*
- (c) Each joint must be inspected to insure compliance with this subpart.*

Employees of Ohio Rural Natural Gas (ORNG) were observed joining 4" PE 4710 PolyPipe plastic piping on March 16, 2016, without following written procedures or inspecting joints to ensure compliance. This joining took place at the ORNG piping in the area of Ellsworth and Duck Creek Road intersection (Duck Creek Road system) and includes approximately 3,400 feet of plastic piping. Butt fusion procedures adopted by ORNG state that the ends of the plastic piping to be joined must be heated to between 400 and 450 degrees Fahrenheit. Temperatures of butt fusion ends were observed by Staff to be between 490 and 505 degrees Fahrenheit.

Joined piping showed defective melt beads that did not pass the inspection criteria listed in the ORNG O&M manual or the PolyPipe heat fusion procedures. Inspection of these joints by a person qualified under the applicable joining procedure would have determined these joints were unsatisfactory and required replacement.

Staff also observed ORNG employees attempting to cut out and replace the defective plastic joints on March 22-23, 2016, using an incorrect fusion temperature. Staff observed many other instances of joints being made incorrectly and not according to procedures, such as:

- a. The face plates of the iron heating element used appeared to be damaged and in need of replacement. Burn marks were observed on the plates which indicate material was stuck to them. This will cause a loss of temperature and the pipe sticking to the face of the iron.
- b. The pipe ends and heating element face were not cleaned prior to fusing the pipe. Both items are to be cleaned using a non-synthetic lint free cloth (cotton). This is a recommendation of both the pipe manufacturer (PolyPipe) and the Plastic Pipe Institute (PPI). McElroy, the heating element manufacturer, also has this noted in their operating instructions.
- c. Staff witnessed ORNG employees joining pipe without proper shielding from winds that were in excess of 30 MPH. Exposure of the fusion heater plate and pipe to wind can result in unacceptable temperature variations during butt fusion and possible joint contamination. When unfavorable wind conditions exist, the provision of a suitable shelter is required to protect the pipe and the fusion heater plate to ensure more consistent work performance. Unfavorable wind conditions can also flow through the pipe bore and cause unacceptable temperature variations during the fusion process.

- d. Staff witnessed ORNG employees improperly using a device intended to align both ends of the pipe during fusion, which may have caused misalignment of the pipe while heating and joining.
- e. The pipe manufacturers joining procedures state that the maximum heater removal time for that wall thickness of pipe is 10 seconds (the time from when the iron is removed until the pipe ends are joined). The ORNG employee performing the joining would remove the iron and walk it to a truck (approximately six feet away) to put it back into the heater stand, then return to the fusion machine to join the heated pipe ends. This process was taking over 15 seconds which exceeds the manufacturer specified maximum time limit by more than 5 seconds, resulting in fusion of pipe ends that have been allowed to cool.

It is clear from Staff observation that ORNG is using employees who are not properly trained or otherwise qualified to perform plastic joining, resulting in unsafe joints with a high probability of failure.

- 2. 49 CFR 192.283 *Plastic Pipe: Qualifying joining procedures.*
 - (c) *A copy of each written procedure being used for joining plastic pipe must be available to the persons making and inspecting joints.*

Written procedures for joining plastic pipe were not available to ORNG personnel making the plastic pipe joints. The ORNG personnel at the scene were not familiar with the joining procedures or inspection criteria for butt fused plastic joints when interviewed by Staff.

Staff documented additional violations of the Pipeline Safety Regulations during an annual staff inspection of operator procedures and records at ORNG completed on May 12, 2016. At one point during the audit, Pete Chace, the Staff's Gas Pipeline Safety Program Manager, visited the audit location to supervise his inspectors and gauge the audit's progress. While travelling to the location on March 23, 2016, he received a telephone call from Richard Osborne questioning why he was participating in the audit and then advising him that his employees will not assist with the audit while Mr. Chace was there. By the time the audit was concluded, Staff had identified a number of violations of the Pipeline Safety Regulations including a lack of welding procedures; failure to provide cathodic protection for installed metallic pipelines or pipeline components; failure to install required excess flow valves; a lack of a leak management program or the equipment required to determine whether or not reported leaks are hazardous; failure to pressure test newly installed piping; failure to determine an MAOP for any piping in the ORNG system; and failure to implement a required public awareness program. Many of these issues are repeat violations that were cited originally by Staff on December 1, 2015, and corrections were implemented by ORNG at the Tin Man Storage facility while under direct Staff observation, but no other corrections were made anywhere else in the ORNG system. The specific violations identified by Staff were:

1. 49 CFR 192.13 *What general requirements apply to pipelines regulated under this part?*
(c) *Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.*

Ohio Rural Natural Gas (ORNG) does not have plans or procedures required under Sections 192.225: Welding Procedures and 192.227: Qualifications of Welders although ORNG has employed contract welders to conduct welding operations on their facilities. ORNG did not follow their own procedures for pressure testing, cathodic protection, or the installation of excess flow valves.

2. 49 CFR 192.16 *Customer notification.*
(a) *This section applies to each operator of a service line who does not maintain the customer's buried piping up to the entry of the first building downstream, or, if the customer's buried piping does not enter a building, up to the principal gas utilization equipment or the first fence (or wall) that surrounds that equipment.*
(c) *Each operator shall notify each customer not later than August 14, 1996 or 90 days after the customer first receives gas at a particular location, whichever is later.*

ORNG's O&M plan, Section 4.C. "Damage Prevention" provides procedures for customer notification, however none of these required notices have been sent out to customers.

3. 49 CFR 192.225 *Welding procedures.*
(a) *Welding must be performed by a qualified welder in accordance with welding procedures qualified under section 5 of API 1104 (incorporated by reference, see §192.7) or section IX of the ASME Boiler and Pressure Vessel Code "Welding and Brazing Qualifications" (incorporated by reference, see §192.7) to produce welds meeting the requirements of this subpart. The quality of the test welds ... applicable welding standard(s).*

ORNG was unable to provide any qualified welding procedures to Staff. ORNG has tapped into steel transmission and high pressure distribution lines and installing, by means of welding, steel company service lines, steel valves, and steel inlet risers to farm taps and distribution centers without having qualified welding procedures. The lack of qualified welding procedures was first identified by Staff and communicated to ORNG on February 20, 2015, and no action has been taken to date.

4. 49 CFR 192.241 *Inspection and test of welds.*
(b) *The welds on a pipeline to be operated at a pressure that produces a hoop stress of 20 percent or more of SMYS must be nondestructively tested...*

ORNG has made 2 taps into a 10" steel transmission line operated by Cobra Pipeline (Cobra) (line C341) at its Newton Falls system. Steel lines were welded to the Cobra

transmission line at the inlet side of the Hallock-Young and Elsworth Rd Town Border Stations. The Cobra line C341 operates in excess of 20 percent SMYS. None of these welds were nondestructively tested.

