

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

)	
In the Matter of)	
)	
City of Danville, Virginia,)	CPF No. 1-2012-0006
a municipal corporation,)	
)	
Respondent.)	
)	

CONSENT AGREEMENT AND ORDER

Between January 27 and December 29, 2011, 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 Danville’s (City or Respondent) pipeline facilities in Danville, Virginia. The City’s pipeline facilities consist of approximately 359 miles of distribution mains, 26 district regulators to supply gas at necessary pressures, and gas-storage capacity.

As a result of this inspection, the Director, Eastern Region, Office of Pipeline Safety (Director), issued to Respondent, by letter dated December 13, 2012, a Notice of Probable Violation, Proposed Civil Penalty, and Proposed Compliance Order (Notice), a copy of which is attached hereto as Appendix A. In accordance with 49 C.F.R. § 190.207, the Notice proposed finding that Respondent had committed six violations of 49 C.F.R. Part 192, assessing a total civil penalty of \$80,000 for two of the violations, and requiring the City to take various remedial actions to correct the violations.

The City responded to the Notice by letter dated January 10, 2013 (Response), and requested a hearing, which was held on November 21, 2013. Respondent has proposed, as part of this proceeding and two unrelated enforcement actions, CPF No. 1-2013-0009 and CPF No. 1-2013-0010, to resolve these matters via administrative consent agreements.

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 might reasonably 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 neither affects the terms of the Proposed Compliance Order contained in the Notice, attached hereto as Appendix A, nor relieves Respondent from its responsibility to complete the remedial actions described therein. Except as expressly provided under this Agreement, the Parties agree that the City will perform all of the corrective actions set forth in the Proposed Compliance Order and that the Parties will have all their respective rights and responsibilities under the terms set forth in the Proposed Compliance Order and under 49 C.F.R. Part 190 relating to the implementation and enforcement of that Proposed Compliance Order.

8. 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. The City agrees to hold harmless DOT, its officers, employees, agents, and representatives from any and all causes of action arising from any acts or omissions of Respondent or its contractors in carrying out the work required by this Agreement.

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

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

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

B. Additional Work to be Performed.

12. 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 Parts 2 and 3 of the Work Plan (General Information and Completed Remedial Actions and Additional Proposed Actions) and will adhere to the schedule set forth in Part 4 of the Work Plan (Project Schedule).

13. 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.

14. 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.

15. 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.

16. 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, in whole or in part, the submission; (b) disapprove the submission on specified conditions; (c) disapprove, in whole or in part, the submission; or (d) 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.

17. Except as otherwise provided in Paragraph 7 above, 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.

18. 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. 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.

19. PHMSA agrees to withdraw the civil penalties for Items 1 and 2, proposed in the Notice, in exchange for completion of the Project Schedule outlined in Part 4 of the Work Plan.

20. 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 penalties proposed in the Notice.

G. Miscellaneous.

21. 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.

22. 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.

23. Each undersigned representative of the Parties certifies that he 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.

24. 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.

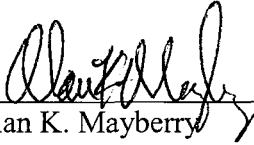
25. The "Effective Date," as used herein, is the date on which this Agreement is signed by both Respondent and PHMSA. Unless otherwise specified, all deadlines for actions required by the Agreement run from the Effective Date.

I. Termination.

26. This Agreement will terminate upon the completion of all terms set forth in the Proposed Compliance Order and 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:

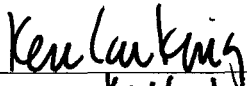
For PHMSA:



Alan K. Mayberry
Acting Associate Administrator for
Pipeline Safety, PHMSA

JUL 19 2016

For City of Danville, Virginia:



Name: Ken Larkins
Title: City Manager
City of Danville, Virginia

APPENDIX A



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

820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628
609.989.2171

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

UPS OVERNIGHT DELIVERY

December 13, 2012

Mr. Joe King
Danville City Manager
427 Patton St., Room 404
Danville, VA 24541

CPF 1-2012-0006

Dear Mr. King:

Between January 27 and December 29, 2011, inspectors from the Virginia State Corporation Commission (VA SCC) acting as Agent for the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code inspected the City of Danville's (City) pipeline facilities in Danville, VA.

As a result of the inspection, it appears that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violations are:

- 1. § 192.479 Atmospheric corrosion control: General.**
 - (b) Coating material must be suitable for the prevention of atmospheric corrosion.**

The City failed on one (1) occasion to coat a pipeline with a material that is suitable for the prevention of atmospheric corrosion.

