



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
COMMONWEALTH KEYSTONE BUILDING
400 NORTH STREET, HARRISBURG, PA 17120

BUREAU OF
INVESTIGATION
&
ENFORCEMENT

March 18, 2026

Via Electronic Filing

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Re: Pennsylvania Public Utility Commission,
Bureau of Investigation and Enforcement v.
UGI Utilities Inc. – Gas Division
Docket No. C-2026-
Formal Complaint (Non-Proprietary and Proprietary Version)

Dear Secretary Homsher:

Enclosed for electronic filing is the **Non-Proprietary** version of the **Formal Complaint** of the Bureau of Investigation and Enforcement (“I&E”) of the Pennsylvania Public Utility Commission in the above-referenced matter. The **Proprietary** version has been submitted to the Secretary’s Bureau via their ShareFile.

Copies have been served on the parties of record in accordance with the Certificate of Service. If you have any questions, please do not hesitate to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Colby B. Widdowson', is written over a light blue circular stamp.

Colby B. Widdowson
Prosecutor
Bureau of Investigation & Enforcement
PA Attorney ID No. 326185
(717) 787-2139
cwiddowson@pa.gov

CBW/ac
Enclosures

cc: Per Certificate of Service
Robert Horensky, Manager, Safety Division (*via email - rhorensky@pa.gov*)
Robert Biggard, Supervisor, Safety Division (*via email - rbiggard@pa.gov*)

NOTICE

A. You must file an Answer within 20 days of the date of service of this Complaint.

The date of service is the mailing date as indicated at the top of the Secretarial Letter. *See* 52 Pa. Code § 1.56(a). The Answer must raise all factual and legal arguments that you wish to claim in your defense, include the docket number of this Complaint, and be verified. You may file your Answer by mailing an original to the below address or submitting an efilings with the Secretary of the Commission by opening an efilings account through the Commission's website and accepting eservice at <http://www.puc.state.pa.us/efiling/default.aspx>. If your filing contains confidential material, you are required to file by overnight delivery to ensure the timely filing of your submission to:

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

If your Answer is 250 pages or less, you are not required to file a paper copy. If your Answer exceeds 250 pages, you must file a paper copy with the Secretary's Bureau.

Additionally, please electronically serve a copy on:

Colby B. Widdowson, Prosecutor
Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
cwiddowson@pa.gov

B. If you fail to Answer this Complaint within 20 days, the Bureau of Investigation and Enforcement will request that the Commission issue an Order imposing the requested relief.

C. You may elect not to contest this Complaint by paying the civil penalty and performing the requested relief within 20 days. Send only a certified check or money order made payable to the "Commonwealth of Pennsylvania," with the docket number indicated, and mailed to:

Matthew L. Homsher, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

D. If you file an Answer which either admits or fails to deny the allegations of the Complaint, the Bureau of Investigation and Enforcement will request that the Commission issue an Order imposing the requested relief set forth in this Complaint.

E. If you file an Answer which contests the Complaint, the matter will be assigned to an Administrative Law Judge for hearing and decision. The Judge is not bound by the penalty set forth in the Complaint and may impose additional and/or alternative penalties as appropriate.

F. If you are a corporation, you must be represented by legal counsel. *See* 52 Pa. Code § 1.21.

G. Alternative formats of this material are available for persons with disabilities by contacting the Commission's ADA Coordinator at 717-787-8714.

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Pennsylvania Public Utility Commission,	:	
Bureau of Investigation and Enforcement,	:	
Complainant	:	
	:	
v.	:	Docket No. C-2026-
	:	
UGI Utilities, Inc. - Gas Division,	:	
Respondent	:	

**FORMAL COMPLAINT
(NON-PROPRIETARY VERSION)**

NOW COMES the Bureau of Investigation and Enforcement (“I&E”) of the Pennsylvania Public Utility Commission, by its prosecuting attorneys, pursuant to Section 701 of the Public Utility Code, 66 Pa.C.S. § 701, and files this Formal Complaint (“Complaint”) against UGI Utilities, Inc. – Gas Division (“UGI” or “Respondent”) alleging violations of the Public Utility Code, Pennsylvania Code, and Code of Federal Regulations in in connection with the catastrophic March 24, 2023 natural gas fueled explosion and fire that occurred at the R.M. Palmer Company in West Reading, Pennsylvania, which resulted in the loss of seven lives, injuries to ten individuals, and property damage (“Incident”). In support of its Complaint, I&E respectfully avers as follows:

I. COMMISSION JURISDICTION AND AUTHORITY

1. The Pennsylvania Public Utility Commission (“Commission” or “PUC”), with a mailing address of the Commonwealth Keystone Building, 400 North Street, Harrisburg, PA 17120, is a duly constituted agency of the Commonwealth of Pennsylvania empowered to

regulate public utilities within the Commonwealth pursuant to the Public Utility Code, 66 Pa.C.S. §§ 101, *et seq.* (“Code”).

2. Complainant is the Commission’s Bureau of Investigation and Enforcement, which is the bureau established to take enforcement actions against public utilities and other entities subject to the Commission’s jurisdiction pursuant to 66 Pa.C.S. § 308.2(a)(11); *See also Implementation of Act 129 of 2008; Organization of Bureaus and Offices*, Docket No. M-2008-2071852 (August 11, 2011) (delegating authority to initiate proceedings that are prosecutory in nature to I&E).

3. Complainant’s prosecuting attorneys are as follows:

Colby B. Widdowson
Prosecutor
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(717) 787-2139

Stephanie M. Wimer
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Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

4. Respondent is UGI Utilities, Inc. - Gas Division, a wholly owned subsidiary of UGI Corporation, with a principal place of business and mailing address of 1 UGI Drive, Denver, PA 17517.

5. Section 501(a) of the Code, 66 Pa.C.S. § 501(a), authorizes and obligates the Commission to execute and enforce the provisions of the Code.

6. Section 701 of the Code, 66 Pa.C.S. § 701, authorizes the Commission, *inter alia*, to hear and determine complaints against public utilities for violations of any law or regulation

that the Commission has jurisdiction to administer or enforce.

7. Section 3301(c) of the Code, 66 Pa.C.S. § 3301(c), which is specific to gas pipeline safety violations, authorizes the Commission to impose civil penalties on any person or corporation, defined as a public utility, who violates any provisions of the Code or any regulation or order issued thereunder governing the safety of pipeline or conduit facilities in the transportation of natural gas, flammable gas, or gas which is toxic or corrosive. Section 3301(c) further provides that a civil penalty of up to Two Hundred Thousand Dollars (\$200,000) per violation for each day that the violation persists may be imposed, except that for any related series of violations, the maximum civil penalty shall not exceed Two Million Dollars (\$2,000,000) or the penalty amount provided under Federal pipeline safety laws, whichever is greater.

8. Civil penalties for violations of Federal pipeline safety laws and regulations are adjusted annually to account for changes in inflation pursuant to the Federal Civil Penalties Inflation Adjustment Act Improvements Act of 2015, Pub. L. 114-74, § 701, 129 Stat. 599, 28 U.S.C. § 2461 note (Nov. 2, 2015) (amending the Federal Civil Penalties Inflation Adjustment Act of 1990). The applicable adjustment made by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA") occurred on January 26, 2023 and revised the maximum civil penalty to Two Hundred Fifty-Seven Thousand, Six Hundred Sixty-Four Dollars (\$257,664.00) for each violation and for each day the violation continues, with a maximum penalty not to exceed Two Million, Five Hundred Seventy-Six Thousand, Six Hundred Twenty-Seven Dollars (\$2,576,627.00) for a related series of violations. 88 F.R. 1125 (Jan. 6, 2023).

9. Pursuant to Section 59.33(b) of the Commission's regulations, 52 Pa. Code § 59.33(b), I&E's Pipeline Safety Division has the authority to enforce Federal pipeline safety

laws and regulations set forth in 49 U.S.C.A. §§ 60101-60503 and as implemented at 49 CFR Parts 191-193, 195 and 199. The Federal pipeline safety laws and regulations prescribe the minimum safety standards for all natural gas and hazardous liquid public utilities in the Commonwealth.

10. Respondent is a “public utility” as that term is defined at 66 Pa.C.S. § 102,¹ as it is engaged in providing public utility service as a natural gas distribution company (“NGDC”) to the public for compensation.

11. Respondent provides natural gas distribution service to approximately 690,000 residential, commercial and industrial customers in 46 counties across Pennsylvania.

12. Respondent, in providing natural gas distribution service to the public for compensation, is subject to the power and authority of this Commission pursuant to Section 501(c) of the Code, 66 Pa.C.S. § 501(c), which requires a public utility to comply with Commission regulations and orders, including Federal pipeline safety laws and regulations.

13. Pursuant to the provisions of the applicable Commonwealth and Federal statutes and regulations, the Commission has jurisdiction over the subject matter and the actions of Respondent related thereto.

II. BACKGROUND

14. On March 24, 2023 at approximately 4:55 PM, a natural gas explosion and fire occurred at the R.M. Palmer Company (“Palmer”), a candy factory located at 17 South 2nd Avenue in the Borough of West Reading, Berks County, Pennsylvania. Respondent notified the

¹ “Public utility” is defined as:

- (1) Any person or corporations now or hereafter owning or operating in this Commonwealth equipment or facilities for:
 - (i) Producing, generating, transmitting, distributing or furnishing natural or artificial gas, electricity, or steam for the production of light, heat, or power to or for the public for compensation.
- 66 Pa.C.S. § 102.

I&E Pipeline Safety Division of the Incident on March 24, 2023 at approximately 5:55 PM. The I&E Pipeline Safety Division immediately traveled to the scene and began an extensive investigation of the Incident, including a field investigation that spanned thirty-three (33) days during March and April 2023. The following averments represent the findings of Pipeline Safety's investigation.

15. At the time of the Incident, Palmer's factory consisted of three buildings:
 - a. Building 1 located at 77 South 2nd Avenue, used for offices and candy production;
 - b. Building 2 located at 17 South 2nd Avenue, used primarily for candy production; and
 - c. Boiler Room located at 138 Cherry Street, behind Building 1, which contained a natural gas-fueled industrial steam boiler that provided heat and steam for Buildings 1 and 2.

