



RICHMOND GAS WORKS

Gas Regulatory Compliance
400 Richmond Highway
Richmond, VA 23224
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April 24, 2026

Mr. Robert Burrough
Director
PHMSA Pipeline Safety Eastern Region Office
US Department of Transportation
840 Bear Tavern Road, Suite 300
West Trenton, NJ 08628
Robert.Burrough@dot.gov

Sent via email

RE: NOA 1-2026-028

Dear Mr. Burrough,

In response to the Notice of Amendment (Notice) referenced above, Richmond Gas Works (the City) is not contesting the Notice and is instead providing revised O&M procedures and accompanying supplemental procedures to address the inadequacies outlined in the Notice. Each inadequacy of the Notice is addressed below with a summary of the revised O&M procedure or supplemental procedure, and each revised procedure is enclosed for your reference. Please note that the O&M procedure the City changed to address each inadequacy may not be the O&M procedure asserted to be inadequate in the Notice. Notwithstanding these differences, the City believes that all the inadequacies noted are addressed by the package of changes summarized below.

1. 49 CFR 192.303: The City's written construction procedures failed to reference the correct incorporated by reference standards, as required by section 192.303.

In response to this item, the City has revised O&M Procedure II.7.X *Welder Qualification*. Extraneous and incorrect references have been removed from the procedure, and the References section now includes "API Standard 1104 *Welding of Pipelines and Related Facilities* (version incorporated by reference in 49 CFR 192.7)". Therefore, all references to API 1104 in the revised procedure are to the correct version.

The revised procedure became effective on April 23, 2026.

2. 49 CFR 192.513: The City’s written construction procedures failed to state that the maximum test pressure for polyethylene pipe may not be more than 2.5 times the pressure determined under § 192.121 at a temperature not less than the pipe temperature during the test, in accordance with section 192.513(c).

In response to this item, the City has revised O&M Procedure I.3.VIII *Pressure Testing* to include a maximum test pressure for plastic pipe. The maximum test pressure for plastic pipe under the revised procedure is 100 psig at a temperature below 100 degrees Fahrenheit except for plastic mains operating at or above 60 psig. These plastic mains will be tested according to a written pressure test procedure which must comply with all federal regulations per §VI.G.3 of the revised procedure.

For consistency across its operations, the City has chosen to set a universal maximum test pressure that is lower than the variable maximum test pressures allowed by 49 CFR 192.513(c). The City currently installs, and has previously only installed, varieties of PE4710 manufactured by Performance Pipe, and the City has determined that the lowest maximum test pressure allowed by 49 CFR 192.513(c) for any variety or size of Performance Pipe PE4710 that the City has installed or may install is 125 psig. That maximum pressure is greater than the 100 psig permitted by the revised procedure in situations where a bespoke pressure test is not required. Therefore, the revised procedure satisfies the requirements of 49 CFR 192.513(c).

The revised procedure became effective on March 10, 2026.

3. 49 CFR 192.605 and 192.720: The City’s written procedures for operating, maintaining, and repairing its pipeline failed to prohibit the use of mechanical leak clamps as a permanent repair method for plastic pipelines.

In response to this item, the City has revised O&M Procedure I.3.III *System Materials – Other Components*. Section VII.I.1 of the revised procedure now reads “[r]epair clamps may not be used to make permanent repairs on plastic pipe.”

The revised procedure became effective on April 23, 2026.

4. 49 CFR 192.605 and 192.473: The City’s written procedures for controlling corrosion failed to include provisions for identifying and minimizing interference currents on its pipeline system.

In response to this item, the City has revised O&M Procedure II.4.II *Corrosion Control Monitoring*. The revised procedure now includes requirements to identify and minimize AC interference currents on rectifier protected systems, anode protected systems, and the pipeline system generally. Section VII.B of the revised procedure now reads:

B. Annual Monitoring: Cathodically Protected Systems and Interference Bonds

...

3. Rectifier protected systems:

- a. Record output voltage and current of rectifier. Determine if operating within designated limits.
 - b. Record any stray AC voltage or interference currents.
 - c. Record pipe to soil potential at a sufficient number of locations to assure complete cathodic protection and evaluate utilizing the criteria stated in III.B.3.a.(2) while using the procedure as outlined in Exhibit A, "Pipe to Soil Measurement Procedure", Procedure 1.
 - d. The operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring in accordance with Title 49 CFR 192 Article 465 (d)...
4. Anode protected systems:
- a. Record any stray AC voltage or interference currents.
 - b. Record pipe to soil potential at a sufficient number of locations to assure complete cathodic protection and evaluate utilizing the criteria stated in III.B.3.a.(1) while using the procedure as outlined in Exhibit A, "Pipe to Soil Measurement Procedure", Procedure 2.
 - c. The operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring in accordance with Title 49 CFR 192 Article 465 (d)...
5. ...
6. Interference Currents:
- a. Electrical interference may affect cathodic protection levels due to stray currents from nearby facilities, such as electric transmission lines, DC transit systems, traffic signal systems, or other cathodically protected structures. Areas known or suspected to be subject to interference shall be monitored for indications such as abnormal potential fluctuations, inadequate protection levels, or erratic CP readings.
 - b. Where interference is suspected, the following steps should be taken:
 - i. Conduct diagnostic tests such as close-interval surveys (CIS), interrupted surveys, and AC voltage measurements to identify interference impact.
 - ii. Coordinate with owners of adjacent facilities to determine source and nature of stray currents.