The VA SCC inspectors observed and photographed an exposed main under bridges at Piedmont Drive and the Sandy River with areas of atmospheric corrosion. According to a City representative, only a primer coat was installed on the surface of the exposed piping, which is insufficient to protect the exposed main from atmospheric corrosion.

2. **§ 192.707 Line markers for mains and transmission lines.**

(c) Pipelines aboveground. Line markers must be placed and maintained along each section of a main and transmission line that is located aboveground in an area accessible to the public.

The City failed to install pipeline markers near a main that was accessible to the public. The City failed on three (3) occasions to have a pipeline marker on an above ground main that is accessible to the public at Pumpkin Creek Drive at the Pumpkin Creek Bridge, at the London Bridge Drive over the Pumpkin Creek and at the telemetry transmitter on London Bridge Drive.

The VA SCC inspectors observed and photographed an exposed main under bridges at the above locations, and at a take-off line connected to a main and a telemeter transmitter, and found no warning or Company identification markers as required by the regulation.

3. **§ 192.161 Supports and anchors.**

(b) Each exposed pipeline must have enough supports or anchors to protect the exposed pipe joints from the maximum end force caused by internal pressure and any additional forces caused by temperature expansion or contraction or by the weight of the pipe and its contents.

The City failed on one (1) occasion to properly install supports under a section of exposed cast iron main located under the bridge at Pumpkin Creek and London Bridge Drive. Several of the installed supports were not in contact with the cast iron main, and did not provide support to protect the exposed pipe joints from the weight of the cast iron pipe and its contents.

The VA SCC inspectors observed and photographed the section of the main referenced above.

4. **§ 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.

The City failed to install pipeline locks on valves that could allow the monitor regulator to be by-passed. The City failed on two (2) occasions to prevent unauthorized operation of a valve that will make a pressure limiting device (monitor regulator) inoperable at the Southland Regulator and Craighead Rd. (Farmers Market) Regulator Stations by not having a by-pass run valve locked and by not having the control line valve handles removed.

The VA SCC inspectors observed and photographed regulator sets at the above mentioned locations with the monitor regulator by-pass valve unlocked. The handles to the regulator control lines were removed but the valves were unlocked in an unfenced area.

5. **§ 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:

(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 1/4 inch (6.4 millimeters) stroke.

The City failed to install pipeline markers that meet the requirements of the code. The City failed on two (2) occasions to have pipeline markers that met the requirements of this code. The pipeline markers did

not have the word "Warning", "Caution" or "Danger" and did not have the correct letter size at Sandy River Regulator Station and the Southland Drive Regulator Station.

The VA SCC observed and photographed regulator stations at the above mentioned locations that did not have adequate markers with the correct letter size and did not have the word "Warning", "Caution" or "Danger" as stated in the code.

6. § 192.805 Qualification program.

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

(a) Identify covered tasks;

The City failed on one (1) occasion to adequately/fully identify, as a covered task, the maintenance and calibration of telemetering equipment (use of an electrical or pneumatic apparatus for indicating, recording or integrating the values of a variable quantity, and for transmitting the data to a distant point). The equipment is used to monitor/transmit pipeline pressure readings in the pipeline system as stated in the §192.741 requirement.

PHMSA Eastern Region believes the maintenance of a telemeter meets the four part requirements of a covered task as stated in §192.801 (b). Transducers are a "pipeline facility" as defined in §192.3. §192.741 requires charts or telemetry on systems supplied by more than one district regulator station and requires the investigation of abnormally high or low pressures when indicated. Accurate readings are required to ensure the pipeline was not over pressured during abnormally high pressure situations. Over pressuring the system could affect the integrity of the pipeline.

Proposed Civil Penalty

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed \$200,000 per violation per day the violation persists up to a maximum of \$2,000,000 for a related series of violations. For violations occurring prior to January 4, 2012, the maximum penalty may not exceed \$100,000 per violation per day, with a maximum penalty not to exceed \$1,000,000 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 \$80,000 as follows:

<u>Item number</u>	<u>PENALTY</u>
1	\$40,000
2	\$40,000

Warning Items

With respect to items 3, 4, 5, and 6 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 promptly correct these items. Be advised that failure to do so may result in the City being subject to additional enforcement action.

Proposed Compliance Order


With respect to items 1 and 2 pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to the City of Danville, VA. 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. 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). 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.