16. Buildings 1 and 2 were separated by Cherry Street.

17. Buried steam and chocolate lines ("Palmer lines") crossed Cherry Street, connecting Buildings 1 and 2.

18. A true and accurate depiction of Buildings 1 and 2, pre-incident, is attached as I&E Exhibit 1. See I&E Exhibit 1.

A. History of Gas Distribution to Palmer

19. The distribution system in West Reading is fed by three district regulator stations. Gas is transported from these stations through an extensive looped² network of distribution mains, underneath Penn Avenue, South 2nd Avenue, and Franklin Street. Natural gas travels from Franklin Street & South 2nd Avenue and Penn Avenue & South 2nd Avenue to Cherry Street.

² A looped system is a network of pipelines that are fed from multiple directions and therefore several valves are needed to isolate the system.

20. At the time of the Incident, Respondent supplied gas to Palmer's buildings via three plastic service lines from a 1 ¼-inch plastic main inserted, or cased, in a retired bare steel main running down Cherry Street, at a depth of approximately three (3) feet.

21. In 1911, a 2-inch bare steel main was installed on Cherry Street.

22. At some point between 1911 and 1968, the Palmer steam and chocolate lines were installed above the 1911 bare steel main, with the steam pipe at a depth of approximately one and a half feet.

23. The operation of the Palmer steam line raised the temperature of the surrounding soil and created a condition in which the ground temperatures were elevated beyond the typical ambient ground temperature for that location.

24. In 1968, Respondent retired and replaced part of the 1911 main west of the Palmer lines.

25. Respondent was aware of the Palmer lines at the time of the 1968 retirement and replacement of the 1911 main.

26. The 1968 retirement of the 1911 main stopped just short of the Palmer lines despite the remaining portion of the 1911 main having experienced significant corrosion, as evidenced by the installation of four leak clamps in 1961 and four more leak clamps in 1964.

27. In 1982, the remainder of the 1911 main was retired.

28. In 1982, Respondent inserted a 1 ¼-inch Aldyl-A³ plastic main into the retired 2-inch bare steel main, connecting to the bare steel main on South 2nd Avenue and extending 203-feet on Cherry Street, allowing Respondent to navigate the Palmer lines.

³ Aldyl-A is a trademarked name referring to a finished polyethylene ("PE") pipeline product manufactured by the DuPont chemical company using DuPont's own proprietary Alathon polymer resin. The industry commonly refers to this piping as Aldyl-A and until this product line was acquired from DuPont by the Uponor company in 1991, no other manufacturers utilized this resin to produce pipelines under this or any other trade names. The term "pipelines" is commonly referred to in this context as either the pipes or fittings (service-tees, coupling, etc., attached to the pipes in the field during construction) that are made of the Alathon polymer resin.

29. Respondent was aware of the Palmer lines at the time of the 1982 installation.
30. During the retirement of the remaining 1911 main in 1982, Respondent excavated on the west side of the Palmer lines, to retire the Building 2 steel service line, and the east side of the Palmer lines, to cut the steel main and tie in the new main.
31. After 1982, Building 2's service line was a 1982 Aldyl-A ½-inch plastic line that was installed at the same time as the 1 ¼-inch 1982 Aldyl-A plastic main insert.
32. The 1 ¼-inch Aldyl-A plastic main installed in 1982 was manufactured in February of 1981 by DuPont using Alathon 5043 polymer resin.
33. In 1982, the maximum allowable operating pressure ("MAOP") was established at 60 pounds per square inch gauge ("psig").
34. At the time of the Incident, the service line for the Boiler Room was located at the end of the Cherry Street main.
35. At the time of the Incident, the service line for Building 1 was located approximately 100-feet west, towards South 2nd Avenue, of the Boiler Room service line.
36. At the time of the Incident, the service line for Building 2 was located approximately 82-feet west of Building 1's service line and approximately 20-feet east of the South 2nd Avenue and Cherry Street intersection.
37. At the time of the Incident, the service line locations for Buildings 1 and 2 had about 5 feet of the bare steel casing cut out for the installation of the plastic service line tees.
38. During a February 16, 2021, leak survey at Building 2, gas was discovered at the inside meter set and curb valve.
39. Respondent promptly dispatched a crew to remediate the discovered leak.
40. The remediation consisted of retiring Building 2's 1982 Aldyl-A service tee, cutting and abandoning the service line, replacing the old service line with a new 1-inch high-

density polyethylene (“HDPE”) line, and moving the meter and regulator outside.

41. The new service tee was located approximately 1-foot east of the retired service tee. See attached I&E Exhibit 2.

42. The 1982 Aldyl-A service tee was capped with a stab fitting, leak tested at the same pressure as the main, and retired.

43. The retired service tee remained subject to the same pressure as the main and active service tee and is therefore not considered to be abandoned.

44. Palmer’s steam and chocolate lines crossed perpendicularly over Respondent’s Aldyl-A main approximately twenty-three (23) inches to the west and approximately fifteen (15) inches above Building 2’s new and retired service tees. See attached I&E Exhibit 3.

45. A true and correct depiction of the location of Respondent’s facilities in relation to the Palmer lines is attached as I&E Exhibits 3 and 4.

46. During the February 2021 installation of Building 2’s new service line, Respondent’s field personnel were informed by Palmer personnel that Palmer’s steam and chocolate lines were operating adjacent to Respondent’s facilities.

47. The 2021 service line was pressure tested to maintain an MAOP of 60 psig.

48. Respondent did not update and correct its electronic facility records during or after the new service tee was installed in February 2021.

49. At the time of the Incident, the electronic facility records were inaccurate in that they indicated inside piping that did not exist, a 2-inch main size when it was one and one-quarter inches, and a steel main when it was plastic.

50. At the time of the 1982 and February 2021 installations, Respondent did not ensure that the plastic main and service lines were installed with sufficient clearance, or insulated, from any heat sources including steam lines.

B. The Incident

51. On March 24, 2023, approximately seventy-two (72) employees were working in the Palmer buildings.

52. At approximately 4:10 PM on March 24, 2023, a delivery driver arrived at Palmer.

53. The delivery driver noticed an outdoor odor of natural gas and informed a Palmer employee of the odor.

54. At approximately 4:30 PM the same day, Palmer employees attempted to search for and locate the source of the natural gas odor, but were unsuccessful.

55. At approximately 4:55 PM that day, an unknown ignition source inside Building 2 ignited a natural gas explosion and subsequent fire.

56. The initial explosion was witnessed by a local emergency responder. Local fire and emergency responders arrived at the scene within minutes of the initial explosion and informed local 911 of the presence of natural gas and a secondary explosion.

57. Emergency responders observed a gas fed fire coming from the Cherry Steet conduits.

58. The explosion killed seven (7) Palmer employees, seriously injured four (4) individuals, and injured six (6) other individuals.

59. The natural gas explosion and fire destroyed Building 2, caused significant structural damage to Building 1, and destroyed an adjacent apartment building, displacing three families. See attached I&E Exhibit 5.

60. The total property damage as a result of the natural gas explosion and fire is estimated at \$42 million.

61. The explosion resulted in the deployment of approximately fifty-six (56) emergency crews, including thirty (30) fire and rescue, fifteen (15) law enforcement agencies, nine (9) emergency medical services, and two (2) search and rescue teams.

C. UGI's Emergency Response

62. At approximately 5:00 PM on March 24, 2023, 911 notified Respondent's Central Dispatch ("Dispatcher") of the explosion at Palmer, possible entrapment of persons, and secondary explosions at the scene.

63. At 5:02 PM, Dispatcher called and notified Respondent's on-call first responder ("First Responder"), who directed Dispatcher to notify Respondent's duty supervisor ("Duty Supervisor").

64. At 5:04 PM, Dispatcher notified Duty Supervisor, who directed Dispatcher to call Respondent's three-man duty crew after dispatching an emergency order.

65. An emergency order was dispatched at 5:07 PM.

66. Each member of the three-man duty crew was notified between 5:11 PM and 5:14 PM.

67. First Responder arrived on scene at approximately 5:19 PM.

68. First Responder did not establish contact with on-scene emergency services after arriving.

69. First Responder did not contact Central Dispatch upon arrival on scene.

70. A few minutes later, First Responder spoke, via phone, with Respondent's Senior Supervisor of Construction & Maintenance ("SSCM") who was not on-site.

71. SSCM directed First Responder to turn off two underground gas main valves located at the intersection of South 2nd Avenue and Franklin Street and at the intersection of South 2nd Avenue and Penn Avenue.

72. The first valve at the intersection of South 2nd Avenue and Franklin Street, Valve ID 711490, was closed at approximately 5:30 PM.

73. On the way to the second valve, First Responder walked past a valve located at the intersection of South 2nd Avenue and Cherry Street, without considering turning it off or consulting with emergency responders to determine the feasibility of shutting off this valve.

74. A true and accurate representation of the valve at the intersection of South 2nd Avenue and Cherry Street, in relation to Buildings 1 and 2 is attached as I&E Exhibit 6.

75. If the valve at the intersection of South 2nd Avenue and Cherry Street had been shut off, gas flow could have been stopped 40-45 minutes sooner.

76. First Responder proceeded to the second valve at the intersection of South 2nd Avenue and Penn Avenue, Valve ID 705178, which could not be located because it had been paved over.

77. The paved over gas valve was located 6-feet west of a water valve that had a lid mislabeled as a gas valve and a valve identification number that did not match Respondent's records.

78. Valve ID 705178 is required to be inspected every five years. During the previous two inspections of the paved over valve in May 2016 and March 2021, Respondent mistook the water valve to be its gas valve based on the mislabeled lid, but did not inspect the gas valve.

79. A true and correct representation of the location of the mislabeled water valve and the paved over gas valve are attached as I&E Exhibit 7.

80. Respondent's on-scene personnel discussed, with SSCM, via phone, alternative valve options, which led to the identification of valves to be shut off at the intersection of North 3rd Avenue and Penn Avenue and at the intersection of North 4th Avenue and Penn Avenue.

81. First Responder closed the valve at the intersection of North 3rd Avenue and Penn Avenue, Valve ID 709301, at 5:50 PM.

82. First Responder located the valve at the intersection of North 4th Avenue and Penn Avenue, Valve ID 701744, but a vacuum truck was required to remove debris from the valve before it could be closed at 6:15 PM.

