



U.S. Department
of Transportation

**Pipeline and
Hazardous Materials
Safety Administration**

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609.771.7800

WARNING LETTER

OVERNIGHT EXPRESS DELIVERY

March 29, 2019

Robert Steidel
Director, Department of Public Utilities
City of Richmond
730 East Broad St
Richmond, VA 23219

CPF 1-2019-0005W

Dear Mr. Steidel:

On February 1, 2018 to October 8, 2018, an inspector from the Virginia State Corporation Commission, Division of Pipeline Safety (VA SCC), acting as Agent for the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code (U.S.C.) inspected the City of Richmond's (City) records and procedures.

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 violations are:

1. **§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. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least once each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.**

The City failed to follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. Specifically, the City failed to follow its *Leak Survey Procedures Manual*, dated 07/22/2013 (Leak Survey Procedure), regarding performing leakage survey at or near ground level for buried gas facilities and adjacent to above-ground gas facilities with a gas detector system.

During the inspection, the VA SCC inspector reviewed the City's Leak Survey Procedure which stated in part:

"Surface leak survey is conducted by use of Flame Ionization Survey or Infrared Optical gas detection equipment.

1. This is a continuous sampling of the atmosphere at or near ground level for buried gas facilities and adjacent to aboveground gas facilities with a gas detector system..."

The VA SCC inspector observed the City perform business district leak survey activities in the 4900 blocks of Augusta and Fitzhugh Avenues in Richmond, VA.

- 4900 Augusta Avenue, the City performed a leak survey at the meter set and over an older gas service and riser, but not the newer gas service.
- 4900 and 4902 Fitzhugh Avenue, two services run parallel to one another from the sidewalk to the building wall, and both meter sets are located next to each other. The City did perform a leakage check over the curb valves located in the sidewalk but not the remainder of the service lines or meter sets at the building wall.

The VA SCC issued a Notice of Investigation (NOI) to the City on June 11, 2018. In its response to the NOI on June 21, 2018, the City did not dispute the proposed violation and identified additional measures it has taken to prevent reoccurrence of the violation.

Therefore, the City failed to follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response.

2. §192.751 Prevention of accidental ignition.

Each operator shall take steps to minimize the danger of accidental ignition of gas in any structure or area where the presence of gas constitutes a hazard of fire or explosion, including the following:

(a) When a hazardous amount of gas is being vented into open air, each potential source of ignition must be removed from the area and a fire extinguisher must be provided.

The City failed to provide a fire extinguisher when a hazardous amount of gas was being vented into open air. Specifically, the City failed to provide a fire extinguisher during a March 5, 2018 purging operation of a newly installed natural gas service.

During the inspection, the VA SCC inspector observed the City perform an in-service purge of a newly installed natural gas service. The City performed the gas purging without a fire extinguisher

present. In the City's Prevention of Accident Ignition procedure, dated 11/27/2013, it stated in part IV.B.3.a.(2) for when gas is being vented into the open air:

“A charged fire extinguisher shall be placed near the venting location and, if possible, upwind from the venting location.”

The City's Notice of Investigation response, dated March 26, 2017, acknowledged that a fire extinguisher was not set nearby during the purge operations, but had a fully charged fire extinguisher at the job site.

Therefore, the City failed to provide a fire extinguisher when a hazardous amount of gas was being vented into open air.

3. §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;

The City failed to ensure through evaluation that individuals performing covered tasks are qualified. Specifically, the City performed a leak investigation of its system without proper operator qualifications.

During the inspection, the VA SCC inspector witnessed the City investigating a suspected gas leak on Hobbs Lane in the City of Richmond. The City was performing bar hole Combustible Gas Indicator (CGI) readings. No one present at the time of the readings, including the individual performing the readings, was qualified to perform covered task 1202, “Outside Leak Investigation, Pinpointing, and Grading”.

The City's NOI response on February 20, 2018 contended the findings, stating that a qualified individual completed the covered task, and that VA SCC witnessed a “recheck” which the City believes is not a covered task requiring operator qualifications.

While the work being performed was considered a “recheck”, it still involved the investigating and pinpointing of a gas leak, including bar holing and use of a CGI. Thus, a covered task was being performed. Therefore, the City failed to ensure through evaluation that individuals performing a covered task were qualified.

