



1030 15th Street, N.W.
Suite 380 East
Washington, DC, 20005
Tel (202) 461-3100 Fax (202) 461-3102
www.foxrothschild.com

MORGAN W. CAMPBELL
Direct No: 202 794 1210
Email: [REDACTED]

October 3, 2019

VIA EMAIL – Robert.Sumwalt@NTSB.gov
The Honorable Robert L. Sumwalt
Chairman
National Transportation Safety Board
490 L’Enfant Plaza, SW
Washington, DC 20594

Re: Elster Perfection’s Petition for Reconsideration and Modification of Findings and
Determination of Probable Cause
Accident ID DCA17FP006
Accident Report NTSB/PAB – 19/01
Millersville, PA - 2 July 2017 Pipeline Accident

Dear Chairman Sumwalt:

Elster Perfection¹ hereby petitions the NTSB, by and through undersigned counsel, pursuant to 49 CFR § 845.32, to reconsider and modify its findings and determination of probable cause in the above-referenced matter. The basis of this petition is that factual errors have been made which need to be corrected. The errors are so fundamental that the NTSB should reconsider and modify its determination of probable cause. Specifically, the factual corrections sought in this petition demonstrate that the probable cause of the house explosion was not that gas was leaking because an Elster Perfection tapping tee was installed incorrectly by UGI (or its contractor) in 1998, but rather that UGI’s response to a leak reported 19 years later on July 2nd, 2017, was slow and undermanned and neglected basic emergency response procedures, allowing gas to accumulate to highly dangerous levels.

¹ Elster Perfection is a division of Elster American Meter Company, LLC.

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For ease of reference, this petition is organized as follows:

- I. Overview and Summary of Petition
- II. Factual Errors in the Pipeline Accident Brief
 - A. Introduction
 - B. The leak response timeline is incorrect
 - C. The facts regarding the gas readings are incorrect in almost every respect
- III. Incorrect Probable Cause and Failure to Analyze Leak Response

Attached to this Petition is a Timeline of Key Events, followed by an Index of Exhibits, and Exhibits A through L.

I. Overview and Summary of Petition

The NTSB's Pipeline Accident Brief (hereinafter, the "PAB") contains numerous substantive factual errors and a probable cause determination that fails to address how a leak reported at 10:26 a.m., and declared to be an emergency at 11:18 a.m., ultimately resulted in an explosion at 12:32 p.m. The materials in the public docket reveal a gas leak response that was untimely, under-resourced, and unmindful of basic emergency response procedures. The response was so deficient that UGI waited until after the explosion to close the nearby valve on the gas line and direct that the electrical service to the cul-de-sac be shut off. Indeed, the Pennsylvania Public Utility Commission ("PUC") in its Formal Complaint against UGI observes that UGI failed to protect life and property by not immediately closing the closest valve and contacting 911 to notify the local fire department.

UGI's deficient response began with the technician dispatched to investigate the leak. Despite recording gas levels within the explosive range, UGI's technician did not close the nearby valve on the gas line, joked with the resident of 206 Springdale Lane, spent time with her inside the house as they opened windows, and opened the garage door so she could activate the ignition on her automobile. He then let her drive her car out of the garage, stop it in the driveway to go back in the house, then stop it again to speak with UGI's employees digging in her front yard, before she finally evacuated the premises.² The UGI technician also told the residents of the home next door that it was fine to remain inside, despite elevated gas levels and proximity to an emergency leak. The technician did not direct that the electrical service to the neighborhood be shut off, despite gas levels mandating that he do so.

² Citations to information in this summary are included in the body of this petition.

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The mistakes of UGI's technician were exacerbated by UGI's failure to take emergency actions in response to the emergency the technician had reported at 11:18 a.m. The supervisor on duty had no prior experience coordinating an emergency gas leak response. UGI's on call responder failed to answer phone calls throughout the response, while others were mobilized slowly or not at all. The supervisor made a few phone calls before ultimately arriving on site himself about an hour after he was notified of the emergency, and the one member of his supporting crew who arrived before the explosion got to the site even later than he did. As a result of the botched response, the technician did not receive any on-site support until less than 20 minutes before the explosion.

UGI's response to the leak was so inadequate that over two hours after the leak was reported, its sole effort to stop the flow of gas consisted of two employees digging in the front yard for a few minutes in an effort to squeeze off the gas main line near the leaking tee. Meanwhile, gas continued to flow through the open valve to a neighborhood receiving ongoing electrical service, leading to gas levels posing an immediate threat to human life and property.

It does not require hindsight to recognize that to effectively respond to an emergency leak, the utility should have a sufficient number of personnel on call, those on call should answer their phones, the valve to the cul-de-sac should immediately be closed, and the electricity should be shut off. In fact, after the explosion a UGI worker closed the valve within seven minutes. Although squeezing-off the gas main line was also an option, the decision to squeeze-off was not made until a five minute call between the supervisor and a UGI engineer from 12:04 to 12:09 p.m., and there was no reason not to promptly close the valve and then conduct the squeeze-off procedure. It is even more obvious that UGI should immediately evacuate affected residents and not allow them to risk igniting an explosion by starting their vehicles.

All of these UGI failures are even more egregious when viewed in the context of UGI's history of inadequate responses to gas leaks. In three previous natural gas explosions between 2004 and 2017, the PUC cited UGI for inadequate dispatch procedures in an emergency (2004 explosion resulting in injury), persistent gas safety violations (February 2011 explosion killing five people), and failure to have procedures to shut down a gas line in a timely manner (October 2011 explosion). In the October 2011 explosion, just as in the July 2017 incident, a decision had been made to squeeze-off the gas main, rather than close valves, and the excavation was in progress at the time of the explosion (approximately 1½ hours after the first call was made). The PUC found, "as a result of the decision to squeeze-off the main, the location of two valves that could have been turned to isolate the remaining flow of gas was not requested...." Following the October 2011 explosion, UGI agreed in a settlement with the Pennsylvania Public Utility Commission to provide additional training to first responders when approaching a flowing gas site.

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As described more fully in this petition, the leak should never have become an accident. The NTSB's investigation found many shortcomings in UGI's response, but then produced a PAB that alternately buried, ignored, or masked these shortcomings by misstating facts. Further, despite the errors that raise questions as to the training of the technician and the supervisor, the PAB does not discuss their training, and the docket does not contain their training records. The result is a report that should be reconsidered in its entirety and redone to correct the factual errors and to analyze how these shortcomings in the leak response caused the accident.

II. Factual Errors

A. Introduction

The PAB contains many statements that are contradicted by the facts in the public docket and require correction as well as reconsideration of the probable cause determination. Each error is significant, and the cumulative effect of the errors is to downplay the deficiencies in the leak response. For clarity, each factual error is addressed herein using the following three part sequence: 1) quoting the statement in the PAB at issue (the "Report"); 2) setting forth the underlying factual material demonstrating the statements are false (the "Error"); and 3) detailing the request of Elster Perfection with respect to the error (the "Petition").

B. The leak response timeline is incorrect.

1. Report

The report states that the leak was reported at 10:26 a.m. and "By 11:50 a.m., the senior supervisor had assembled a three-person crew at the site." PAB, p. 3, last line of first full paragraph (emphasis added). (The PAB is attached as Exhibit A.) Similarly, the report, in a more general prefatory passage states "An additional UGI technician and a senior supervisor arrived shortly thereafter," i.e., shortly after 11:00 a.m. PAB, bottom of page 1 and top of page 2.

2. Error

A bit of background is needed to show the errors quoted above. The utility had dispatched a technician to respond to the 10:26 a.m. gas leak report, and he arrived on scene at 11:00 a.m., over 30 minutes after the leak was reported. PAB, p. 2, first two sentences of last full paragraph. At 11:18 a.m., the technician called the supervisor and requested a response crew. PAB, p. 2, last two sentences.

As detailed below, however, the first member of the response crew, the supervisor, did not arrive until approximately 12:14 p.m. The second member arrived at approximately 12:19 p.m.

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The third member did not arrive until after the accident. Accordingly, the statement in the PAB that two of the three arrived shortly after 11:00 a.m. and the full crew assembled at 11:50 a.m. is wildly inaccurate.

The leader of the crew was the supervisor, Jason Trimble, who was the first crewmember to arrive at the site. Mr. Trimble stated that he had not arrived on site by 12:04 p.m., and he agreed that the earliest time that it could be said he was on scene was 12:14 p.m. Trimble 68:16-25; 70:14-17.³ (The interview transcript of Jason Trimble is attached as Exhibit B.) Therefore, the first of the three-man response crew to arrive on site did not arrive until about 24 minutes after 11:50 a.m.⁴

Mr. Trimble indicated that five minutes after he came to the scene, the second member of his crew, a foreman (Robert Lopez) arrived. Trimble 70:14-17. This means that the second member of the response crew showed up at approximately 12:19 p.m., about half an hour after the 11:50 a.m. time reported in the PAB. In fact, Mr. Lopez was not even asked to come to the site until 11:52 a.m., two minutes after the PAB states he was already at the site. Trimble 19:6-10; Lopez 17:2-5. (The interview transcript of Robert Lopez is attached as Exhibit C.)

The third member of the response crew, Jesse Ressler, did not arrive until after the explosion at 12:32 p.m. See Trimble 18:16–21:10; 23:14–24:1; 42:25–43:21. Therefore, the full three man response crew did not assemble (if at all) until at least 42 minutes after the time recorded in the PAB.

3. Petition

Elster Perfection requests that the two erroneous statements cited under “Report,” above, be corrected. Further, Elster Perfection requests that the corresponding error in the Pipeline Operations/Integrity Management Group Chairman’s Factual Report be corrected.⁵ Finally, Elster

³ References to interview transcripts herein list the last name of the interviewee, followed by the page and line numbers in page:line(s) format.

⁴ Elsewhere, the PAB itself notes that Mr. Trimble did not arrive until after noon. PAB, p. 4, first line of third paragraph.

⁵ The Pipeline Operations/Integrity Management Group Chairman’s Factual Report, on page 4, last line of first full paragraph, reads “By approximately 11:50 a m., the Senior Supervisor had assembled a three person crew that was responding to the site.” This report is attached as Exhibit D.

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Perfection requests that the PAB, including but not limited to the probable cause determination, be reconsidered in light of this blatant and substantial factual error.

The factual error described above is significant to an assessment of whether the probable cause of the house explosion was the initial leak or the failure of the utility to remediate it. The disparity between the time set forth in the PAB and the actual response time of the three person response crew, amounting to at least 42 minutes (the duration between the time set forth in the PAB - 11:50 a.m. - and the explosion at 12:32 p.m. that preceded the arrival of the third member of the crew) is important considering that:

a) The utility, which had notice of the leak at 10:26 a.m. and had classified the leak as an emergency at 11:18 a.m., took one hour, rather than 30 minutes, to get two of the three members of the response crew to the site, and failed to get the third member to the site until after the explosion. All the while, even after the emergency was declared, gas continued to flow and the electricity remained on.

b) After the accident, a utility worker closed the valve to the cul-de-sac in seven minutes or less. See Survival Factors Group Chairman's Factual Report, Exhibit 3, p. 6 (entries at 12:48 p.m. and 12:55 p.m.). (This report is attached as Exhibit E.) Therefore, had the crew actually arrived at 11:50 a.m., it would have been able to close the valve well before the accident. Further, the gas could have, and should have been turned off at the valve by the technician promptly after the emergency was declared (at 11.18 a.m.), and well prior to the crew's arrival time.

c) The gap between 11:50 a.m. (the time cited in the PAB for the crew's arrival time) and the time the first two members of the three man crew had actually assembled at the site (roughly 12:19 p.m.) is significant in light of the fact that it left the two UGI employees with only 13 minutes to address the emergency. By this time, the fact that an emergency condition still existed was due to UGI's failure to close the valve supplying gas to the cul-de-sac and to shut off the electricity. The explosion occurred at 12:32 p.m., meaning the shorthanded crew had only 13 minutes to address the emergency, not the 42 minutes outlined in the PAB. At this late point, Mr. Trimble stated he believed that squeezing off the gas main line near the tee was a better option than closing the valve, although it appears the valve was closed much faster than the gas main line was excavated.

The PAB states that the crew had "fully excavated the plastic main and were ready to squeeze-off the plastic main line when the explosion occurred" at 12:32 p.m. PAB, p. 4, second sentence of last paragraph. In other words, considering that the two person crew had almost remediated the leak within 13 minutes of arriving on site, the leak would have been remediated well prior to 12:32 p.m., and the accident would not have occurred, if a full crew had actually

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arrived anywhere close to the 11:50 a.m. time set forth in the PAB. Accordingly, even if one ignores the prior failures of UGI to close the gas valve and shut off the electricity, the disparity between the PAB's reported response times and the actual response times are the difference between an explosion and a remediated leak.

C. The facts regarding the gas readings are incorrect in almost every respect

1. Report

The PAB does not reference any gas readings at the 206 Springdale Lane residence (the house that exploded) other than in the following passages:

The senior supervisor and the duty operator began excavating the gas main pipeline. While the excavation was underway, the technician reported that he was measuring 20 percent LEL at the stoop on 206 Springdale Lane and that he had trouble getting the occupant to respond to his knocking at the front door.

PAB, fourth page, second sentence, fourth full paragraph.

While the main line was being excavated, the occupant of 206 Springdale Lane responded to the technician. Based on the gas percentage reading of 20 percent LEL in the home, the technician decided to evacuate the home.

PAB, p. 4, first two sentences of the 5th paragraph.

2. Errors

The above passages in the PAB are wrong in almost every respect. The passages incorrectly state where the readings were recorded, dramatically understate the gas readings that were recorded, and miss the actual reason for the evacuation. Collectively, the errors serve to conjure a scene in which the house explosion would have been a shocking development, whereas the actual facts demonstrate an extremely high risk of an explosion in the half hour or more leading up to it.

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The first passage cited above states, in part, that the “technician⁶ reported that he was measuring 20% LEL at the stoop on 206 Springdale Lane.” This is false. The reading was actually recorded inside the residence. Mr. Trimble testified that:

“...I remember turning and I remember Rick saying I have 21 gas in the house. He was on the front stoop. And within – I’m going to say within 10, 15 seconds – all I did was turn from Denny to go squeeze the main off with Rob, and that’s when it went. That’s when it exploded.”

Trimble 24:15-20 (emphasis added).

He further testified:

“...that reading wasn’t on the stoop. That’s just the – that’s the last reading that I remember Rick giving me before the explosion.”

Trimble 48:19-21.

The passages above also understate the gas readings, in ways both big and small. The small error is that the actual reading, as noted above, was “21,” not “20.” The large error is that the reading was not percent of LEL, but actual volume of gas in the air.

The lower explosive limit (“LEL”) for natural gas is approximately 5% gas in volume by air, so 20% LEL equates to 1% gas-in-air. According to the interview transcripts, however, the technician/decedent told the supervisor, within seconds of the explosion, that he had recorded “21 gas in home,” not 20% LEL. Trimble 24:17-18, 31:11-16, 48:15-21. In other words, the actual gas level in the house that exploded was 21 times greater than what is stated in the PAB.

A further error is that the second passage under “Report,” above, states, in part, “Based on the gas percentage reading of 20 percent LEL in the home, the technician decided to evacuate the home.” As clarified above, the reading was not 20 percent LEL. However, the PAB is also wrong in that the evacuation was triggered by earlier gas readings inside the house, not the incorrect readings cited in the PAB.

Mr. Trimble testified:

⁶ The technician, Richard (“Rick”) Boudier, was killed in the house explosion.

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Q: Right, and it was 10 or 11 inside the house?

A: That's what triggered the evacuation.

Trimble 48:22-23. (emphasis added).

Q: Okay. Going back to what Rick was speaking about a second ago, at some point Rick told you he had 10 or 11 percent gas. Was that in the house or at the foundation wall? Are you --

A: It had to be -- I'm spit-balling here, but I almost think it would've had to be in the house because that's when he told me he was evacuating the lady from the house.

Trimble 60:24 -- 61:4. (emphasis added)

Q: Just going over the timeline, at the point when Rick was at the front of the house, it seems like, just looking at everything up to that point, for 206, where he had trouble getting in --

A: Um-hum.

Q: -- he finally gets in. The lady opens the door and he gets a reading that he reported to you of 11 -- I'm sorry -- 10 or 11 gas in the house.

A: That's what I remember.

Trimble 63:21 -- 64:4.

Q: I just had a question. So you said that you were evacuating 206 because it was at 10 or 11. Was that in gas or LEL?

A: That was gas.

Trimble 77:21-24; see Trimble 22:14 -- 24:20 for a description of the events leading up to the explosion including the earlier readings of 10-11 gas in the house, the later reading of 21 gas in the house, and the explosion.

In addition to showing that the readings of 10 to 11 gas-in-air triggered the evacuation, the transcript portions quoted above further support that the later reading of 21 was a reading of gas-

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in-air, not percent of LEL. As Mr. Trimble testified, the earlier house reading was 10 or 11 “in gas,” not LEL:

Q: Was that in gas or LEL?

A: That was gas.

Trimble 77:22-24; see J. Hughes 22:17-19 (wherein the resident testified that upstairs there was a reading of “12,” and downstairs there was a reading of “11.”) (The transcript of J. Hughes is attached as Exhibit F.)

As the gas continued to leak, the gas concentration in the home rose to a reading of 21. After Mr. Trimble was informed of this reading, the house exploded seconds later. Trimble 24:16-20; 48:15-21.

In sum, the reading was 21, not 20, it was 21 gas-in-air, not 21% LEL, the reading was not taken on the stoop, but inside the house, and the reading did not trigger the evacuation, it came after the evacuation. The reason for the evacuation was readings taken that were right in the middle of the range in which natural gas can ignite: 5-15% gas-in-air.

3. Petition

Elster Perfection requests that these errors in the PAB be corrected. Further, Elster Perfection requests that the corresponding errors in the Pipeline Operations/Integrity Management Group Chairman’s Factual Report be corrected⁷. Also, the NTSB should reconsider the leak response and the accident in light of the actual concentrations of gas in the house and the timing of those readings. For example, despite the fact that the 10-12% gas-in-air readings are in the 5-15% range within which natural gas can combust, UGI’s technician allowed the resident to start her car in the garage, thus creating a risk of explosion, neighboring residents were not evacuated, and the utility did not close the valve supplying gas to the leak site. PAB, p. 4.

III. Incorrect Probable Cause Determination and Failure to Analyze the Leak Response

The PAB failed to analyze how the leak response led to the accident. The facts (including the corrected facts set forth above) demonstrate that the slow, uncoordinated, and undermanned

⁷ The factual report states “Based on the gas percentage readings in the home reading of 20% LEL, the Mechanic III decided to evacuate the home.” Exhibit D, p. 6, second sentence of third full paragraph.

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response to the leak was the probable cause of the house explosion. UGI's omissions are even more egregious given its history of inadequate responses to gas leaks, its violations of PUC and federal regulations during the preceding years, and its settlements with the PUC in which it committed to enhancing its responses to natural gas leaks. These failures, however, are not even listed as contributing causes.

The probable cause determination should be revised to address the probable cause of the explosion, not the leak which emanated from a tapping tee that had been incorrectly installed 19 years earlier. The explosion is the event that resulted in the death and the property damage. As such, the "accident" being investigated is the explosion, not the leak. If the leak had been effectively remediated, the NTSB would not have investigated. Leaks rarely lead to deaths, injuries, or property damage. The probable cause should address why it did so in this instance.

A probable cause determination that addresses the probable cause of the accident is also mandated by the NTSB's statutory authority, which states that the NTSB

shall investigate or have investigated (in detail the Board prescribes) and establish the facts, circumstances, and cause or probable cause of ... a pipeline accident in which there is a fatality, substantial property damage, or significant injury to the environment.

49 U.S.C. § 1131(a)(1)(D).

Pursuant to this authority, the governing regulations state that

The NTSB is responsible for the investigation of pipeline accidents, explosions, incidents, and ruptures in which there is a fatality, significant injury to the environment, or substantial property damage.