83. The closure of Valve ID 701744 at 6:15 PM resulted in the isolation of the distribution system around Palmer and stopping the flow of gas to Palmer.

84. A true and correct representation of the valves operated during Respondent's emergency response are attached as I&E Exhibit 8 (**Confidential**).

85. All of the valves operated during the emergency response were classified as "secondary" or "non-critical" by Respondent and "secondary" valves were inspected at five-year intervals.

86. Fifty-three (53) customers were without gas until the following day due to the isolation of the distribution system.

D. Investigation of the Cause of Incident

87. At 7:09 PM on March 24, 2023, Respondent filed an initial National Response Center ("NRC") notification.

88. Respondent pressure tested its natural gas facilities along South 2nd Avenue and these facilities held pressure.

89. On April 22, 2023, after the partial demolition of Building 1, Respondent conducted pressure checks on its Cherry Street facilities.

90. The natural gas main on Cherry Street failed to hold pressure.

91. Further pressure testing of the main confirmed the presence of a significant leak in the segment of the Cherry Street main that contained the Building 2 retired service tee and the

active Building 2 service line.

92. On April 24, 2023, the retired Aldyl-A service tee to Building 2, was excavated and exposed. See attached I&E Exhibits 2 and 3.

93. The retired Aldyl-A service tee for Building 2 was determined to be the point of failure and the source of the natural gas leak.

94. A true and correct representation of the components of a typical Aldyl-A service tee, similar to the retired Aldyl-A service tee for Building 2, is attached as I&E Exhibit 9. This attachment shows a typical Aldyl-A service tee tower, Delrin⁴ (polyoxymethylene) insert, the cutter, the cap underside with an o-ring in the groove, and a top down view of service tee with cap removed and the cutter installed.

95. Inspection and investigation of the failed, retired Aldyl-A service tee found the following:

- a. The tower assembly's outer shell exhibited a longitudinal fracture at the 10 o'clock position. See attached I&E Exhibit 10.
- b. The Delrin insert exhibited material degradation, dirt & debris, volume loss, a fracture origin point near 9 o'clock, a final fracture point near 3 o'clock (via jumping across a thread crest from the 9 o'clock position), and ratchet marks.⁵ See attached I&E Exhibit 11.
- c. The cutter head exhibited a transverse crack across the floor of the socket and multiple other cracks and fractures and the cutter barrel threads exhibited surface roughing and alteration. See attached I&E Exhibit 12.
- d. The cap was not recovered, but the cap's o-ring was recovered and exhibited a break. See attached I&E Exhibit 12.

96. On April 26, 2023, Palmer's lines were excavated and inspected.

⁴ Delrin is the commercial name for a plastic polymer which has a technical name of poly-oxyl-methylene (POM) and a generic name of acetal.

⁵ "Ratchet marks" is material engineering term for fatigue cracks that have propagated from different origins before merging into a single crack.

97. Palmer's 4-inch steam line was found to be corroded, deformed by shear forces, and a 4-inch long crack with two smaller cracks branching off. See attached I&E Exhibit 13.

98. The crack was located on the east side of the steam pipe, facing Respondent's retired Aldyl-A service tee for Building 2. See attached I&E Exhibit 3.

99. The crack in the steam pipe allowed steam to escape from the pipe and heat the soil around Respondent's facilities to temperatures far in excess of average soil temperatures.

100. The National Transportation Safety Board ("NTSB") conducted an investigation of the Incident and concluded the following:

The National Transportation Safety Board determines that the probable cause of the explosion was degradation of a retired 1982 Aldyl A polyethylene service tee with a Delrin polyacetal insert that allowed natural gas to leak and migrate underground into the R.M. Palmer Company candy factory buildings, where it was ignited by an unknown source. Contributing to the degradation of the service tee and insert were significantly elevated ground temperatures from steam escaping R.M. Palmer Company's corroded underground steam pipe, located near the service tee, that had been unmarked and cracked. Contributing to the steam pipe crack was soil movement and R.M. Palmer Company's lack of awareness of the pipe's corroded state. Contributing to the natural gas leak was UGI Corporation's lack of awareness of the nearby steam pipe, which led to an incomplete integrity management program evaluation that did not consider or manage the risk posed by the steam pipe. Contributing to the accident's severity was R.M. Palmer Company's insufficient emergency response procedures and training of its employees, who did not understand the hazard and did not evacuate the buildings before the explosion.

See NTSB Pipeline Investigation Report (PIR-25-01), Section 3.2.

E. Aldyl-A History and UGI's Distribution Integrity Management Plan

101. The history and risks of Aldyl-A piping and other vintage plastic pipes is widely known and understood in the natural gas distribution industry.

102. In 1965, DuPont began manufacturing Aldyl-A pipe using its proprietary Alathon polymer resin. A short time later, DuPont began manufacturing Aldyl-A pipe fittings, which

incorporated Delrin, a poly-oxy-methylene polymer, as a bi-layer product.

103. The most common form of failure of Aldyl-A pipe is slow crack growth (“SCG”), which is characterized by brittle, slit, fracture surfaces that exhibit little ductile deformation.⁶

104. SCG growth begins when a microscopic defect in the pipe behaves as a stress concentrator (e.g., a scratch, a gouge, or an inherent material defect) when an internal force, internal gas pressure, and/or an external force, such as field applied loads, are/is exerted against the defect and enables this defect to grow in response to the stress.

105. SCG did not become a well known issue until the 1982-1986 time period.

106. Operating temperature, or ground temperature, of plastic pipelines, including Aldyl-A pipelines, is a physical property that is inherent in the design of the pipeline formula, as it is a critical factor in determining life expectancy, allowable operating pressure, and the susceptibility to SCG.

107. Elevated operating temperatures will cause the physical properties of vintage Aldyl-A pipelines to deteriorate at an increased rate due to shifts and deformations in the polymer crystallinity.

108. The Aldyl-A pipeline serving the Palmer facilities on Cherry Street was manufactured in February of 1981 with DuPont’s Alathon 5043 polymer resin.

109. Vintage 1965-1970 Aldyl-A pipes were manufactured with DuPont’s Alathon 5040 polymer resin and had a very low relative resistance to SCG.

⁶ Two other failure modes are rapid crack propagation and ductile rupture, which are a somewhat rare phenomenon. Rapid crack propagation usually occurs when a pipeline is subjected to a rapid external stress, such as a sharp blow on the pipe via excavation damage. Ductile rupture occurs when a pipeline is significantly over-pressurized above its maximum allowable operating pressure and the root cause of such failures is typically due to the malfunction of a pressure regulating device or incorrect operating procedures, not an outright failure of the piping material itself.

110. Vintage 1970-1983 Aldyl-A pipes, which includes the 1982 pipelines serving the Palmer buildings, were manufactured with DuPont's Alathon 5043 polymer resin and had a low relative resistance to SCG.

111. Aldyl-A pipes, made in 1983 through 1988, were manufactured with DuPont's Alathon 5046-C polymer resin and had a medium relative resistance to SCG.⁷

112. The NTSB issued a Special Investigation Report, NTSB-SIR-98-01, addressing "Brittle Like Cracking in Plastic Pipe for Gas Service" on April 23, 1998.

113. Recommendation P-98-002 of the special investigation report tasked PHMSA with determining the extent of the susceptibility to premature brittle-like cracking of older plastic piping, informing gas system operators, and requiring operators to closely monitor the performance of the older plastic piping and to identify and replace, in a timely manner, any of the piping that indicates poor performance based on such evaluation factors as installation, operating, and environmental conditions; piping failure characteristics; and leak history.

114. Recommendation P-98-3 of the special investigation report requested that PHMSA immediately notify those States and territories with gas pipeline safety programs of the susceptibility to premature brittle-like cracking of much of the plastic piping manufactured from the 1960s through the early 1980s and of the actions that PHMSA will require of gas system operators to monitor and replace suspect piping that exhibits unacceptable performance.

115. On March 11, 1999, PHMSA issued Advisory Bulletin ADB 99-01 advising all owners and operators of natural gas distribution systems that polyethylene pipe manufactured by Union Carbide Corporation during the period 1970 to 1973 (Century pipe) may be susceptible to premature failure due to brittle-like cracking due to poor resin characteristics, excessive local

⁷ This model of Aldyl-A pipe offered a ten-fold increase in median time to failure as compared to the prior version.

stress intensification caused by improper joints, improper installation, and environments detrimental to pipe long-term strength. This advisory bulletin recommended that distribution systems containing Century pipe should be monitored to identify pipe subject to brittle-like cracking and remedial action, including replacement, should be taken to protect system integrity and public safety.

116. On March 11, 1999, PHMSA issued Advisory Bulletin ADB 99-02 recommending that all owners and operators of natural gas distribution systems identify all pre-1982 plastic pipe installations, analyze leak histories, and evaluate any conditions that may impose high stresses on the pipe, noting that appropriate remedial action, including replacement, should be taken to mitigate any risks to public safety.

117. On November 26, 2002, PHMSA issued Advisory Bulletin ADB 02-07, which advised on service conditions that could make plastic pipe susceptible to brittle like cracking, such as piping installed in areas with higher ground temperatures. PHMSA further advised operators to take appropriate action, including replacement, to mitigate any risks to public safety. PHMSA recommended that for systems where there is no record of the piping material, operators should consider recording print line data when piping is excavated because recording the print line data can aid in establishing the type and extent of polyethylene piping used in the system. PHMSA also requested that operators review system, engineering, and purchasing records to determine if any known susceptible materials have been installed in the system.

118. On September 6, 2007, PHMSA issued Advisory Bulletin ADB 07-1, including Delrin insert tapping tees and Plexco Celcon service tee caps in its prior guidance regarding vintage plastic pipe and again advising operators about suspect service conditions. PHMSA also advised operators to take appropriate action, including replacement, to mitigate any risks to public safety.

119. On February 2, 2010, regulations for Gas Distribution Pipeline Integrity Management, 49 CFR § 192 Subpart P, (commonly referred to as “DIMP”) became effective. The 1998 Special Investigation Report and its recommendations were a driving factor in the promulgation of the DIMP regulations.

120. DIMP requirements at 49 CFR § 192.1007 require operators to consider reasonably available information to identify existing and potential threats to their pipelines.