5. 49 CFR 192.243 *Nondestructive testing.*

(d) *When nondestructive testing is required under §192.241(b), the following percentages of each day's field butt welds, selected at random by the operator, must be nondestructively tested over their entire circumference;*

(3) *In Class 3 and Class 4 locations, at crossings of major or navigable rivers, offshore, and within railroad or public highway rights-of-way, including tunnels, bridges, and overhead road crossings, 100 percent unless impracticable, in which case at least 90 percent. Nondestructive testing must be impracticable for each girth weld not tested.*

ORNG's O&M manual states in section 1.2 that all distribution facilities will be designed, constructed, operated, and maintained in accordance with requirements for Class 4 locations. ORNG has made 12 taps into steel transmission and high pressure distribution lines to feed farm taps, steel M&R station piping, and steel service lines. None of these welds were nondestructively tested.

6. 49 CFR 192.321 *Installation of plastic pipe*

(a) *Plastic pipe must be installed below ground level except as provided by paragraphs (g) and (h) of this section.*

(c) *Plastic pipe must be installed so as to minimize shear or tensile stresses.*

ORNG installed a farm tap at Fracci Court and a regulator station at Tin Man Storage. Both locations supply a PE plastic line installed through the use of a plastic to steel transition fitting without a riser. The PE piping is exposed above ground level and is helping to support the stations, which imposes tensile stress on the PE pipe. ORNG needs to install inlet risers at these locations.

7. 49 CFR 192.383 *Excess flow valve installation*

(b) *Installation required. An excess flow valve (EFV) installation must comply with the performance standards in §192.381. The operator must install an EFV on any new or replaced service line serving a single-family residence after February 12, 2010...*

Excess flow valves (EFV) were not installed on their Muzic, Dowd, or Williams Road – Steel Head Run systems. ORNG's O&M plan, Section 4C, page 4 states that ORNG will install EFVs on each newly installed service line ... that serves a single residential unit.

8. 49 CFR 192.455 *External corrosion control: Buried or submerged pipelines installed after July 31, 1971.*

(a) *Except as provided in paragraphs (b), (c), and (f) of this section, each buried or submerged pipeline installed after July 31, 1971, must be protected against external corrosion, including the following:*

(2) *It must have a cathodic protection system designed to protect the pipeline in accordance with this subpart, installed and placed in operation within 1 year after completion of construction.*

ORNG installed farm taps supplying steel service lines at their Fracci, Oak, Dowd, Muzic, Williams Road Barn, Williams Road - Steel Head Run, and Reynolds Road systems and new main line steel pipe feeding gas to town border stations for Sugar Bush, Hallock Young, and Ellsworth Road without a cathodic protection system.

9. 49 CFR 192.465 *External corrosion control: Monitoring.*

(a) *Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463.*

ORNG has no cathodic protection monitoring records for 2015.

10. 49 CFR 192.479 *Atmospheric corrosion control: General.*

(b) *Coating material must be suitable for the prevention of atmospheric corrosion.*

ORNG operates a steel main line pipe supplying gas to the Os Air facility in Mentor, Ohio. The pipeline coating is in poor condition and active atmospheric corrosion is extensive along approximately 100 feet of the 2" steel main pipeline.

11. 49 CFR 192.481 *Atmospheric corrosion control: Monitoring.*

(b) *During inspections the operator must give particular attention to pipe at soil-to-air interfaces, under thermal insulation, under disbonded coatings, at pipe supports, in splash zones, at deck penetrations, and in spans over water.*

The outlet riser at the Hallock Young station has atmospheric corrosion present on the outlet riser at the soil to air interface. The soil to air interfaces on the Fracci Ct. System farm tap are not properly protected from atmospheric corrosion.

12. 49 CFR 192.491 *Corrosion control records.*

(a) *Each operator shall maintain records or maps to show the location of cathodically protected piping, cathodic protection facilities, galvanic anodes, and neighboring structures bonded to the cathodic protection system.*

(c) *Each operator shall maintain a record of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist. These records must be retained for at least 5 years,*

except that records related to §§192.465(a) and (e) and 192.475(b) must be retained for as long as the pipeline remains in service.

ORNG has no records or maps showing the location of cathodically protected piping or test points, or records of any tests, surveys, or inspection to demonstrate that a corrosive condition does not exist.

13. 49 CFR 192.503 *General Requirements.*

- (a) No person may operate a new segment of pipeline, or return to service a segment of pipeline that has been relocated or replaced, until-*
 - (1) It has been tested in accordance with this subpart and §192.619 to substantiate the maximum allowable operating pressure;*

ORNG was unable to produce pressure testing records for the Sugarbush, Hallock Young, Ellsworth Road, Reynolds Road, Williams Road, Steel Head Run, or Os Air systems, or steel service lines off the Fracci, Oak, Dowd, Muzic, Williams Road Barn, and Williams Road Steel Head Run fed from farm taps.

14. 49 CFR 192.615 *Emergency plans.*

- (a) Each operator shall establish written procedures to minimize the hazard resulting from a gas pipeline emergency. At a minimum, the procedures must provide for the following:*
 - (2) Establishing and maintaining adequate means of communication with appropriate fire, police, and other public officials...;*
 - (4) The availability of personnel, equipment, tools, and materials, as needed at the scene of an emergency.*
- (b) Each operator shall:*
 - (1) Furnish its supervisors who are responsible for emergency action a copy of that portion of the latest edition of the emergency procedures established under paragraph (a) of this section as necessary for compliance with those procedures;*
 - (2) Train the appropriate operating personnel to assure that they are knowledgeable of the emergency procedures and verify that the training is effective.*

ORNG does not have written procedures listing appropriate contact information/phone numbers to establish a means of communication with appropriate emergency and public officials. The ORNG emergency procedures list incorrect phone numbers for available company personnel to be contacted in the event of an emergency. ORNG has not provided supervisors with a copy of emergency procedures and has no record of any training of appropriate operator personnel in emergency procedures. ORNG employees have not been provided with equipment necessary to determine the source and concentration of a gas leak (i.e. a combustible gas indicator).

15. 49 CFR 192.616 *Public awareness.*

- (a) Except for an operator of a master meter or petroleum gas system covered under paragraph (j) of this section, each pipeline operator must develop and implement a written continuing public education program that follows the guidance provided in the American Petroleum Institute's (API) Recommended Practice (RP) 1162 (incorporated by reference, see §192.7).*

The ORNG public awareness plan has not identified Emergency Officials, Public Officials, or Excavator stakeholder audiences. No notification messages have been prepared or sent out to those stakeholders as required by API PR 1162. No messages to the Affected Public stakeholders were sent out in 2015. The first messages to the Affected Public were sent out January 2016, to a limited list of customers on Lyntz Townline Road in the Hallock Young system in Newton Falls, Ohio. This violation was first identified by Staff on November 24, 2015, and has not been corrected by ORNG.