49 C.F.R. § 831.40(a)(2).

The installation error cited in the PAB as the probable cause of the accident might have been the probable cause of the leak, but it was not the probable cause of the accident. The gas odor was reported at 10:26 a.m., and the explosion occurred at 12:32 p.m. The utility had over two hours to determine the nature and severity of the problem and remediate it. In fact, the leak was reported by the utility itself to be an emergency at 11:18 a.m., but emergency actions were not taken. Notwithstanding the emergency classification:

a) After UGI's technician reported the leak as an emergency at 11:18 a.m., another UGI employee, the supervisor, did not arrive on site until 12:14 p.m. (Trimble 68:16-25; 70:14-17),

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and the resident of 206 Springdale Lane was not evacuated until after the supervisor had arrived, about an hour after the declared emergency. Trimble 33:5-8.

b) UGI did not contact the electric company to shut off electrical service to the street until after the explosion, almost two hours after the gas leak was classified as an emergency and, accordingly, throughout the leak response, electricity continued to flow to residences experiencing dangerous natural gas accumulations (this critical piece of information is buried in a footnote, n. 10, of the PAB). According to the UGI foreman interviewed by the NTSB, readings over 20% LEL⁸ (like the readings in the house at 206 Springdale Lane) require the technician to request that the electrical grid be shut down. Lopez 13:9-10.

c) The technician checked for gas in the basement of 202 Springdale Lane (202 Springdale Lane is a neighboring residence, not the residence that exploded), but did not check anywhere else in that home (PAB, p. 4), despite the fact that natural gas is lighter than air and rises inside a structure.

d) Despite obtaining LEL readings over 10% in the basement of 202 Springdale Lane (and readings within the explosive range in the neighboring home), the technician did not evacuate the residents of 202 Springdale Lane. See PAB, p. 4. In fact, fifteen to twenty minutes before the explosion at 12:32 p.m., the technician was laughing with the resident of 202 Springdale Lane, who was a minor, and instructed him that it was safe to remain in the house. Gutierrez 28:14-30:3. (This interview transcript is attached as Exhibit G).

e) Despite gas readings of 12% gas-in-air in the upstairs level of 206 Springdale Lane, and 11% gas-in-air in the downstairs level of 206 Springdale Lane, within the explosive range for natural gas, the technician displayed no urgency in evacuating the resident and, instead, joked with the resident as they opened windows together inside the home. J. Hughes 25-33. (For unknown reasons, the transcript of the Interview of Jeannine and Gary Hughes was removed from the NTSB's public docket.)

f) The technician permitted the resident of 206 Springdale Lane to activate a dangerous ignition source when he opened the garage door for her and allowed her to start her car and drive it out of her garage. PAB, p. 4.

g) Although the PAB states that the supervisor, Mr. Trimble, opted to try to squeeze-off the gas main line rather than shut down the valve to the cul-de-sac because he thought the valve

⁸ In fact, as explained above, the readings were actually over 20% gas-in-air, and therefore over 400% LEL

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was the slower option, Mr. Trimble testified that he did not know how long it would take for gas to stop flowing (Trimble 54:10-15) and that he did not perform a side-by-side comparison of squeezing-off the gas main line versus shutting down the valve (Trimble 28:17-21). The PAB does not analyze which option was the better option or analyze why sufficient personnel were not on hand to pursue both options.⁹

h) According to a timeline supplied by UGI (Exhibit 3 to the Survival Factors Factual Report), after the accident a worker was instructed to close the valve to the cul-de-sac at 12:48 p.m., and the worker reported that he had done so by 12:55 p.m. Therefore, although closing the valve would not immediately stop gas from flowing to the leak site, it appears to compare favorably to the 13 minutes spent digging at 206 Springdale Lane leading up to the explosion.

i) The valve was near the intersection of Springdale Lane and Burr Oak Lane, about one block from the leak site, so anyone responding to the leak site could have accessed it quickly. See the map on page 5 of the Pipeline Operations/Integrity Management Group Chairman's Factual Report (incorrectly designating the cross-street "Red Oak Road").

j) The PUC in its Formal Complaint against UGI, attached as Exhibit H, observes that "UGI failed to follow its written, internal procedures on July 2, 2017, in that the actions taken by UGI were not prioritized to protect life and property and eliminate hazards. ... With the discovery of 98% gas-in-air over the tapping tee and 80% gas-in-air in the sewer¹⁰, UGI's procedures should have directed immediate closure of the closest valve [and] should have directed UGI's dispatch to promptly contact 911 to notify the local fire department." See Exhibit H, p. 13, paragraph 58. Mr. Trimble said in his interview that this emergency leak was his first as a supervisor. Trimble 12:19-20; 13:11. The docket does not contain his training records.

k) UGI did not provide sufficient available personnel to respond to the leak:

⁹ The Pipeline Operations/Integrity Management Group Chairman's Factual Report, citing unspecified interview(s), stated that the supervisor based his decision in part on the possibility that a vehicle might have been obstructing access to the valve. See Exhibit D, p. 4. The supervisor himself did not state this in his interview, and we are unaware of any source for it. The timeline supplied by UGI and attached as Exhibit 3 to the Survival Factors Group Chairman's Factual Report provides data on the post-accident closing of the valve, and does not contain any reference to an obstructing vehicle.

¹⁰ These readings were taken by the technician prior to his report of an emergency at 11:18 a.m. See Pipeline Operations/Integrity Management Group Chairman's Factual Report, attached as Exhibit D.

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- an on-call duty operator did not answer repeated phone calls (PAB, p. 3);
- rather than immediately mobilizing a replacement for the duty operator who did not answer phone calls, the supervisor waited until 11:50 a.m. to call Jesse Ressler, who was not on call, had to go home to retrieve his work equipment, did not live close to the leak site, and did not arrive until after the explosion (Lopez 17:11-13; UGI Timeline, attached as Exhibit 3 to Survival Factors Group Chairman’s Factual Report);
- an on-call foreman (Robert Lopez) was advised of the emergency at 11:23 a.m., but was not asked to come to the site until he was called again at 11:52 a.m. (Trimble 19:10-13);
- other employees did not arrive on scene in time to assist (Trimble 20-21); and
- other than the decedent technician, only two employees were at the site at the time of the explosion at 12:32 p.m., over two hours after the initial leak report and one hour and fourteen minutes after the leak was classified as an emergency (see Trimble, generally).

l) Because UGI did not provide for a sufficient number of personnel to be available to respond to the leak, the supervisor apparently did not consider that he had the option to both close the valve to the cul-de-sac and squeeze-off the gas main line at 206 Springdale Lane.

m) UGI failed to establish an isolation area to protect its employees, firefighters, sewer workers, and the public from a potential explosion.

n) Even though the supervisor was aware that the resident of 206 Springdale Lane was evacuated based on readings of 10-11 gas-in-air inside the home, within the range in which natural gas can ignite, UGI did not evacuate its workers and others from the area.

o) As the U.S. Department of Labor found (see Exhibit I) UGI’s procedures failed to provide employees with clear and concise methods to control and render a natural gas leak safe, including insufficient procedures in its Gas Operations Manual with respect to:

- pressurized subsurface gas leaks;
- support to on-scene responders with evacuation;

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- when to use a shut-off valve versus alternate methods when isolating a gas leak or reducing gas volume;
- when to request electrical service be disconnected to an area of an uncontrolled leak; and
- when to evacuate the area when an explosive range is found and there are uncontrolled ignition sources.

p) Numerous other deficiencies in UGI's leak response were set forth in the PUC's Complaint filed against UGI. See Complaint attached hereto as Exhibit H, pp. 18-21, paragraphs 68-70.

All of these UGI failures are even more egregious when viewed in the context of UGI's history of inadequate responses to gas leaks. For instance, the PUC cited UGI for a 2004 gas explosion in Lancaster that injured a UGI employee. See Exhibit J. The PUC determined that UGI needed to revise its dispatching procedures for emergencies. On February 9, 2011 another natural gas explosion involving a UGI gas main in Allentown killed five people. Following that incident, the Chairman of the PUC stated that "UGI's compliance history related to gas safety issues [was] patently unacceptable" and noted that the 2011 incident was the eighth time in more than four years in which the PUC had adjudicated a matter containing allegations of gas safety violations by a UGI-owned gas distribution utility. See Exhibit K. Nevertheless, eight months later, on October 31, 2011, yet another natural gas explosion occurred in Millersville, causing significant property damage.

In its enforcement action following the October 2011 explosion, the PUC alleged, *inter alia*, that UGI's failure to have procedures in place to shut down the gas line in a timely manner contributed to the October 2011 explosion. See Exhibit L. Just as in the July 2017 incident, a decision had been made to squeeze-off the gas main line, rather than close valves, and the excavation was in progress at the time of the explosion (approximately 1½ hours after the first call was made). The PUC found, "as a result of the decision to squeeze-off the main, the location of two valves that could have been turned to isolate the remaining flow of gas was not requested...." UGI subsequently reached a settlement with the PUC, agreeing to a \$200,000 civil penalty and agreeing to provide additional training to first responders when approaching a flowing gas site.

Accordingly, in addition to making the modifications requested in Section I, above, the NTSB should reconsider its probable cause determination. It appears that the cause of the accident was the utility's slow, undermanned, and uncoordinated response to the reported gas leak. A



The Honorable Robert L. Sumwalt
October 3, 2019
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probable cause determination that addresses the probable cause of the accident, not the leak, is needed.

Sincerely,

A black rectangular redaction box covering the signature of Morgan W. Campbell.

Morgan W. Campbell
David Tochen

cc: Michael Hughes (via email - michael.hughes@ntsb.gov)
Candi Bing (via email – candi.bing@ntsb.gov)
communications@ntsb.gov

Timeline of Key Events

Accident ID DCA17FP006
Millersville, PA - 2 July 2017 Pipeline Accident

- 10:26 a.m. Leak was reported. See UGI timeline attached as Exhibit 3 to Survival Factors Group Chairman’s Factual Report (hereinafter “UGI timeline”).
- 11:00 a.m. The UGI technician reportedly arrives on site. See UGI timeline.
- 11:00–11:18 a.m. The UGI technician discovers 98% gas-in-air over the tapping tee and 80% gas-in-air in the sewer. See Pipeline Operations/Integrity Management Group Chairman’s Factual Report, p. 3.
- 11:18 a.m. The UGI technician reports a gas leak emergency to a UGI on-call supervisor and requests a response crew, but does not close the valve to the cul-de-sac or request that the electrical service to the neighborhood be shut off. See Pipeline Operations/Integrity Management Group Chairman’s Factual Report, p. 3.
- 11:23 a.m. The UGI on-call supervisor, Jason Trimble, advises Robert Lopez, a UGI foreman, that he should be prepared to assist, but does not direct him to come to the leak site. See UGI timeline.
- 11:25 a.m. The UGI on-call supervisor, Jason Trimble, leaves a voicemail for an on-call duty operator, Norm Chancy. See UGI timeline.
- 11:27 a.m. Jason Trimble again unsuccessfully attempts to reach on-call duty operator Norm Chancy. See UGI timeline.
- 11:44 a.m. Jason Trimble again unsuccessfully attempts to reach on-call duty operator Norm Chancy. See UGI timeline.
- 11:42–11:47 a.m. The UGI technician checks for gas in the basement of 202 Springdale Lane and records a reading of 10% LEL but does not evacuate the resident, close the gas valve to the cul-de-sac, or

request that the electrical service be shut off. Gutierrez 7:77- 8:8; Pipeline Operations/Integrity Management Group Chairman's Factual Report, p. 6.

- 11:50 a.m. Jason Trimble calls Jesse Ressler and advises that he will be the replacement for Norm Chancy. Mr. Ressler was not on-call, had to return home to get his work equipment, and did not live close to the leak site. Mr. Ressler did not arrive on site until after the accident. See UGI timeline; Lopez 17:11-13. Despite being advised of the emergency at 11:18 a.m., Mr. Ressler was the first UGI employee mobilized by Mr. Trimble.
- 11:52 a.m. A UGI foreman, Robert Lopez, is asked to come to the leak site. Trimble 19:6-10; Lopez 17:2-5.
- 12:00 p.m. (approx.) The UGI technician enters 206 Springdale Lane. J. Hughes 7:22 – 12:2.
- 12:00–12:10 p.m. (approx..) The UGI technician gets reading of 12% gas-in-air upstairs and 11% gas-in-air downstairs at 206 Springdale Lane, but does not immediately evacuate the resident or shut off the gas valve to the cul-de-sac or request the electrical service be shut off. He and the resident of 206 Springdale Lane spend five minutes laughing and opening windows upstairs and downstairs. J. Hughes 8:16 – 33:17.
- 12:04-12:09 p.m. The decision to squeeze-off was not made until a five minute call between the supervisor and a UGI engineer. See UGI timeline.
- 12:10–12:17 p.m. (approx.) The UGI technician opens the garage door for the resident of 206 Springdale Lane, lets her start her car, and she backs out. She then stops her car, and he lets her go back inside to retrieve a personal item, and she backs out again. She again stops her car in the driveway, and walks around the front yard (without UGI instructing her to leave immediately) before exiting the driveway in her car. J. Hughes 12:22-25; 13:1-14:25.
- 12:14 p.m. (approx.) UGI supervisor arrives on site. Trimble 68:16-25; 70:14-17. This was the first UGI employee to appear on site after the emergency was declared at 11:18 a.m.
- 12:14 p.m. (approx.) The technician informed the supervisor, Mr. Trimble, that he had 10-11% gas-in-air in the house at 206 Springdale Lane, and was evacuating the resident. Trimble 48:22-23; 60:24–61:4; 77:21-24.

- 12:12-12:17 p.m. The UGI technician records 11% LEL at 202 Springdale Lane and told the resident of 202 Springdale Lane that it was safe to remain in the house, and was laughing and joking with him. Pipeline Operations/Integrity Management Group Chairman's Factual Report, p. 6; Gutierrez 28:14-30:3.
- 12:19 p.m. The UGI foreman, Robert Lopez, arrives on site. Trimble 70:14-17. Besides the supervisor, Mr. Lopez was the only UGI employee to arrive on site after the UGI technician declared an emergency and requested a response crew at 11:18 a.m.
- 12:31-12:32 p.m. The UGI technician reported to the supervisor, Mr. Trimble, that he had recorded 21% gas-in-air in the house, but rather than evacuating, UGI continues to work near the house. Trimble 24:15-20, 31:11-16, 48:15-21.
- 12:32 p.m. Explosion occurs. At this time, according to the Pipeline Accident Brief, Mr. Trimble and Mr. Lopez had excavated the gas main line and were ready to perform the squeeze off. PAB, p. 4, second sentence of last paragraph.
- 12:48-12:55 p.m. Gas valve to the cul-de-sac is finally shut down. See UGI timeline.
- 12:59 p.m. The electrical power to the neighborhood was finally shut off. See UGI timeline.

Index of Exhibits

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| Exhibit A | Pipeline Accident Brief |
| Exhibit B | Interview Transcript of Jason Trimble |
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| Exhibit D | Pipeline Operations/Integrity Management Group Chairman's Factual Report |
| Exhibit E | Survival Factors Group Chairman's Factual Report |
| Exhibit F | Interview Transcript of J. Hughes |
| Exhibit G | Interview Transcript of R. Gutierrez |
| Exhibit H | PUC Complaint against UGI Regarding Subject Explosion |
| Exhibit I | Dept. of Labor Violation Worksheet Regarding Subject Explosion |
| Exhibit J | PUC Order Regarding 2004 Explosion |
| Exhibit K | PUC Motion Regarding Settlement from February 2011 Explosion |
| Exhibit L | PUC Settlement and Civil Penalty Regarding October 2011 Explosion |

A



National Transportation Safety Board

Pipeline Accident Brief

UGI Utilities Natural Gas-Fueled Explosion

Millersville, Pennsylvania

July 2, 2017

The Accident

On July 2, 2017, at 12:32 p.m. eastern daylight time, a natural gas-fueled explosion occurred at a single-family residence at 206 Springdale Lane, Millersville, Pennsylvania.¹ The explosion killed one person and injured three others, destroyed the residence and significantly damaged six neighboring homes, one of which was subsequently condemned.² (See figure 1.)



Figure 1. Debris field at cul-de-sac area where explosion occurred.

At 10:26 a.m., a neighborhood resident walking in the area smelled natural gas and reported it to the local gas utility, UGI Utilities, Inc. (UGI).³ About half an hour later, a UGI service

¹ All times in this accident brief are eastern daylight time.

² Local authorities condemned the residence at 202 Springdale Lane.

³ On June 1, 1882, UGI is incorporated in Philadelphia as the United Gas Improvement Company, becoming the first public utility holding company in the United States. In February 1968, the company changed its name to UGI Corporation.

UGI Utilities Natural Gas-Fueled Explosion

technician arrived to investigate and confirm the gas leak.⁴ An additional UGI technician and a senior supervisor arrived shortly thereafter. A Lancaster Area Sewer Authority (LASA) employee arrived on scene in response to UGI's Emergency PA (Pennsylvania) One Call to mark the location of the sewer lines.⁵ About 15 minutes prior to the explosion, UGI personnel directed the resident of 206 Springdale Lane to evacuate the residence who left in their personal automobile. About 12:15 p.m., UGI requested fire department support. The first fire truck arrived at 12:28 p.m. and assumed a stand-by position. The house exploded about 4 minutes later.

Following the accident, the natural gas main and service pipelines for the cul-de-sac homes were leak tested. All segments held pressure, except for the service line at the 206 Springdale Lane connection at the main; this segment had a Permalock mechanical tapping tee.⁶ Subsequent inspection of the Permalock mechanical tee revealed gas was leaking at the connection of the tee to the 2-inch main, and two of the four nylon bolts had fractured. At the time of the accident, the operating pressure of the line was 54 pounds per square inch, gauge (psig), as measured at the closest monitoring point that was about 0.5 mile away from 206 Springdale Lane.

The Pipeline System

The natural gas main on Springdale Lane was made from a polyethylene material that was installed on August 7, 1995. The maximum allowable operating pressure (MAOP) of the system main serving Springdale Lane was 60 psig.

The service line to the 206 Springdale Lane residence was installed in June 1998, and was constructed of 1/2-inch polyethylene pipe. The mechanical tapping tee was installed at the same time as the service line. The mechanical tapping tee and service pipe had been in service for 19 years when the accident occurred.⁷ The pipe between the main and the meter at the residence was 50 feet long. The service line to the residence was inserted inside a 1-inch polyethylene pipe that served as a protective jacket. The jacket ran from the outlet of the service tee to the meter.

UGI Actions Following the Gas Leak Report

Shortly after the gas leak report, UGI dispatched a UGI technician to respond. At 11:00 a.m., the technician arrived on scene and was the first UGI representative on site. He began his assessment to determine the presence of a leak. Consistent with UGI policy and training, the technician began implementing UGI's leak survey procedure. His investigation determined that the leak source was at an adjacent residence, which was 206 Springdale Lane.

At 11:18 a.m., the technician called the on-call UGI senior supervisor of Operations Construction and Maintenance (senior supervisor). The technician requested a response crew because he measured high-gas-concentration readings and confirmed a leak. The technician told

⁴ UGI refers to its service technicians as mechanics. Each mechanic has a "grade" designation of I, II, or III, which is determined by the degree of qualifications and experience.

⁵ For additional information, see <http://www.pa1call.org/PA811/Public/>.

⁶ The *Honeywell Elster Perfection PermaLock Mechanical Tapping Tee* is a tee that can be installed on a main to supply the individual gas service to a gas customer without the need to shut down the natural gas main.

⁷ UGI *Gas Operations Manual*, section 70.20.

UGI Utilities Natural Gas-Fueled Explosion

the senior supervisor that he suspected that a mechanical tee was leaking, and that he measured a reading of 80 percent gas in the sewer and 98 percent gas over the tee. Based on the gas readings, the technician classified the leak as an emergency leak. The senior supervisor contacted UGI Dispatch at 11:20 a.m. and requested that they call Emergency PA One Call to mark underground utilities because an excavation would be necessary. The Emergency PA One Call ticket was issued at 11:27 a.m.

About 11:20 a.m., the senior supervisor began assembling a crew to respond to the leak. Using the UGI duty roster of employees available to respond to emergencies, the senior supervisor made several calls between 11:25 a.m. and 11:44 a.m. to the on-call duty operator, who is required to answer all calls for response during off hours, including weekends; however, that duty operator did not respond. The senior supervisor contacted the next duty operator appearing on the on-call list, who answered and responded to the scene. By 11:50 a.m., the senior supervisor had assembled a three-person crew at the site.

After assembling a response crew, the senior supervisor traveled to the scene. The senior supervisor told National Transportation Safety Board (NTSB) investigators that prior to arriving on-scene he reviewed the location of the closest shutoff valve to the site. On his way to the shutoff valve, he contacted the UGI engineer and informed her that he expected to shut down a main line. As the duty supervisor, the senior supervisor could exercise judgement to determine whether it was appropriate to either squeeze off the line or close a gas valve.⁸ After the discussion with other responding UGI employees, the senior supervisor decided to squeeze off the main line rather than closing the mainline valve, because he thought this action was the fastest way of stopping the flow of gas. Figure 2 shows the location of the valve.



Figure 2. Location of gas shut-off valve in relation to accident site.

⁸ To *squeeze off a line* is a method of controlling either the pressure or the flow through a plastic pipe by reducing its cross-sectional area by applying an external force.