- iii. Evaluate mitigation strategies, including installation of solid-state decouplers (SSDs), polarization cells, isolation joints, or bonding systems.
- iv. Re-test after mitigation to ensure that CP criteria are met and interference is neutralized.

The revised procedure became effective on April 23, 2026.

5. 49 CFR 192.605 and 192.487: The City's written procedures for operating, maintaining, and repairing its pipeline failed to provide adequate guidance to operating personnel when evaluating the remaining strength of internally and externally corroded pipe.

In response to this item, the City has revised O&M Procedure II.4.I *Corrosion Control* and created an additional Standard Operating Procedure (SOP) for corrosion defect analysis. The revised procedure at §VII.E directs field personnel to the SOP (incorporated as Appendix A) whenever any of the City's normally buried metallic pipeline infrastructure is exposed. The SOP then provides guidance for conducting basic corrosion monitoring on all metallic pipe.

With respect to this item, which requires the City to provide adequate guidance when evaluating the remaining strength of internally and externally corroded pipe pursuant to 49 CFR 192.487(a), the SOP includes a Corrosion Defect Analysis (CDA) form (Exhibit B of the SOP) that provides guidance to operating personnel for determining when generally corroded steel or copper pipe must be replaced. The CDA form contains the "maximum allowable pit depth" which is the deepest a pit on generally corroded pipe may be before it must be repaired or replaced under 49 CFR 192.487(a) based on the most conservative estimates of the type and grade of pipe that might be installed. If an initial corrosion evaluator discovers a pit that is deeper than the maximum allowable pit depth, a secondary corrosion evaluator will be contacted to measure the pipe's actual, uncorroded wall thickness and verify the pit depth using more accurate equipment and methods. The pipe will then be either repaired, replaced, or cleaned and coated based on the secondary analysis.

The SOP is enclosed separately. The revised procedure along with the SOP will become effective no later than July 1, 2026, to allow the City time to train its employees on the new SOP and purchase and distribute additional equipment (e.g., pit gauges and ultrasonic thickness gauges).

6. 49 CFR 192.605 and 192.453: The City's written procedures for controlling corrosion failed to establish the qualifications required for an individual to lead the corrosion control department.

In response to this item, the City has revised O&M Procedures II.4.I *Corrosion Control* and II.4.II *Corrosion Control Monitoring*. The revised procedures now list the qualifications required for an individual to perform corrosion control tasks. Section VI.A of revised O&M Procedure II.4.I now reads:

- A. Tasks described in this procedure must be carried out by or under the direction of personnel qualified in pipeline corrosion control methods.
 - 1. Operations and maintenance tasks related to the organization's corrosion control procedures (visually assessing corrosion, evaluating cathodic protection systems for adequacy, installing anodes, etc.) must be performed by or under the direction of individuals who hold valid operator qualifications (OQs) for the relevant tasks.
 - 2. The design and installation of cathodic protection systems must be performed by or under the direction of individuals who are qualified to do so by relevant training or experience. Appropriate qualifications are specific to the task being performed and may include, but are not limited to, NACE certification, relevant technical education, licensure as an electrician, or multiple years of working experience controlling the corrosion of pipeline infrastructure.

Section VI.A of revised O&M Procedure II.4.II now reads:

- A. The routine monitoring of RGW's cathodically protected pipeline facilities must be performed by or under the direction of personnel holding valid operator qualifications (OQs) for the relevant tasks.

Revised O&M Procedure II.4.II became effective on April 23, 2026. As noted in the response to item 5, revised O&M Procedure II.4.I will become effective no later than July 1, 2026.

7. 49 CFR 192.605: The City's written procedures for reporting incidents contained erroneous statements inconsistent with the requirements of 49 CFR 191.5(a).

In response to this item, the City has revised O&M Procedure I.2.III *DOT Incident Reporting* to remove the error that occurred in the introductory "Policy" section and ensure that the word "incident" has a correct definition and is used consistently throughout the procedure.

The revised procedure became effective on April 21, 2026.

8. 49 CFR 192.605 and 192.756: The City's written procedures for operating, maintaining, and repairing its pipeline failed to have written procedures for maintaining equipment used in joining plastic pipe in accordance with the manufacturer's recommended practices or with written procedures that have been proven by test and experience to produce acceptable joints.

In response to this item, the City has revised O&M Procedure II.3.V *Fusion of Polyethylene Pipe*. Section VI.D of the revised procedure now reads, "[e]quipment used to join plastic pipe, such as fusion equipment, alignment equipment, facing and adaptor equipment, heater plates, and gauging devices, must be maintained in accordance with either the manufacturer's recommended maintenance procedures or written procedures that have been proven by test and experience to produce acceptable joints."

The revised procedure became effective on April 23, 2026.

I hope these revised procedures address your concerns. The City did not incur any costs in fulfilling the requirements of the Notice. Please let me know if you need any additional information or documentation.

Respectfully,

A handwritten signature in black ink that reads "D.M. Rifenburg".

Daniel Rifenburg
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Enclosures

Copy:

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