16. 49 CFR 192.619 *Maximum allowable operating pressure: Steel or plastic pipelines.*
(a) No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following:...

ORNG has not established an MAOP for the Sugarbush, Hallock Young, Ellsworth Road, Reynolds Road, Williams Road, Steel Head Run, or Os Air systems, or steel service lines off the Fracci, Oak, Dowd, Muzic, Williams Road Barn, and Williams Road Steel Head Run fed from farm taps.

17. 49 CFR 192.707 *Line markers for mains and transmission lines.*
(c) Pipelines above ground. Line markers must be placed and maintained along each section of a main and transmission line that is located above ground in an area accessible to the public.

ORNG operates an exposed 2" steel main (Os Air system) with no line markers.

18. 49 CFR 192.721 *Distribution systems: Patrolling.*
(b) Mains in places or on structures where anticipated physical movement or external loading could cause failure or leakage must be patrolled-

The ORNG Os Air system has an exposed 2" steel main line hung on posts, and has no patrolling records for this system.

19. 49 CFR 192.805 *Qualification program.*
Each operator shall have and follow a written qualification program. The program shall include provisions to:
(b) Ensure through evaluation that individuals performing covered tasks are qualified;

ORNG could not demonstrate PE plastic piping installations in 2015, were performed by individuals who were qualified to perform this covered task.

20. 49 CFR 192.1007 *What are the required elements of an integrity management plan?*
- (a) *Knowledge. An operator must demonstrate an understanding of its gas distribution system developed from reasonably available information...*
 - (b) *Identified threats. The operator must consider the following categories of threats to each gas distribution pipeline...*
 - (c) *Evaluate and rank risk. An operator must evaluate the risks associated with its distribution pipeline...*
 - (d) *Identify and implement measures to address risks. Determine and implement measures designed to reduce the risks from failure of its gas distribution pipeline. These measures must include an effective leak management program.*
 - (e) *Measure performance, monitor results, and evaluate effectiveness.*
 - (f) *Periodic evaluation and improvement*
 - (g) *Report results*

ORNG has not collected or documented information required to meet the required elements of an integrity management plan, including leak history, corrosion control records, continuing surveillance records, patrolling records, maintenance history, or excavation damage experience. ORNG has not identified threats or evaluated risks to their pipeline system, or implemented measures designed to reduce the risks from failure of its gas distribution system. ORNG does not have an effective leak management system and does not even have a leak detection device capable of measuring the concentration of natural gas in the atmosphere. ORNG has taken no action to measure performance or evaluate the effectiveness of their plan.

21. OAC 4901:1-16-04 *Records, maps, inspections, and leak classifications.*
- (H) *Each operator shall classify all leaks utilizing leak detection equipment. As used in this rule, leak detection equipment means any device capable of detecting and measuring the concentration of natural gas in the atmosphere. The operator shall classify all hazardous leaks immediately and classify all other leaks within two business days of discovery.*

Staff identified two leaks on the Hallock Young town border station in November, 2015. These leaks were still present and observed by Staff on April 14, 2016. ORNG was unable to produce documentation that these leaks had been evaluated to determine whether or not they were hazardous. ORNG was unable to produce a leak detection device capable of measuring the concentration of natural gas in the atmosphere to properly classify the leaks during the Staff inspection on April 14, 2016.

Ohio Rural Natural Gas Co-op Response

ORNG did not dispute the Staff findings of the events that took place at Tin Man Storage on November 20-25, 2015, offered no evidence or additional information to mitigate the violations

alleged in Staff's Notice dated December 1, 2015, and did not respond to Staff in writing regarding the Compliance Order. The company completed only the portions of the corrective action plan necessary to reestablish service to the Tin Man Storage facility from December 3, 2015, to December 11, 2015, but not without significant Staff supervision and guidance. During that time, Staff noted that the ORNG employees did not appear to understand the requirements for regulator station design or pressure testing.

On April 4, 2016, representatives of the Staff met with representatives of ORNG and its attorney where ORNG claimed to have met the terms of the Compliance Order issued by Staff on December 1, 2015. Staff investigated and confirmed that ORNG has met these terms with the exception of meeting the Public Awareness requirements of 49 CFR 192.616. Additional Staff investigation revealed that ORNG implemented corrective action necessary in order to restore service at the Tin Man Storage facility, but did not implement corrective action at any other part of its pipeline system.

ORNG responded to the April 5, 2016, Notice on April 19, 2016. This response did not address the qualifications of its employees, or the training processes for those employees, but instead offered a counter-proposal to excavate a certain percentage of plastic joints for inspection. Staff has not responded to this counter-proposal.

Discussion of Violations

As part of its December 1, 2015, Notice, Staff issued a Compliance Order requiring certain corrective actions to be taken in order to restore service at the Tin Man Storage facility. Below is a summary of the corrective actions ordered and ORNG's compliance efforts or lack thereof in response:

- ORNG must re-install all meters using qualified personnel using procedures established in the ORNG O&M plan. ORNG must then perform pressure testing of the service lines present at the Tin Man Storage facility for leakage, and an inspection of all customer piping to verify gas connections to appliances are either connected or shut off, all relights performed correctly, and no leaks are present.
 - Partial compliance was completed by ORNG under Staff supervision over the week of December 3 through December 11, 2015. Further investigation by Staff has shown that ORNG does not have records of performing pressure testing of new meter installations at any part of its system other than the Tin Man Storage facility.
- ORNG must place line markers and signage indicating that ORNG operates the gas pipelines in the area along with an accurate emergency phone number.

- Compliance was completed by ORNG under Staff supervision over the week of December 3 through December 11, 2015.
- ORNG must modify the regulator station at the Tin Man Storage facility to incorporate an emergency shutoff valve, locking devices or other means to prevent unauthorized operation, and a correct installation of the pressure regulator sensing line.
 - Partial compliance was completed by ORNG under Staff supervision.
- ORNG must visually inspect all regulator stations in the ORNG system for correct design by December 15, 2015.
 - This has not yet occurred to the best of Staff's knowledge.
- ORNG must perform pressure testing on all piping at the Tin Man Storage facility in order to establish an MAOP.
 - Partial compliance was completed under Staff supervision over the week of December 3 through 11, 2015. Further investigation by Staff has shown that ORNG does not have records of performing pressure testing or establishing an MAOP at any of its systems other than the Tin Man Storage facility.
- ORNG must provide complete Operator Qualification records for all ORNG employees and contractors demonstrating they are qualified to perform certain operation and maintenance tasks by December 30, 2015.
 - To date ORNG has provided records to Staff showing personnel performing the specific tasks required at Tin Man Storage have received a qualification, although ORNG qualification records for other covered tasks not directly required to reestablish service at Tin Man Storage are incomplete.
- ORNG must provide public awareness materials to its customers, the general public, appropriate government organizations, and persons engaged in excavation related activities in the Tin Man Storage area by January 30, 2016.
 - ORNG sent a mailing out to all Tin Man Storage customers in January of 2016, but have done nothing else to comply with public awareness requirements to date.