UGI Utilities Natural Gas-Fueled Explosion

The senior supervisor told NTSB investigators that the following factors influenced his decision to squeeze off the main: he considered that given the circumstances surrounding the leak, even if the valve were turned off, the gas would continue to flow to the leak until the system lost pressure; and the line could be quickly and successfully excavated and squeezed, as compared to the time necessary to reach the valve.

The senior supervisor stated that he received a phone call from the technician, who said that he had measured a lower explosive limit (LEL) of 11 percent in the basement at 202 Springdale Lane and that he could not gain access to the house at 206 Springdale Lane.⁹ The senior supervisor informed the technician that he should do whatever was necessary, including a forced entry, to clear the house at 206 Springdale Lane.

Shortly after noon, the senior supervisor arrived at the scene and continued making calls from his vehicle to his management and others to keep them abreast of the situation. Within 10 minutes of arriving, the senior supervisor made an assessment that the fire department was needed. At 12:14 p.m., he called UGI Dispatch to request that they call 9-1-1, which was accomplished 1 minute later. The technician arrived at the scene at 12:19 p.m.

The senior supervisor and the duty operator began excavating the gas main pipeline. While the excavation was underway, the technician reported that he was measuring 20 percent LEL at the stoop on 206 Springdale Lane and that he had trouble getting the occupant to respond to his knocking at the front door. The technician had twice visited the residence to the left of the accident home (202 Springdale Lane) and had talked with the residents. The LEL measurement on the first visit was 10 percent. Returning 30 minutes later, he advised the residents that there was no need to evacuate as the LEL measurement was at 11 percent, which is less than UGI's 20 percent LEL threshold for resident evacuation.

While the main line was being excavated, the occupant of 206 Springdale Lane responded to the technician. Based on the gas percentage reading of 20 percent LEL in the home, the technician decided to evacuate the home. The occupant requested permission to leave in her personal vehicle that was stored in the garage. Although the technician did not allow the occupant to use her powered garage door opener, he allowed the occupant to start her vehicle in the garage and depart the area. The electrical power to the neighborhood remained energized at the time of the accident.¹⁰

The technician was near the gas meter for 206 Springdale Lane when the explosion occurred. The two gas employees, who were digging at the main in front of the home, had fully excavated the plastic main and were ready to squeeze-off the plastic main line when the explosion occurred. The representative from LASA was walking in the cul-de-sac when the explosion occurred. The technician located near the gas meter was killed, and three others were injured.

⁹ *Lower explosive limit (LEL)* is the minimum concentration of vapor (percentage by volume) in air below which propagation of a flame does not occur in the presence of an ignition source.

¹⁰ At 12:59 p.m., the UGI Dispatch contacted the local electric power provider, PPL Electric Utilities (PPL), and requested that they shut off the power to the area. At 1:08 p.m., PPL confirmed that the electric power was shut off and that its personnel were on site.

UGI Utilities Natural Gas-Fueled Explosion

Technician Experience and Qualifications

The technician, who was killed in the explosion, had over 16 years of utility experience. In 2001, he started working at UGI. He was a technician in the Construction and Maintenance department. Since April 2003, he held an Investigating Leak and Odor Complaints qualification. He held 73 operator qualification tasks that covered all aspects of gas utility work, including emergency response, pipe joining, repair and maintenance, and inspection activities. Since 2013, he had responded to and resolved 446 emergency calls. Of those 446 calls, 238 were gas leaks. Of those 238 leaks, 27 were hazardous underground gas leaks.

Mechanical Tapping Tees

NTSB's examination of the tee assembly involved in the accident revealed the assembly was incorrectly installed because a locking sleeve, an important piece of hardware that served as an attachment between the tee and the main, was not attached to the main. The tee is also secured to the main by four nylon bolts. Although four nylon bolts were installed, two of them were fractured. Since the locking sleeve was not attached to the main, additional tensile stress was placed on the four nylon bolts, which then become the fail-safe feature holding the tee assembly in place. The NTSB determined two of the four nylon bolts fractured when in service in a manner consistent with slow crack growth. The incorrect installation of the tee, combined with the in-service fracture of the two nylon bolts, allowed gas to escape from the tee assembly. See Safety Recommendation Report PSR-18/01 *Installation of PermaLock Mechanical Tapping Tee Assemblies*, including Safety Recommendations P-18-001 through -004, for details pertaining to examination and testing of tee assemblies.

Postaccident Actions

UGI took the events of July 2, 2017, as an opportunity to reinforce and enhance the procedures and programs specifically revolving around emergency response to ensure employee preparedness, competence, and confidence when responding to emergency situations. The following summarizes the emergency response improvements UGI implemented across departments and job functions:

1. System Improvement Initiatives

Immediately following the accident, UGI instituted the following initiatives to manage the integrity of the system on Springdale Lane from the intersection of Burr Oak Drive west to the end of the cul-de-sac. UGI implemented the following improvements:

- Conducted a daily driving leak survey of the main in the neighborhood
- Remediated or replaced all known mechanical tees
- Replaced the entire gas main

UGI Utilities Natural Gas-Fueled Explosion

- Took actions to manage the integrity of the surrounding neighborhood defined by the boundaries of North Duke Street, Blue Rock Road, Letort Road, and Little Conestoga Creek

2. Pipeline and Public Safety Improvements

The UGI Pipeline and Public Safety department undertook several training initiatives to emphasize the incident command system. Outreach efforts with external emergency response departments was increased to strengthen the awareness of natural gas pipeline safety.

3. Training and Field Compliance Improvements

UGI updated its training to improve the skill set of its employees when responding to an emergency.

4. Pipeline Facility Improvements

UGI implemented pipeline facility enhancement to ensure the safe and reliable delivery of natural gas to its customers. This enhancement included the increased remediation activity of mechanical tees throughout its distribution system, by either remediating or replacing 2,577 total mechanical tees since the accident [through October 4, 2018]. UGI continues to examine the main and service facilities to determine the mechanical tees that must be replaced.

5. Dispatch Improvements

UGI modified its dispatch procedures and protocols. UGI streamlined dispatch processes to proactively identify the need for electrical shutdown and additional help.

6. Standard and Procedure Improvements

UGI created an emergency plan that is separate from its Gas Operations Manual (GOM). UGI's emergency plan contains similar content as previously included in GOM 60.50– Emergency Plan; however, the procedures have been revised to add further clarity to the emergency response situations and the actions undertaken.

7. 9-1-1-Related UGI Initiatives

To enhance safety and to ensure 9-1-1 emergency responders are timely notified, UGI:

- Developed a first-hour checklist for first responders that provides guidance on when to (1) contact the local emergency response agencies: 9-1-1 and Emergency Medical Services, (2) shut off electrical power in the area, and (3) conduct an evacuation
- Updated its response procedures to include “safety perimeter” criteria
- Reinforced the discretion that UGI's first responders must shut down a pipeline

UGI Utilities Natural Gas-Fueled Explosion

- Created checklists for leak investigations
- Identified in its emergency response procedures specific emergency situations where immediate 9-1-1 notification is required by UGI personnel
- Reviewed and updated its dispatch procedures to include a decision matrix
- Identified situations and keywords where immediate 9-1-1 notification is required

8. Safety Culture Assessment Project

In June 2018, UGI contracted DuPont Sustainable Solutions (DSS) to assess the UGI safety culture and the efficacy of UGI safety-related initiatives and incident investigation process to create a unified safety brand. The assessment included a comprehensive evaluation that provided a baseline to understand the current state and the development of an improvement strategy to advance the culture, systems, and processes as part of a world-class safety program.

Pennsylvania Public Utility Commission Enforcement Action

On October 4, 2018, the Pennsylvania Public Utility Commission Bureau of Investigation and Enforcement, issued a formal complaint against UGI that proposed a cumulative civil penalty of \$2,090,022. This complaint, which was an enforcement action of that regulatory agency, alleged several safety violations that occurred during the gas leak response on Springdale Lane.

Previously Issued Safety Recommendations

As a result of this natural gas-fueled explosion on June 25, 2018, the NTSB issued the following four safety recommendations:

To the Pipeline and Hazardous Materials Safety Administration:

Work with state pipeline regulators to incorporate into inspection programs, a review to ensure that gas distribution pipeline operators are using best practices recommended by the manufacturer in its distribution integrity management programs, including using the specified tools and methods, to correctly install Permalock mechanical tapping tee assemblies. (P-18-001)

Safety Recommendation P-18-001 is classified *Open—Initial Response Received*.

Reference the use of external sources of information for threat identification in your frequently asked questions for preparation of distribution integrity management programs. (P-18-002)

Safety Recommendation P-18-002 is classified *Closed-Acceptable Action*.

UGI Utilities Natural Gas-Fueled Explosion

To Honeywell International, Incorporated:

Update your Permalock mechanical tapping tee assembly installation instructions to specify the exact tools that should be used during installation and explain what an installer should sense while using those tools throughout the installation process. (P-18-003)

Safety Recommendation P-18-003 is classified *Open—Initial Response Received*.

Specify in your Permalock mechanical tapping tee assembly installation instructions a not-to-exceed torque limit for Nylon bolts and have that value checked and adjusted with a torque wrench immediately after installation. (P-18-004)

Safety recommendation P-18-004 is classified *Open—Initial Response Received*.

Probable Cause

The National Transportation Safety Board determines that the probable cause of the natural gas explosion at 206 Springdale Lane was an improperly installed mechanical tapping tee that leaked and allowed gas to migrate into the house where it ignited.

For more details about this accident, visit www.nts.gov/investigations/dms.html and search for NTSB accident identification number DCA17FP006.

Issued: February 25, 2019

The NTSB has authority to investigate and establish the facts, circumstances, and cause or probable cause of a pipeline accident in which there is a fatality or substantial property damage, or significant injury to the environment. (49 U.S. Code, Section 1131 - *General authority*)

The NTSB does not assign fault or blame for an accident or incident: rather, as specified by NTSB regulation, “accident/incident investigations are fact-finding proceedings with no formal issues and no adverse parties...and are not conducted for the purpose of determining the rights or liabilities of any person.” Title 49 *Code of Federal Regulations*, Section 831.4. Assignment of fault or legal liability is not relevant to the NTSB’s statutory mission to improve transportation safety by investigating accidents and incidents and issuing safety recommendations. In addition, statutory language prohibits the admission into evidence or use of any part of an NTSB report related to an accident in a civil action for damages resulting from a matter mentioned in the report. 49 U.S. Code, Section 1154(b).

B

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

* * * * *

Investigation of: *

*

RESIDENTIAL GAS EXPLOSION *

ON SPRINGDALE LANE, MILLERSVILLE, * Accident No.: DCA17FP006

PENNSYLVANIA, JULY 2, 2017 *

*

* * * * *

Interview of: JASON TRIMBLE

Blue Rock Fire Hall
Millersville, Pennsylvania

Tuesday,
July 25, 2017

APPEARANCES:

ROGER EVANS, Investigator in Charge
National Transportation Safety Board

EDWARD KENDALL, Attorney
National Transportation Safety Board

RICHARD DOWNS, Survival Factors Group Chair
National Transportation Safety Board

TERRI COOPER SMITH, Fixed Utility Evaluation
Engineer III
Pennsylvania Public Utilities Commission,

GARY MAURER, Manager, Operations Programs
UGI Utilities

ROBERT KRIEGER, Vice President of Operations
UGI Utilities

WILLIAM MYERS, Attorney
Myers Law Firm
(On behalf of Mr. Trimble)

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I N T E R V I E W

1
2 MR. EVANS: Good morning. Today is July 25, 2017. My name
3 is Roger Evans. I'm an investigator with the National
4 Transportation Safety Board in Washington, D.C. We're at the Blue
5 Rock Fire Hall in Millersville, Pennsylvania. This interview is
6 being conducted as part of the investigation into the residential
7 gas explosion on Springdale Lane here in Millersville that
8 occurred on July 2nd, 2017.

9 This is NTSB Case Number DCA17FP006. The purpose of the
10 investigation is to increase safety, not to assign fault, blame or
11 liability. The NTSB cannot offer any guarantee of confidentiality
12 or immunity from legal actions.

13 This interview is being recorded and may be transcribed at a
14 later date. A copy of the transcript will be provided to the
15 interviewee for review prior to being entered into the public
16 docket.

17 Jason Trimble, you are permitted to have one other person
18 present during the interviews. This is a person of your choice --
19 an attorney, a supervisor, friend, family member or nobody at all.

20 Please state for the record the spelling of your name and
21 your job title.

22 MR. TRIMBLE: Jason Trimble, J-A-S-O-N, T-R-I-M-B-L-E, and
23 I'm a supervisor for UGI.

24 MR. EVANS: Okay. And the person that you have chosen to
25 represent you today?

1 MR. TRIMBLE: My attorney, Bill Myers.

2 MR. EVANS: For the record, Bill, can you give us your
3 spelling of your name and --

4 MR. MYERS: Yeah, it's William L. Myers, M-Y-E-R-S, Junior.

5 MR. EVANS: And you're with?

6 MR. MYERS: The Myers firm in Philadelphia, Pennsylvania,
7 1515 Market Street, Suite 810, Philadelphia, 19102.

8 MR. EVANS: Okay. I'd like to go around the room now and
9 have everyone make an introduction with their name, spelling of
10 their name and job title.

11 MR. KENDALL: Edward Kendall, K-E-N-D-A-L-L, NTSB attorney.

12 MR. DOWNS: Richard Downs, NTSB, Survival Factors Group
13 Chairperson.

14 MS. COOPER SMITH: Terri Cooper Smith, Pennsylvania Public
15 Utilities Commission, Fixed Utility Evaluation Engineer III.

16 MR. MAURER: Gary Maurer, M-A-U-R-E-R, Manager, Operations
17 Programs, UGI Utilities.

18 MR. KRIEGER: Robert Krieger, Vice President of Operations,
19 UGI Utilities.

20 INTERVIEW OF JASON TRIMBLE

21 BY MR. EVANS:

22 Q. Okay. So Jason, thank you so much for agreeing to speak with
23 us today. We are going to be on record for probably an hour and a
24 half, I would imagine with this one, so if you need to take a
25 break feel free to go off the record, no problem.

1 If you can go ahead and give us your job title and how long
2 you've been in that position with the firm?

3 A. Operations Supervisor for UGI, and I've been in that position
4 for approximately 1 year.

5 Q. And prior to that, what position did you have?

6 A. I was a Mech II at UGI in the field, a foreman.

7 Q. And that is a Mechanic II, is that --

8 A. Yes.

9 Q. -- that's correct? And how long were you in that position?

10 A. Probably I would say maybe 2 years.

11 Q. Okay. And prior to that?

12 A. I just went up through the -- you know, laborer, operator.
13 So I was with the company for approximately 8 years before I took
14 my supervisor position.

15 Q. Okay. And to get to your current position did you serve an
16 apprenticeship?

17 A. Yes.

18 Q. And what is the length of the apprenticeship?

19 A. At that point it was 4 years.

20 Q. And as an apprentice, what types of activities did you do?

21 A. Put in -- running new gas services, renewing gas services.

22 At that point we did still put main -- UGI Group still put main in
23 the ground; leaks, we ran leaks; pipefitting.

24 Q. Okay. And what is your educational level?

25 A. High school --

1 Q. High school?

2 A. -- diploma.

3 Q. Okay. And just so -- and so overall, when did you start and
4 when -- what year did you start at the company?

5 A. That would have been 2008.

6 Q. Okay.

7 A. September of 2008.

8 Q. And when you started, did you work in another capacity before
9 you got into the apprenticeship program?

10 A. No, I started in --

11 Q. As an apprentice?

12 A. Um-hum.

13 Q. Okay. Okay, great. Okay, thank you for that.

14 So as an ops supervisor, describe your -- what your roles and
15 responsibilities are in that?

16 A. Day-to-day permitting, dispatching crews, visiting crews,
17 equipment upkeep, not physically fixing things but making sure
18 things are fixed and taken care of, answering one-call tickets, my
19 work, and then just helping out the other supervisors with locates
20 and those types of things.

21 Q. Okay. So I'm going to describe something for you and perhaps
22 you can tell me if I'm down the right path, wrong path?

23 A. Okay.

24 Q. So I trust you have a truck, a service truck that you -- that
25 the company provides for you?

1 A. I do. I have an Escape, a Ford Escape.

2 Q. Okay. And within that Ford Escape do you have a computer
3 system?

4 A. I do not.

5 Q. Okay. Do you just have a company cell phone?

6 A. Um-hum.

7 Q. Do you have a radio as well?

8 A. No.

9 Q. No?

10 A. Like a dispatching radio?

11 Q. Right.

12 A. No, sir.

13 Q. Okay. So all your direction comes via your cell phone?

14 A. Um-hum.

15 Q. Okay. So let's say tomorrow morning you were going to work
16 and you get in your Escape. Would you have a list of assignments
17 coming through email or is it through texts or is it through --

18 A. No, we pretty --

19 Q. -- purely phone calls?

20 A. We pretty much set up our own work in my position, so --

21 Q. Okay. And how do you go about that? Can you describe that
22 for us?

23 A. Either through customer contact or -- you know, a customer
24 calls in and says they want something done, or we have --
25 depending on what leaks they are, things that need to be worked,

1 leaks that need to be worked, I guess what we would consider non-
2 emergency.

3 Q. Right, routine stuff?

4 A. Routine, yeah.

5 Q. Okay. So do you have a list of those that come across a
6 computer or --

7 A. No, sir. I set the work up for all the crews at the shop in
8 my office.

9 Q. Okay. So when you go to work in the morning, you
10 automatically go to the office first?

11 A. Um-hum.

12 Q. And then you have a laptop or a desktop?

13 A. I do, a laptop, yeah.

14 Q. You have a laptop.

15 A. Um-hum.

16 Q. Is the laptop with you when you go out on your -- out in your
17 truck?

18 A. I do not usually take my laptop with me, no.

19 Q. Okay. So you have your laptop and then you have incoming
20 activities that you need -- that you know need to be addressed.

21 A. Um-hum.

22 Q. Is that --

23 A. Yes.

24 Q. Then you make these assignments --

25 A. Um-hum.

1 Q. -- to the crews. And how many crews do you have working for
2 you?

3 A. On average, two C&M crews -- two construction and maintenance
4 crews that are actually UGI crews, probably an average of three
5 Miller vac crews. I would say day-to-day that's probably --
6 that's an average day.

7 Q. Uh-huh. So I trust there are other crews that could join in
8 this if you need, but are these crews specifically assigned to
9 you?

10 A. Um-hum.

11 Q. They actually work for you?

12 A. Yes.

13 Q. Okay. Okay. So when you -- take us through a daily
14 assignment where you've gone into your office and you turn your
15 laptop on and go from there. Tell us how all that works.

16 A. Normally, I mean, between permitting and the one-call tickets
17 and everything, I will just set the work up as I can, you know,
18 try to make customer contact, set up with the customer. If we're
19 going to be renewing their gas service, trying to give them a
20 head's up on what that's going to look like with the customers,
21 you know, with the meters coming outside, what their yard's going
22 to look like, how many holes we could be digging, checking
23 possibly -- I'm responsible for our valve program as well, which
24 will be inspecting, maintaining valves.

25 Normal morning, going through to see if any new leaks came in

1 overnight since we have guys on call 24/7, to see if maybe
2 something might have come in overnight that needs to be taken care
3 of, trying to find out if -- maybe we call the duty crew, repair
4 crew that may have been out last evening, you know, if something
5 that needed to be taken care of the next day, usually they'll
6 leave a note or something letting us know if there's something
7 that needs to be taken care of.

8 Pretty much, I mean, that's pretty much it. And then if I
9 have the jobs set up for that day I'll dispatch the crews to go
10 take care of them.

11 Q. Okay. So let's talk about the paper trail. Whenever you
12 have this information coming in and you make these phone calls, is
13 there a work order system that you use to launch these five
14 people?

15 A. Um-hum. Yes.

16 Q. And are each one of those activities assigned a number or the
17 system assigns numbers to them?

18 A. Um-hum. Yes.

19 Q. So that number would be like a work order number 123 or
20 whatever?

21 A. Um-hum.

22 Q. Okay. And then that work order remains open until the work
23 gets completed, and do you close it or do they close it on the
24 truck?

25 A. Normally they'll close it on the truck.

1 Q. Okay. And do you get notification that that work order's
2 been closed?

3 A. No. I might be -- maybe verbally.

4 Q. Okay. Okay. So I understand on the weekend of the accident,
5 it being a holiday weekend, but you were on duty, I guess, right?

