



U.S. Department  
of Transportation  
**Pipeline and Hazardous  
Materials Safety  
Administration**

1200 New Jersey Avenue, SE  
Washington, DC 20590

April 22, 2020

**VIA EMAIL TO: calvin.farr@richmondgov.com**

Mr. Calvin D. Farr, Jr.  
Director, City of Richmond  
Department of Public Utilities  
900 East Broad Street, Room 115  
Richmond, Virginia 23219

**CPF No.: 1-2019-0004**

Dear Mr. Farr:

Enclosed please find a copy of the fully-executed Consent Agreement and Order issued in the above-referenced case. It contains terms of settlement pursuant to 49 C.F.R. § 190.219 and includes a work plan for the development and implementation of a two-phase project under the City of Richmond's Distribution Integrity Management Program.

When the terms of the work plan have been completed, as determined by the Director, Eastern Region, this enforcement action will be closed. The effective date of this agreement is April 22, 2020. Service of the Consent Agreement and Order by electronic mail is deemed effective upon the date of transmission as provided under 49 C.F.R. § 190.5.

Thank you for your cooperation in this matter.

Sincerely,

Alan K. Mayberry  
Associate Administrator  
for Pipeline Safety

Enclosure: Consent Agreement and Order

cc: Mr. Robert Burrough, Director, Eastern Region, Office of Pipeline Safety, PHMSA  
Ms. Linda Daugherty, Deputy Associate Administrator for Field Operations, PHMSA  
Mr. David Kearney, Senior Assistant City Attorney, david.kearney@richmondgov.com

**CONFIRMATION OF RECEIPT REQUESTED**

**U.S. DEPARTMENT OF TRANSPORTATION  
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION  
OFFICE OF PIPELINE SAFETY  
WASHINGTON, DC 20590**

In the Matter of	)	
	)	
City of Richmond, Virginia,	)	CPF No. 1-2019-0004
a municipal corporation,	)	
	)	
Respondent.	)	
	)	

**CONSENT AGREEMENT AND ORDER**

From February 8, 2017 to October 8, 2018, pursuant to Chapter 601 of 49 United States Code, inspectors from the Virginia State Corporation Commission (VA SCC), acting as agents for the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), inspected the City of Richmond’s (the City or Respondent) pipeline facilities in Richmond, Virginia. The City’s pipeline facilities consist of more than 1900 miles of distribution mains and eight gate stations to supply gas at necessary pressures.

As a result of this inspection, the Director, Eastern Region, Office of Pipeline Safety (Director), issued to Respondent, by letter dated April 22, 2019, a Notice of Probable Violation, Proposed Civil Penalty, and Proposed Compliance Order (Notice). A copy of the Notice is attached hereto as Appendix A. In accordance with 49 C.F.R. §190.207, the Notice proposed finding that Respondent had committed two violations of 49 C.F.R. Part 192 and proposed assessing a civil penalty of \$80,500 for the alleged violation of 49 C.F.R. § 192.465(a) (Item 1). The City shall address Item 2, a violation of 49 C.F.R. § 192.491(a), through the proposed compliance actions included in the Notice (“Proposed Compliance Order”), and Item 2 is not addressed in the attached Work Plan. The Director grants the City’s request for additional time to complete the proposed compliance actions with respect to Item 2.

The City responded to the Notice by letter dated June 20, 2019 (Response). The Response proposed to resolve Item 1 of this matter via an administrative consent agreement requiring the City to expend a minimum of \$1,575,556, to develop and implement a two-phase project under the City’s Distribution Integrity Management Program (DIMP). The City proposes to add additional manpower to survey and identify all coated steel services in the City’s distribution system, determine which steel services or pot drips are missing from the City’s database, to temporarily add these newly identified missing services to the City’s ten percent program, and to monitor those services accordingly. The City will replace all services with low readings with polyethylene pipe once they are located. The City will complete the project within seven years.

Having agreed that settlement of this proceeding will avoid further administrative proceedings or litigation, pursuant to 49 C.F.R. Part 190, and upon consent and agreement of Respondent and PHMSA (collectively, the Parties), the Parties hereby agree as follows:

**A. General Provisions.**

1. Respondent acknowledges that its pipeline system is subject to the jurisdiction of the federal Pipeline Safety Laws, 49 U.S.C. 60101, *et seq.*, and the regulations and administrative orders issued thereunder. As used in this Consent Agreement and Order (Agreement), the terms “pipeline system” and “pipeline facility” shall be defined as in 49 C.F.R. Part 192. Respondent acknowledges that it received proper notice of PHMSA’s action in this proceeding and that the Notice states claims upon which relief may be granted pursuant to 49 U.S.C. 60101, *et seq.*, and the regulations and orders issued thereunder.