As part of its April 5, 2016, Notice, Staff issued a Compliance Order requiring the following corrective actions be taken in order to restore service to distribution mains located at the ORNG Duck Creek Road and Ellsworth Road systems (Mahoning County). Below is a summary of the corrective actions ordered and ORNG's compliance efforts or lack thereof in response:

- All ORNG employees and contractors engaged in making plastic joints must be requalified under the ORNG joining procedure for plastic fusions.
 - ORNG provided documentation that the employees observed making defective plastic joints had been requalified.
- All plastic joints along the buried portion of the approximately 3,400 feet of piping at the Duck Creek Road system be excavated and all defective joints be cut out and replaced prior to the system being placed into service, with Staff being present to observe the evaluation of defective joints and completion of new joints.
 - To date, ORNG has not complied with this order.¹³
- All plastic joints along the buried portion of the approximately 5,400 feet of piping at ORNG's nearby Ellsworth Road system be excavated and all defective joints be cut out and replaced prior to the system being placed into service, with Staff being present to observe the evaluation of defective joints and completion of new joints. This system was installed by the same ORNG personnel observed making defective joints at the Duck Creek Road system.
 - To date, ORNG has not complied.¹⁴

Then, during an annual inspection of operator procedures and records conducted by Staff at ORNG from March 4 through May 12, 2016, Staff discovered numerous violations of the Pipeline Safety Regulations, many of which were violations that Staff had previously cited. These violations included a lack of welding procedures;¹⁵ failure to provide cathodic protection for installed metallic pipelines or pipeline components;¹⁶ failure to install excess flow valves;¹⁷ a lack of a leak management program or the equipment required to determine whether or not reported leaks are hazardous;¹⁸ failure to conduct pressure testing newly installed piping;¹⁹ failure to determine a MAOP for any piping in the ORNG system;²⁰ and failure to implement a required public awareness program.²¹

¹³ ORNG responded on April 19, 2016 with a counter-proposal that 25% of joints be excavated and evaluated. Staff has not responded to this counter-proposal.

¹⁴ ORNG responded on April 19, 2016 stating Staff had no evidence of defective joints in this system as installation was not directly observed and proposed to pressure test the system instead in order to identify leaks. Staff has not responded to this counter-proposal.

¹⁵ See 49 CFR 192.225(a).

¹⁶ See 49 CFR 192.455(a).

¹⁷ See 49 CFR 192.383(b).

¹⁸ See 49 CFR 192.1007.

¹⁹ See 49 CFR 192.503(a).

²⁰ See 49 CFR 192.619(a).

²¹ See 49 CFR 192.616(a).

Looking backward, it is clear that there are multiple violations of the same rules on different sections of ORNG's systems. In reviewing all of these enforcement actions issued by Staff, ORNG has established a pattern of only correcting the violations required to restore its business operations, and are not implementing these corrections in other parts of the ORNG system. For example, the company partially complied with the Staff's March 10, 2015, citation by purchasing the necessary operations manuals, but has not taken the step of enforcing the requirements of that Compliance Order throughout their system. Had the company truly developed the plans, procedures and programs required by the law – and implemented them – the subsequent violations would not have occurred.

Further, ORNG has established a pattern of ignoring compliance orders designed to promote safety and attempting to barter with Staff for the purposes of avoiding costs related to compliance. Based on past experiences with this company, Staff has reason to believe that any new piping installed by ORNG that was not directly observed by Staff will have similar problems to the portions of the ORNG system that were directly observed.

Based on the history of non-compliance and the repeated violations, Staff initiated this case for the purposes of having the commission review Staff's concerns regarding the pattern of Gas Pipeline Safety violations and ORNG's unsatisfactory responses to determine if ORNG's facilities are hazardous to life and property.

Conclusions and Recommendations

Based on the compliance history of ORNG outlined above, Staff believes that ORNG is a willful and persistent violator of the Pipeline Safety Regulations and the administrative enforcement process attempted by Staff has been ineffective in obtaining complete compliance. The pattern shown by ORNG is that of an operator with willful disregard for safety regulations unless directly observed by, and directed by, a member of the Staff and has not implemented written procedures for its employees to follow when installing gas pipeline facilities. Therefore, Staff concludes that ORNG is currently operating its natural gas pipeline system in a manner that potentially threatens human life and property.

After consideration of the information summarized in this report, Staff offers the following recommendations:

1. Determine that ORNG's facilities are hazardous to life and property.
2. Require ORNG to immediately cease all construction and operation of regulated gas pipelines until all of the remaining items from the December 1, 2015, corrective action plan contained in the Compliance Order issued by Staff are satisfied. This includes obtaining and adopting a complete Operator Qualification plan for all covered tasks

performed by ORNG, Cobra Pipeline, Orwell Trumbull Pipeline, and any outside contractors; completing a visual inspection of all regulator stations currently in the system for correct design; and providing public awareness materials to its customers, the general public, appropriate government organizations, and persons engaged in excavation related activities as required by 49 CFR 192.606. ORNG must also correct all of the violations cited in this Staff Report from the annual audit that concluded on May 12, 2016.

3. Require ORNG to fully cooperate with Staff in returning to and maintaining compliance with the Pipeline Safety Regulations on its entire system, including any newly constructed facilities.
4. Assess the recommended forfeitures issued by Staff against Ohio Rural Natural Gas Co-op. In the Notice dated December 1, 2016, Staff proposed a fine of \$100,000.²² In the Notice dated April 5, 2016, Staff proposed an additional fine of \$500,000. Therefore, Staff recommends a total proposed fine of \$600,000 be assessed against the company.

²² Pursuant to authority granted the PUCO under division (B)(1)(b) of section 4905.95 of the Revised Code.

The Public Utilities Commission of Ohio
Asim Z. Haque, Chairman

180 E. Broad Street, Columbus, Ohio 43215-3793
(800) 686-PUCO (7826)

An Equal Opportunity Employer and Service Provider

APPENDIX A

NOTICE OF PROBABLE NON-COMPLIANCE

MARCH 10, 2015



**Public Utilities
Commission**

John R. Kasich, Governor
Thomas W. Johnson, Chairman

Commissioners

Steven D. Lesser
Asim Z. Haque
Lynn Slaby
M. Beth Trombold

March 10, 2015

Darryl L. Knight, President
Ohio Rural Natural Gas
7001 Center Street
Mentor, OH 44060

Dear Mr. Knight:

On February 11-13, 2015, a representative of the Public Utilities Commission of Ohio conducted a safety inspection of your construction of new pipeline facilities and records in the area of Newton Falls, Ohio pursuant to Section 4905.91(B) of the Ohio Revised Code.