Please submit all correspondence in this matter to Byron Coy, PE, Director, PHMSA Eastern Region, 820 Bear Tavern Road, Suite 103, W. Trenton, NJ 08628. Please refer to **CPF 1-2012-0006** on each document you submit, and please whenever possible provide a signed PDF copy in electronic format. Smaller files may be emailed to byron.coy@doh.doe.gov. Larger files should be sent on a CD accompanied by the original paper copy to the Eastern Region Office.

Sincerely,



Byron Coy, P.E.
Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration

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

Cc: Mr. James Hotinger, VA SCC

PROPOSED COMPLIANCE ORDER

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

1. In regard to Item Number 1 of the Notice, the City failed to coat a pipeline with a material that is suitable for the prevention of atmospheric corrosion on an exposed main under bridges at Piedmont Drive and the Sandy River. The City must remove the existing coating/primer, clean the pipeline surface, and apply a coating suitable for the prevention of atmospheric corrosion, in accordance with coating manufacturer's procedures.
2. In regard to Item Number 2 of the Notice, the City failed to install pipeline markers near an above ground main that was accessible to the public at Pumpkin Creek Drive at the Pumpkin Creek Bridge, at the London Bridge Drive over the Pumpkin Creek, and at the telemetry transmitter on the London Bridge Drive. The City must install and maintain line markers along each section of a main and feeder line that is located above ground in the area accessible to the public.
3. The City shall have 90 days from the receipt of a Final Order to complete the requirements for Items 1 and 2 of the Proposed Compliance Order.
4. It is requested (not mandated) that the City of Danville, VA maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Byron Coy, P.E., 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 plan for coating of exposed piping
and a program for the control and monitoring of pipeline warning markers.**

**City of Danville, Virginia
CPF 1-2012-0006**

1. Introduction

The U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) has allowed the City of Danville, Virginia (City), the opportunity to perform the following supplemental safety actions as an alternative to paying a proposed civil penalty for alleged violations of the pipeline safety regulations in 49 C.F.R. Part 192. The City is to perform these risk-mitigating actions relative to the violations, which improve the continued safe operations of the natural gas distribution and provide value that offsets the proposed civil penalties. Should PHMSA determine that the proposed actions provide safety and/or environmental value beyond the enforcement of the civil penalty, the City will enter into a Consent Agreement with PHMSA to perform the proposed actions within agreed-upon time frames.

2. General Information and Completed Remedial Actions

PHMSA's Notice of Probable Violation in CPF 1-2012-0006 identified six items of probable violation and included proposed civil penalties for the first two items. The notice also included a Proposed Compliance Order, requiring the City to take various remedial actions to correct the probable violations. In Item 1, PHMSA alleged that the City failed to coat a pipeline with a material suitable for the prevention of atmospheric corrosion, in violation of 49 C.F.R. § 192.479(b). The probable violation was identified at one location at Piedmont Drive and the Sandy River. Item 1 included a proposed civil penalty of \$40,000. In Item 2, PHMSA alleged that the City failed to install pipeline markers near a main that was accessible to the public, in violation of 49 C.F.R. § 192.707(c). The probable violation was identified at three locations: Pumpkin Creek Drive at the Pumpkin Creek Bridge, at London Bridge Drive over the Pumpkin Creek and at the telemetry transmitter on London Bridge Drive. Item 2 included a proposed civil penalty of \$40,000, for a total proposed civil penalty of \$80,000.

With respect to Item 1, the City has:

1. Reviewed and modified inspection and documentation procedures for pipeline segments exposed to the atmosphere.
2. Developed specifications and procured a qualified contractor to recoat the pipeline segments identified in Notice of Probable Violation Item 1. Four (4) additional exposed pipeline segments were also coated.

With respect to Item 2, the City has:

1. Reviewed all bridge crossings and telemetry stations and installed surface pipeline markers at both limits of all bridge-attached pipeline crossings and telemetry stations where needed. Adhesive pipeline markers were also attached to bridge-attached

pipeline segments where the City determined that the pipelines were accessible to the public.

All of the work described above was completed by December 2013. The approximate cost to the City for testing the existing coatings, the development of contract documents by a consulting engineer, compensating the coating contractor and inspector utilized during the coating process was \$230,800. City personnel labor costs during this process were not documented. Likewise, the cost for identification of sites and installation of the surface and pipe-attached pipeline markers was also not documented because all of the work was performed by City personnel.