2. Respondent consents to the issuance of this Agreement and hereby waives any further procedural requirements with respect to its issuance. Respondent waives all rights to contest the adequacy of notice or the validity of this Agreement, including all rights to administrative or judicial hearings, reviews, or appeals.

3. This Agreement shall apply to and be binding upon PHMSA and Respondent, its officers, directors, and employees, and its successors, assigns, or other entities or persons otherwise bound by law. Respondent agrees to provide a copy of this Agreement and any incorporated work plans and schedules to all City officers, employees, agents, and successors-in-interest whose duties reasonably might include compliance with this Agreement.

4. This Agreement constitutes the final, complete, and exclusive agreement and understanding between the Parties with respect to the settlement embodied in this Agreement, and the Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Agreement and its appendices.

5. Nothing in this Agreement affects or relieves the City of its responsibility to comply with all applicable requirements of the federal Pipeline Safety Laws, 49 U.S.C. § 60101, *et seq.*, and the regulations and orders issued thereunder. Nothing in this Agreement alters PHMSA’s right of access, entry, inspection, and information-gathering or its authority to bring any enforcement action against Respondent pursuant to the federal Pipeline Safety Laws, the regulations and orders issued thereunder, or any other provision of federal or state law.

6. This Agreement does not waive or modify any federal, state, or local laws or regulations that are applicable to the City or its pipeline system. This Agreement is not a permit, or a modification of any permit, under any federal, state, or local laws or regulations. Respondent remains responsible for achieving and maintaining compliance with all applicable federal, state, and local laws, regulations and permits.

7. This Agreement does not create rights in, or grant any cause of action to, any third party not a party to this Agreement. The U.S. Department of Transportation (DOT) is not liable for any injuries or damages to persons or property arising from acts or omissions of Respondent or its officers, employees, agents, or successors-in-interest in carrying out the work required by this Agreement.

8. The Parties agree that the facts as alleged in the Notice are true and correct and may be considered by PHMSA to be a prior offense in any future PHMSA enforcement action taken against the City.

9. Respondent agrees to complete the corrective actions specified in Section B (Additional Work to be Performed) of this Agreement.

10. Respondent agrees that the activities described in Section B of this Agreement, and in all work plans and schedules incorporated thereunder, are not required by any federal, state, or local law or regulation and do not include actions which Respondent would likely be required to perform:

- a. as injunctive relief, including as a mitigation project, in the instant case;
- b. as injunctive relief in any other existing legal action initiated by PHMSA or any other regulatory agency against Respondent;
- c. as part of an existing settlement or order in another legal action; or
- d. under any other federal, state, or local requirement.

**B. Additional Work to be Performed.**

11. Respondent agrees to perform the actions set forth in the Work Plan, incorporated herein as Appendix B to this Agreement. Respondent will complete the actions described in Part 2 of the Work Plan (General Information and Proposed Action Description) and will adhere to the schedule set forth in Part 3 of the Work Plan (Project Schedule).

12. Respondent agrees to revise the Work Plan as necessary to incorporate new information obtained during the evaluations and remedial activities performed under the Work Plan. Respondent shall submit any such plan revisions to the Director for prior approval. The Director may approve Work Plan revision elements incrementally.

13. The Director may grant an extension of time for completion of any of the work to be performed under this Section B (Additional Work to be Performed) upon Respondent's timely, written request that demonstrates both good cause for an extension and provides sufficient detail to enable the Director to evaluate Respondent's request.

14. Respondent agrees to maintain documentation of the costs associated with implementation of the Work Plan and agrees to make this information available to PHMSA upon request.