As a result of the inspection, the Staff has issued the following Notice of Probable Noncompliance to the Ohio Rural Natural Gas company in accordance with Section 4901:1-16-09 of the Ohio Administrative Code, for review and written response within 30 days. The response is your opportunity to provide additional information for consideration by the Staff and/or to provide a proposed corrective action plan.

You may contact me at (614) 644 8983 or via e-mail at peter.chace@puc.state.oh.us with any questions.

Sincerely,

Peter A. Chace, Program Manager
Gas Pipeline Safety Section
Facility and Operations Field Division

PC:ts
Enclosure

**THE PUBLIC UTILITIES COMMISSION OF OHIO
GAS PIPELINE SAFETY SECTION**

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

NOTICE OF PROBABLE NONCOMPLIANCE

Sent to Darryl L. Knight Title President
Operator Ohio Rural Natural Gas
Address 7001 Center Street
City Mentor State OH Zip Code 44060
Date of Inspection February 11-13, 2015 Place of Inspection Newton Falls
GPS Inspector Keith Topovski

DESCRIPTION

ALL PROBABLE NONCOMPLIANCES LISTED BELOW SHOULD BE CORRECTED OR ACTION TAKEN TO CORRECT WITHIN 30 DAYS OF RECEIPT OF CERTIFIED LETTER.

- (1) Section 192.13(c) (49 C.F.R.); Title: What general requirements apply to pipelines regulated under this part?
(2) O.A.C. 4901:1-16-06(D); Title: Construction reports.

Describe Probable Noncompliance

49 C.F.R. 192.13(c) Each operator shall maintain, modify as appropriate, and follow the plans, procedures, and programs that it is required to establish under this part.

The Ohio Rural Natural Gas company has installed approximately 7,300 feet of 4" plastic line and has installed a tap to a transmission line for the purpose of supplying gas to customers without maintaining plans, procedures, and programs that are required under 49 C.F.R. 192 including procedures for the design, installation, construction, inspection and testing of piping, an operations and maintenance manual, emergency response plan, public awareness plan, operator qualification plan, and integrity management plan.

O.A.C. 4901:1-16-06(D) In accordance with the training program requirements pursuant to the pipeline safety regulations, subpart N 49 C.F.R. 192.801 to 192.809, as effective on the date referenced in paragraph (D) of rule 4901:1-16-02 of the Administrative Code, distribution operators shall incorporate new construction, including riser installation, as a part of their operator qualification requirements.

The Ohio Rural Natural Gas company is performing new construction of pipeline segments without establishing operator qualification requirements.

APPENDIX B

STAFF RESPONSE TO OHIO RURAL NATURAL GAS CO-
OPERATIVE LETTER OF COMPLIANCE

JULY 24, 2015



Public Utilities Commission

John R. Kasich, Governor
Andre T. Porter, Chairman

Commissioners

Asim Z. Haque
Lynn Slaby
M. Beth Trombold
Thomas W. Johnson

July 24, 2015

Richard R. Parsons
Kravitz, Brown & Dortch, LLC
65 East State Street – Suite 200
Columbus, OH 43215-4277

Re: Ohio Rural Natural Gas Co-op

Dear Mr. Parsons:

I have received your letter dated July 21, 2015 regarding the Ohio Rural Natural Gas Co-op ("ORNG"). The Public Utilities Commission, Gas Pipeline Safety section Staff ("Staff") has verified that ORNG has obtained an Operator ID number from the Office of Pipeline Safety, has registered with an underground utility protection service, and has developed plans and procedures necessary for the operation of a gas pipeline facility.

Staff has two remaining concerns before ORNG may commence operations:

1. The Pipeline Safety Regulations (49 C.F.R. 192) requires natural gas pipeline operators to establish a Maximum Allowable Operating Pressure (MAOP) in accordance with 192.619. This will require pressure testing in accordance with Subpart J of the Pipeline Safety Regulations, and the use of these pressure testing results to determine a MAOP. It is Staff's understanding that ORNG does not currently have pressure testing records and therefore cannot establish a MAOP.
2. Staff first became aware of construction activity by ORNG on February 11th, 2015. It is Staff's understanding that construction activity had occurred before this time, before ORNG had established procedures for new construction and processes to document construction had been done in accordance with the Pipeline Safety Regulations. Staff's investigation determined that the construction company contracted by ORNG was using procedures developed by another gas pipeline operator and as a result I am willing to allow the ORNG system to go into operation provided that leak surveys are performed when the lines are pressurized with a Staff member present.

Staff has also identified a few issues with the ORNG Operator Qualification plan, and has not yet reviewed a Drug and Alcohol plan or the operator's Public Awareness baseline message material. These issues need to be addressed but should not prevent ORNG commencing operations.

You may contact me at (614) 644-8983 or via e-mail at peter.chace@puc.state.oh.us with any questions, comments, or concerns.

Sincerely,

Peter A. Chace
Gas Pipeline Safety Program Manager

PC:ts

APPENDIX C

NOTICE OF PROBABLE NON-COMPLIANCE

DECEMBER 1, 2015



Public Utilities Commission

John R. Kasich, Governor
Andre T. Porter, Chairman

Commissioners

Asim Z. Haque
Lynn Slaby
M. Beth Trombold
Thomas W. Johnson

December 1, 2015

Sherri Phillips, President
Ohio Rural Natural Gas Cooperative
7001 Center Street
Mentor, OH 44060

NOTICE OF PROBABLE NONCOMPLIANCE

Dear Ms. Phillips:

On November 20, 2015, Ohio Rural Natural Gas (ORNG) cut an Orwell Natural Gas main line in order to take over service to customers at 6272, 6273, and 6275 Tin Man Road, Mentor OH ("Tin Man Storage"). This was done without Orwell Natural Gas consenting to or being made aware of this activity. Representatives of the Public Utilities Commission of Ohio (PUCO) conducted safety inspections of your pipeline facilities at this location on November 20, 2015, November 23, 2015 and November 25, 2015 pursuant to Section 4905.91(B) of the Ohio Revised Code. The inspections show that the actions of ORNG at this address have endangered public safety and could have resulted in a serious incident resulting in loss of life and/or property damage.

The inspection found several violations of the Pipeline Safety Regulations (49 CFR 192) and the Ohio Administrative Code (OAC). The items inspected and probable violations are:

1. 192.181 Distribution Line Valves.