6 A. Um-hum. I was supervisor on call, yeah.

7 Q. Supervisor on call.

8 A. Um-hum.

9 Q. And when you're a supervisor on call, how many days in a row
10 area you expected to have that spot, that slot?

11 A. Seven.

12 Q. Seven days --

13 A. Friday to Friday.

14 Q. So Friday to Friday. So your duty had just started the
15 previous Friday?

16 A. Yes.

17 Q. Okay. And what are your responsibilities when you're the
18 duty person? Describe that for us.

19 A. Generally -- I mean, this is my, this is my first time on
20 call by myself. This week was my first time. So, I mean, I
21 didn't have a ton of weeks under my belt, but generally fielding
22 calls. Guys will call you. First responders will call if they
23 have an issue at a property or something, maybe -- anything. Like
24 it can be a, you know, I have a leak in a fuel line, I have to
25 shut this place down. They'll give me a head's up to let them

1 know that -- just to try and keep me informed of what's going on.

2 Q. Okay. So when you say this was your first, and you've been
3 with the company since 2008, supervisor -- since you've only been
4 a supervisor for a year, is that how you -- well, what I would
5 call escaping -- we serve duty as well.

6 A. Yeah.

7 Q. And we have to go on duty for 7 days as well, same thing.

8 A. Um-hum.

9 Q. But how you did not get this and this was your first one, can
10 you explain that to us?

11 A. Well, it was my first one as a supervisor.

12 Q. Oh, but you had been on --

13 A. I'm sorry. I should have clarified, yeah.

14 Q. Okay. So you had been on duty before --

15 A. Oh, yeah. Yeah.

16 Q. -- plenty of times?

17 A. As a foreman, an operator, a laborer, yes.

18 Q. Okay. Okay. So this wasn't a new --

19 A. No, no, no. No.

20 Q. -- rodeo for you?

21 A. Uh-uh.

22 Q. Okay. Okay, great. So your responsibilities as a duty
23 person, is it first person? When you're that person, you have to
24 go actually out the scene or do you assign it?

25 A. No, it's normally assigned. Yeah, I mean, I'm --

1 Q. So normally you would assign it?

2 A. Not necessarily that we have to be out on whatever call comes
3 in, yes.

4 Q. So is it customary for a supervisor, an ops supervisor like
5 yourself, to actually travel to the scene for --

6 A. Yes. In my experience it depends on the supervisor. I mean,
7 that's what I've experienced over the years. Some supervisors
8 come out to almost everything and some come out on hardly
9 anything.

10 Q. But there's no carved-in-stone policy that says that you have
11 to or you do not have to?

12 A. No. I don't -- I'm not aware of that. I don't know.

13 Q. You're not aware of the -- that there is a policy?

14 A. I'm not certain.

15 Q. Okay. Okay. That's fine.

16 A. I know -- I'm fairly certain policy would dictate an
17 explosion or something of that magnitude, yes.

18 Q. Okay. So once you get a call as the duty person, are you the
19 person who is going to make the assignments and call your crews
20 out to do the work?

21 A. Yeah, generally -- well, the first responders are called by
22 dispatch, so they could be getting called all night without me
23 knowing it, depending on the severity of the issue that they run
24 into. So yes, if a crew, a repair crew is involved, that would
25 run through me or any other duty supervisor.

1 Q. So on the -- for this particular accident, did you actually
2 coordinate with the others that were there, that they were going
3 to be going to the scene, or was that assigned from another party?

4 A. No, dispatch called the first responder. The first responder
5 called me to let me know that he was going to need a crew.

6 Q. And then you got the crew then together?

7 A. Um-hum.

8 Q. Okay. That's what I was getting at. So you got the crew
9 together to actually go to that scene?

10 A. I did, yes.

11 Q. Okay. Okay, great. And then your responsibility for that,
12 for any kind of call like this, is it imperative that you see it
13 through or -- all the way, or is it -- you know, on a routine call
14 like a leak, you said some supervisors go, some don't. But the
15 ones that go, are they normally going to see the issue all the way
16 from beginning to end?

17 A. Pretty much depends on the supervisor again. But a lot of
18 times, in my experience in the field, if they were there, they
19 would stay till things were under control.

20 Q. Okay. Normalized and all that good stuff?

21 A. Um-hum.

22 Q. Okay. And then once the call is made out, the person that's
23 in the service truck, they have a screen in their truck, correct?

24 A. They do have a computer.

25 Q. So whenever you solicit their services, you will -- they'll

1 get a call on their screen that will say, hey, guy, you need to go
2 to such-and-such?

3 A. Well, this was all phone.

4 Q. Oh, everything was phone?

5 A. Um-hum.

6 Q. So the data terminals in the truck were not used for this?

7 A. They may have been turned on, but I did not -- yes. I didn't
8 send an order or anything to anybody. It was phone calls to come
9 out and work it.

10 Q. Okay. But as far as the way the system is, you can send an
11 order to the screen and the screen will pop up and say, hey, this
12 is Jason; I want you to go do this for me?

13 A. That's feasible. The guys on duty crew don't -- the repair
14 crew, they don't take their vehicles home. Their vehicles are at
15 the shop.

16 Q. Okay. So they have to go to the shop first?

17 A. Right.

18 Q. And then --

19 A. Yeah.

20 Q. Okay. So when you're calling them, they're going -- you're
21 calling them from their -- whatever they're doing. If they're out
22 picnicking on a hot Fourth of July weekend, then they're going to
23 go and get dressed, put PPE and all that, go to the shop and take
24 the trucks.

25 A. Um-hum.

1 Q. Now, when they go in their -- when they get in their trucks,
2 will they start looking at things on the screen to see what's
3 what?

4 A. Yeah, normally. I always did, yeah.

5 Q. Okay. And what types of items would they be looking at for a
6 call like this when they --

7 A. I mean, speaking personally, material involved -- steel, cast
8 iron, plastic main, whatever the main material might be.

9 Q. Um-hum.

10 A. Any fittings involved; tap fitting, what the tap fitting
11 might be. Anything, like the service, is the meter inside,
12 outside? You try to kind of get all that stuff together in your
13 head so you kind of know what you're walking into to a certain
14 degree.

15 Q. So do you also do that so that you have parts and pieces on
16 board your truck --

17 A. Um-hum, sure.

18 Q. -- to make a repair?

19 A. Um-hum.

20 Q. Okay. So the person's going to withdraw material from the
21 stock to address this issue. Okay.

22 So on the day of the incident, so what -- well, I guess,
23 let's start from this. Let's go ahead and have you from the
24 moment you woke up that day, talk us through the entire process of
25 when you got the calls, the calls you made, who you talked to, you

1 know, what was said.

2 A. Yeah. I mean, I'm --

3 Q. As best as -- I know --

4 A. I'll try.

5 Q. Yeah, as best as you can.

6 A. Okay. I'll try, for sure.

7 Q. Yeah.

8 MR. MYERS: Can we just go outside for a minute?

9 MR. EVANS: Certainly. Off the record.

10 MR. DOWNS: Off the record.

11 (Off the record.)

12 (On the record.)

13 MR. EVANS: On the record.

14 MR. DOWNS: On the record.

15 BY MR. EVANS:

16 Q. Okay. Jason, as we were speaking earlier, can you, from the
17 moment you woke up that day, tell us about your day and go through
18 all the calls you made, received, as best you can?

19 A. Yeah, I'll try. I do -- and there are some things that are
20 jumbled. I do have a concussion, so I'll do my best.

21 Q. Okay.

22 A. I don't remember much about the morning before the call. I
23 remember getting a call from our first responder, from Rick,
24 saying that he was going to need a crew out there, and that was
25 the first call that I received, stating that he had gas in the

1 sewer and the readings were 80 percent gas in the sewer, which
2 obviously for us automatically triggered a C leak or emergency leak.

3 So I made a ton of phone calls after that. I remember
4 calling dispatch to make sure that they put a one-call ticket in
5 so we were legal to dig. And I called Rob Lopez first as the
6 foreman on call, who picked up immediately. When I was on the
7 phone with Rick he had said that he -- that he had a mechanical
8 tee leaking, that he had 80 percent gas in the sewer and 98
9 percent gas over the tee.

10 So at that point I started calling the crew. I called Rob.
11 Rob picked up, and I told him that we had a mechanical tee leaking
12 at Springdale and they were going to be shutting down and cutting
13 in a piece of main.

14 At that point I called the operator, Norman Chancy, on his
15 work phone, who did not pick up, and I left a message for him to
16 call me back immediately, that we were -- had need of the crew's
17 services. And then I called Norman's home phone, Norman Chancy,
18 and didn't get an answer there, and I left another message stating
19 that he needed to call me back and that we needed him to respond
20 to this leak.

21 MR. EVANS: Off the record, just for a moment.

22 (Off the record.)

23 (On the record.)

24 MR. DOWNS: Back on the record.

25 BY MR. EVANS:

1 Q. You were saying -- you were talking about Norm.

2 A. Okay.

3 Q. And Norm's last name?

4 A. Norman Chancy, who was the operator on call. I think I was
5 at the point where I called his home phone and left a message
6 there and asked him to call me back ASAP. So I didn't reach him
7 there. And at that time I called the laborer on call, Ken Henry,
8 who picked up, and I told him the same thing that I told Rob, that
9 we had a leak at Springdale and that we were going to have to cut
10 out a mechanical tee and replace a piece of main.

11 At that point I -- at that point I didn't have an operator,
12 so I had got myself dressed and to get out the door because I told
13 the guys that I would meet them out there because we -- at this
14 point I wasn't sure if we were going to be short a guy. And I
15 think I called Norman one more time, Norman Chancy, the operator
16 on call, on his work cell phone number, on his work cell phone
17 again, and did not -- he did not pick up. So at that point I had
18 left a message stating that I needed an operator, that he had not
19 picked up and that I'm moving on to the callout list. So I was
20 actively searching for another operator.

21 We're furnished with a list of people that signed up for
22 overtime and all the phone numbers and everything in case of this
23 type of situation. So I believe the only person qualified that
24 signed up that day was Jesse Ressler. I then called Jesse Ressler
25 on his work cell number and he did not answer. And I was

1 furnished with paperwork with his home -- I believe it's his
2 personal cell. I'm not sure if it's his home number or if it's
3 his cell number. I called that and he did pick up and I asked him
4 if he would be willing to come in and help us. He was not willing
5 at first, but I did ask several times and told him that we could
6 really use him, and he said that he would.

7 So knowing the proximity of where Jesse lives in Lititz, I
8 figured I wouldn't have an operator for quite some time. So at
9 some point I had called Rob Lopez, the foreman on call, and told
10 him if necessary I would dig for them until the operator arrived.

11 I think it was at this point I had also put a call in to
12 Sandra Urmey, who's an engineer for UGI, to kind of give her a
13 head's up that we were going to be shutting down a main. I wanted
14 to make sure the valve or squeeze-off, whatever we had to do to
15 make it safe, that we were going to be okay. So it's not abnormal
16 to call engineering and make sure that they know what's going on
17 so they can have a look at it as well.

18 She did not pick up on the first call. I'm trying to think
19 of what -- I think at that point I had -- this was, I'm not sure
20 how long later, but I was already en route. So Rick Boudier, the
21 emergency first responder, did call me at that point, told me that
22 in the house next door -- that would be 202 Springdale -- he had
23 11 percent LEL in the basement, and that -- he stated that he was
24 having trouble getting into 206, that he had knocked on the door,
25 no answer, and asked me what I wanted him to do. At that point I

1 told Rick that, regardless, we have to get in the house, whether
2 we have to force entry or whatever we have to do, but we have to
3 be able to clear the house. And at that point told him that I
4 would be there shortly. And I think at that point I had told him
5 that the crew was on the way, that they should be at the shop
6 shortly and heading out to us.

7 Sandra Urmey called me back after that to let me know if we
8 wanted to squeeze the main off to stop the flow of gas that that
9 would be fine. Judging by our records on our computers, I think
10 she said we would -- if we squeezed, we'd lose three houses, that
11 it was a one-way feed, which I already knew, but, you know, she
12 clarified that. So we were okay to squeeze off to shut the main
13 down.

14 When I arrived at 206 -- I arrived shortly after that. When
15 I got there everything was kind of verified. The main was behind
16 the curb in the grass. At that point Rick had still not gotten
17 into 206, so we needed to have that conversation again, that it
18 didn't matter what it took, we had to get into the house. We had
19 to get readings in the house. So while Rick was trying to get
20 someone to answer the door at 206, I proceeded to grab a shovel
21 and started digging up the main.

22 And then shortly thereafter, she apparently -- she did answer
23 the door. She came to the door. I was in the process of digging
24 up the gas main. I'm guessing -- I'm not guessing, but it was
25 probably 2, 2½ feet down to the main. And in between there, Rob

1 had showed up with a street truck. This all kind of happened, you
2 know, pretty quickly. And at that point, Rob, I mean, he parked
3 the truck and got out and started helping me dig the main up. We
4 got down to dust and tape, and he grabbed the blow rod to blow the
5 dust from around the main so we could get a squeeze-off tool on
6 it. And this was all happening in conjunction at the same time
7 Rick said the lady answered the door.

8 And he said he had -- yeah, he said he had, I think, 10 or 11
9 gas in the house and that he was evacuating the house. So at that
10 point I called dispatch and told them that we needed support, to
11 call 911. I'm not exactly sure what I said to them. I just --
12 the gist of it was, you know, that we needed fire on scene. We
13 were going to need some help.

14 The next thing I remember is the fire company showing up. I
15 got a phone call in between there. I did miss a phone call
16 earlier. Ken Fitzpatrick called me. He was -- I don't know that
17 he was even on call, but he had been in contact with Rick Boudier,
18 the first responder, and Rick had said to him, you know, call
19 Jason, maybe we could use a hand out here once we get this taken
20 care of and check all the tees and all that stuff for anything.
21 So he called me and I agreed that it would be a good idea to have
22 another set of eyes and another set of hands out there. So he was
23 en route while all this was going on. So as the fire company
24 showed up, he had called and said he was -- this was a second call
25 from Sean Fitzpatrick -- or Ken Fitzpatrick, sorry. We always

1 call him Sean, but his name's actually Kenneth.

2 So fire company showed up. The main was dug up. Rob was
3 going for the squeeze-off tool. I ran to the fire chief as he got
4 out and said that I needed intrinsically safe fans for the house,
5 to try and vent the house faster, and which I was informed that
6 they didn't have any.

7 And at that point I told the fire chief that everything that
8 was going on with the house was not good, like we were at a point
9 where something really bad could happen. I'm not sure exactly how
10 I said it. I just wanted to make sure that he understood that we
11 were -- this was not good.

12 So I ran back down the hill. Denny -- I think it's Hoffert,
13 from LASA, was out to mark the sewer lines. And he pulled me
14 aside to show me his marks where the sewer lateral was going into
15 the house. At that point I remember -- I remember turning, and
16 this is really -- this is really jumbled, but I remember turning
17 and I remember Rick saying I have 21 gas in the house. He was on
18 the front stoop. And within -- I'm going to say within 10, 15
19 seconds -- all I did was turn from Denny to go squeeze the main
20 off with Rob, and that's when it went. That's when it exploded.

21 There was -- I'm so sorry -- this is all jumbled. There were
22 some things in between there, too, like Rick was checking the
23 yard. You know, he was pogoing, putting holes in the yard,
24 checking readings. Obviously, I said before, we had very high
25 readings over the top of the tee. He was barring out, going up

1 closer to the house. The highest reading he had going up to the
2 house was 10 gas. It was 15 feet away from the house. I watched
3 him take that reading. That kind of all happened in the middle of
4 all that.

5 I remembered him telling me that reading, and I remember
6 going -- as I was turning, going for my phone to try and call
7 dispatch again, and then it was just getting thrown up against the
8 truck and looking around and there was nothing there. I didn't
9 know where -- I didn't know where anybody was. I didn't know
10 where -- I knew Rob had to be close because we were close to the
11 hole that we were going to squeeze off in. I didn't know where
12 Rick was. I didn't -- I was yelling for everybody but I didn't --
13 I couldn't get up. I couldn't see anything. So --

14 Q. Well, thank you for that. That's -- I'd like to go back
15 perhaps with the sketch you have, that Exhibit 1A?

16 A. Um-hum.

17 Q. Can you mark on there where your -- here's a pen.

18 A. Thank you.

19 Q. Does someone have a red pen or something?

20 UNIDENTIFIED SPEAKER: Here you go.

21 MR. TRIMBLE: Thank you.

22 BY MR. EVANS:

23 Q. Can you mark on that -- first thing, let's just go ahead and
24 locate the truck, your vehicle, where you parked.

25 A. Okay. I parked -- I parked over here, which would have been

1 the front of 201.

2 MR. DOWNS: Jason, this might --

3 MR. TRIMBLE: Oh, that might help.

4 MR. DOWNS: -- be a lot easier.

5 MR. TRIMBLE: Thank you very much.

6 MR. EVANS: No, I don't think you'll see that though, Rick.

7 It's too light -- it's too --

8 MR. TRIMBLE: Too dark?

9 MR. EVANS: Too dark, yeah.

10 MR. DOWNS: The red won't show, though.

11 MR. EVANS: Yeah, the red will be okay. We'll figure it out.

12 MR. DOWNS: There you go. See if that works.

13 MR. TRIMBLE: Perfect. Thank you.

14 So my Escape would have been -- I hope a rectangle is okay

15 because I'm not --

16 BY MR. EVANS:

17 Q. Okay.

18 A. So that would have been my vehicle in front of 201.

19 Q. And then when you arrived, what vehicles were there?

20 A. Rick's truck was here. That's all I remember being there

21 when I first arrived. Rick's vehicle was here.

22 Q. And that's a typical service truck?

23 A. Yes.

24 Q. It has a computer inside?

25 A. F-250. Yeah, a computer.

1 Q. Okay. And when you said you saw that the fire department
2 arrived, where was -- where had they parked?

3 A. They would have been -- I'm not exactly sure, but they would
4 have been up Springdale. They did not come down into the cul-de-
5 sac.

6 Q. Okay. Just -- well --

7 A. Is it okay just to put it --

8 Q. Yeah, put where you think they were, is all.

9 A. I'm guessing -- okay.

10 Q. Okay. Let's number your car as number 1.

11 A. Okay.

12 Q. You can circle it, and put it big there so I can see it.

13 A. Okay.

14 Q. And Rick's car is number 2.

15 A. Okay.

16 Q. And the fire truck is number 3.

17 A. Okay.

18 Q. Okay. So when you explained that you -- you were talking
19 about you -- I mean, it's obvious now you've made all these calls
20 and you could not find anyone that was going to kind of come out
21 and assist, so your basic decision was I'm the guy for this.

22 A. Yeah, but --

23 Q. But you normally wouldn't be doing this kind of work?

24 A. No, I wouldn't. There would be no -- there'd be no reason to
25 rush out there at that point.

1 Q. Right. Right.

2 A. If the guys needed something possibly, you know.

3 Q. Right. Okay, so when you -- you said you grabbed a shovel.

4 A. Um-hum.

5 Q. At that time you had all your PPE on and all this and you're
6 ready to roll.

7 A. Yes.

8 Q. So you grab a shovel and you did a hand dig of the hole down?
9 And what were you going for? Were you going for the tee or were
10 you going for a --

11 A. I was going for the main.

12 Q. For a squeeze?

13 A. Um-hum.

14 Q. So your idea was a squeeze. Okay. Excuse me.

15 With regard to the squeeze, had there been any discussions
16 about hitting that valve versus a squeeze? Like a --

17 A. There was no, like, side-by-side comparison. I know I think
18 when I talked to Sandy I had said that I knew that there was a
19 valve. I'm not sure what the cross street is, but there was a
20 valve out there. So it was either we're going to have to squeeze
21 it or shut the valve off.

22 Q. Um-hum. And so while you were digging the -- you know, doing
23 the excavation there to get at it, where was Rick at the time?

24 A. Rick was, when I first got there -- yeah, so when I started
25 digging the hole, he was trying to get into 206. So he was

1 pounding on the front door of 206 when I got there.

2 Q. Okay. So did you observe Rick out by the meter at any time?

3 A. No. No. When I observed Rick, he was taking readings at the
4 front of the house.

5 Q. Okay. Did -- were there any discussions at all when you
6 first talked to Rick about Rick taking the -- disconnecting the
7 meter from the home?

8 A. No. We did not have that discussion, no.

9 Q. Okay. So you had no awareness at all of what happened to the
10 meter in this particular incident?

11 A. No, sir.

12 Q. That was not in any sort of a discussion?

13 A. No, sir.

14 Q. Okay. So when you really got there, and you got there kind
15 of late in the game, and it was just you and Rick?

16 A. Yes.

17 Q. That was it?

18 A. That's it.

19 Q. Okay. Your -- let's see. Did Rick mention where the sample
20 was taken?

21 A. For which reading?

22 Q. For the sewer.

23 A. He did not.

24 Q. Typically, from training, where would they --

25 A. Manhole probably.

1 Q. Tip the manhole up?

2 A. Um-hum.

3 Q. All right. Okay. So the readings that you had, you know, in
4 the homes and all that, did Rick talk about the other home, 202,
5 at all when you --

6 A. Yes. That was -- he had 11 LEL in the basement of 202.

7 Q. But did he talk about, anything about a person being in that
8 home?

9 A. I don't recall having that conversation. I know he got in,
10 so I guess the assumption was that somebody must have been home.