**C. Review and Approval Process.**

15. With respect to any submission by the City under Section B (Additional Work to be Performed) of this Agreement that requires the approval of the Director, the Director may: (a) approve the submission, in whole or in part; (b) disapprove the submission on specified conditions; (c) disapprove the submission, in whole or in part; or (d) undertake any combination

of the foregoing. In the event of approval in whole, in part, or upon conditions, the City will proceed to take all actions required by the submission as modified by the Director, subject to Respondent's right to invoke the procedures in Section D (Dispute Resolution) with respect to any conditions identified by the Director. In the event that the Director does not approve all or any portion of a submission, the Director will provide the City with a written notice of the deficiencies. Respondent will correct all deficiencies within the time specified by the Director and resubmit it for acceptance. If Respondent fails to correct the specified deficiencies, the Director may invoke the dispute resolution process provided in Section D below.

#### **D. Dispute Resolution.**

16. The Director and Respondent will attempt to informally resolve any disputes arising under this Agreement. If the City and the Director are unable to informally resolve the dispute within 15 business days, Respondent may request in writing, within 10 business days, a written determination resolving the dispute by the Associate Administrator for Pipeline Safety, PHMSA. Along with its request, Respondent will provide the Associate Administrator with all information Respondent believes is relevant to the dispute. If the request is submitted as provided herein, the Associate Administrator will issue a written determination that shall constitute final agency action. The existence of a dispute and PHMSA's consideration of matters placed in dispute shall not excuse, toll, or suspend any term or timeframe for completion of any work to be performed under this Agreement during the pendency of the dispute resolution process, except as agreed by the Regional Director or the Associate Administrator in writing.

#### **E. Enforcement.**

17. This Agreement, including all plans and schedules incorporated by reference, is subject to all enforcement authorities available to PHMSA under 49 U.S.C. §60101, *et seq.*, and 49 C.F.R. Part 190, including administrative civil penalties under 49 U.S.C. §60122, of up to \$200,000 per violation for each day the violation continues and referral of the case to the Attorney General for judicial enforcement, if PHMSA determines that Respondent is not complying with the terms of this Agreement in accordance with determinations made by the Director, or if appealed, in accordance with decisions of the Associate Administrator. The maximum civil penalty amounts are adjusted annually for inflation. *See, e.g.*, Pipeline Safety: Inflation Adjustment of Maximum Civil Penalties, 82 Fed. Reg. 19325 (April 27, 2017). All other work plans and associated schedules developed under Section B shall be automatically incorporated into this Agreement and are enforceable in the same manner.

#### **F. Civil Penalties.**

18. PHMSA agrees to withdraw the proposed civil penalty for Item 1 in the Notice, in exchange for completion of the Project Schedule outlined in Part 3 of the Work Plan.

19. If the Work Plan is not implemented within the timeframe contemplated in the Project Schedule, subject to any extensions approved by the Director, PHMSA reserves the right to take further enforcement action, including assessment of the civil penalty proposed in the Notice.

**G. Miscellaneous.**

20. Respondent agrees to maintain records demonstrating compliance with all requirements of this Agreement for a period of at least five years following completion of all work to be performed. PHMSA and the VA SCC will have the right to inspect the records and facilities of the City, or any contractor, agent, or successor-in-interest thereof, upon reasonable notice, to confirm that the compliance terms of this Agreement are being undertaken in conformity with the terms of this Agreement.

21. Except as otherwise provided herein, this Agreement may be modified only by the mutual agreement of the Parties as set forth in writing and signed by the Parties.

22. Each undersigned representative of the Parties certifies that he or she is fully authorized by the party represented to enter into the terms and conditions hereof and to execute and legally bind that party to it.

23. Respondent certifies that it is not a party to any open federal financial assistance transaction that is funding or could fund the same activities described in this Agreement, including all activities described in the Work Plan or any other incorporated plan or schedule. Respondent further certifies that it has inquired of City departments and of any parties acting on the behalf of the City whether they are a party to any open federal financial assistance transaction that is funding or could fund the same activities described in this Agreement, and has been informed by said parties that they are not subject to such a transaction.

**H. Effective Date and Term.**

24. The "Effective Date," as used herein, is the date on which this Agreement is signed by both Respondent and PHMSA. Unless otherwise specified, all deadlines for actions required by the Agreement run from the Effective Date.

**I. Termination.**

25. This Agreement will terminate upon the completion of all terms set forth in Section B (Additional Work to Be Performed), as determined by the Director. Respondent may request, and PHMSA will provide, written confirmation of the termination of this Agreement. Nothing in this Agreement prevents Respondent from completing any of the obligations earlier than the deadlines provided for herein.