(b) Each regulator station controlling the flow or pressure of gas in a distribution system must have a valve installed on the inlet piping at a distance from the regulator station sufficient to permit the operation of the valve during an emergency that might preclude access to the station.

ORNG installed a Metering and Regulation (M&R) station designed to control the pressure of gas to customers at Tin Man Storage on November 20, 2015 without a valve installed at a distance sufficient to permit operation during an emergency that might preclude access to the station.

2. 192.199 Requirements for design of pressure relief and limiting devices.

(g) Where installed at a district regulator station to protect a pipeline system from overpressuring, be designed and installed to prevent any single incident such as an explosion in a vault or damage by a vehicle from affecting the operation of both the overpressure protective device and the district regulator.

ORNG installed an M&R station without a sensing line on the downstream pressure regulator at the station required for correct operation. This incorrect installation resulted in the downstream pressure regulator being unable to function, causing the regulator station to be unprotected from a single incident affecting its operation.

(h) Except for a valve that will isolate the system under protection from its source of pressure, be designed to prevent unauthorized operation of any stop valve that will make the pressure relief valve or pressure limiting device inoperative.

ORNG installed an M&R station without locking devices or other method of securing valves against unauthorized operation.

3. 192.503 General Requirements

(a) No person may operate a new segment of pipeline, or return to service a segment of pipeline that has been relocated or replaced, until

- (1) It has been tested in accordance with this subpart and §192.619 to substantiate the maximum allowable operating pressure; and**
- (2) Each potentially hazardous leak has been located and eliminated.**

ORNG did not perform pressure testing of the service line and tap from an Orwell Trumbull high pressure main to the ORNG M&R set, the M&R set that was connected to a system operating at a maximum allowable operating pressure of 500 psig, or the distribution system running from the M&R set to customer meters at Tin Man Storage before pressurizing the piping and placing it in operation.

4. 192.605 Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.

(b) The manual required by paragraph (a) of this section must include procedures for the following, if applicable, to provide safety during maintenance and operations:

- (11) Responding promptly to a report of a gas odor inside or near a building.**

On November 25, 2015 Public Utilities Commission Staff was contacted by an employee of Orwell Natural Gas who received a call from a tenant at Tin Man Storage reporting a gas leak. The tenant was unaware that ORNG had cut the Orwell main line and established service with a tap from Orwell Trumbull Pipeline, and did not know how to contact ORNG to report the leak. From the tenant's initial report of a gas leak, it took approximately one hour to locate an ORNG employee who could respond to the leak call. The ORNG employee who responded did not have any leak detection equipment and appeared unfamiliar with leak detection and leak grading procedures.

5. 192.616 Public Awareness

(d) The operator's program must specifically include provisions to educate the public, appropriate government organizations, and persons engaged in excavation related activities on:

- (1) Use of a one-call notification system prior to excavation and other damage prevention activities;**
- (2) Possible hazards associated with unintended releases from a gas pipeline facility;**
- (3) Physical indications that such a release may have occurred;**
- (4) Steps that should be taken for public safety in the event of a gas pipeline release; and**
- (5) Procedures for reporting such an event.**

ORNG did not educate its customers or appropriate government organizations responsible for responding to emergency events on steps that should be taken for public safety in the event of a gas pipeline release. Customers trying to report a gas leak on November 25, 2015 were unaware that ORNG was providing their gas service and did not know how to contact the company. The City of Mentor Fire Department was also unaware ORNG was operating in the area.

6. 192.619 Maximum Allowable Operating Pressure

(a) No person may operate a segment of steel or plastic pipeline at a pressure that exceeds a maximum allowable operating pressure determined under paragraph (c) or (d) of this section, or the lowest of the following:

- (1) The design pressure of the weakest element in the segment...;**
- (2) The pressure obtained by dividing the pressure to which the segment was tested after construction as follows:**
 - (i) For plastic pipe in all locations, the test pressure is divided by a factor of 1.5.**
 - (ii) For steel pipe operated at 100 p.s.i. (689 kPa) gage or more, the test pressure is divided by a factor determined in accordance with the following table...:**

ORNG is operating steel and plastic piping at Tin Main Road without having determined the maximum allowable operating pressure.

7. 192.707 Line markers for mains and transmission lines

(d) Marker warning. The following must be written legibly on a background of sharply contrasting color on each line marker:

- (2) The name of the operator and telephone number (including area code) where the operator can be reached at all times.**

ORNG did not place line markers at required locations, or take any action to inform its customers who to contact in case of an emergency. The line markers present at the site show Orwell Natural Gas as the operator with the emergency phone number for Orwell Natural Gas listed.

8. 192.725 Test requirements for reinstating service lines

(a) Except as provided in paragraph (b) of this section, each disconnected service line must be tested in the same manner as a new service line, before being reinstated.

(b) Each service line temporarily disconnected from the main must be tested from the point of disconnection to the service line valve in the same manner as a new service line, before reconnecting.

ORNG reinstated 44 disconnected service lines at Tin Man Storage without testing for leakage.

9. 192.805 Qualification program

Each operator shall have and follow a written qualification program. The program shall include provisions to: (b) Ensure through evaluation that individuals performing covered tasks are qualified

Staff observed two ORNG employees install gas meters on November 20, 2015. Neither of these employees were qualified under the operator's Operator Qualification plan to install domestic meter and regulator sets. It was later discovered that meters installed before Staff's arrival on November 20, 2015 were installed without gaskets designed to prevent leakage of gas at the connection with the service riser and house piping, resulting in approximately 30 of the meters leaking and leading to a leak complaint on November 25, 2015.

Staff witnessed an ORNG contractor ("Big Oats Supply") perform work on the M&R station to install a missing sensing line on November 23, 2015. This line was installed after Staff informed ORNG that the missing sensing line was an urgent safety issue. This employee was not qualified under the operator's Operator Qualification plan to perform this task.

The ORNG employees responding to a leak complaint on November 25, 2015 did not arrive with leak detection equipment capable of determining the percentage of gas in air and was unable to determine whether the reported leaks were hazardous.

10. 192.807 Recordkeeping

(b) Records supporting an individual's current qualification shall be maintained while the individual is performing the covered task.

ORNG was unable to provide records showing the qualification status of any of its employees to Staff upon request.

11. OAC 4901:1-13-05 Minimum Customer Service Levels

(A)(3) Prior to initial operation or reestablishment of residential or nonresidential gas service (including after an outage), the gas piping downstream of the meter shall be tested to determine that no leaks exist. Testing may be accomplished by pressure testing or dial testing as set forth in paragraphs (A)(3)(a) to (A)(3)(d) of this rule.