121. PHMSA Advisory Bulletins and NTSB Special Investigation Reports are reasonably available information regarding the known threat of brittle-like cracking, or SCG, associated with vintage plastic piping/components as well as the threat of SCG associated with any potential suspect service conditions, such as higher ground operating temperatures.

122. At the time of the 1982 Aldyl-A pipe installation on Cherry Street, Respondent used design criteria, found at 49 CFR § 192.121 (Design of Plastic Pipe), which accounted for ductile failure mechanisms, but not brittle failure mechanisms, such as SCG. The design formula, at that time, used to calculate the maximum allowable design pressure of plastic pipe incorporated values for two variables, hydrostatic design basis (“HDB”)⁸ and the design factor (“DF”), which resulted in Respondent establishing a MAOP of 60 psig for the Cherry Street pipeline in 1982.

123. HDB is the sole factor in the design formula that directly accounts for the operating temperature of the pipeline.

124. In its design of the Cherry Street pipeline in 1982 or 2021, Respondent did not account for the elevated operating temperature of the Aldyl-A pipeline, caused by the Palmer Lines.

⁸ HDB refers to the estimated long-term strength of the pipe material in the hoop or circumferential direction when subjected to certain end-use conditions.

125. Respondent did not have any procedures in place for evaluating and mitigating the risk that elevated ground temperatures posed to plastic pipelines, such as Aldyl-A, or have procedures in place to ensure adequate clearance or insulation from nearby heat sources.

126. Respondent did not use NTSB Special Investigation Reports, PHMSA Advisory Bulletins, and its own design, operations, inspection, and maintenance records to fully analyze the causes, performance, and risk of vintage plastic pipelines.

III. UGI PROCEDURES

127. In completing its investigation, Pipeline Safety reviewed UGI’s policies and procedures.

128. At the time of the Incident, Respondent had emergency response procedures in place at Emergency Plan (“EP”) 3.2 establishing a uniform method for responding to explosions or fires that may involve natural gas.

START CONFIDENTIAL

[REDACTED]

[REDACTED]

END CONFIDENTIAL

START CONFIDENTIAL

[REDACTED]

[REDACTED]

[REDACTED]

END CONFIDENTIAL

138. Federal regulations do not limit notifications of potential ruptures to only transmission pipelines. See 49 CFR §§ 192.3 & 192.615.

139. At the time of the Incident, Respondent used Gas Operations Manual (“GOM”) 60.30.10 for its continuing surveillance program.

START CONFIDENTIAL

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

END CONFIDENTIAL

141. Not all DIMP, TIMP, and other GOM procedures are applicable to continuing surveillance.

142. Respondent does not have a consolidated and prescriptive continuing surveillance procedure for identifying threats to its pipeline system, such as:

- a. Conditions that have the potential to deleteriously increase the operating temperature of a plastic pipeline facility;
- b. Field conditions associated with brittle like cracking (slow crack growth) on vintage plastic pipelines;
- c. Roadway paving projects that will affect their valve facilities; and

- d. All activities that are related to continuing surveillance and separate from other programs, such as DIMP or TIMP.

Additionally, there are no directions to personnel who may encounter the above issues, how to communicate the above issues to appropriate operating personnel, or how to communicate with municipalities.

143. At the time of the February 2021 pipe installation, Respondent used GOM 30.10.20 for procedures for the general installation requirements of steel and polyethylene (PE) pipe.

START CONFIDENTIAL

[REDACTED]

END CONFIDENTIAL

145. Respondent used GOM 70.80.10 for procedures directing the maintenance and inspection of critical and secondary valves.

START CONFIDENTIAL

[REDACTED]

[REDACTED]

END CONFIDENTIAL

149. GOM 70.80.10 does not provide direction or procedures to employees when a valve cover is discovered to be mislabeled.

150. Respondent used GOM 80.10.10 for procedures for maintaining an Operator Qualification Plan.

START CONFIDENTIAL

[REDACTED]

END CONFIDENTIAL

155. Respondent's Manual of Standard Procedures,⁹ Section 2_2_3, Plastic Pipe Design, Section F, effective September 12, 2005, incorporated special design considerations for vintage plastic piping where the design temperature of plastic could be exceeded due to abnormal outside influences, such as buried steam lines, hot water lines, power lines, or other high temperature facilities that could be found in municipal or industrial locations. See attached I&E Exhibit 24 (**Confidential**).

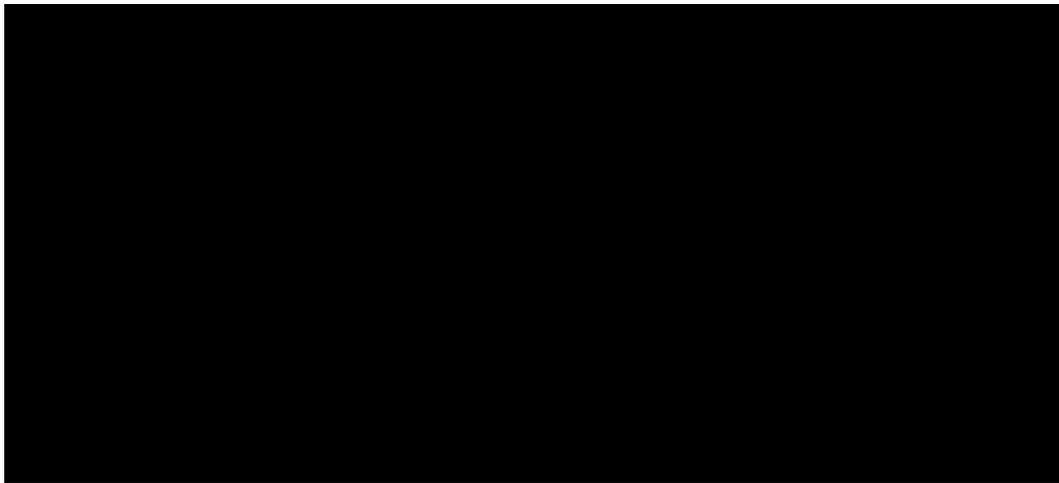
156. Respondent's Manual of Standard Procedures, Section 2_2_3, Plastic Pipe Design, effective January 18, 2010, and Gas Design Manual from 2017, Section 10.10.40, removed the above Section F design considerations for elevated temperatures. See attached I&E Exhibits 25 and 26 (**Confidential**).

157. Respondent uses its Gas Design Manual in both construction and maintenance activities.

START CONFIDENTIAL

[REDACTED]

⁹ The Manual of Standard Procedures was the prior iteration of Respondent's operating and maintenance procedures and has since been replaced by the GOM.



END CONFIDENTIAL

160. Respondent's Gas Design Manual, Section 10.10.40, does not provide procedures or the ability to calculate the design formula and MAOP for vintage plastic pipe, including Aldyl-A, for any operating temperature above 73 degrees Fahrenheit.

161. Consequently, during the installation of the new service-tee and service line to Palmer Building 2 on February 16, 2021, UGI's engineers and field installation crew failed to utilize any procedures within their design manual and/or GOM to identify or address the elevated operating temperature.

IV. ALLEGED VIOLATIONS

162. All allegations in paragraphs 1 through 161 are incorporated as if fully set forth herein.

163. Respondent failed to maintain complete and accurate electronic facility records, in that at the time of the Incident, the records incorrectly indicated inside piping that did not exist, a two-inch main size when it was one and one-quarter inches, and a steel main when it was plastic.

164. Respondent failed to understand its gas distribution system and identify threats to its system developed from reasonably available information, particularly NTSB's SIR-98-01 and

all applicable PHMSA Advisory Bulletins, including ADB 99-01, ADB 99-02, ADB 02-07, and ADB 07-01, in that Respondent failed to have procedures to assess and mitigate the risks that elevated ground temperature poses to plastic pipelines, such as Aldyl-A.

165. Respondent installed Aldyl-A plastic pipe in 1982 and HDPE pipe in 2021 in a location with elevated ground temperatures, but did not give due consideration the effect of elevated temperatures on the HDB in the calculation of the design formula and MAOP for those pipelines.

166. Respondent did not design, install, or inspect the distribution pipeline on Cherry Street in 1982, to ensure it was constructed in accordance with Part 192 of the Code of Federal Regulations, particularly 49 CFR §§ 192.121(b)(2)(ii), 192.143(a), and 192.325(c), in that Respondent operated its Aldyl-A plastic pipeline on Cherry Street at a location where ground temperatures were elevated to temperatures above the temperature at which the HDB used in the design formula was determined and did not ensure the pipeline had sufficient clearance, or was insulated, from a heat source.

167. Respondent did not design, install, or inspect the HDPE main and service installed in February 2021, to ensure it was constructed in accordance with Part 192, particularly 49 CFR §§ 192.121(b)(2)(ii), 192.143(a), and 192.325(c), in that Respondent operated its pipeline and service on Cherry Street at a location where ground temperatures were elevated to temperatures above the temperature at which the HDB used in the design formula was determined and did not ensure the pipeline had sufficient clearance, or was insulated, from a heat source.

168. Respondent failed to have a consolidated and prescriptive continuing surveillance procedure for identifying, reporting, and documenting threats to its pipeline system, such as: (1) Conditions that have the potential to deleteriously increase the operating temperature of a plastic pipeline facility; (2) Field conditions associated with brittle like cracking (slow crack growth) on

vintage plastic pipelines; (3) Address roadway paving projects that will affect their valve facilities; and (4) All activities that are related to continuing surveillance and separate from other programs, such as DIMP or TIMP.

169. Respondent did not ensure that the plastic pipelines installed in 1982 and February 2021 were installed with sufficient clearance, or insulated, from any heat source such as steam or electric power lines.

170. Respondent failed to demonstrate an understanding of its gas distribution system developed from reasonably available information, identify threats to its system, evaluate and rank risk, and identify and implement measures to address risks related to vintage plastic pipe, in that Respondent failed to use NTSB Special Investigation Reports, PHMSA Advisory Bulletins, and design, operations, inspection, and maintenance records to fully analyze the causes, performance, and risk of vintage plastic pipelines, such as Aldyl-A.

171. Respondent failed to replace, repair, or remove the 1982 Aldyl-A pipeline in February 2021 despite the unsafe proximity to the Palmer steam line.