The Parties hereby agree to all conditions and terms of this Agreement:

For PHMSA:

For the City of Richmond, Virginia:

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Alan K. Mayberry  
Associate Administrator for  
Pipeline Safety, PHMSA

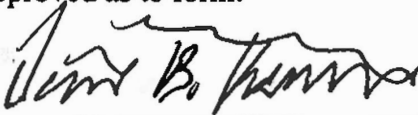
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Calvin D. Farr, Jr.  
Director of Public Utilities  
City of Richmond, VA

Approved as to form:

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Date Issued

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David B. Kearney  
Senior Assistant City Attorney  
City of Richmond

## **APPENDIX A**





U.S. Department  
of Transportation

**Pipeline and  
Hazardous Materials  
Safety Administration**

840 Bear Tavern Road, Suite 300  
West Trenton, NJ 08628  
609.771.7800

**NOTICE OF PROBABLE VIOLATION  
PROPOSED CIVIL PENALTY  
and  
PROPOSED COMPLIANCE ORDER**

**OVERNIGHT EXPRESS DELIVERY**

April 22, 2019

Mr. Robert Steidel  
Director, City of Richmond  
Department of Public Utilities  
730 East Broad Street  
Richmond, VA 23219

**CPF 1-2019-0004**

Dear Mr. Steidel:

From February 8, 2017 to October 8, 2018, inspectors from the Virginia State Corporation Commission (VA SCC), acting as an Agent for the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected the City of Richmond's (City) facilities and records in Richmond, VA.

As a result of the inspection, it is alleged that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations (CFR). The items inspected and the probable violation(s) are:

- 1. § 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. However, if tests at those intervals are impractical for separately protected short sections of mains or transmission line not in excess of 100 feet (30 meters), or separately protected service line, these pipelines may be surveyed on a sampling basis. At least 10 percent of these protected structures, distributed over the entire system must be surveyed each calendar year, so that the entire system is tested in each 10-year period.**

The City failed to survey at least 10 percent of its separately protected structures, distributed over the entire system each calendar year, with a different 10 percent checked each subsequent year, so that the entire system is tested in each 10-year period. Specifically, the City failed to monitor for external corrosion control at two pot drips located at 5900 Derrymore Court and 7548 Prairie Road, Richmond, VA, and at two isolated steel service lines located at 1703 and 1705 Windingridge Place, Richmond, VA.

During an inspection in February of 2017, a VA SCC inspector reviewed the City's Leakage Inspection-Location Records #578766 and #580156. Leak #578766 was located on a pot drip near 5900 Derrymore Court, which was installed in 1991. Leak #580156 was located on a pot drip near 7548 Prairie Road, which was installed in 1987. The two steel pot drips were cathodically protected by anodes, and each was connected to a two-inch plastic distribution main pipeline. The pot drips were isolated short sections not in excess of 100 feet and were to be surveyed as part of the City's 10 percent monitoring program.

When requested, the City was unable to provide cathodic protection monitoring survey records of the pot drips. The VA SCC issued a Notice of Investigation (NOI) to the City on February 15, 2017. In its response to the NOI on February 28, 2017, the City acknowledged failure to monitor the two pot drips under its 10 percent monitoring program. The City's response stated in part:

*The pot drip located on 7548 Prairie Road... was never keyed into the GIS database, which resulted in our failure to monitor this particular pot drip under the ten percent monitoring program.*

...

*Pot drip located on Derrymore Court...the City failed to monitor this particular pot drip under our ten percent monitoring program.*

During an inspection in May of 2018, a VA SCC inspector observed the City of Richmond perform cathodic protection reads on its "Windingridge Road Cathodic Protection Survey #06-014." The VA SCC inspector identified two isolated steel service lines at 1703 and 1705 Windingridge Place. Both service lines were cathodically protected and had acceptable readings but, according to the City, had never been monitored as part of the City's isolated short section list. These service lines were installed in 1974.