11 Q. Okay. When you said that you did bar holing, would it be
12 possible for you to, maybe on this, on this -- could you give us a
13 -- with the red pen -- give us an idea of where the bar holing may
14 have taken place? That's the cul-de-sac out there and that's the
15 home. There's the driveway.

16 A. Okay. The only one -- I didn't do any bar holing. All I did
17 was dig the main. Rick handled all the bar holing, all the
18 readings.

19 Q. Oh, so you're not really sure where the bar holings were
20 done?

21 A. No. The only -- like the only reading I knew that he had
22 told me outside was 10 gas, and it was, it was -- he told me 15
23 feet from the house. So that would have been somewhere in here, I
24 guess.

25 Q. Uh-huh.

1 A. Do you want that marked, if I'm not certain?

2 Q. Yeah, go ahead and just put an X and put --

3 A. Okay. Do you want anything else on here?

4 Q. Yeah, put an X where that is.

5 A. Okay.

6 Q. And then just put a leader out -- line out to it and say it's
7 what -- and that's 10 percent?

8 A. Ten percent gas.

9 Q. Ten percent gas bar hole. Okay. And that's from Rick?

10 A. Yes.

11 Q. Okay. And then in the home he had what as far as the LEL, 20
12 or what was it?

13 UNIDENTIFIED SPEAKER: Twenty-one.

14 BY MR. EVANS:

15 Q. Twenty-one.

16 A. And that was the last reading that I remember.

17 Q. Reading. That's when he was on the stoop, correct?

18 A. That was -- yes. That was the last reading that I remember
19 him giving me.

20 Q. So when the explosion occurred, Rick was on the stoop?

21 A. No. I don't know. I had -- somebody else told me actually
22 where he was. I didn't know where he was when the explosion
23 occurred. I mean, I've heard where they found him, but I don't --
24 I have no --

25 Q. Okay.

1 A. I didn't know where he went. I didn't --

2 Q. Okay. No, that's fine.

3 The discussions you had with Rick on the way out, there was
4 no talk about anything at all with the meter, or how about the --
5 was there any talk about excess flow valves?

6 A. No, sir. There was no -- we didn't talk about the meter. We
7 didn't talk about --

8 Q. How about capping tees? Did you talk about those?

9 A. About tapping tees?

10 Q. Yeah, tapping, the --

11 A. The --

12 Q. The tees that may have leaked? Did you talk about that?

13 A. Yes, absolutely. There was talk of that, yes.

14 Q. Did you find it unusual that you'd have this much gas coming
15 from the ground and making its way to the home compared to other
16 cases you've been in, other situations?

17 A. No, not with this type of tee.

18 Q. Um-hum. Okay. When you said that you arrived on scene, did
19 -- do you have a timestamp for that?

20 A. It would -- I don't have a timestamp. I mean, I know --

21 Q. I mean, some sort of a -- just roughly what time you arrived?

22 A. It was after 12. I don't have an exact time.

23 Q. Okay.

24 A. But it was --

25 Q. And as far as when Rick arrived at the scene, did you know

1 what time Rick got there?

2 A. No, I didn't -- no, I didn't have any of that information.

3 Q. Okay. Okay. Were you party to any of the discussions about
4 evacuating people?

5 A. No. The only discussion we had was when she finally answered
6 the door and Rick told me that he was evacuating her.

7 Q. Were you there to see her evacuate?

8 A. No. I saw her when she drove out of the driveway.

9 Q. Did you find it odd that she drove versus walk?

10 A. Yes, very odd. I did.

11 Q. Okay. Your training dictates, I know, no doorbells, no --

12 A. No phones, no -- yes.

13 Q. No nothing.

14 A. No light switches, yes.

15 Q. Including automobiles?

16 A. Exactly.

17 Q. So I guess we'll never know why --if Rick ever did that, if
18 he said you can go ahead and drive out or if she just said I'm --
19 you know, when he says you need to leave, she decided to leave
20 that way.

21 A. I don't know.

22 Q. We'll never know why she --

23 A. No. I remember --

24 Q. We'll be talking to her, but anyway.

25 A. Yeah. I mean, I remember parts -- a little bit of the

1 conversation with Rick with her wanting to make phone calls and
2 stuff before she left. I know -- and that's one of the only
3 things I remember from my conversation afterwards was she wanted
4 to make phone calls and he was --

5 Q. Sandy?

6 A. -- wanting her to --

7 Q. You don't have time for phone calls, something like that.

8 A. No, you don't have time for phone calls.

9 Q. Right.

10 A. You got to get out.

11 Q. Okay. So when you arrived on scene and you parked your car
12 where you parked it there, when you left your car, did you have a
13 strong odor of gas?

14 A. No, it wasn't particularly strong, no.

15 Q. Did you have a meter on you at that time?

16 A. A (indiscernible)?

17 Q. Yeah.

18 A. I did not.

19 Q. Okay. Did you ever use a meter before you (indiscernible) or
20 anything like that?

21 A. That day?

22 Q. Yes.

23 A. No, sir.

24 Q. Okay. And are you equipped with a meter? Was there -- or
25 you don't normally have those because you're an ops guy?

1 A. Yeah, generally we don't. I don't carry them. I know some
2 of the supervisors do, some --

3 Q. Yeah. But not even a small one, like the pocket size things,
4 nothing like that? Okay.

5 Do you recall any sort of a wind that day?

6 A. I don't recall that. I feel like I remember it was pretty
7 stagnant, hot.

8 Q. Hot?

9 A. Yeah. I don't remember there being much of a breeze, no.

10 Q. And it was a bright sunny day?

11 A. It was -- it felt bright. It was hot enough.

12 Q. Yeah.

13 A. Yes.

14 Q. Okay. When you were making your calls along the way, you
15 know, to try and get things sorted out, and I guess you mentioned
16 that -- excuse me -- is his name Rob?

17 A. Rob Lopez?

18 Q. Pardon me?

19 A. Mr. Lopez, Rob Lopez?

20 Q. Yeah. Yeah, Rob Lopez.

21 A. Yes.

22 Q. So Rob Lopez eventually got to the scene.

23 A. He did, yes.

24 Q. Okay. So when in all of your -- from the time you got there
25 until the time of the explosion, when did Rob arrive?

1 A. I would --

2 Q. How many minutes had he been there when you -- would you say?

3 A. How long I'd been there before he got there? Is that what --

4 Q. Yeah, that's fine.

5 A. It wasn't long. I mean, several -- maybe 5 minutes,
6 something like that.

7 Q. Okay. So you got there and 5 minutes later Rob shows up?

8 A. Yeah.

9 Q. Kind of like that?

10 A. Yeah.

11 Q. Okay. And did you direct Rob at that point, what he was
12 going to be doing?

13 A. I kind of told him what was going on. I already had the hole
14 half dug, so he jumped right in and grabbed the shovel and we
15 proceeded to dig the main up.

16 Q. Okay. So approximately how long did it take you to get from
17 the grade level down to the main?

18 A. I can't think it would have taken him much longer than 5
19 minutes, honestly. It was half dug before Rob got there, so we
20 got it down pretty quick.

21 Q. Okay. And did you have all your tools handy? You had your
22 squeeze-off tools and all that, they were -- you had already had
23 them out of the truck and getting ready?

24 A. They were -- he was going for the squeeze-off tool when the
25 explosion occurred.

1 Q. Okay.

2 A. So the squeeze-off tool was not --

3 Q. Was not at the scene?

4 A. -- not next to the hole. It was in the back of the truck.

5 Q. Okay. And so, but just to reiterate, no knowledge of
6 anything about the meter?

7 A. Uh-uh.

8 Q. Okay. And since you've been doing this a long time and
9 you've been with the company a long time and you served in an
10 apprenticeship program, in your career have you ever seen someone
11 detach a meter from a home with a gas leak?

12 A. I don't recall. I really don't. I mean, for an inside,
13 like, fuel line leak, sure. Maybe not -- maybe disconnecting or
14 shutting off, but I don't -- I can't tell you that I recall
15 anybody pulling a meter set.

16 Q. So as far as the meter set, what -- your normal routine would
17 have been to just hit the angle valve and swing it 90 degrees and
18 call it a day and walk away? Is that --

19 A. You mean on the meter set itself?

20 Q. On the meter set. If you want to cut the --

21 A. Oh, if it was a fuel line leak?

22 Q. Well, if you're going to -- what are the motivations, I
23 guess, in your training to address -- to do anything at all with a
24 meter set?

25 A. I mean, most times when the street guys are involved with

1 meter sets we're either building them for a renew that we did,
2 again, renew a service.

3 Q. Right.

4 A. We don't do many disconnects. You know, we're not -- the
5 utility guys are usually out doing -- you know, if something's
6 pulled for theft or, you know, change of customer or something --

7 Q. Right.

8 A. -- we don't handle much of those.

9 Q. Okay. Are you aware of the efficiency of an excess flow
10 valve if someone were to pull a meter off of a house? What is
11 your understanding that would happen?

12 A. Well, we have done that, you know, pulled the meter set and
13 opened the locking valve to get the excess flow valve to trip,
14 for sure.

15 Q. You have done that?

16 A. Um-hum.

17 Q. Is that trained?

18 A. I don't know that we've had specific classroom training on
19 it. I'm sure we had trained on the flow valves and, you know,
20 what they're for and all that, but I don't know that I've ever
21 received formal training.

22 Q. Is it common knowledge among your -- the people you
23 supervise, that if they were to want to stop the flow of a gas,
24 that you would permit them to disconnect a meter to drop the -- to
25 drop the flow?

1 A. Yes.

2 Q. That's common knowledge under --

3 A. I would think it would be common knowledge. Yeah, it's
4 something that we've done.

5 MR. EVANS: Okay. Well, that's all I have for now. Ed?

6 BY MR. KENDALL:

7 Q. Edward Kendall, NTSB. I just have a couple of questions. So
8 you were the duty supervisor from the Friday to the Friday?

9 A. Yes, sir.

10 Q. And for what location was that?

11 A. For Lancaster and Harrisburg, for the town.

12 Q. Okay. And when you were on scene, did you see Rick opening
13 the windows of 206?

14 A. I did not.

15 Q. He did not?

16 A. I did not see him.

17 Q. Oh, you did not see him?

18 A. No.

19 Q. Okay. Is that something that would normally be done when
20 evacuating?

21 A. Um-hum.

22 Q. Okay.

23 A. Yes.

24 Q. And do you remember what time the fire department arrived on
25 scene?

1 A. I don't.

2 Q. And did you speak to any fire department officials while you
3 were at on scene?

4 A. I spoke to -- I'm assuming it was the chief. He was the one
5 driving. Maybe it wasn't the chief, but I did speak to someone
6 from the fire department, yes.

7 Q. Okay. And was that conversation related to the fans?

8 A. Yes.

9 Q. Okay. Were there any additional conversations with the fire
10 chief?

11 A. No.

12 Q. Did you have any conversations with any of the other
13 homeowners there?

14 A. I did not.

15 MR. KENDALL: I think those are all the questions I have for
16 now.

17 BY MR. DOWNS:

18 Q. Well, thank you. Downs, NTSB. Jason, I'm going to go back
19 to the very beginning, so forgive me if I get a little redundant
20 on some of these questions here, and if I misspeak just correct me
21 as we go along.

22 You had indicated all your dispatch communication is by cell
23 phone. You don't have any radio or anything like that, and that
24 truck that I believe you said was driven by the fellow -- not Rick
25 but Mr. Lopez, he has a utility truck that has the computer in it?

1 A. It does. Yes.

2 Q. And you're able to use that computer to communicate with your
3 dispatch and such.

4 A. Yeah. I mean, generally speaking as a duty supervisor it's
5 done by phone, dispatch.

6 Q. Company cell phone is your routine?

7 A. Yes.

8 Q. And whenever you need to enter data or access data, it's on
9 the computer in the truck, right?

10 A. Um-hum.

11 Q. And would that truck always be at the scene when you go to a
12 particular event such as this or a similar event where you've got
13 a gas leak?

14 A. That truck or a similar truck, yes.

15 Q. Similar truck, okay.

16 A. Um-hum.

17 Q. Rick's vehicle, does that have a computer in it also?

18 A. Yes.

19 Q. And your truck does not have a computer in it.

20 A. It does not have one.

21 Q. Okay. Is that normal for a supervisor?

22 A. I believe so. There's not many (indiscernible) for the
23 computers in vehicles, yes.

24 Q. Okay. So in order to be able to access a map with valves or
25 whatever you have to do, you have to either go to the computer

1 screen in somebody's truck or ring up the engineer, I think you
2 had indicated, to find out instructions from that person as to
3 where a valve is located or whatever.

4 A. Yes. I mean, I did -- I had my laptop with me as well. I
5 should have stated that probably earlier.

6 Q. Oh, okay. That's --

7 A. Yeah. I did --

8 Q. -- the next question that I was getting to.

9 A. Yeah, I did have my laptop.

10 Q. On this particular day you had your laptop.

11 A. I did.

12 Q. And that normally you would have your laptop with you and
13 it's got Wi-Fi so you can connect with the company --

14 A. Um-hum.

15 Q. -- as well?

16 A. Um-hum.

17 Q. So in effect you have a computer at your disposal in your own
18 vehicle?

19 A. Yes. Yes.

20 Q. Okay, good. That wasn't quite clear before.

21 A. Okay. Sorry about that.

22 Q. Okay. Yeah, previously you indicated you had not taken the
23 computer in the field that day, so I'll correct that.

24 A. Okay.

25 Q. Okay. You're the supervisor on call. You have a first

1 responder -- that was Rick -- the first person that would be
2 dispatched to the site, right?

3 A. Yes. Yes.

4 Q. And you would follow up typically, depending on the magnitude
5 of the event, whether you'd go there or not, to -- and in this
6 particular case it was described to you enough that you felt it
7 was necessary to be there. You wanted to be there, correct?

8 A. Well, I did, and also with the lack of -- I did have one
9 gentleman that didn't answer his phone, so that --

10 Q. Right. You mentioned that.

11 A. -- that did (indiscernible).

12 Q. Right. So you were able to find somebody else and persuade
13 them --

14 A. Yes. Eventually yes.

15 Q. -- eventually persuade them to come on by, and that was
16 Mr. Lopez.

17 A. That was Mr. Ressler.

18 Q. Ressler?

19 A. Yes, Jesse Ressler.

20 Q. Jesse. But he did not arrive before the explosion?

21 A. He did not.

22 Q. He arrived after the explosion?

23 A. Yes.

24 Q. Was he the fellow that ultimately turned off the gas, closed
25 the gas valve?

1 A. I don't know.

2 Q. You don't know.

3 A. I'm not sure who shut that valve off.

4 Q. Okay. Let's see. When you arrived, was the sewer fellow
5 already at the site?

6 A. No, sir.

7 Q. He arrived at some point after you arrived. Do you remember
8 roughly --

9 A. I'm sorry, I don't.

10 Q. You weren't really paying attention?

11 A. I was not.

12 Q. And normally they would get dispatched to a call of this sort
13 to check the sewers for gas. Would that be the normal?

14 A. No. I mean, his response was in response to the one-call
15 ticket that dispatch put through to come out and mark their
16 facilities.

17 Q. I see. So just to mark the --

18 A. Yes, just --

19 Q. -- facilities, not necessarily to check gas content in the
20 sewer?

21 A. That's correct.

22 Q. But this person was checking gas content in the sewer as a
23 result of your discussion with them?

24 A. No, he was not.

25 Q. Or how did that evolve?

1 A. He was marking his lines.

2 Q. Just marking the lines. So he had not checked anything in
3 the sewers as far as you know?

4 A. No. No. My discussion with him was when he was showing me
5 where his sewer main was and where the lateral that went into 206
6 was.

7 Q. Okay. Does he mark it with a can of spray paint --

8 A. Green paint, yes.

9 Q. -- on the pavement or on the grass?

10 A. Yes.

11 Q. Okay. And he was in the process of marking?

12 A. At that point he had been done. When he called me over, he
13 had marked what needed to be marked and he just wanted to make
14 sure that I knew where.

15 Q. He pointed out, in other words?

16 A. After -- yes.

17 Q. Great. Okay. Thank you.

18 A. Um-hum.

19 Q. Let's see. There was a mention here of emergency leak, a C
20 leak, I think you mentioned it's called?

21 A. We do call them C leaks, yes.

22 Q. They're graded A, B, C? Is that --

23 A. Yes.

24 Q. -- the type of thing? An A would be worst case, that --

25 A. C would be worst case.

1 Q. C is the worst case?

2 A. Um-hum.

3 Q. Okay. And that's according to the company's criteria of
4 establishing a level of leak, right?

5 A. Yes, sir.

6 Q. Is that documented somewhere in your SOPs or whatever? Or is
7 that just experience?

8 A. No, that's documented.

9 Q. Documented. Okay, great. The one-call to dig, is that a
10 routine that's enacted when you're in the field working to have to
11 dig up a tee-fitting or something?

12 A. Um-hum.

13 Q. In an emergency situation where you know you have high
14 readings, wouldn't it take time to get the one-call person out
15 there?

16 A. Yes.

17 Q. Is there a process in your procedures that would allow you to
18 hand dig in an emergency to try to locate a line while you wait
19 for the one-call?

20 A. Well, if I'm -- yeah, if I'm correct, we're still permitted
21 to dig by hand. I think it's mechanized, any mechanized equipment
22 that would permeate the surface of --

23 Q. So it's the one-call just for the mechanized, for a backhoe
24 or whatever, to come out.

25 A. Yes, sir.

1 Q. And because you weren't going to be utilizing that
2 necessarily here, the expediency prescribed you could do the hand
3 dig?

4 A. Yes. I was hoping to use the backhoe at that point.

5 Q. Sorry. You were?

6 A. I was hoping to use it.

7 Q. You were hoping.

8 A. Yes.

9 Q. Okay. So the one-call would've had to have been called out
10 on an emergency basis. They would come and mark the line.

11 A. Um-hum.

12 Q. Would you then summons the backhoe? Did you summons the
13 backhoe?

14 A. Yes. That should have come out with the duty crew, the
15 repair crew.

16 Q. Oh, that should have come out just part of that process --

17 A. Yes.

18 Q. -- of dispatching the backup?

19 A. The process is the truck that Rob Lopez brought out, the
20 foreman, a backhoe --

21 Q. Right behind?

22 A. Um-hum.

23 Q. Normally that would be the procedure. The reason I ask is
24 that we have several witnesses of people up and down the street
25 commented there was a backhoe shortly after the explosion --

1 A. Yeah.

2 Q. -- which kind of surprised people.

3 A. Right.

4 Q. And now it makes sense that the backhoe was actually part of
5 that routine call.

6 A. Um-hum.

7 Q. Okay, great. Mr. Boudier mentioned there was 11 percent LEL
8 in the basement of the 202. He had trouble getting into the 206
9 property. It sounds like he had tried the door, pounding on the
10 door, whatever, several -- for several minutes. Could not get in,
11 but eventually got in after you arrived or before you arrived?

12 A. It was more as or after.

13 Q. Just about the same time?

14 A. Yes.

15 Q. And he went in and had discussion with the -- your
16 understanding, he had discussion with the occupant. He had a
17 meter reading in the house, and I'm looking for my notes here, he
18 had 21 percent on the stoop.

19 A. It was not -- yeah, that reading wasn't on the stoop. That's
20 just the -- that's the last reading that I remember Rick giving me
21 before the explosion.

22 Q. Right, and it was 10 or 11 inside the house?

23 A. That's what triggered the evacuation.

24 Q. That's what triggered the evacuation. Okay. And that --
25 Mr. Boudier -- or you called the dispatch and requested fire

1 department, right?

2 A. I did. Yes.

3 Q. And that's normal procedure that the fire department wouldn't
4 get contacted until somebody at the scene made a determination
5 through meter readings that it was necessary to have the fire
6 department? Is that a documented process in your SOPs, to your
7 best recollection?

8 A. I'm sorry. I don't know.

9 Q. Okay.

10 A. I just know with an evacuation --

11 Q. You would know that as part of your training then?

12 A. Yeah.

13 Q. And that's what you engaged here?

14 A. Um-hum.

15 Q. Great. Okay. Mr. Boudier had probed the yard in several
16 places you had indicated.

17 A. Yes, sir.

18 Q. And is it the normal process he would randomly probe the yard
19 or would he follow the line or at least the best guess of where
20 the line was in the -- from where the yard where you were digging
21 down to where the meter was?