Staff observed two ORNG employees install 57 gas meters and reestablish gas service to customers without testing the gas piping downstream of the meter to determine that no leaks exist.

Due to the nature of the violations and the recent history of violations by ORNG, a forfeiture in the amount of **\$100,000 is being assessed** for violations of the Pipeline Safety Regulations. Payment must be made out to "Treasurer, State of Ohio" and mailed to the Public Utilities Commission of Ohio, 180 E Broad Street, Columbus OH 43215.

A Compliance Order is also included with this PNC detailing the actions that ORNG must take to return to compliance with the Pipeline Safety Regulations.

Payment of the forfeiture is due within 30 days of the date of this letter. You may contact me at (614) 644 8983 or by e-mail at peter.chace@puc.state.oh.us with any questions.

Sincerely,



Peter A. Chace, Program Manager
Gas Pipeline Safety Section
Facility and Operations Field Division

c.c. Richard Osborne, President, Orwell Trumbull Pipeline Company LLC
Lisa D. Summers, Esq., Acting Compliance Officer, Ohio Rural Natural Gas Cooperative
Robert Searles, City of Mentor Fire Chief

COMPLIANCE ORDER

Pursuant to the Ohio Administrative Code, section 4901:1-16-09, the Public Utilities Commission, Gas Pipeline Safety Staff ("Staff") issues the Ohio Rural Natural Gas Cooperative ("ORNG") the following Compliance Order requiring corrective action for ORNG to return to compliance with the Pipeline Safety Regulations.

The following must be completed prior to restoration of service at the Tin Man Storage facility:

1. In regard to Items 8 and 11 of the Notice pertaining to the failure to test service lines and customer piping for leakage, ORNG must re-install all of the meters at the Tin Man Storage facility using qualified personnel following the ORNG Operations and Maintenance plan. ORNG must then perform a pressure test of the service lines present at Tin Man Storage for leakage in accordance with 49 CFR 192.725. Finally, ORNG must perform an inspection of all customer piping to verify that all gas connections to appliances are either connected or shut off, all relights have been done correctly, and there are no leaks present. A member of the PUCO Staff must be present to verify all work has been completed in accordance with the Pipeline Safety Regulations prior to the restoration of gas service.
2. In regard to Item 7 of the Notice pertaining to pipeline markers, ORNG must place line markers and signage indicating that ORNG operates the pipelines, and providing an accurate emergency phone number so customers can contact ORNG in case of a leak or other emergency.

The following must be completed within thirty (30) days from the date of this Compliance Order:

3. In regard to Items 1 and 2 of the Notice pertaining to regulator station design and construction, ORNG must modify the regulator station at Tin Man Road to incorporate an emergency shutoff valve and locking devices or other means of securing valves against unauthorized operation. This work must be performed by individual(s) qualified to perform these covered tasks under the company's Operator Qualification plan. ORNG must also perform a visual inspection of all regulator stations currently in its system for correct design, by an individual(s) qualified to determine that pressure regulating stations are properly installed and protected from dirt, liquids, or other conditions that may prevent proper operation, and correct any deficiencies found. This inspection must be completed within fifteen (15) days from the date of this letter.
4. In regard to Items 3, 4, and 6 of the Notice pertaining to leak testing and determination of maximum allowable operating pressure, ORNG must perform pressure testing on all piping at the Tin Man Storage facility in accordance with the Pipeline Safety Regulations, Subpart J, or in the case of the pre-existing piping owned by Orwell Natural Gas, obtain any pressure testing documentation that may exist from Orwell Natural Gas. This pressure testing must be performed by individual(s) qualified under the ORNG Operator Qualification plan to perform such testing. After obtaining pressure testing results, ORNG must determine a maximum allowable operating pressure (MAOP) for all piping at the Tin Man Road location in accordance with 49 CFR 192.619. Once complete all test data and MAOP calculations must be made available to Staff for review, including pressure testing records and residential service records (RSR).

5. In regard to Items 9 and 10 of the Notice, ORNG must provide complete Operator Qualification records for all ORNG employees and contractors. These records must include copies of the "Documentation of Method" for each applicable task as referenced in each Covered Task Evaluation Form in the ORNG Operator Qualification plan.

The following must be completed within sixty (60) days from the date of this Compliance Order:

6. In regard to Item 5 of the Notice pertaining to public awareness, ORNG must provide public awareness material meeting the requirements of 192.616(d) to their customers, the general public, appropriate government organizations, and persons engaged in excavation related activities in the area. This must be completed within sixty (60) days from the date of this letter.

Failure to comply with the terms of this proposed corrective action plan may result in additional fines and/or remedies as authorized under the Ohio Administrative Code section 4901:1-16-12.

APPENDIX D

NOTICE OF PROBABLE NON-COMPLIANCE

APRIL 5, 2016



Public Utilities Commission

John R. Kasich, Governor
Andre T. Porter, Chairman

Commissioners

Asim Z. Haque
Lynn Slaby
M. Beth Trombold
Thomas W. Johnson

April 5, 2016

Richard Parsons, Esq.
Ohio Rural Natural Gas Cooperative
65 East State Street, Suite 200
Columbus, OH 43215

NOTICE OF PROBABLE NONCOMPLIANCE

Mr. Parsons:

On March 16, 2016, representatives of the Public Utilities Commission of Ohio, Gas Pipeline Safety section Staff ("Staff") performed a pipeline safety inspection of the Ohio Rural Natural Gas Cooperative (ORNG) pursuant to Section 4905.91(B) of the Ohio Revised Code. This inspection consisted of observing ORNG employees joining plastic piping near the intersection of Ellsworth Road and Duck Creek Road, Berlin Center, Ohio (Mahoning County).

The inspection found several violations of the Pipeline Safety Regulations (49 CFR 192). The items inspected and probable violations are:

- 1. 192.273 Joining of Materials Other Than by Welding – General**
 - (a) The pipeline must be designed and installed so that each joint will sustain the longitudinal pullout or thrust forces caused by contraction or expansion of the piping or by anticipated external or internal loading.**
 - (b) Each joint must be made in accordance with written procedures that have been proved by test or experience to produce strong gastight joints.**
 - (c) Each joint must be inspected to insure compliance with this subpart.**

Employees of Ohio Rural Natural Gas (ORNG) were observed joining 4" PE 4710 PolyPipe plastic piping on March 16, 2016 without following written procedures or inspecting joints to ensure compliance. This joining took place at the ORNG piping in the area of Ellsworth and Duck Creek Road intersection ("Duck Creek Road system") and includes approximately 3,400 feet of plastic piping. Butt fusion procedures adopted by ORNG state that the ends of the plastic piping to be joined must be heated to between 400 and 450 degrees Fahrenheit. Temperatures of butt fusion ends were observed by Staff to be between 490 and 505 degrees Fahrenheit.