4. **192.1007 What are the required elements of an integrity management plan?**

A written Integrity Management Plan must contain procedures for developing and implementing the following elements:

...

(c) Evaluate and rank risk. An operator must evaluate the risks associated with its distribution pipeline. In this evaluation, the operator must determine the relative importance of each threat and estimate and rank the risks posed to its pipeline. This evaluation must consider each applicable current and potential threat, the likelihood of failure associated with each threat, and the potential consequences of such a failure. An operator may subdivide its pipeline into regions with similar characteristics (e.g., contiguous areas within a distribution pipeline consisting of mains, services and other appurtenances; areas with common materials or environmental factors), and for which similar actions likely would be effective in reducing risk.

The City failed to adequately evaluate and rank the risk associated with legacy gas line bores through sewer mains (cross bores) in its distribution system.

During the inspection, the VA SCC inspector reviewed the City's Gas Distribution Integrity Management Plan, revised 02/06/2018 (IMP). The City's IMP stated in part regarding cross bores:

"8.5 Gas Line Bore through Sewer Main Mitigation Process DPU [City of Richmond's Department of Public Utilities] Wastewater, Gas Maintenance and Construction Department are working to identify sewer mains and laterals bored through during the installation of gas mains and services. When located, DPU Wastewater or DPU Contractor shall submit a copy of the drawing showing sewer main location along with photograph of the utility pipeline to DPU General Supervisor of gas maintenance for further evaluation

...

The City has implemented additional preventative measures by preinspecting sewer mains and laterals utilizing CCTV technology. Once the location of these facilities are determined, as built drawings are created documenting distance of the manhole to sewer lateral, and location of the sewer lateral from main to property prior to beginning of the renewal construction projects. The information collected are annotated in the GIS database. All related documents are filed and maintained for the life of the pipe (Sewer Lateral). This effort will improve the quality of the City's GIS database and knowledge of the facilities which will reduce the risk of boring gas lines through sewer mains and laterals during construction."

The City's IMP Appendix A, Table 5-4 Summary of Construction Practices, states directional boring was first deployed in 1989 and continues to be used.

PHMSA's DIMP FAQs, question C.3.b.3. states in part (emphasis added):

"If operators used trenchless technologies without taking measures to locate sewer laterals and other unmarked facilities during construction, there may be a risk that their facilities

were installed through the foreign facility. If this excavation damage threat applies to the operator, they must evaluate its risk to their system.

Depending on the results of the risk evaluation, they may need to identify and implement measures to reduce this risk to **existing** and future facilities.”

In the City’s IMP Appendix B, Table 6-1, the National Transportation Safety Board (NTSB) recommendations were listed. In 1976, NTSB issued Recommendation Number P76-83-86. NTSB Recommendation P76-83-86 included recommendations for examining records to determine locations where gas lines were installed near existing sewer facilities using directional boring, inspecting the locations, and taking corrective action where necessary.

Overall, the City’s IMP reflects a program to act when cross bores are identified, and that implements measures to prevent future occurrences. These efforts were identified by the City as being adopted in 2012 and 2015, respectively, in its October 8, 2018 response to the VA-SCC’s Notice of Investigation No. 2018-037302. However, specific actions being taken to identify the legacy cross bores are not listed. Without knowledge of the magnitude of legacy cross bores that may exist in its distribution system, the City cannot perform a complete evaluation and ranking of the risk posed by this threat.

Therefore, the City failed to adequately evaluate and rank the risk associated with legacy cross bores in its distribution system.

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. We have reviewed the circumstances and supporting documents involved in this case, and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the item(s) identified in this letter. Failure to do so will result in the City of Richmond being subject to additional enforcement action.

Please be advised that all material you submit in response to this enforcement action is subject to being 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).

No reply to this letter is required. If you choose to reply, please submit all correspondence in this matter to Robert Burrough, Director, PHMSA Eastern Region, 840 Bear Tavern Road, Suite 300, West Trenton, NJ 08628. Please refer to **CPF 1-2019-0005W** 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. Larger files should be sent on USB flash drive accompanied by the original paper copy to the Eastern Region Office.

Sincerely,

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

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