The VA SCC issued an NOI to the City on June 11, 2018 in regard to the May 2018 inspection. In its response to the NOI on June 21, 2018, the City acknowledged failure to monitor the two steel service lines under its 10 percent monitoring program. The City's response stated in part:

*During the inspection, the commission observed a City technician monitoring two steel service line at 1703 & 1705 Windingridge Place. While both were found to be cathodic protected, they were later determined to be isolated short sections (under 100' in length) and were not in City's 10 percent monitoring database.*

*The City is aware that the 10 percent monitoring database does not fully reflect accurate number of services in our system. The City is*

*working diligently everyday on improving the knowledge of our infrastructure in accordance to City's Distribution Integrity Management Program Section 5.0.*

Therefore, the City failed to monitor two separately protected pot drips, installed on distribution mains, and two isolated steel service lines so that its entire system is tested in each 10-year period, as required by § 192.465(a).

This violation is a repeat of violations found in CPF # 1-2015-0008 Item # 1, and CPF # 1-2013-0003 Item # 1.

## **2. § 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. Records or maps showing stated number of anodes, installed in a stated manner or spacing, need not show specific distances to each buried anode.**

The City failed to maintain records or maps to show the location of cathodically protected piping. Specifically, the City failed to maintain accurate construction records or maps of its cathodically protected pot drip near 7548 Prairie Road, Richmond, VA.

During the inspection, the VA SCC inspector reviewed the City's Leakage Inspection-Location Record #580156 in comparison with the City's mapping system. Leak #580156 was located on a pot drip near 7548 Prairie Road. The steel pot drip was cathodically protected by an anode, and was connected to a two-inch plastic distribution main pipeline. The pot drip was an isolated short section not in excess of 100 feet and was to be surveyed as part of the City's 10 percent monitoring program. The pot drip location was not identified in the City's mapping system.

The City acknowledged failure to maintain accurate construction records or maps. The City's post inspection response stated in part:

*The pot drip located on 7548 Prairie Road was not in our GIS database due to the inaccuracy of the 'As Built' drawings submitted by our New Construction Department.*

Therefore, the City failed to maintain records or maps to show the location of its cathodically protected pot drip in the area of 7548 Prairie Road, Richmond, VA.

### Proposed Civil Penalty

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed \$213,268 per violation per day the violation persists, up to a maximum of \$2,132,679 for a related series of violations. For violation occurring on or after November 2, 2015 and before November 27, 2018, the maximum penalty may not exceed \$209,002 per violation per day, with a maximum penalty not to exceed \$2,090,022. For violations occurring prior to November 2, 2015, the maximum penalty may not exceed \$200,000 per violation per day, with a maximum penalty not to exceed \$2,000,000 for a related series of violations. The Compliance Officer has reviewed the

circumstances and supporting documentation involved in the above probable violation(s) and has recommended that you be preliminarily assessed a civil penalty of \$80,500 as follows:

<u>Item number</u>	<u>PENALTY</u>
1	\$80,500

Proposed Compliance Order

With respect to item number 2 pursuant to 49 U.S.C. § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to City of Richmond. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Response to this Notice

Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. All material you submit in response to this enforcement action may be made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

Following the receipt of this Notice, you have 30 days to submit written comments, or request a hearing under 49 CFR § 190.211. If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue a Final Order. If you are responding to this Notice, we propose that you submit your correspondence to my office within 30 days from receipt of this Notice. This period may be extended by written request for good cause.

Please submit all correspondence in this matter to Robert Burrough, Director, PHMSA Eastern Region, 840 Bear Tavern Road, Suite 300, West Trenton, New Jersey 08628. Please refer to **CPF 1-2019-0004** on each document you submit, and whenever possible provide a signed PDF copy in electronic format. Smaller files may be emailed to [robert.burrough@dot.gov](mailto:robert.burrough@dot.gov). Larger files should be sent on a USB flash drive accompanied by the original paper copy to the Eastern Region Office.

Additionally, if you choose to respond to this (or any other case), please ensure that any response letter pertains solely to one CPF case number.

Sincerely,

A handwritten signature in blue ink, appearing to read "Robert Burrough".