22 A. Yes. I mean, he would have, yeah, typically followed --

23 Q. So it would be a visual estimate to probe along that path?

24 A. Yes.

25 Q. Would that be a fair characterization?

1 A. I believe so, yes.

2 Q. Okay. And the purpose of probing -- I'm not a gas guy so
3 forgive me. The purpose of probing the yard there would be what?

4 A. Just for -- my brain -- I'm sorry.

5 Q. Yes.

6 A. I'm looking for the perfect word for --

7 UNIDENTIFIED SPEAKER: Gas concentration.

8 MR. TRIMBLE: Yeah, I mean, for -- yeah, where it's going.

9 That's a terrible way to say it, but my -- I'm jumbled a little
10 bit here.

11 BY MR. DOWNS:

12 Q. Would one probe the yard with a pole and they have the meter
13 there?

14 A. Yes.

15 Q. is that how it works?

16 A. Yes.

17 Q. Okay. That's what I was looking for.

18 A. Okay.

19 Q. Okay. You had indicated you were at the hole at the time of
20 the explosion or right near the hole?

21 A. I was near the hole, yes.

22 Q. Okay. And had you actually reached the service line or the
23 main when you were digging?

24 A. Yes.

25 Q. So you could see it. Was it fully uncovered?

1 A. Yes, around the -- I didn't see it with my eyes. Rob blew --
2 got a blow a rod out, off of the truck, Rob Lopez.

3 Q. Okay.

4 A. And blew the dust from around the main.

5 Q. So he blew the dust around the main. Did you ever see it
6 yourself?

7 A. I did not.

8 Q. You did not.

9 A. No.

10 Q. Okay. But he was confident or at least you had an
11 understanding he was confident that it was accessible enough so
12 that the next step would be to get the squeeze-off tool?

13 A. Yes, sir.

14 Q. And that would be your standard process, right? And top of
15 your head, best guess, how long did it take to dig the hole?

16 A. My best guess would be 5 to 7 minutes.

17 Q. Five to 7? The soil was fairly easy to dig?

18 A. Yes.

19 Q. And that kind of helped the process, I'm guessing?

20 A. Absolutely.

21 Q. Great. You were standing near Rob's truck when the explosion
22 occurred.

23 A. Um-hum.

24 Q. And you said you were thrown against the truck.

25 A. I was.

1 Q. Okay. Where was Rob roughly?

2 A. I didn't know.

3 Q. You don't know? Okay.

4 A. I didn't see him. They got him first.

5 Q. Okay. And you don't know where Mr. Boudier was --

6 A. No.

7 Q. -- either at that particular time?

8 A. I do not.

9 Q. You were just focused -- you were focused on what you were
10 doing.

11 A. Yes, sir.

12 Q. And when the explosion occurred, you were doing exactly what?
13 Were you walking around the truck or you just happened to have
14 your back to the hole or --

15 A. Yeah. I was talking to Denny Hoffert from LASA. He had
16 showed me the lines, and I had turned to walk away from him and
17 that's when the explosion occurred.

18 Q. Okay. Was Denny in front of the utility truck?

19 A. I think Denny was behind, I think.

20 Q. Behind.

21 A. Yeah.

22 Q. Okay. And you had just finished that discussion --

23 A. Yes.

24 Q. -- and you were kind of walking back around the left side of
25 the truck, meaning between the truck and the curb?

1 A. Yes.

2 Q. That -- okay. And all of a sudden it went?

3 A. Yes.

4 Q. Okay. All right. Let's see. Closing of valves versus
5 digging up the service line to do a pinch, a squeeze-off, it's
6 called, I guess. Okay.

7 A. Um-hum.

8 Q. Walk me through a little bit some of the decision process
9 here in terms of tradeoffs, pros and cons, given your experience,
10 given the SOPs of the company. This particular event you knew you
11 had high gas readings, right?

12 A. Yes, sir.

13 Q. You had crew members on the scene. They were doing whatever
14 they were doing, okay. So given your experience, digging a hole,
15 5 to 7 minutes, versus trotting down the street -- and correct me
16 if I'm wrong, there was a valve down the street, correct?

17 A. I believe so.

18 Q. Were you aware of the valve or --

19 A. I looked at it on my records before I arrived to the scene,
20 yes.

21 Q. Before -- and that's on your computer?

22 A. Um-hum. Yes, sir.

23 Q. Okay. So you knew, pretty good idea of where that valve was,
24 right, down the street?

25 A. Um-hum.

1 Q. So it would be decision factors involved in terms of closing
2 that valve first versus going right to the scene and pinching off
3 the line, squeezing off the line, right?

4 A. Um-hum.

5 Q. And again, squeezing off the line involves a digging
6 process --

7 A. Yes.

8 Q. -- and so on. So if you could walk me through some of the
9 pros and cons do you consider in your decision process?

10 A. My -- that day, my decision was based on -- I mean, I'll try
11 to explain to everybody. When you shut a gas valve it's not a
12 light switch. It doesn't shut off immediately, so you still have
13 some blow down from the main. So you can shut a valve, and
14 depending on length and size of the main, it -- I don't have that
15 data to know how long it would take.

16 Q. It's going to take a while, in other words --

17 A. Yes.

18 Q. -- before that gas bleeds off.

19 A. It's going to continue to blow.

20 Q. It sounds like there's a little motivation to go right to the
21 squeeze-off. Would that be a fair --

22 A. That was --

23 Q. -- characterization?

24 A. Yes, that was -- yes sir.

25 Q. Okay. Okay. Let's see. Roger mentioned the excess flow

1 valves, and that basically is a technique where one can disconnect
2 the meter and the excess flow valve would then kick in and close
3 the line, right?

4 A. Yes.

5 Q. And that did not come up in the discussion --

6 A. No.

7 Q. -- with Mr. Boudier?

8 A. No, and part of that, part of that decision -- I'm not saying
9 I made the decision not to do that. That -- those -- the type of
10 tee that we're dealing with, you can open the valve and trip the
11 flow lever, but it's not going to stop the leak because this leak
12 is on the fitting that's on top of the main. So the excess flow
13 valve is after the tee. So, I mean, you can shut the gas off to
14 the house, but it doesn't necessarily stop the leak.

15 Q. So would that have factored in the process in terms of
16 tripping the excess flow valve and disconnecting the meter?

17 A. Yes. I mean, being on several of these and digging up a ton
18 of these, I mean, that's notoriously what they do. They leak at
19 the main, on top of the main, not after the tee.

20 Q. Okay. Let's see. Your discussion with the fire chief, I did
21 a little bit of debriefing of the fire chief.

22 A. Okay.

23 Q. He mentioned that someone from the gas company, he didn't
24 know who it was, other than he had motioned to the crew down by
25 the truck to come up. Would that be in agreement with what your

1 experience was at the scene there?

2 A. No. I mean, I --

3 Q. Why don't you walk us through in terms of the fire department
4 pulls up in the fire truck?

5 A. Well, I saw them pull up and at that point I engaged. I
6 mean, I --

7 Q. You walked to the fire truck?

8 A. I didn't walk, but yes, I did go to the fire truck, yes.

9 Q. You went to the fire truck.

10 A. Yes.

11 Q. And you spoke with, you think it was the chief --

12 A. Whoever was driving. I don't know --

13 Q. Whoever was driving?

14 A. Yeah, I don't know if it was a ladder truck or whatever,
15 whatever truck was there.

16 Q. It's not important, but --

17 A. Yeah.

18 Q. Okay. And the driver got out and you had a discussion?

19 A. Yes.

20 Q. So maybe walk me through a little bit on that discussion --

21 A. That discussion --

22 Q. -- as best you can recall.

23 A. Yeah. The best I can recall, that discussion was about
24 getting intrinsically safe fans into the house to get the gas out
25 of the house without causing any issues.

1 Q. And he said?

2 A. No, we don't have them. We don't have them.

3 Q. Did not have them?

4 A. Something to that, something to that effect.

5 Q. Something to that effect?

6 A. Yes. I knew after the discussion that they didn't have what
7 we needed.

8 Q. Okay. And that would be a normal process for you, to get
9 fans as quickly as you could to vent the house?

10 A. I would have -- yeah. That would have been nice. Yeah.

11 Q. Okay. The LEL readings in and near that house, would that
12 have a factor in terms of venting the house rather than clearing
13 everybody out first?

14 A. Yes. If I'm understanding your question correctly, yes.

15 Q. Yes. Okay.

16 A. Yes.

17 Q. So in other words, if you had a dangerous LEL you would not
18 use the fans? Is that what you're saying?

19 A. If we had a dangerous LEL, we would not enter the property.

20 Q. And fundamentally you'd want to evacuate everybody as fast as
21 you can?

22 A. Right.

23 Q. Is that correct?

24 A. Yes.

25 Q. Okay. And am I reading this wrong with the LEL readings in

1 the house, were they at the dangerous level?

2 A. Yes.

3 Q. So would it have been correct to vent the house or not vent
4 the house?

5 A. It would have been correct not to go into the house.

6 Q. At all?

7 A. So you wouldn't necessarily, just by rights you wouldn't be
8 venting because --

9 Q. But you were asking about the fans?

10 A. Yeah, it was too late at that point.

11 Q. It was too late.

12 A. Well, I wouldn't -- I don't -- when I say too late, from what
13 I understood, the windows and everything were still -- were
14 already up in the house.

15 Q. Okay.

16 A. So --

17 Q. So Mr. Boudier had gone in with the homeowner prior to that
18 point and had opened the windows and doors; is that correct?

19 A. From what I've read. I didn't witness that. I didn't
20 witness Rick going into the house.

21 Q. Okay.

22 A. But from what I understood, yes, he did, and they opened
23 windows together or she said they were -- I read, I mean, I don't
24 live under a rock, so I did read that, you know, she said they
25 were laughing and carrying on and opening windows --

1 Q. Right.

2 A. -- and all that stuff.

3 Q. And all this occurred before you got there?

4 A. No, I was there but I was outside. I was --

5 Q. Busy doing other things?

6 A. Yes, sir.

7 Q. I see. Okay. So the LEL reading would have been too high at
8 that point in terms of after you were asking about the fans?

9 A. Can you reword that for me?

10 Q. In other words, you were asking about the fans because you
11 believed at that time they might have been useful?

12 A. Yes, I did.

13 Q. Okay. And was that because the LEL was above the limit, the
14 explosive limit?

15 A. Well, yeah. I didn't really have a reading, like, second by
16 second, but the reading that he gave me, and then when she left,
17 knowing that they had -- or not knowing, but I have read that the
18 windows and stuff were up, so I just asked for them because I
19 figured if they had them we could probably use them.

20 Q. Probably use them.

21 A. Yes, sir.

22 Q. But that wasn't definite use?

23 A. No.

24 Q. Okay. That's what I wasn't clear on.

25 A. Oh, okay.

1 Q. Yeah. That's what I wasn't quite clear on. Okay.

2 MR. DOWNS: All right. Let's see. Okay. That's pretty much
3 my questions at the moment. I'll defer to the next in line.

4 BY MS. COOPER SMITH:

5 Q. Okay. Terri Cooper Smith, Pennsylvania Public Utility
6 Commission. Were you en route to the site when you were talking
7 to Sandy or had you gotten there yet?

8 A. I was not. I don't believe I was there.

9 Q. You weren't there?

10 A. I don't think I was there when I talked to Sandy.

11 Q. Okay. So you called Sandy first and you got her voicemail?

12 A. Um-hum.

13 Q. And then she called you back?

14 A. She did call me back, yes.

15 Q. Okay, because I have a log here where it looks like you
16 talked to her about 5 minutes.

17 A. Okay.

18 Q. And I guess during that time period you were discussing what?

19 A. Um-hum.

20 Q. You were discussing what exactly?

21 A. Valves. Valves, squeeze off, what are we --

22 Q. Okay.

23 A. -- what are we looking at. Yep.

24 Q. Okay. Going back to what Rick was speaking about a second
25 ago, at some point Rick told you he had 10 or 11 percent gas. Was

1 that in the house or at the foundation wall? Are you --

2 A. It had to be -- I'm spit-balling here, but I almost think it
3 would've had to be in the house because that's when he told me he
4 was evacuating the lady from the house.

5 Q. Did you and Rick have any other conversation about any of the
6 other properties? I know that at some point he had said that
7 there was 11 percent LEL in the basement of 202.

8 A. 202, yes.

9 Q. Did you guys talk at all about evacuating 202?

10 A. No.

11 Q. Okay. Did he talk about the other houses? Did he check any
12 of the other houses on the cul-de-sac?

13 A. When I had talked to him on the phone, I believe the second
14 time I talked to him, he said that 206 and 201 he hadn't been in,
15 but 206 was where he was trying.

16 Q. Okay. Do you know -- are you aware at all that Rick went
17 back to 201?

18 A. I'm not aware of that.

19 Q. Okay.

20 A. I'm sorry.

21 Q. Okay. Let's see. Did the fire -- do you remember any other
22 parts of your conversation with the fire chief regarding
23 evacuations?

24 A. No, ma'am.

25 Q. So just -- you just remember talking to him about the

1 intrinsically safe fans?

2 A. Yeah, that's what I -- yeah, that's what I remember.

3 Q. Okay. And you don't recall where Denny Hoffert was after --
4 so the two of you had just had a quick conversation about the
5 markings of where the sewer lines were?

6 A. Yes.

7 Q. Then you tried to turn from him and that conversation and
8 then the explosion happened. So would you say that Denny was
9 probably within 10 feet of you when you turned?

10 A. Possibly.

11 Q. Okay.

12 A. But I think -- I don't want to say that I think.

13 Q. Don't (indiscernible).

14 A. I don't know, but I assume that Denny was behind the truck at
15 the point of the explosion.

16 Q. So it was a very short period of time from the end of your
17 conversation --

18 A. Yes.

19 Q. -- to when the explosion happened? Okay.

20 When you were digging in the hole, you didn't physically see
21 the main being uncovered but Rob did?

22 A. Yes.

23 Q. Okay. And the tee was how close to that point?

24 A. Fifteen feet, 10 or 15 feet probably.

25 Q. Ten or 15 feet?

1 A. Um-hum.

2 Q. And you never physically saw the tee because you didn't dig
3 that up?

4 A. I did not.

5 Q. Okay. But you knew that you had -- but Rob had said that he
6 had a 98 percent gas --

7 A. Over the tee.

8 Q. -- over the tee?

9 A. Yes.

10 Q. So he had located the tee?

11 A. Yeah, I mean, it was located. Yeah, Rick had said that, but
12 just for record sake, Rick Boudier had said that.

13 Q. Oh, I'm sorry, Rick.

14 A. That's okay.

15 Q. I didn't mean to say Rob.

16 A. I just wanted to make sure it was --

17 Q. So Rick had said it, okay. Okay.

18 MS. COOPER SMITH: That was all the questions I have at the
19 moment.

20 BY MR. MAURER:

21 Q. Gary Maurer, UGI. Just going over the timeline, at the point
22 when Rick was at the front of the house, it seems like, just
23 looking at everything up to that point, for 206, where we had
24 trouble getting in --

25 A. Um-hum.

1 Q. -- he finally gets in. The lady opens the door and he gets a
2 reading that he reported to you of 11 -- I'm sorry -- 10 or 11 gas
3 in the house.

4 A. That's what I remember.

5 Q. Is that the point where you realized -- I think that where
6 this thing escalated --

7 A. Yes.

8 Q. -- to a real serious situation?

9 A. Yes.

10 Q. And at that point you called dispatch, told them we needed
11 support. Did you -- I'm just curious. Did you report to dispatch
12 the readings you had in the house or --

13 A. I don't remember that, if I told them readings or not.

14 Q. Okay.

15 A. I know I told them that we were evacuating. I'm not -- I
16 think I may have told them we were evacuating one person because
17 she -- I understood that she was the only one home, but I don't
18 remember that part of it. Sorry.

19 Q. Okay. I was just curious. And just for the record, UGI has
20 procedures that when you have those type of readings in homes
21 there are certain actions that have to be taken?

22 A. Yes, sir.

23 MR. MAURER: Okay. No other questions.

24 MR. EVANS: Mr. Krieger?

25 BY MR. KRIEGER:

1 Q. Robert Krieger, UGI. Jason, just a quick question on, you
2 said you were the duty supervisor in this case. What kind of the
3 role is a duty supervisor? Does it differ significantly from your
4 day-to-day activities as a construction and maintenance supervisor
5 or is it fairly consistent?

6 A. I never thought about that. I guess it could be considered
7 fairly consistent. I mean, we deal with leaks all day.

8 Q. Right.

9 A. Yeah.

10 Q. Okay.

11 A. Okay.

12 Q. Yeah, I just wanted to clarify that. And also you had said,
13 and I think Terri may have asked the same question, but you called
14 Sandra Urmey to give her a head's up that you would be shutting
15 down the main and that it was either a valve or a squeeze-off.
16 Did you say you made that call before you were en route? So you
17 spoke to her before you left for the scene or was that at the
18 scene?

19 A. No, that was before the scene. I was not at the scene when I
20 talked with Sandra.

21 Q. That was before. Okay. When you were at the scene did you
22 make -- other the calls to dispatch, had you made any other calls
23 that you can recall?

24 A. Not that I recall.

25 Q. So you were just more or less into the activities on scene,

1 digging the hole and then -- okay. You had said that at one point
2 you turned to call dispatch again and it was at that time that the
3 explosion occurred. You were thrown up against the truck.

4 A. Um-hum.

5 Q. At that point in time what was the reason that you were going
6 to be making a call to dispatch?

7 A. Well, I'm not -- I was kind of stuck between the activities
8 that we were doing, being so close to having the main shut down
9 and trying to kind of weigh my options here, if I could get the
10 grid shut down.

11 Q. Okay.

12 A. If I could get -- what do I do? I either get the main
13 squeeze off or I try and get the grid shut down. You know, just
14 kind of --

15 Q. So you were looking at that point in time to get -- you know,
16 you were calling dispatch to get the grid shut down or --

17 A. Well, that's what -- that was what I was thinking, but I was
18 just so concerned with --

19 Q. Okay.

20 A. I kind of felt like I could do one of two -- one or the
21 other. Like, I don't have an operator. I have a hole open in the
22 yard. My foreman tells me that the main's exposed and he's ready
23 to squeeze it off.

24 Q. And that was --

25 A. Do I squeeze it off or take whatever -- so yeah, I really

1 felt like I didn't --

2 Q. And you were just -- and it was at that point as well that
3 you said that you -- I mean, everything just happened.

4 A. Yeah, it was --

5 Q. Okay. All right. Understood.

6 The fans, too, you said that you had -- you had gone to the
7 fire department to -- and requested fans. Had you ever, had you
8 ever used a fan in the past to --

9 A. No, sir.

10 Q. You hadn't? Okay. So that was kind of an out of the
11 ordinary request then?

12 MR. KRIEGER: All right. That's all the questions I have.
13 Thanks, Jason, appreciate it.

14 MR. TRIMBLE: Absolutely.

15 MR. DOWNS: Roger?

16 BY MR. EVANS:

17 Q. Yeah, Roger Evans here. I'm going to give you this Exhibit
18 2A, we call it. This is a timeline and I want to -- I want to
19 establish as best we can your arrival at the scene based on the
20 phone calls.

21 A. Okay.

22 Q. So if you could look at this? We have a record of all your
23 phone calls, and if you can look at this and tell us, well, I know
24 that call was the first call I made when I was on scene.

25 A. Okay.

1 Q. And then we'll establish a time --

2 A. Sure.

3 Q. -- because we have timestamps for the phones.

4 A. On the scene?

5 Q. Yes.

6 A. Okay.

7 MR. EVANS: Excuse me. This is Roger Evans.

8 Bill, would you want us to go off the record to look at this
9 or are you okay with this?

10 MR. TRIMBLE: I'm okay, if you are.

11 MR. EVANS: Okay.

12 MR. MYERS: Yeah, just take your time.

13 MR. TRIMBLE: Yeah. Well, the 12:14 would be the dispatch
14 call for emergency for 911.

15 BY MR. EVANS:

16 Q. So that means you -- that's the call you made while you were
17 on scene --

18 A. Yes.

19 Q. -- at 12:14?

20 A. Yes.

21 Q. Okay.

22 A. The 12:04, the Sandy Urmev call, I was not on scene.

23 Q. So from that call we can say that you were on scene, the
24 earliest time we know of is 12:14?

25 A. Yes, sir.

1 Q. Okay. Okay, thank you.

2 A. Um-hum.

3 Q. If I can get that back?

4 A. Yes, sir.

5 Q. Thank you. So that's on Exhibit 2, and I'm going to mark on
6 this that the 12:14 call is -- I'm going to put an arrow that says
7 on scene/off scene, okay? Off and on. There you go.

8 So did you have any knowledge when you arrived on scene that
9 a call had been made to have the power shut down? Was that
10 something that you would normally do? Is that something that Rick
11 would have done?