3. Additional Proposed Actions

The City has reviewed potential remedial actions which could be performed by the City and used in the development of a Consent Agreement with PHMSA. Following consideration, it has been determined that the best remedial actions aligned with the probable violations are an acceleration of the coating maintenance for bridge-attached pipelines within the City's distribution system, where needed, and the development of a program to control and monitor pipeline warning marks.

The City proposes to complete coating remediation for two (2) natural gas pipeline segments attached to bridge structures.

The coating program is as follows:

1. Coat the 8-inch diameter, 129-foot-long casing pipe beneath a bridge crossing Fall Creek on US Route 58 East in Danville, Virginia. This casing contains an inserted 6-inch diameter polyethylene gas main.
2. Coat the 8-inch diameter, 43-foot-long casing pipe beneath a bridge crossing Pumpkin Creek on London Bridge drive in Danville, Virginia. This casing pipe contains an inserted 4-inch diameter polyethylene gas main.

The City proposes to develop a structured program to control and monitor pipeline warning markers. Development and implementation of the program shall consist of the following:

1. A review of system mapping to determine locations where pipeline markers are warranted. Typical locations are:
 - a. Railroad crossings
 - b. Bridge attachments and other exposed crossings
 - c. Underwater crossings
 - d. Telemetry stations
 - e. Pressure reducing stations
 - f. Class 1 and Class 2 pipeline routes
 - g. Other locations as required.
2. Confirmation and documentation of all existing pipeline warning markers. This will include verification of installed pipeline warning markers at locations determined in the preceding section (1). All existing pipeline warning markers will be reviewed and documented for marker content, O&M compliance and condition. GPS locations will also be collected for each existing marker.

3. Installation of markers at locations identified during work under section (1) above and not located during work performed under section (2) above. Documentation and location information described in section 2 above will be collected for each newly-installed marker.
4. Development of digital mapping for all system pipeline warning markers. GPS data previously collected will be utilized to develop a mapping system for all pipeline markers within the City's natural gas distribution system.
5. Incorporate scheduled monitoring of the pipeline warning markers into the City's continuing surveillance and damage prevention programs.

4. Project Schedule

The schedules for the proposed work in this Work Plan have been developed based on consideration of availability of funding and weather.

Coating Program

Estimated schedule:

Preparation of specifications and bidding:	April 2015 through August 2015
Execution of work:	August 2015 through September 2015

Pipeline Warning Marker Control and Monitoring Program

Estimated schedule:

Review of existing system:	July 2016 through August 2016
Confirmation and documentation of existing marker:	August 2016 through October 2016
Installation and documentation of new markers:	November 2016 through December 2016
Development of database:	August 2016 through December 2016
Development of marker mapping:	December 2016 through January 2017
Monitoring of markers:	Ongoing annually beginning 2017

5. Estimated Project Costs

The estimated cost for work associated with the Coating Program includes:

Development of Coating Program Specifications and Contract Documents	
Consultant (RK&K)	\$10,170
City Personnel	\$720
Subtotal Estimated Cost	<u>\$10,890</u>
Bidding and Contractual Agreement	
Consultant (RK&K)	\$7,830
City Personnel	\$720
Subtotal Estimated Cost	<u>\$8,550</u>
Execution of Work (BGL Asset Services)	\$42,114.36
Subtotal Cost	<u>\$42,114.36</u>

Total Estimated Cost \$61,554.36

The estimated cost for work associated with the development and implementation of a Pipeline Warning Marker Control and Monitoring Program includes:

Review of existing system (identification of probable marker locations)	
Consultant (RK&K)	\$2,500
City Personnel	\$5,700
	<u>Subtotal Estimated Cost \$8,200</u>
Confirmation and documentation of existing markers	
Consultant (RK&K)	\$6,730
City Personnel	\$5,700
	<u>Subtotal Estimated Cost \$12,430</u>
Installation and documentation of new markers	
Consultant (RK&K)	\$4,500
City Personnel	\$3,660
	<u>Subtotal Estimated Cost \$8,160</u>
Development of database	
City Personnel	\$2,040
	<u>Subtotal Estimated Cost \$2,040</u>
Development of mapping	
City Personnel	\$3,240
	<u>Subtotal Estimated Cost \$3,240</u>
	Total Estimated Cost** \$34,070

***Estimated costs do not include cost for ongoing monitoring
Total costs for consultation work available on request*

The total estimated cost for both projects is:

Coating Program	\$61,554.36
Pipeline Warning Marker Control and Monitoring Program	\$34,070
TOTAL COST OF ADDITIONAL WORK	\$87,504.36