172. Respondent unnecessarily limits its Emergency Plan and emergency notifications of ruptures to transmission lines and failed to have procedures in place for emergency responses and notifications of ruptures on distribution lines.

173. Respondent failed to inspect Valve ID 705178 at South 2nd Avenue and Penn Avenue ensure its accessibility and operability during the 2016 and 2021 inspection cycles because it had been paved over and mislabeled and Respondent did not ensure the valve had been located, inspected, repaired, raised, or reset before, during, or after the paving project.

174. Respondent's emergency plan did not establish written procedures that provide for prompt and effective response, taking necessary actions to minimize hazards of released gas, or making safe any actual or potential hazard, in that Respondent's emergency plan does not

provide direction to first responders, or plan accordingly, when the first responder encounters an inaccessible valve that is needed for a prompt and effective response to an explosion.

175. Respondent's procedure at GOM 70.80.10 was insufficient to provide safety during maintenance and operations, in that Respondent's GOM 70.80.10 failed to identify who in Operations is responsible for documenting, locating, inspecting, repairing, raising, or resetting any valve box during a paving project.

176. Respondent designed the 1982 Aldyl-A main, service tee, service line, and the 2021 HDPE service tee and line at Palmer Building 2 for an assumed operating temperature of 73 degrees Fahrenheit because Respondent's Gas Design Manual, Section 10.10.40, did not give any consideration to operating temperatures for vintage plastic pipe, including Aldyl-A, exposed to outside heat sources.

177. Respondent's Operator Qualification Plan failed to ensure that individuals were qualified to take appropriate action concerning unusual operating and maintenance conditions, such as identification of conditions that have the potential to deleteriously increase the operating temperature of a plastic pipeline facility.

178. Respondent's First Responder did not contact Respondent's Central Dispatch upon arrival on scene and did not establish contact with fire and police on scene.

179. Respondent notified the National Response Center of the reportable incident at 7:09 PM, more than two hours after the explosion and one hour and fifty minutes after the First Responder's arrival on scene. Respondent failed to notify the NRC within one hour of confirmed discovery of a reportable incident.

COUNT ONE

180. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to keep complete maps, plans, and records of its entire distribution

and other system showing the size, character, and location of each main, district regulator, street valve and drip, and each service connection, together with such other information as may be necessary, in that its electronic facility records for the Cherry Street main were inaccurate. If proven, this is a violation of 52 Pa. Code § 59.37 (Maps, plans and records).

COUNT TWO

181. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to keep records necessary to administer the procedures established under § 192.605(b)(3), in that its electronic facility records for the Cherry Street main were inaccurate because they incorrectly indicated inside piping that did not exist, a two-inch main size when it was one and one-quarter inches, and a steel main when it was plastic. If proven, this is a violation of 49 CFR § 192.603(b) (General Provisions).

COUNTS THREE AND FOUR

182. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to demonstrate an understanding of its gas distribution system or identify threats to its system developed from reasonably available information, particularly NTSB's SIR-98-01 and all applicable PHMSA Advisory Bulletins, including ADB 99-01, ADB 99-02, ADB 02-07, and ADB 07-01, in that Respondent failed to have procedures to identify, report, assess, and mitigate the risks that elevated ground temperature poses to plastic pipelines, such as Aldyl-A. If proven, this is a violation of 49 CFR § 192.1007(a)&(b) (What are the required elements of an integrity management plan).

COUNTS FIVE THROUGH EIGHT

183. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to demonstrate an understanding of its gas distribution system developed from reasonably available information, identify threats to its system, evaluate and

rank risk, and identify and implement measures to address risks related to vintage plastic pipe, in that Respondent failed to use NTSB Special Investigation Reports, PHMSA Advisory Bulletins, and its design, operations, inspection, and maintenance records to fully analyze the causes, performance, and risk of vintage plastic pipelines, such as Aldyl-A, in its system. If proven, this is a violation of 49 CFR § 192.1007(a), (b), (c), & (d) (What are the required elements of an integrity management plan).

COUNTS NINE AND TEN

184. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent did not design, install, or inspect the distribution pipeline on Cherry Street in 1982, to ensure it was constructed in accordance with Part 192, particularly 49 CFR §§ 192.121(b)(2)(ii), 192.143(a), and 192.325(c), in that Respondent operated its Aldyl-A plastic pipeline on Cherry Street at a location where ground temperatures were elevated to temperatures above the temperature at which the HDB used in the design formula was determined and did not ensure the pipeline had sufficient clearance, or was insulated, from a heat source. If proven, this is a violation of 49 CFR § 192.305 (Inspection: General) and 49 CFR § 192.13(a) (What general requirements apply to pipelines regulated under this part).

COUNT ELEVEN

185. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent did not design, install, or inspect the HDPE main and service it installed in February 2021, to ensure it was constructed in accordance with part 192, particularly 49 CFR §§ 192.121(b)(2)(ii), 192.143(a), and 192.325(c), in that Respondent operated its pipeline and service on Cherry Street at a location where ground temperatures were elevated above the temperature at which the HDB used in the design formula was determined and did not ensure the pipeline had sufficient clearance, or was insulated, from a heat source. If proven, this is a

violation of 49 CFR § 192.13(a) (What general requirements apply to pipelines regulated under this part).

COUNT TWELVE

186. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to have a procedure for continuing surveillance of its facilities to take appropriate action concerning unusual operating and maintenance conditions, in that Respondent failed to have a consolidated and prescriptive continuing surveillance procedure for identifying, reporting, and documenting threats to its pipeline system, such as: (1) Conditions that have the potential to deleteriously increase the operating temperature of a plastic pipeline facility; (2) Field conditions associated with brittle like cracking (slow crack growth) on vintage plastic pipelines; (3) Roadway paving projects that will affect their valve facilities; and (4) All activities that are related to continuing surveillance and separate from other programs, such as DIMP or TIMP. If proven, this is a violation of 49 CFR § 192.613(a) (Continuing Surveillance).

COUNTS THIRTEEN AND FOURTEEN

187. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to ensure that each plastic main or pipeline was installed with sufficient clearance, or was insulated, from any source of heat so as to prevent the heat from impairing the serviceability of the pipe and failed to follow its procedure GOM 30.10.20, in that Respondent failed to ensure that the plastic pipelines installed in 1982 and February 2021 were installed with sufficient clearance, or were insulated, from any heat source such as steam or electric power lines. If proven, this is a violation of 49 CFR § 192.325(c) (Underground Clearance) and 49 CFR § 192.605(a) (Procedural manual for operations, maintenance, and emergencies).

COUNT FIFTEEN

188. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent unnecessarily limits its Emergency Plan and emergency notifications of ruptures to transmission lines and failed to have procedures in place for emergency responses and notifications of ruptures on distribution lines. 49 CFR §§ 192.3 and 192.615 do not limit notifications of potential ruptures to only transmission pipelines. If proven, this is a violation of 49 CFR § 192.615(a) (Emergency Plans).

COUNT SIXTEEN

189. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to follow its procedure GOM 70.80.10, in that Respondent did not ensure the Valve ID 705178 at South 2nd Avenue and Penn Avenue had been located, inspected, repaired, raised, or reset before, during, or after the paving project resulting in the valve not being inspected in 2016 and 2021. If proven, this is a violation of 49 CFR § 192.605(a) (Procedural manual for operations, maintenance, and emergencies).

COUNT SEVENTEEN

190. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to follow its procedure GOM 70.80.10, in that Respondent failed to inspect Valve ID 705178 at South 2nd Avenue and Penn Avenue to ensure its accessibility and operability during the 2016 and 2021 inspection cycles. If proven, this is a violation of 49 CFR § 192.605(a) (Procedural manual for operations, maintenance, and emergencies).

COUNT EIGHTEEN

191. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent's procedure at GOM 70.80.10 was insufficient to provide safety during maintenance and operations, in that Respondent's GOM 70.80.10 failed to identify who in

Operations is responsible for documenting, locating, inspecting, repairing, raising, or resetting any valve box during a paving project. If proven, this is a violation of 49 CFR § 192.605(b) (Procedural manual for operations, maintenance, and emergencies).

COUNT NINETEEN

192. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent's Emergency Plan did not establish written procedures that provide for prompt and effective response, taking necessary actions to minimize hazards of released gas, or making safe any actual or potential hazard, in that Respondent's Emergency Plan does not provide direction to first responders, or plan accordingly, when the first responder encounters an inaccessible valve that is needed for a prompt and effective response to an explosion. If proven, this is a violation of 49 CFR § 192.615(a)(3),(6), & (7) (Emergency Plans).

COUNT TWENTY

193. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent used an inadequate design formula on the Cherry Street pipeline, in that Respondent designed the 1982 Aldyl-A main, service tee, service line, and the 2021 HDPE service tee and line at Palmer Building 2 for an assumed operating temperature of 73 degrees Fahrenheit because Respondent's Gas Design Manual, Section 10.10.40, did not give any consideration to operating temperatures for vintage plastic pipe, including Aldyl-A, exposed to outside heat sources. If proven, this is a violation of 49 CFR § 192.121(b) (Design of plastic pipe) and 49 CFR § 192.143 (General requirements).

COUNT TWENTY-ONE

194. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to replace, repair, or remove from service a segment of pipeline that had become unsafe, in that Respondent failed to replace, repair, or remove the 1982 Aldyl-A

pipeline in February 2021 despite the unsafe proximity to the Palmer steam line. If proven, this is a violation of 49 CFR § 192.703(b) (General).

COUNT TWENTY-TWO

195. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed ensure through its Operator Qualification Plan that individuals performing covered tasks are qualified, in that the identified abnormal operating conditions in Respondent's Tasks and do not ensure that individuals are qualified take appropriate action concerning unusual operating and maintenance conditions, such as identification of conditions that have the potential to deleteriously increase the operating temperature of a plastic pipeline facility. If proven, this is a violation of 49 CFR § 192.805(b) (Qualification Program).

COUNT TWENTY-THREE

196. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent's First Responder failed to contact Central Dispatch upon arrival on scene and failed to establish communication with fire and police to learn what action had been taken and establish next steps, as required by Respondent's procedures at Emergency Plan 3.2. If proven, this is a violation of 49 CFR § 192.605(a) (Procedural manual for operations, maintenance, and emergencies).