12 A. Normally somebody on scene, yeah, depending on who's there.

13 Q. Do you have any idea for this case why the power was not
14 asked -- why they didn't make a call? Was it in your thought
15 process at the time?

16 A. It was --

17 Q. I know you had a lot going on.

18 A. Yeah, there was a lot going on. Yeah. I think it was just
19 -- I don't know if I was so focused on getting the main shut down,
20 but it was -- and we didn't know what readings we had in the
21 house. I mean, at that point we did.

22 Q. Okay.

23 A. But yes.

24 Q. So but the whole time you were there, you had no knowledge of
25 any kind of a discussion that was made regarding shutting power

1 down?

2 A. No, sir.

3 Q. And in any of the calls you made or you listened to, were
4 there any discussions from anyone that said, hey, we need to call
5 and get the power shut down?

6 A. Not that I --

7 Q. That topic was not discussed that day?

8 A. Not that I recall, no.

9 Q. So we can go on record as saying that topic was not discussed
10 that day?

11 A. Yes. I do not remember having that conversation with anyone.

12 Q. Okay. I just want to make sure of that.

13 A. Okay.

14 Q. The discussions -- like, when -- so if we have you arriving
15 on the scene at 12:14, earlier you said maybe 5 minutes later Rob
16 shows up.

17 A. Um-hum.

18 Q. And so you probably started -- probably by 12:20 the hole was
19 pretty much -- is that right? When you arrived on the scene you
20 grabbed a shovel and went to doing that?

21 A. A pretty short time after I --

22 Q. Pretty short time?

23 A. -- after I got there, yes.

24 Q. Okay. And the shovel came from where? Your --

25 A. Rick's truck.

1 Q. Rick's truck.

2 A. Um-hum.

3 Q. Okay. And before I forget, I want -- we need you to put --
4 we have where your truck was. We have where Rick's truck was. We
5 know where the fire department. Then we need the LASA truck --

6 A. Okay.

7 Q. -- and Rob's truck.

8 A. Okay.

9 Q. Number 4 and 5.

10 A. The -- Rob's truck was here. I'm not sure about the LASA
11 truck, but there's -- okay. Rob's truck would have been here. So
12 that would have been 4. The LASA truck, I believe -- I'm not
13 positive, but I believe he parked either behind Rick's truck or in
14 front of Rick's truck over here.

15 Q. Okay. Just, you can go ahead and put him behind.

16 A. That's okay?

17 Q. Yeah. Yeah, that's okay. And we'll put a question next to
18 that.

19 A. Okay.

20 Q. Okay.

21 A. It's hard to see.

22 Q. Yeah. Well, we'll get it. So you're there and you do the
23 excavation. You're there and you do the excavation, and you said
24 that as you -- you were -- your back was turned toward the scene
25 when the explosion occurred.

1 A. I was walking back to the hole to squeeze the main off.

2 Q. Oh, you're walking toward the hole?

3 A. Yes.

4 Q. Okay. Okay.

5 A. Yeah, so I was walking -- I met Denny. I'm not going to mark
6 this up, but I met Denny here in front of the truck.

7 Q. Right.

8 A. He showed me where the sewer was out in the cul-de-sac and
9 where --

10 Q. Right.

11 A. -- kind of a general area where it was going into the house.

12 Q. Um-hum.

13 A. I finished that conversation, turned and walked back toward
14 the hole beside the truck. So I was, I don't know, 3 or 4 feet
15 probably in the grass off the curb walking toward the hole that
16 Rob had finished digging.

17 Q. And then you mentioned that Denny was behind one of the
18 trucks when the explosion occurred?

19 A. I believe so.

20 Q. You think so?

21 A. I'm assuming.

22 Q. And which truck was he behind, do you think?

23 A. I'm thinking, if anyone's, he should have been behind Rob's,
24 because we had the conversation right at the front of Rob's truck.

25 Q. Right. Okay.

1 A. And at that point, when we had finished our conversation, I
2 went this way and I'm assuming that Denny went the other way.

3 Q. Okay. Another question about the -- when we came on scene we
4 saw that the -- on Rick's truck, that there was -- it looked like
5 pneumatic hose was out there, and it looked as though an air spade
6 may have been used for something. So, but you folks didn't use
7 that; is that correct? Because you said you did everything by
8 hand.

9 A. We did dig it by hand, but I know Rob -- at some point Rob
10 did grab what we call a blow rod to get the --

11 Q. Oh, the blow rod. Okay.

12 A. -- dust away from the main.

13 Q. So he turned the compressor on and got that so you could get
14 it blown away, blown out? Okay. So that was the only reason you
15 used the air that day, no other place on site?

16 A. No. That was is. Yes, sir.

17 Q. Okay. And where was Rob at the time of the explosion?

18 A. I don't know.

19 Q. You don't know.

20 A. I think he was -- it doesn't matter what I think, but --

21 Q. Yeah. Yeah, that's a guess, so --

22 A. Yeah.

23 Q. -- we'd rather not know.

24 A. Right. I'm not exactly certain.

25 Q. Yeah, okay. So just for the record, your rules with regard

1 to evacuation, percent of LEL, what is it?

2 A. Twenty.

3 Q. Twenty percent LEL --

4 A. Yes, sir.

5 Q. -- it's time to evacuate?

6 A. Yes, sir.

7 Q. So when UGI employees are talking to residents and they use
8 numbers, okay, are they speaking in LEL or are they speaking in
9 gas?

10 A. When they talk to residents?

11 Q. Yeah, about if there's gas in the home.

12 A. Um-hum.

13 Q. What does your training say?

14 A. I don't know. I typically try to stay away from numbers --
15 me personally, from numbers with customers because it's confusing
16 for them.

17 Q. So, but have you ever been -- I mean, has there ever been any
18 training where someone says we went to notify -- we want you to
19 notify the residents with a number?

20 A. No, not that I'm aware of.

21 Q. Not part of your training?

22 A. No, sir.

23 Q. When a -- we have a lot of, I guess, instances of hearing
24 where there were numbers given to neighbors and all this. If
25 someone were to give numbers, would it be percent LEL, do you

1 think, or you have no idea?

2 A. No, that would be a guess. I have no idea.

3 Q. Okay. You yourself when you've done this, all the years
4 you've done this, you've never provided numbers to a --

5 A. No. I don't share numbers.

6 Q. Have you had any of your colleagues use, or in your career
7 have you heard they use numbers for notifying residents?

8 A. Not that I'm aware of, no.

9 Q. Okay. The use of numbers in this particular incident or
10 accident is, in your own thinking with your rules of what you've
11 learned and all this, is it unusual for you to hear someone speak
12 in the words of numbers versus, oh, we have to evacuate you?

13 A. To a customer?

14 Q. Yes.

15 A. It would be odd to me.

16 Q. It would be odd?

17 A. To share numbers, yes.

18 Q. Okay. The person, the 20-year-old -- did you know there was
19 a 20-year-old in 202? Were you aware of that?

20 A. No, sir.

21 Q. And so your -- Rick never said anything about another person
22 being in there?

23 A. No. He told me that he had gotten a reading of 11 LEL in the
24 basement, but I have not -- no discussion on how he got in, who --
25 if there was somebody there. And I guess I just assumed that

1 somebody let him in. He didn't break the door down, so --

2 Q. Right. So 11 LEL, in your mind, would be time to get out?

3 A. Thinking about it. I mean, you're getting -- I mean, we have
4 the hard line to 20 LEL. Hard line is 20 LEL, so --

5 Q. So you're over halfway, so --

6 A. Um-hum.

7 Q. And it could go south pretty quickly for a person that's in a
8 home with 11 LEL. Now are you trained to that? When you get an
9 LEL reading that's over 10 or is over 5 or -- is that part of your
10 training for evacuation?

11 A. No, sir.

12 Q. So your basic thing for your training is it's steadfast
13 number, 20 part per -- 20 percent LEL, you evacuate?

14 A. Yes.

15 Q. That's what the book says?

16 A. Yes. And then --

17 Q. And that's what you train to?

18 A. -- I believe the book also says at the discretion of the
19 first responder as well.

20 Q. Okay.

21 A. I believe it says that.

22 Q. Um-hum. Okay. So just to reiterate, I want to make sure we
23 have this down on the record. Limited conversation with Mr. Rick
24 Boudier, because I know the accident happened at 12:29 and you got
25 there at 12:14. You were only on the scene for a matter of -- I

1 mean, did -- in your mind, did it feel like it was a very, very
2 short period from the time you got there to the time of the
3 explosion? Did it seem like a 20-minute kind of --

4 A. Yeah. I mean, there's -- fast and slow, I guess. There was
5 so much stuff going on at the same time.

6 Q. Right.

7 A. You know, a little harried maybe, but --

8 Q. Yeah.

9 A. -- it wasn't very long.

10 Q. So you arrive on scene, you're having a conversation with the
11 guy in the truck about the fans, get back down, do your
12 excavation. So you did a lot of work in a short amount of time.

13 A. Yes, sir.

14 Q. And you're confident about that 12:14 call, that that's --

15 A. That is on scene, yes.

16 Q. That one there is not -- nowhere near a guess? That is what
17 you recall?

18 A. Yes.

19 MR. EVANS: Okay. Okay. I have no further questions.

20 BY MR. KENDALL:

21 Q. Edward Kendall, NTSB. I just had a question. So you said
22 that you were evacuating 206 because it was at 10 or 11. Was that
23 in gas or LEL?

24 A. That was gas.

25 Q. Okay. And could you just mark on the map, and it might be a

1 little difficult, I don't know --

2 A. I'll try.

3 Q. -- where the hole was being dug?

4 A. Yes. I would venture probably right -- I'm assuming you can
5 see that?

6 MR. EVANS: Yeah, just put a leader out to the light area and
7 we'll be okay.

8 MR. TRIMBLE: Okay. So --

9 MR. EVANS: That's the hole location, 6?

10 MR. TRIMBLE: Yeah, he would have been here probably.

11 MR. EVANS: Yeah. Can you mark a six next to that and we'll
12 just put, at 6, it's the excavation.

13 BY MR KENDALL:

14 Q. And just before the accident at issue, you were having
15 discussions with the LASA individual.

16 A. Um-hum.

17 Q. And those discussions were simply we've marked the lines for
18 you?

19 A. Yeah, here's our main.

20 Q. And as far as you knew at the time, you were done with LASA?

21 A. Yes.

22 Q. They were going to take off and --

23 A. Yes.

24 Q. -- you were okay to dig with the backhoe?

25 A. Well, no. Nobody else had been there yet.

1 Q. Okay.

2 A. Electric, water, nobody had shown up.

3 Q. So you're still waiting for a number -- how many entities in
4 total were you waiting for, for the 811 call?

5 A. Well, I would have liked to have seen -- because I believe it
6 was a common trench, so I would have like to have seen electric
7 and water at that point.

8 Q. Okay.

9 A. But, I mean, I didn't even have a backhoe on site at that
10 point so that wasn't an option anyway.

11 Q. Okay, because you didn't have an operator?

12 A. No. We just -- yeah.

13 MR. KENDALL: Okay. I think those are all the questions I
14 have right now.

15 BY MR. DOWNS:

16 Q. Downs, NTSB. Jason, going back quick and dirty here, kind of
17 refresh your memory, fire department arrived on scene. You had a
18 chat with the driver?

19 A. I did.

20 Q. Do you remember what the fire department was doing after the
21 chat with the driver?

22 A. No. I mean, I don't think they were doing -- I don't want to
23 say they weren't doing anything, but I don't recall them doing --

24 Q. You don't recall?

25 A. Uh-uh.

1 Q. Okay. The reason I ask is that we have testimony from
2 several of the firefighters that they were actually down in the
3 center of the cul-de-sac and they had stretched a hose line --

4 A. Okay. I wasn't aware of that.

5 Q. -- already. You didn't happen to notice it?

6 A. No.

7 Q. Okay, fair enough. Okay. Forced access, what is the company
8 policy in terms of having to gain access into a house that is
9 suspected to have high gas? Can you lay that out for -- a little
10 bit for us?

11 A. Yeah. I mean, certainly a call to dispatch to let them know
12 that you're going to have to force entry. I mean, if you have
13 time, you like to have fire or police on the scene. So we had,
14 not a ton of times that we've had to force access, so I wouldn't
15 say that we're well-versed in -- I mean, we're not in the business
16 of breaking doors down normally. So from what I understand, it's
17 normally they call the dispatch to let them I need to do forced
18 entry on this house.

19 Q. Okay. And is it your understanding you are enabled to do
20 that or do you have to call the police or how does that work?

21 A. No, we understand if we have to get in, we got to get in.

22 Q. You'll kick the door in if necessary.

23 A. Break -- yes.

24 Q. Okay. But in this case the fire department was there, so
25 would they be the one in your judgment that would have been able

1 to kick the door in if they had to?

2 A. If they had to, yeah.

3 Q. Rather than the gas company employees?

4 A. Or -- right. Or witness us doing it, I guess either way.

5 Q. Right. Okay. Exigent circumstance, in other words?

6 A. Um-hum.

7 Q. Okay, great. And the power shutdown, we touched on that a
8 little bit with Roger's question here. Power shutdown should be
9 enacted by the gas company, UGI, as part of your standard protocol
10 here. And because it was such tight timing here, would that be a
11 fair way to say it, that you had not addressed that particular
12 point or --

13 A. Yeah, I do not remember having a conversation with someone
14 about that.

15 Q. But that would be a standard process as far as a gas call
16 such as the event itself here?

17 A. And possibly --

18 Q. One of the steps in the process?

19 A. -- a next step possibly, yes, for sure.

20 Q. Oh, a next step?

21 A. Well, it could have been done probably at the same time.

22 Q. It would not be a first step?

23 A. It would -- with the readings that we had, it should probably
24 at the same time, yes.

25 MR. DOWNS: Okay. All right. And that's -- that does it for

1 me at this time. Thank you.

2 Follow up?

3 BY MS. COOPER SMITH:

4 Q. Terri Cooper Smith, PUC. As a duty supervisor, when you were
5 -- when you first were given leave, told to be supervisor, did
6 they tell you or is there some protocol as to what happens in
7 emergency situations? Like do they tell you, you'll get a staff
8 and when you get on-site that you will tell the staff what to do
9 or won't tell the staff what to do? What is the relationship?

10 A. As far as like street workers to duty supervisor?

11 Q. Yeah, and I mean specifically in an emergency response
12 situation.

13 A. Um-hum.

14 Q. Because I'm just trying to get a picture here of would you
15 normally tell the other individuals who are under your supervision
16 at that time what to do, where to go, so on and so forth?

17 A. If I'm on-site, yeah. I mean, even --

18 Q. Okay.

19 A. -- maybe, even maybe if I'm not on-site, yeah. If there's a
20 continuing conversation, yes.

21 Q. Okay. So in with this particular event, would I be wrong in
22 saying that you didn't really give Rick Boudier any direction? He
23 was already doing stuff on his own? Do you remember any specific
24 instructions you gave Rick Boudier?

25 A. The only specific instruction I remember telling him before I

1 was on scene, that we had to get in 206.

2 Q. That was it? Okay. And as far as Rob Lopez, it was go dig,
3 help me dig this hole or --

4 A. Yeah. When Rob got there, he started helping me do what I
5 was already doing, which was digging the hole.

6 Q. Okay. So you were aware that Rick was doing a lot of other
7 activities that maybe you did not tell him specifically to do?

8 A. Yes.

9 Q. Okay.

10 A. That would be fair.

11 MS. COOPER SMITH: Okay. That's all I have. Thank you.

12 MR. MAURER: Nothing.

13 BY MR. KRIEGER:

14 Q. Just a couple of follow-ups real quick, and just kind of
15 dovetailing what -- oh, Robert Krieger, by the way, UGI -- just
16 dovetailing with some of what Terri had said. You said that you
17 don't remember giving instructions to Rick other than getting into
18 206?

19 A. Um-hum.

20 Q. Is that typical than -- or from the standpoint that a number
21 of activities are going on, you've got qualified individuals that
22 are performing those activities and they would be expected --

23 A. Yes.

24 Q. -- to any number of tasks?

25 A. Yes.

1 Q. The power shutdown as well, and this was a question of
2 Rick's, is that you talked about the readings that you had. At
3 some point you were getting different readings, and again, you
4 were only there for a short period of time. So you had gotten
5 readings, I guess at some point, that wouldn't have warranted a
6 shutdown? So again, it was just something that you were
7 continuing to evaluate, that you were going through that process?
8 Is that fair?

9 A. That's fair.

10 Q. Okay. And then the last thing was you had mentioned that you
11 didn't smell any gas when you arrived on the scene.

12 A. I smelled gas. It wasn't an overwhelming --

13 Q. It wasn't an overwhelming odor?

14 A. It wasn't a get out of the -- I didn't get out of the truck
15 or my car and say oh, my gosh, this is --

16 Q. How about anything audible? Did you hear anything or --

17 A. At one point when Rob and I were -- he was digging the -- he
18 had helped me dig up the main, and at one point I did -- I put my
19 head on the ground over the top of the tee and could hear it
20 flowing.

21 MR. KRIEGER: That's all I have. Thanks, Jason.

22 MR. EVANS: Roger Evans. Before we go further, we have
23 Exhibit 1A and we have Exhibit 2A and we have Exhibit 3A. And
24 Exhibit 3A is a plat map that we have indicated on it where the
25 bar holing was done, 2A is a timeline, and 1A is where the

1 vehicles were parked. I just wanted to make that for the record.

2 BY MR. EVANS:

3 Q. On Exhibit 3A here, as far as bar holing, were there any
4 other bar holes that were done that you know of?

5 A. There was a bar hole over the top of the tee on the main,
6 which -- I'm assuming this is the curb line?

7 Q. Yes.

8 A. This is the curb line?

9 Q. This is the curb line right here.

10 A. Right there, okay. And so there was a bar hole directly --
11 not directly, over the tee, but it was in close proximity to the
12 gas tee on the main.

13 Q. Okay. I know where that is.

14 A. Okay.

15 Q. So that's second. Let me just put that. That is somewhere
16 around here. So, and what was that reading?

17 A. Ninety-eight percent gas.

18 Q. Okay. Can you go ahead and put, just put that on?

19 I hope that pen writes.

20 So those are the only two bar holes that were done that you
21 are aware of?

22 A. Yes. Yeah, that I'm certain were done, yes.

23 Q. For certain. Okay, that's good.

24 The other question I have about the parking. Is there a
25 guideline that you folks have with regard to where you park your

1 vehicles? I mean, you know, diesels are -- especially diesels,
2 you know, you have the accelerated RPM when you get around gas. I
3 know a lot of guys have experienced that.

4 So is there any kind of guideline as far as how many feet
5 away from gas you would park?

6 A. No. I don't believe there's a guideline in any actual
7 numbers.

8 Q. Is that -- I mean, looking back on this now, was that a good
9 idea in your mind?

10 A. I never -- I actually never even considered it, if it was a
11 good or bad idea.

12 Q. Okay. I just was curious. Is there a, like, a placard or
13 some sort of a laminated card that says, okay, when I go on a gas
14 call where there's gas in a neighborhood, these are my main points
15 to do? Is there a checklist?

16 A. Yeah, I believe there is. I mean, we do -- we have laminated
17 cards also for our readings in proximity to structures, you know,
18 what --

19 Q. Um-hum.

20 MR. EVANS: So Roger, this is Roger Evans to Rob -- Bob.

21 MR. KRIEGER: Oh, I'm sorry.

22 MR. EVANS: If we were to request the placards that are
23 available in vehicles, any sort of checklists that are laminated,
24 can you provide that for us, if there are? Just a copy of them.

25 MR. KRIEGER: There is one that we -- yeah, we can provide

1 it. I just --

2 MR. EVANS: Yeah, if there are, whatever. Okay.

3 That's all I have.

4 BY MR. DOWNS:

5 Q. Downs, NTSB. Another quick follow-up here. Looking at our
6 timeline exhibit, wherever that is, are we able to identify when
7 Mr. Boudier arrived on scene from this?

8 A. I don't know.

9 MR. EVANS: I think we can, actually.

10 Q. While he's -- Roger's looking that up as best he --

11 MR. EVANS: 11:00.

12 MR. DOWNS: 11 a.m.?

13 MR. EVANS: Yeah, arrives on scene 11:00.

14 MR. DOWNS: And we have an indication to the effect that he
15 had tried several times to get into 206, nobody had responded.
16 Ultimately about when the time you responded, he was able to get
17 in. He was working with the occupant to vacate. So from 11 a.m.,
18 is it?

19 MR. EVANS: Yep.

20 MR. DOWNS: -- until, say, 12:15 or so?

21 MR EVANS: Right.

22 BY MR. DOWNS:

23 Q. So we're talking an hour and a quarter, okay? In which case,
24 when Mr. Boudier got in there he came out and indicated to the
25 effect that we had, he said 10, 11 -- 10 or 11 gas in the 206.