Robert Burrough  
Director, Eastern Region  
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Proposed Compliance Order*  
*Response Options for Pipeline Operators in Compliance Proceedings*

## PROPOSED COMPLIANCE ORDER

Pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) proposes to issue to City of Richmond a Compliance Order incorporating the following remedial requirements to ensure the compliance of City of Richmond with the pipeline safety regulations:

1. In regard to Item Number 2 of the Notice pertaining to § 192.491, the City shall identify all cathodically protected pot drips and verify they are incorporated into the City's 10 percent monitoring program by taking the following actions:
  - a. Within 60 days of issuance of the Final Order, the City shall develop and provide to PHMSA a plan to:
    - i. identify cathodically protected pot drips in the City's mapping system.
    - ii. identify cathodically protected pot drips in the City's 'As-Built' drawings that have been revised during the previous four years of the date of issuance of this Final Order.
    - iii. identify cathodically protected pot drips on the City's leak reports during the previous four years of the date of issuance of this Final Order.
  - b. Within 180 days of issuance of the Final Order, the City shall provide PHMSA verification pot drips in the City's mapping system have been compared to 'As-Built' drawings and leak reports, and all discrepancies corrected.
2. It is requested (not mandated) that City of Richmond maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Robert Burrough, Director, Eastern Region, Pipeline and Hazardous Materials Safety Administration. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.

## **APPENDIX B**

**Work Plan for the Development and Implementation of a  
Steel Services Identification and Replacement Program  
City of Richmond, Virginia  
CPF 1-2019-0004**

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**1. Introduction.**

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) has allowed the City of Richmond, Virginia (the City) the opportunity to perform the following supplemental safety actions as an alternative to paying a proposed civil penalty for a violation of the pipeline safety regulations in 49 C.F.R. Part 192. The City is to perform these risk-mitigating safety actions relative to the alleged violation to enhance the continued safe operations of the City's distribution of natural gas and to provide value that offsets the proposed civil penalties. PHMSA and the City agree that the actions set forth below provide safety and/or environmental value beyond the enforcement of the proposed civil penalty, and the City has entered into a Consent Agreement and Order (Agreement) with PHMSA to perform the proposed actions within agreed-upon timeframes.

**2. General Information and Proposed Action Description.**

PHMSA's Notice of Probable Violation in CPF 1-2019-0004 identified two probable violations and included a proposed civil penalty for Item 1.

Item 1

In Item 1, PHMSA alleged that the City failed to survey at least ten percent of its separately-protected structures, distributed over the entire system each calendar year with a different ten percent checked each subsequent year, so that the entire system is tested in each ten-year period. Specifically, the City failed to monitor for external corrosion control at two pot drips located at 5900 Derrymore Court and 7548 Prairie Road, Richmond, VA, and at two isolated steel service lines located at 1703 and 17025 Windingridge Place, Richmond, VA.

Proposed Action for Item 1

The City plans to increase the personnel who will be responsible, under the City's DIMP Program, for surveying and identifying all coated steel services, valves, and pot drips in the distribution system, determining which steel services, valves, or pot drips are missing from the City's database, temporarily adding the missing services to the City's ten percent monitoring program, and monitoring accordingly. The City also will replace all steel services, valves or pot drips with low readings with polyethylene pipe or fittings.

The City has determined that the best remedial action aligned with the probable violation of Item 1 is for the City to have the Richmond Gas Works Corrosion contractor provide resources to patrol the City's natural gas distribution system to locate all steel services, valves and pot drips, which are not currently in the City's geographic information system (GIS), as part of the City's ten percent monitoring program. This project will require a minimum of two Corrosion Testers to locate steel pipelines not in the City's ten percent program and an as-built drawing of the



newly identified steel services, valves, or pot drip will be made and forwarded to the Department of Public Utilities GIS section. The City's GIS Technician shall enter this information in the GIS database, and the Richmond Gas Works Corrosion section shall monitor these pipelines under the City's ten percent program. The Richmond Gas Works Engineer Principal of Corrosion shall be responsible for coordinating the comprehensive project to locate all steel services, valves, and pot drips that are not currently in the City's ten percent program. The City shall replace all steel services that are determined to have low readings. The entire project will be completed within seven years.

**3. Program Project Schedule.**

Proposed Schedule for Item 1

The City shall require its corrosion contractor to assign at least two individuals to patrol the City's natural gas distribution system to locate all steel gas services, valves, and pot drips that are not currently being monitored in the City's ten percent program. The City will continue the project that it initiated on November 1, 2019. The contractor shall remain on the project until all services, valves, and pot drips are located and all as-built drawings are completed. The City also shall utilize its gas leak repair contractor to replace all services with low readings. The City's GIS team shall enter the location of pipelines and pot drips in the City's database.

Start date	November 1, 2019
Completion date	November 1, 2026

**4. Costs.**

Estimated Cost to address Item 1:	\$1,575,556
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