COUNTS TWENTY-FOUR AND TWENTY-FIVE

197. All allegations in paragraphs 1 through 179 are incorporated as if fully set forth herein. Respondent failed to notify the National Response Center within one hour of confirmed discovery of a reportable incident, as required by Respondent's procedures at Emergency Plan 6.1 and 49 CFR § 191.5. If proven, this is a violation of 49 CFR § 192.605(a) (Procedural manual for operations, maintenance, and emergencies) and 49 CFR § 191.5 (Immediate notice of certain incidents).

COUNT TWENTY-SIX

198. As set forth in paragraphs 180 through 197, *supra*, Respondent failed to use every reasonable effort to properly warn and protect the public from danger, or exercise reasonable care to reduce the hazards to which employees, customers and others may be subjected to by reason of its equipment and facilities. If proven, this is a violation of 52 Pa. Code § 59.33 (Gas Service - Safety).

COUNT TWENTY-SEVEN

199. As set forth in paragraphs 180 through 197, *supra*, Respondent failed to furnish and maintain adequate, efficient, safe and reasonable service and facilities and make such repairs, changes, alterations, substitutions, extensions and improvements in or to its service and facilities necessary or proper for the accommodation and safety of its customers, employees and the public, thereby placing the safety of its customers, employees and the public in danger. If proven, this is a violation of 66 Pa.C.S. § 1501 (Character of Service and Facilities).

V. REQUEST FOR RELIEF

200. Due to Respondent's failure to follow the minimum safety standards established by its procedures, the Public Utility Code, Commission Regulations, and the Code of Federal Regulations, resulting in a natural gas fueled explosion and fire, seven fatalities, injuries to ten individuals, and substantial property damage, I&E would have requested that Respondent pay a maximum civil penalty for each count, or Six Million, Nine Hundred Fifty-Six Thousand, Nine Hundred Twenty-Eight dollars (\$6,956,928.00). However, as that amount exceeds the maximum civil penalty as permitted by law, I&E proposes that Respondent pay a total civil penalty of Two Million, Five Hundred Seventy-Six Thousand, Six Hundred Twenty-Seven Dollars (\$2,576,627.00). The civil penalty shall not be tax deductible pursuant to Section 162(f) of the

Internal Revenue Code, 26 U.S.C.S. § 162(f) or passed through as an additional charge to UGI customers in Pennsylvania.

201. In addition to the civil penalty, I&E proposes the following corrective actions:

- a. Retrain first responders on the importance of immediately confirming explosions and fire to dispatching personnel and promptly communicating with other emergency responders to coordinate response activities and minimize hazards to all parties on-scene.
- b. Increase the leak survey frequency to one year on vintage plastic pipelines (manufactured pre-1983) in urban environments where any underground leak will likely become hazardous.
- c. Improve its procedures to ensure notification is made to the National Response Center (“NRC”), within the required one-hour timeframe.
- d. Incorporate in continuing surveillance procedures a process to identify and replace, if necessary, any plastic pipeline in proximity to heat sources.
- e. Include “high temperature” as an abnormal operating condition in the Company’s Operator Qualification plan for tasks related to continuing surveillance and other appropriate operation and maintenance tasks.
- f. Create a procedure for retiring Aldyl-A service tees with Delrin inserts. The procedure should specify tools, acceptable lubricants, if any, and other risk reduction step(s) which will ensure the integrity of the tee after the retirement process.
- g. Create a procedure for retiring Aldyl-A service tees with Delrin inserts, considering risk reduction by: obstructing the flow of gas with the existing cutter, obstructing the flow by the addition of a plug, foam or other obstruction method, or removing tee from service. UGI should consider expanding this procedural process to all plastic service tees.
- h. Create a valve identification system that ensures distribution valves locations are not confused with other utility facilities. UGI should consider redundant positive identification such as fixed and non-removable attributes e.g. paint inside boxes or tags attached to boxes to positively identify gas valves regardless of what valve covers indicate. UGI should include valve and roadway facility maintenance into the continuous surveillance procedures and identify pavement projects and road maintenance.

- i. Improve the OQ plan to include abnormal operating conditions related to valve maintenance, including if a valve is mislabeled or cannot be found at the location of record.
- j. Re-evaluate and redesignate as necessary UGI's emergency valve criteria in sensitive locations such as hospitals, schools, nursing homes, other critical facilities, factories, places of congregation, and urban type areas with large concentrations of people where service line lengths are short and potential consequences are high.
- k. Assign a risk ranking to each distribution valve for the purpose of determining valve closure during emergencies. Factors relevant in the determination of the ranking may include size, flow direction, flow rate, material, age, location, operating environment, pressure, inspection frequency, operability, accessibility, environment, and any other relevant factors for the purpose of minimizing shut down times during emergencies.
- l. Develop and implement a valve management risk model based on operation and maintenance history of distribution valves. The valve maintenance model could be less sophisticated utilizing manual input of data coupled with a potential ranking for turnability or, preferably a more sophisticated model integrating 'live' up-to-date maintenance activity with potential for smart or artificial intelligence software utilizing environmental variables, operating history, pressures, and flow direction, etc. to determine the valves necessary to minimize hazards during emergencies.
- m. Review, consider, and implement all appropriate action related to the recommendations directed to the UGI Corporation as set forth in the National Transportation Safety Board's March 18, 2025, Pipeline Investigation Report, PIR-25-01. Review, consider, and implement all appropriate action related to Pipeline and Hazardous Materials Safety Administration's Advisory Bulletin ADB-2026-01, issued on January 23, 2026, and any subsequent advisory bulletins in response to PIR-25-01's recommendations.
- n. Train field personnel to identify Delrin insert tapping tees and modify existing procedures, as necessary, to prevent conditions which may adversely affect the integrity of the pipeline.
- o. Create a plan to document and track vintage plastic assets, squeeze offs, leak locations, material failures, excavation damage, common trench installations, and other environments which may affect the integrity of vintage plastic.

- p. Identify and track through mapping and other means, all pre 1983 (vintage) plastic pipe and incorporate in the DIMP, an analysis of leaks and failures of the pipe material and any components attached to the vintage pipe. This should include PE2306 material, and its precursors mentioned in PHMSA Advisory Bulletin ADB 07-01.
- q. Document and analyze leaks or material failures on vintage plastic, or any appurtenance attached to vintage plastic pipelines for the purpose of reducing risk in the distribution system.
- r. Identify through DIMP, the riskiest plastic assets and prioritize replacements, or risk reduction efforts, and create a timeline to mitigate the risks posed by vintage plastic.
- s. Modify failure investigation procedures to include precautionary measures while excavating underground facilities for suspected failures and leaks.
- t. Improve its Public Awareness Program to ensure that: (1) businesses and places of congregation can recognize and respond to a gas pipeline emergency (emphasizing evacuation if gas odor is encountered); (2) ensure the media used is sufficiently comprehensive and diverse enough to reach non-English speaking persons in commercial and industrial settings; and (3) engage in continuous evaluation of effectiveness and improvement of the program.
- u. Expand its Methane Detector Pilot Program (R-2024-3052716, *et al.*) for smart remote methane detectors (“SRMD”) that can identify potential leaks, detect the presence of methane gas, and directly notify the gas operator and/or emergency official(s) through smart technology and communication networks, in addition to the audible alarm at the detector location. This expanded program will be implemented geographically in sections of UGI’s service territory through a risk based evaluation considering operational history, and will include residences, businesses, and places of congregation. The selection of the devices and technology for this pilot will depend on available technology either compatible with or separate from UGI’s current technology. UGI will be responsible for the installation of the SRMDs and the supporting communication network.

WHEREFORE, the Pennsylvania Public Utility Commission’s Bureau of Investigation and Enforcement hereby requests that the Commission: (1) find UGI to be in violation of the Public Utility Code, Commission regulations, and/or Code of Federal Regulations for each of the twenty-seven (27) counts set forth herein; (2) impose a cumulative civil penalty upon UGI in the

amount of Two Million, Five Hundred Seventy-Six Thousand, Six Hundred Twenty-Seven Dollars (\$2,576,627.00); (3) direct UGI to perform each of the corrective actions detailed in this Complaint; and (4) order such other remedies as the Commission may deem to be appropriate.

Respectfully submitted,



Colby B. Widdowson
Prosecutor
PA Attorney ID No. 326185

Stephanie M. Wimer
Deputy Chief Prosecutor
PA Attorney ID No. 207522

Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Dated: March 18, 2026

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Pennsylvania Public Utility Commission,	:	
Bureau of Investigation and Enforcement,	:	
Complainant	:	
	:	
v.	:	Docket No. C-2026-
	:	
UGI Utilities, Inc. – Gas Division,	:	
Respondent	:	

VERIFICATION

I, Christopher Whiteash, Fixed Utility Valuation Engineer, hereby state that the facts above set forth are true and correct to the best of my knowledge, information, and belief and that I expect to be able to prove the same at a hearing held in this matter. I understand that the statements herein are made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.