Joined piping showed defective melt beads that did not pass the inspection criteria listed in the ORNG Operations and Maintenance manual or the PolyPipe heat fusion procedures. Inspection of these joints by a person qualified under the applicable joining procedure would have determined these joints were unsatisfactory and required replacement.

Staff also observed ORNG employees attempting to cut out and replace the defective plastic joints on March 22-23, 2016 using the correct fusion temperature. Staff observed many other instances of joints being made incorrectly and not according to procedures, such as:

1. The face plates of the iron heating element used appeared to be damaged and in need of replacement. Burn marks were observed on the plates which indicates material was stuck to them. This will cause a loss of temperature and the pipe sticking to the face of the iron.
2. The pipe ends and heating element face were not cleaned prior to fusing the pipe. Both items are to be cleaned using a non-synthetic lint free cloth (cotton). This is both a recommendation of both the pipe manufacturer (PolyPipe) and the Plastic Pipe Institute (PPI). McElroy, the heating element manufacturer, also has this noted in their operating instructions.
3. Staff witnessed ORNG employees joining pipe without proper shielding from winds that were in excess of 30 MPH. Exposure of the fusion heater plate and pipe to wind can result in unacceptable temperature variations during butt fusion and possible joint contamination. When unfavorable wind conditions exist, the provision of a suitable shelter is required to protect the pipe and the fusion heater plate to ensure more consistent work performance. Unfavorable wind conditions can also flow through the pipe bore and cause unacceptable temperature variations during the fusion process.
4. Staff witnessed ORNG employees improperly using a device intended to align both ends of the pipe during fusion, which may have caused misalignment of the pipe while heating and joining.
5. The pipe manufacturers joining procedures state that the maximum heater removal time for that wall thickness of pipe is 10 seconds (The time from when the iron is removed until the pipe ends are joined). The ORNG employee performing the joining would remove the iron and walk it to a truck (approximately six feet away) to put it back into the heater stand, then return to the fusion machine to join the heated pipe ends. This process was taking over 15 seconds which exceeds the manufacturer specified maximum time limit by more than 5 seconds, resulting in fusion of pipe ends that have been allowed to cool.

It is clear from Staff observation that ORNG employees observed are not qualified to perform plastic joining, resulting in poor quality joints with a high probability of failure.

2. 192.283 Plastic Pipe: Qualifying joining procedures.

- (c) A copy of each written procedure being used for joining plastic pipe must be available to the persons making and inspecting joints.**

Written procedures for joining plastic pipe were not available to ORNG personnel making the plastic pipe joints. The ORNG personnel at the scene were not familiar with the joining procedures or inspection criteria for butt fused plastic joints when interviewed by Staff.

These violations have resulted in the incorrect installation of approximately 3,400 feet of piping at the Duck Creek Road system that may result in leakage and pipeline failure when this system is pressurized. Staff notes that there is another ORNG system consisting of approximately 5,400 feet of buried plastic pipe running from the intersection of Ellsworth and Weaver roads to the intersection of Ellsworth and

Duck Creek Road ("Ellsworth system") that has been recently installed and pressurized. Staff believes it is likely this system was completed using similar construction methods and the plastic joints in this system are also suspect.

Because of the potential impact to public safety and the fact that ORNG has been cited previously for employing improperly trained individuals in construction and operation activities, a forfeiture in the amount of **\$500,000 is being assessed** for violations of the Pipeline Safety Regulations. Payment must be made out to "Treasurer, State of Ohio" and mailed to the Public Utilities Commission of Ohio, 180 E Broad Street, Columbus OH 43215.

A Compliance Order is also included with this Notice describing the actions that ORNG must take to return to compliance with the Pipeline Safety Regulations. This Order describes the actions that must be taken before the Duck Creek Road system may be pressurized with gas, and actions that must be taken at the Ellsworth system in order for it to remain in service.

A written response to this Notice is required within 15 calendar days from the date of this letter. You may contact me at (614) 644 8983 or by e-mail at peter.chace@puc.state.oh.us with any questions.

Sincerely,



Peter A. Chace, Program Manager
Gas Pipeline Safety Section
Facility and Operations Field Division

PC:ts
Enclosure

c.c. Richard Osborne, President, Orwell Trumbull Pipeline Company LLC

COMPLIANCE ORDER

Pursuant to the Ohio Administrative Code, section 4901:1-16-09, the Public Utilities Commission, Gas Pipeline Safety section Staff ("Staff") issues the Ohio Rural Natural Gas Cooperative (ORNG) the following Compliance Order requiring corrective action for ORNG to return to compliance with the Pipeline Safety Regulations.

- 1: All ORNG employees and contractors engaged in making plastic joints must be requalified under the ORNG joining procedure for butt fusion in accordance with 49 CFR 192.285(c). This requalification must include making and testing of a specimen joint per 192.285(a)(2). ORNG employees or contractors may not make any plastic joints on the ORNG system until this requalification is completed.
- 2: All plastic joints along the buried portion of the approximately 3400' of piping on the Duck Creek Road system must be excavated, cut out and replaced prior to the system being placed in service. All joints must be inspected by a person qualified by appropriate training and experience in evaluating the acceptability of plastic pipe joints made under the ORNG butt fusion procedure. This inspection must ensure the melt bead is rolled over to the surface of the pipe, is uniformly rounded and consistent in size all around the joint, the displacement between the fused ends must not exceed 10% of the pipe minimum wall thickness, and the bead width must be appropriate for ASTM 2513 4" PolyPipe PE4710 piping (SDR 11). All joints found to be unacceptable must be cut out and replaced. Staff must be present to observe joining, or if Staff is not present photographic evidence of all joints deemed to be acceptable must be taken and made available for review by Staff.
- 3: ORNG must take the 5400' of buried and pressurized piping in the Ellsworth Road system out of service within 60 days of the date of this letter. All plastic joints along the buried portion of the Ellsworth Road system must be excavated, cut out and replaced prior to the system being returned to service. All joints must be inspected by a person qualified by appropriate training and experience in evaluating the acceptability of plastic pipe joints made under the ORNG butt fusion procedure. This inspection must ensure the melt bead is rolled over to the surface of the pipe, is uniformly rounded and consistent in size all around the joint, the displacement between the fused ends must not exceed 10% of the pipe minimum wall thickness, and the bead width must be appropriate for ASTM 2513 4" PolyPipe PE4710 piping (SDR 11). All joints found to be unacceptable must be cut out and replaced. Staff must be present to observe joining, or if Staff is not present photographic evidence of all joints deemed to be acceptable must be taken and made available for review by Staff.

Failure to comply with the terms of this proposed corrective action plan may result in additional fines and/or remedies as authorized under the Ohio Administrative Code section 4901:1-16-12.