Date: March 18, 2026



Christopher Whiteash, P.E.
Fixed Utility Valuation Engineer
Pipeline Safety Division
Bureau of Investigation and Enforcement

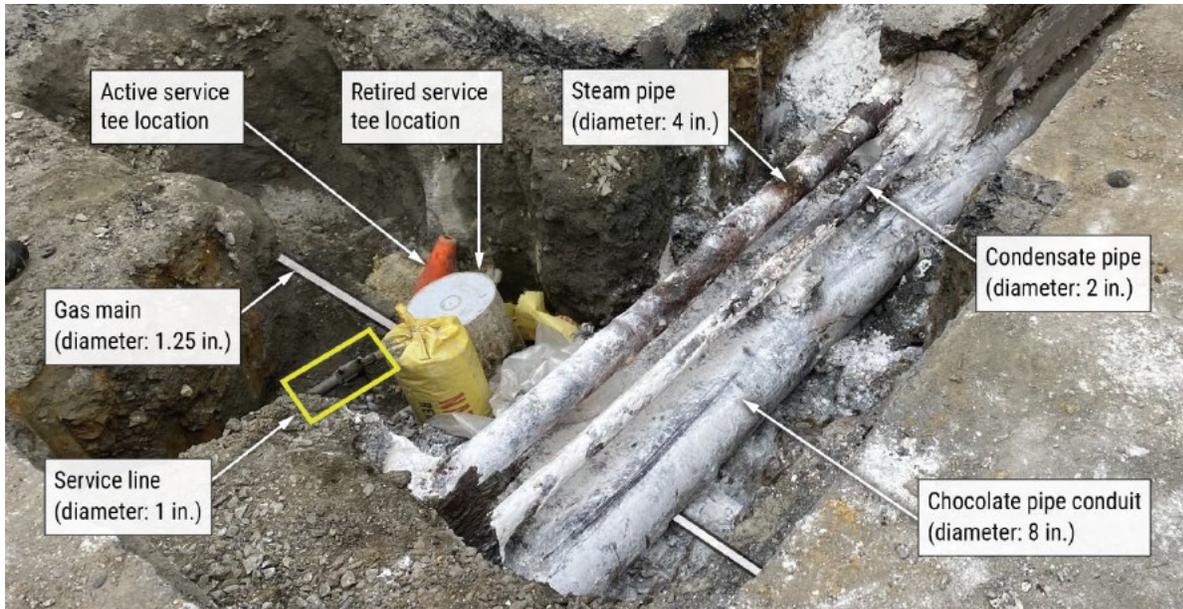
I&E Exhibit 1



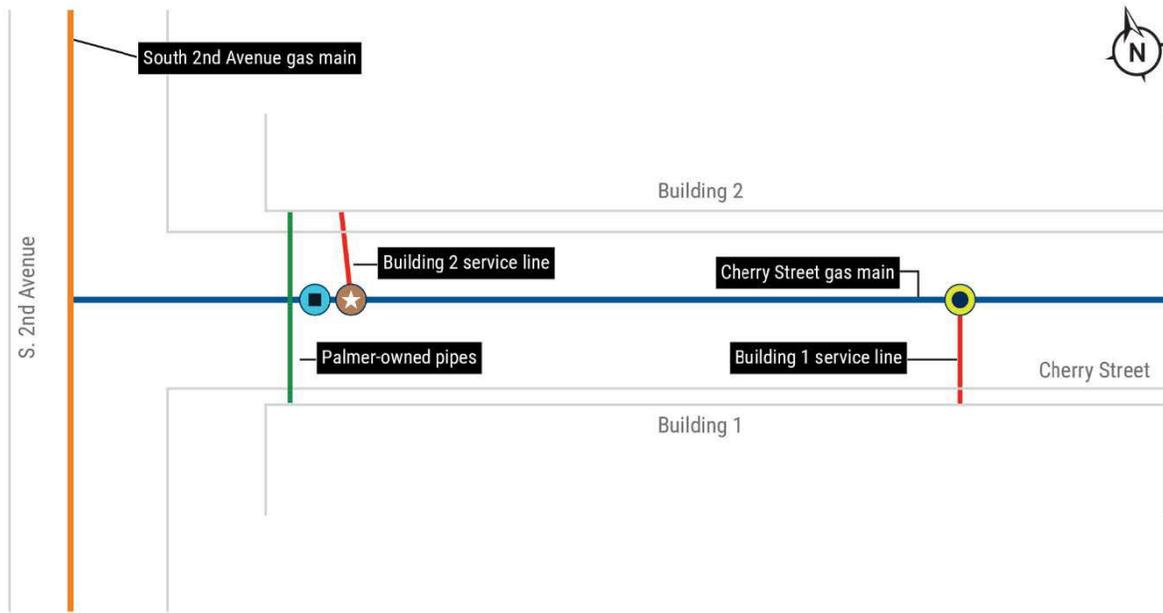
I&E Exhibit 2



I&E Exhibit 3



I&E Exhibit 4

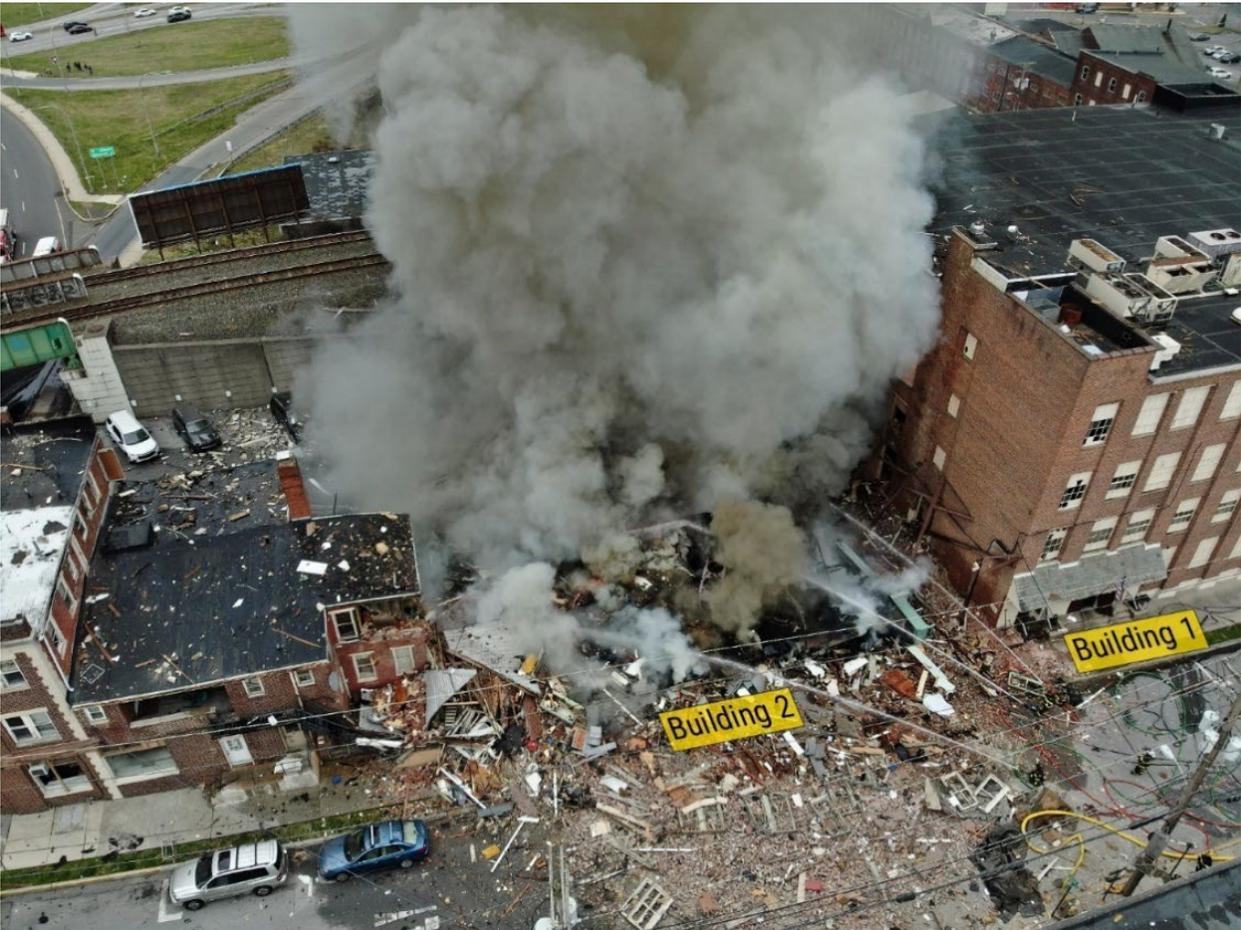


- 1982 retired service tee, Building 2
- ★ 2021 active service tee, Building 2
- 1982 service tee, Building 1

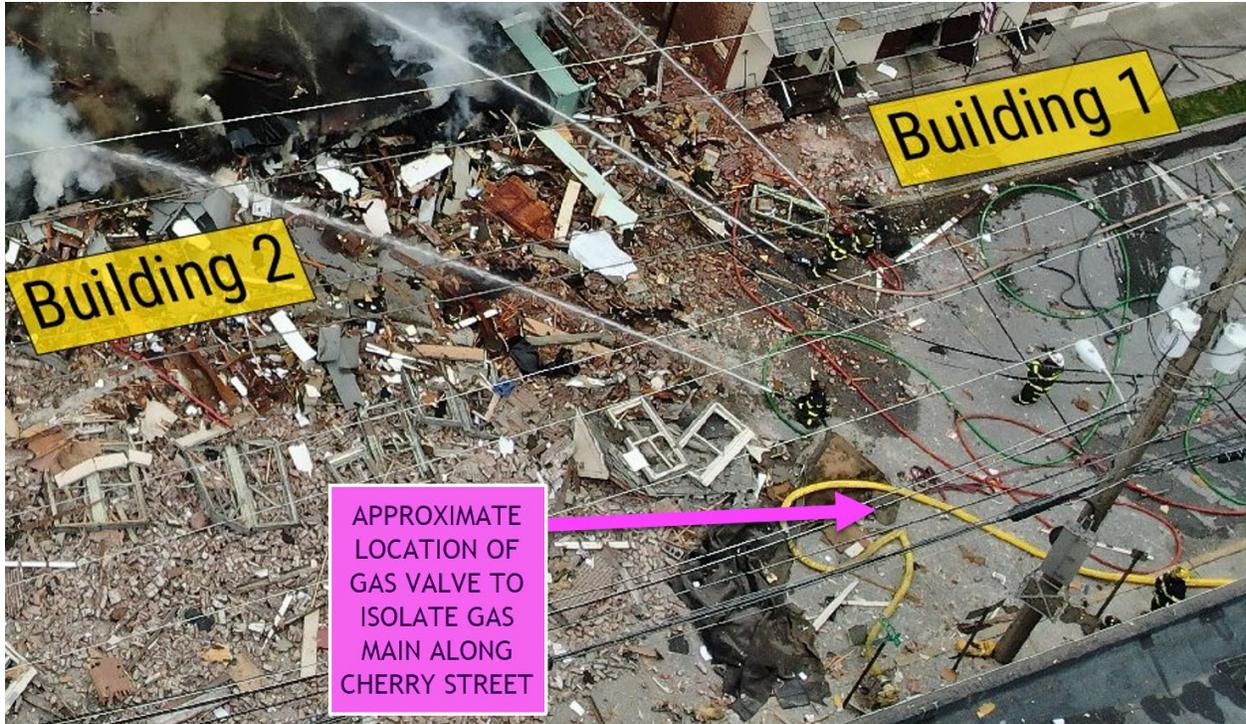
Not to scale

I&E Exhibit 5





I&E Exhibit 6

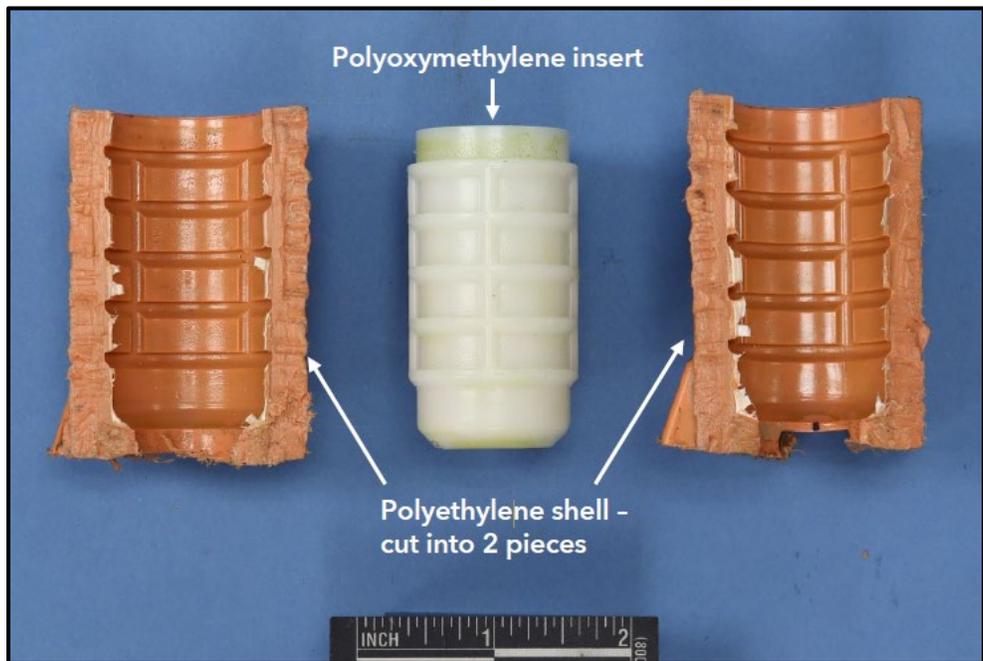
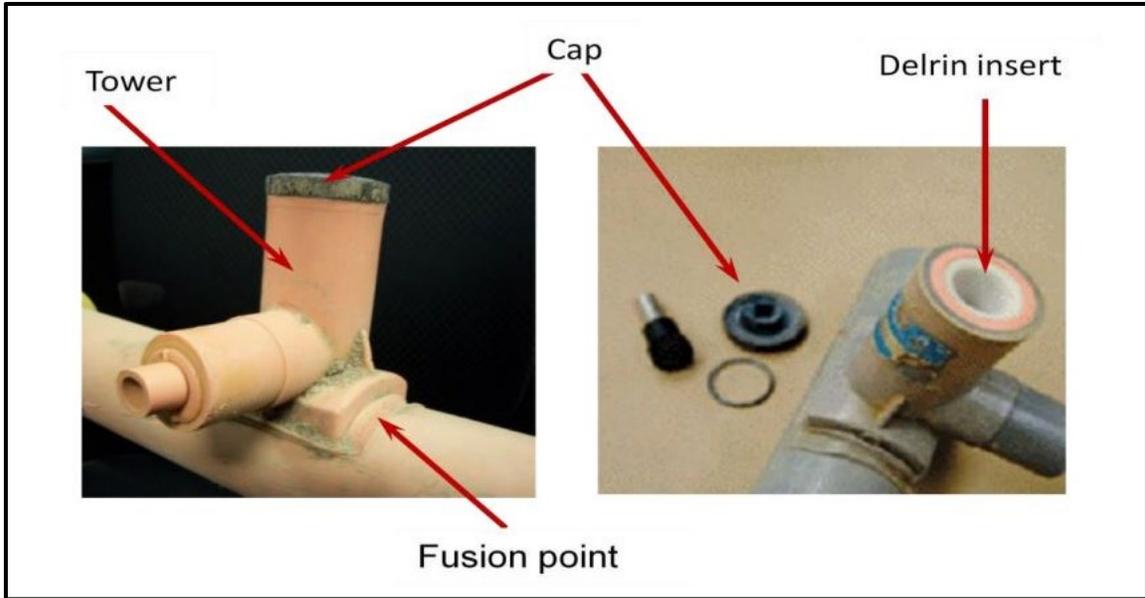


I&E Exhibit 7

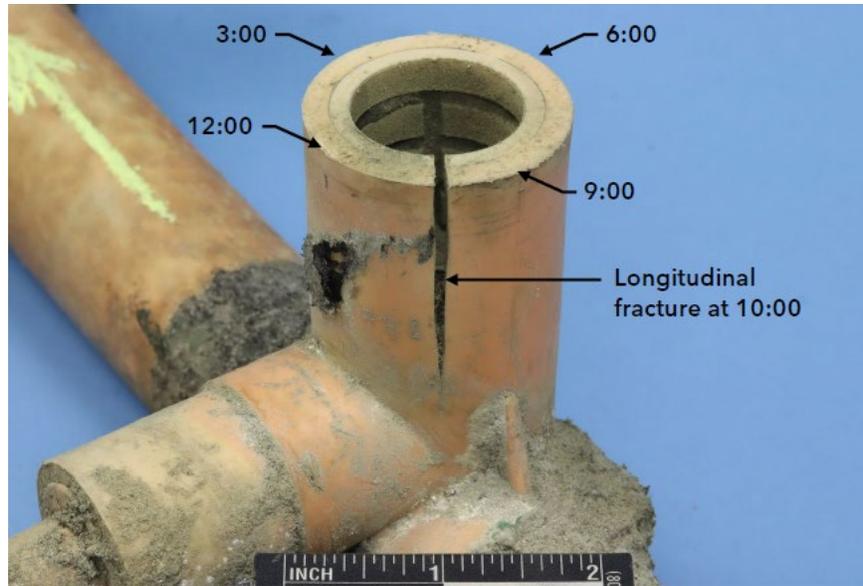


I&E Exhibit 8
CONFIDENTIAL

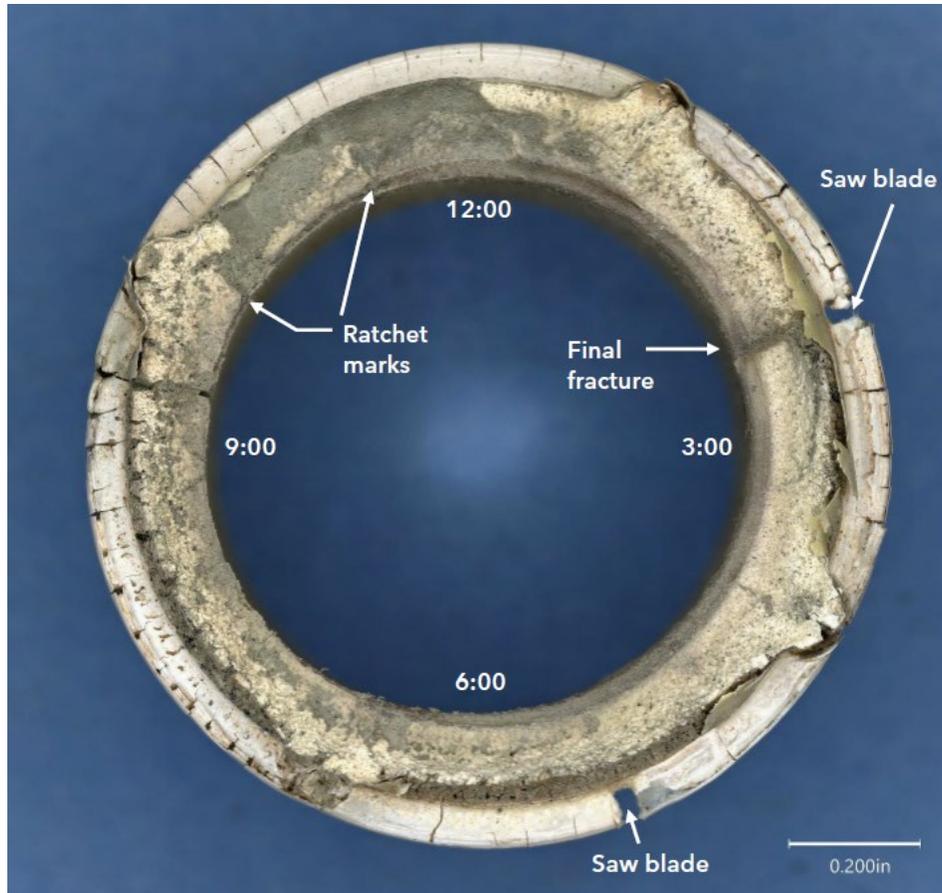
I&E Exhibit 9



I&E Exhibit 10



I&E Exhibit 11



I&E Exhibit 12





I&E Exhibit 13



I&E Exhibit 14
CONFIDENTIAL

I&E Exhibit 15
CONFIDENTIAL

I&E Exhibit 16
CONFIDENTIAL

I&E Exhibit 17
CONFIDENTIAL

I&E Exhibit 18
CONFIDENTIAL

I&E Exhibit 19
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I&E Exhibit 20
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I&E Exhibit 21
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I&E Exhibit 22
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I&E Exhibit 23
CONFIDENTIAL

I&E Exhibit 24
CONFIDENTIAL

I&E Exhibit 25
CONFIDENTIAL

I&E Exhibit 26
CONFIDENTIAL

**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Pennsylvania Public Utility Commission,	:	
Bureau of Investigation and Enforcement,	:	
Complainant	:	
	:	
v.	:	Docket No. C-2026-
	:	
UGI Utilities, Inc. - Gas Division,	:	
Respondent	:	

CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing **Formal Complaint (Non-Proprietary and Proprietary Version)** dated March 18, 2026, upon the parties, listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a party).

Service by Certified Mail, Return Receipt, and Electronic Mail

Michael Swerling, Esq.
UGI Utilities, Inc. - Gas Division
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King of Prussia, PA 19406
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