1 Jason, in your experience -- you've got 10 years, you said?

2 A. Nine, yeah.

3 Q. Nine years? Somebody being in a dwelling, sealed up in a
4 dwelling with a 10 or 11 reading, although we don't know what the
5 readings were prior to that building up, when they answered the
6 door -- when somebody would answer the door, in your experience,
7 would that person be, first of all, breathing? Meaning, wouldn't
8 that person be unconscious perhaps given the level of gas?

9 A. I don't know. I don't know that. I mean, I don't know if
10 they'd be unconscious. They should have surely known that
11 something was --

12 Q. Or kind of experiencing an incapacitation to a certain
13 degree, lack of oxygen?

14 A. I don't know. It probably (indiscernible) --

15 Q. You don't have experience in that area?

16 A. Well, that's -- I mean, well, I mean, I guess if you think it
17 that way it depends where -- I don't know where her bedroom was.
18 I don't know if the bedroom was second floor. I don't know --

19 Q. And we don't know where the readings Mr. Boudier --

20 A. Right.

21 Q. -- was actually getting.

22 A. Yes.

23 Q. So would he have normally gone to, say, the lowest point in
24 the dwelling to get a reading?

25 A. Yes.

1 Q. Is that where typically --

2 A. Under normal circumstances.

3 Q. So it logically might have been the basement being the lowest
4 point, okay, meaning the gas would settle low, right?

5 A. No.

6 Q. It would --

7 A. Yes.

8 Q. -- it would rise.

9 A. Um-hum.

10 Q. Okay. So would your mechanics go to the high point or the
11 low point when they took the meter readings?

12 A. They're trained when they go in to go high.

13 Q. To go high.

14 A. Gas is lighter than air, it'll rise, so you want to get your
15 readings as high as you can.

16 Q. As high as you can. Okay. Because that's converse to what I
17 was thinking before. Okay. Highest point, meter was 10 or 11,
18 somewhere in that neighborhood. The person answers the door. My
19 question here is that, to me, I'm wondering the logic if this
20 person answered the door and this person was fully cognizant and
21 conversing with Mr. Boudier, versus that person being in that
22 dwelling for several hours perhaps --

23 A. Sure.

24 Q. -- where there were some higher elevated readings. We all
25 know obviously lack of oxygen will cause anoxia and things of that

1 sort. But it sounds like when that person answered the door that
2 person was cognizant and conversant with Mr. Boudier, they were
3 opening windows, things of that sort.

4 A. Um-hum.

5 Q. So I was just wondering what your experience in that regard
6 is? And you're saying --

7 A. I'm sorry. I don't --

8 Q. -- that you don't have really a lot of experience there?

9 A. No. I'm sorry.

10 Q. Okay. Fair question. Thank you.

11 A. Um-hum.

12 MR. DOWNS: That concludes my questions. Last go around?

13 BY MS. COOPER SMITH:

14 Q. Terri Cooper Smith, PUC. With regards to the same timeline,
15 with Rick arriving at 11 and you maybe -- I'm not putting this
16 definitively, you arriving somewhere around 12:14, there's only
17 one phone call from Rick to you, and that's at 11:53. But you
18 knew that Rick was on site?

19 A. Yes.

20 Q. You knew Rick was on site at 11:00 in the morning, right?

21 A. No, I didn't know that.

22 Q. No? When did you know that Rick was on site?

23 A. When he called me.

24 Q. So you didn't know he was there until 11:53?

25 A. No, I should have known before that. I didn't know there was

1 even a leak going on until Rick called me.

2 Q. Okay. So it's possible, and I realize that on this timeline
3 it does say it's preliminary and we don't have a definitive one
4 just yet, so somewhere between -- somewhere after 11 but before
5 11:53 you spoke --

6 A. Yes.

7 Q. -- you spoke to Rick?

8 A. Yes.

9 Q. Okay. Okay. Okay, my second question has to -- goes back to
10 what Bob had asked you before about there are folks who have
11 operator qualifications to do certain things. So would you say
12 that it's not necessary for them to always ask you what's
13 necessary to do --

14 A. Yes.

15 Q. -- on a site?

16 A. That would be fair.

17 Q. Okay. At what point did you think it was necessary for you
18 to ask what has happened up until the point where you arrived?
19 Would you have called on the phone and spoken to Rick to say what
20 are you doing? You know, what has been done?

21 A. I don't know. I don't know that. I guess I was busy trying
22 to get the crew out and all that stuff and -- you said he called
23 me at some other -- is that what you said, he called me or I
24 called him?

25 Q. We have here that he called -- he called you at 11:53.

1 A. Okay.

2 Q. That was -- yeah, he called you at 11:53. You had made a lot
3 of phone calls before that, but I don't see any other time that
4 the two of you spoke. Would you have spoken on a different phone?

5 A. No.

6 Q. Okay. Okay. My next and final question is, when you saw the
7 car driving out of the house, you thought there was something odd
8 about that?

9 A. I did.

10 Q. Okay. Did you think to ask Rick about it or there was just
11 too much going on at that point to stop --

12 A. There was a lot going on.

13 Q. Yeah.

14 A. But that was -- I mean, with our training and everything, to
15 see somebody driving out of their driveway with those type of
16 readings was a huge red flag.

17 Q. Okay.

18 A. Like, what -- I'm not going to say what I said, but --

19 Q. Okay.

20 A. Or what I thought. But yes.

21 Q. Okay.

22 A. It was -- yes, very odd.

23 MS. COOPER SMITH: All right. That's all the questions I
24 have. Thank you.

25 BY MR. DOWNS:

1 Q. Would Mr. Boudier likely have told --

2 MR. EVANS: Name.

3 BY MR. DOWNS:

4 Q. Downs, Downs. Sorry. Downs.

5 Would Mr. Boudier likely have told her, based upon his
6 training, not to drive?

7 A. You would -- yes. I mean --

8 Q. In other words, your training, standard training prescribes
9 that the occupant be told not to light switches and things of that
10 sort?

11 A. Yes.

12 Q. Not to drive?

13 A. Yes. Yeah, not typically not to drive, but no ignition
14 sources or --

15 Q. But we don't know exactly what happened in this case?

16 A. No. I -- like I said, I'm kind of a jumbled mess in trying
17 to put all this stuff together, but I do believe I remember having
18 a conversation with Rick after she pulled out of the driveway and
19 me going, what the heck? That he disconnected -- that she did not
20 use the garage door opener, that he had disconnected that and put
21 the garage door up manually.

22 Q. So he manually lifted the door for her?

23 A. Yes.

24 Q. So that suggests that he supported her driving off.

25 A. That's -- I have no other way to look at it. Yes.

1 Q. All right. All right, thank you.

2 A. Yes.

3 MR. DOWNS: Anyone else?

4 BY MR. MAURER:

5 Q. Gary Maurer, UGI. Just a quick question. UGI, do they
6 provide specific duty supervisor training?

7 A. Yes.

8 Q. Okay. Is that on a periodic basis, annually or what?

9 A. I believe it's annually. I had my first one -- I can't
10 remember what month it was, but it was earlier in the year. Yeah,
11 because it was the training in the hotel.

12 MR. MAURER: Okay. That's all.

13 MR. KRIEGER: I don't have any further questions. Thank you.

14 BY MR. EVANS:

15 Q. Just a couple more. One of the things that --

16 MR. DOWNS: Roger?

17 BY MR. EVANS:

18 Q. This is Roger Evans. One of the things that's kind of
19 interesting about this from when I -- we've learned from this --
20 that I have learned from this. So it sounds like you folks have,
21 what -- I mean, most places call it some sort of a daisy chain
22 call system where the person, if that person is not there, it's
23 going to the next person; if that person's not there, it goes to
24 the next person. Is that a true statement?

25 A. Somewhat. I mean, we pay guys to stand by to be on call, to

1 be available whenever the phone rings. So we have --

2 Q. Okay.

3 A. The, you know, first responders are paid to stand by and to
4 respond to emergencies, and so is the duty crew.

5 Q. Okay. So the way your system works and in your past history
6 of being on duty yourself when you were out doing the other type
7 of work, not supervision --

8 A. Yes, sir.

9 Q. -- is it unusual that an ops supervisor has to actually go to
10 the scene and a, you know, a regular person on the call list
11 hasn't answered the phone?

12 A. Is it odd?

13 Q. Is it unusual?

14 A. Yes. You don't miss calls. You don't miss callouts.

15 Q. So a person would normally have his phone with him or his
16 call?

17 A. Absolutely. Yes.

18 Q. And so it would be -- the circumstances that led to you being
19 on scene is unusual in that there should have been someone who
20 along those -- the daisy chain, that actually said, hey, I'm
21 number three in order for today, that means they couldn't get the
22 two previous guys and I've got to take this call now. Is that how
23 it works?

24 A. Some -- I don't know how to explain it. I'll try. So each
25 of our three guys on our repair crew are paid a standby rate to

1 have their phone on and respond to emergencies.

2 Q. Okay.

3 A. Those three guys, you just don't miss calls. I don't -- I
4 never missed a call in my career when I was -- that's what you're
5 on call for is to do this kind of stuff. So that's odd. But yes,
6 those guys are paid standby rate to carry their phone, to answer
7 their phone when it rings and to respond to emergencies. Is that
8 what you're asking?

9 Q. That's what I'm asking.

10 A. Okay.

11 Q. I'd like the names of those people, by the way, and we'll
12 probably want to talk to them, Bob -- Rob?

13 MR. KRIEGER: Hmm?

14 MR. EVANS: The names of the people on the call.

15 MR. KRIEGER: I do.

16 MR. EVANS: We'd like to talk to them. Okay, good.

17 Okay. That's all I have.

18 BY MR. DOWNS:

19 Q. Downs, a quick follow-up question. Is there a penalty that
20 you know of if you're on the standby and you don't answer a call?

21 A. No, not that I'm aware of.

22 Q. So conceivably somebody could sign themselves up for standby,
23 get the higher rate and he does not answer the call but they're
24 still going to get paid?

25 A. Well, not necessarily. I mean, we have a yearly schedule

1 that they're scheduled for that week. They know in advance months
2 in -- they know what weeks they're on call for the whole year. So
3 it's not normal to have to be calling extra people. Those three
4 guys that are on call that week know that they're on call and that
5 they need to respond whenever it rings.

6 Q. Right. And is it your experience that it takes one, two or
7 three calls to finally locate somebody or usually the first
8 call --

9 A. No, generally speaking, they have their phone on them and
10 they answer it because they know that that's what they're on call
11 for.

12 Q. But there's always the prospect the person's in the basement
13 or something and they're out of range and that's just the way it
14 goes and the call won't go through.

15 A. That's possible.

16 Q. It's possible?

17 A. Yes.

18 Q. Right.

19 A. Um-hum.

20 MR. DOWNS: Okay, thank you.

21 MR. EVANS: I've got one last question that just rang in my
22 head. So --

23 MR. DOWNS: That's Roger.

24 BY MR. EVANS:

25 Q. This is Roger Evans. So when you have these calls to make,

1 right?

2 A. Yes, sir.

3 Q. And had you had the first person answer the call, would you
4 have actually called the second one to have more help or would you
5 just rely on one person coming?

6 A. No, I would call all three. All three of them would have
7 responded.

8 Q. You would have asked all three to show up on the scene?

9 A. Absolutely. Yes.

10 Q. So that's the way your plan is set up --

11 A. Um-hum.

12 Q. -- so that all three of those gentlemen who were on this --
13 getting paid this, should have been there at least -- I mean, if
14 you're hitting 75 percent, you know, two of the three or 66
15 percent, whatever the number is, you would think that they would
16 show up. Okay. That's fine. I'm done.

17 MR. DOWNS: Anybody else questions?

18 BY MS. COOPER SMITH:

19 Q. Just one last question. Where you coming from --

20 MR. DOWNS: Name?

21 BY MS. COOPER SMITH:

22 Q. Terri Cooper Smith, PUC, Pennsylvania PUC. Where were you
23 coming from?

24 A. I was in -- at my house in Conestoga.

25 Q. Conestoga, Pennsylvania?

1 A. Um-hum.

2 MS. COOPER SMITH: Okay. That's all I have.

3 MR. EVANS: Okay. Thank you very much, appreciate the time,
4 and you did a great job by the way.

5 MR. DOWNS: This concludes the interview.

6 MR. EVANS: Thank you so much.

7 MR. TRIMBLE: Thank you.

8 (Whereupon, the interview was concluded.)

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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: RESIDENTIAL GAS EXPLOSION
 ON SPRINGDALE LANE, MILLERSVILLE,
 PENNSYLVANIA, JULY 2, 2017
 Interview of Jason Trimble

ACCIDENT NO: DCA17FP006

PLACE: Millersville, Pennsylvania

DATE: July 26, 2017

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.



Teresa Holevas
Transcriber

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UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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RESIDENTIAL GAS EXPLOSION
ON SPRINGDALE LANE, MILLERSVILLE,
PENNSYLVANIA, JULY 2, 2017

Accident No.: DCA17FP006

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Interview of: ROBERT LOPEZ

UGI Offices
Lancaster, Pennsylvania

Friday,
September 15, 2017

APPEARANCES:

ROGER EVANS, Investigator in Charge
National Transportation Safety Board

EDWARD KENDALL, Attorney
National Transportation Safety Board

TERRI COOPER SMITH, Fixed Utility Evaluation
Engineer III
Pennsylvania Public Utilities Commission

GARY MAURER, Manager, Operations Programs
UGI Utilities

ROBERT KRIEGER, Vice President of Operations
UGI Utilities

DANE JAQUES, Attorney
Steptoe & Johnson, LLP
(On behalf of Mr. Lopez)

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I N T E R V I E W

(8:20 a.m.)

1
2
3 MR. EVANS: Good morning. Today is September 15th. It is
4 now 8:20 a.m. Eastern time. My name is Roger Evans. I'm an
5 investigator with the National Transportation Safety Board. We're
6 at the CenterPoint Offices in Lancaster, Pennsylvania.

7 UNIDENTIFIED SPEAKER: Conestoga Street offices.

8 MR. EVANS: Excuse me. UGI. I'm sorry. UGI offices on
9 Calestoga -- Calstoga Street?

10 UNIDENTIFIED SPEAKER: Conestoga Street.

11 MR. EVANS: Conestoga Street in Lancaster, Pennsylvania.

12 This interview is being conducted as part of the
13 investigation into the residential gas explosion on Springdale
14 Lane here in Millersville that occurred on July 2nd, 2017. The
15 NTSB case number for this case is DCA17FP006.

16 The purpose of the investigation is to increase safety --
17 excuse me -- not to assign fault, blame or liability. NTSB cannot
18 offer any guarantee for confidentiality or immunity from legal
19 actions.

20 This interview is being recorded and may be transcribed at a
21 later date. A copy of the transcript will be provided to the
22 interviewee for review prior to being entered into the public
23 docket.

24 Mr. Robert Lopez, you are permitted to have one other person
25 present during the interview. This is a person of your choice --

1 an attorney, supervisor, friend, family member -- or nobody at
2 all. Please state for the record your -- spelling of your name,
3 your job title and who you work for, and who you have selected to
4 have as your person to represent you today?

5 MR. LOPEZ: My name is Robert Lopez. It's R-o-b-e-r-t,
6 L-o-p-e-z. I'm a Mech II in construction and maintenance at UGI.
7 And the person I have to represent me today is Mr. Jaques.

8 MR. EVANS: And can you please identify yourself?

9 MR. JAQUES: Sure. Dane Jaques of Steptoe & Johnson.

10 MR. EVANS: Thank you. Let's go around the room now and have
11 everyone introduce themselves, giving the spelling of their name
12 and their entity they work for.

13 MR. KENDALL: Edward Kendall, K-e-n-d-a-l-l, NTSB, attorney.

14 MS. COOPER-SMITH: Terri Cooper-Smith; C-o-o-p-e-r and Smith,
15 S-m-i-t-h. Terri Cooper-Smith, C-o-o-p-e-r, dash,
16 S-m-i-t-h, Fixed Utility Evaluation Engineer III, with the
17 Pennsylvania Public Utility Commission.

18 MR. MAURER: Gary Maurer, M-a-u-r-e-r, Manager of Operations
19 Programs with UGI Utilities.

20 MR. KRIEGER: Robert Krieger, K-r-i-e-g-e-r, Vice President
21 of Operations, UGI Utilities.

22 MR. JAQUES: Dane Jaques, D-a-n-e, J-a-q-u-e-s, of Steptoe &
23 Johnson.

24 MR. EVANS: Thank you.

25 INTERVIEW OF ROBERT LOPEZ

1 BY MR. EVANS:

2 Q. Thanks, Rob, appreciate you coming in today and talking to
3 us. Before we begin we'd like to just get a little bit of
4 information about your education level, your background, how long
5 you've been with the company, where you worked prior to joining
6 this company; just kind of like a summary of your background
7 there.

8 A. Okay. So I've been with UGI for a little bit over 4 years
9 now. As far as educations, I do have some college. I fell short
10 of just getting my bachelor's degree. I'm not originally from
11 Lancaster, Pennsylvania. I kind of grew up in a military family
12 so I bounced around the country.

13 And is there anything else?

14 Q. Okay. So 4 years at UGI, and your current position title is
15 -- what is it again?

16 A. Mech II in C&M, and that's construction and maintenance.

17 Q. Okay. And in this 4 years you've been with UGI, have you
18 been in that position or --

19 A. No, sir.

20 Q. Can you go through that for us?

21 A. Well, we start as a Utility A, start, and then you progress
22 through Utility, a 2 year, 3 year, and then a Mech II. So every
23 year you kind of progress.

24 Q. Okay. And to get from each level what is required? You take
25 tests? Do you take classes or --

1 A. There is training, yes. In order to meet each progression
2 you have to meet a certain list of qualifications.

3 Q. Do you get -- during this initial period here, you know,
4 these years between getting up to Mech II, do you get all the --
5 exposure to all, like, reading gauges and evacuations and how to
6 address a leak and -- is that all part of that?

7 A. For the most part. It depends on the calls. Some we're
8 exposed to more and some roughly just in training at our training
9 center.

10 Q. But would you say that everyone that has this Mech II
11 qualification, that they've had some sort of formal instruction on
12 the use of LEL meters, how to evacuate a home, the steps you go
13 through to make notification, when you call 911; is that all part
14 of that?

15 A. For the most part, yes.

16 Q. Okay.

17 A. As far as running leaks or investigating leaks, yes. Some
18 tasks more than others. Well, I can't really speak for everyone
19 else, but as far as I'm concerned, I've had experience in most of
20 my, I guess, my qualifications.

21 Q. So along the way your -- throughout your career, you've had
22 to do evacuations yourself?

23 A. No. I've seen them. But as far as a Mech II and being a
24 foreman, I've never had to evacuate a house before.

25 Q. Okay. Have you ever had to do an LEL meter and go in a

1 residence and look at what the gas -- if you register explosive
2 limit; you ever had to do that?

3 A. Yes, sir.

4 Q. And when was the last time you did that?

5 A. I can't give you an exact date. I mean, it's --

6 Q. Routinely done, though, in your work? That you've done that
7 several times in your --

8 A. If we're responding to leaks, yes.

9 Q. Okay. So, but then you just told us you haven't -- never had
10 to evacuate, but you've gone in and taken the meter and say, okay,
11 where are we with regard to LEL. You just haven't had the
12 occasion to say, oh, we're at 20 percent LEL, we got to get out of
13 here? That's -- I'm not trying to put words in your mouth, but I
14 mean, is that the case, you've never -- when you say you haven't
15 had to evacuate anybody?

16 A. I was on a leak where we showed up and the fire department
17 already has the buildings evacuated, so -- I mean, I've gone in to
18 make sure that the building's safe as far as gas readings, but,
19 no, I've never had to evacuate a house.

20 Q. Okay. What is your understanding with regard to the 911
21 calls? Like the -- let's say that we have a call that starts here
22 and then, at the end, everyone's gone from the scene. But once
23 that comes in that there's a leak, what is your understanding of
24 when someone like yourself has to entertain getting the fire,
25 police people involved? When would that call be made?

1 A. Well, I'm not typically the first responder. My job is --
2 I'm the foreman, so we're typically showing up after the first
3 responder. I pinpoint the leaks and fix them.

4 Q. So let's go back to the philosophy of the first responder
5 versus, you know, your position. That first responder's going to
6 -- he's going to get the call from dispatch that says, hey, we
7 have a leak at this residence. So that person that gets that call
8 is the first responder?

9 A. Yes.

10 Q. Okay. Is it your understanding that that person would call
11 911?

12 A. It depends on the circumstances. If we're responding to a
13 leak and there's minimal readings and there's no threat of damage
14 to property, life, or facilities, then typically we don't get --
15 we don't dial 911. We have control of the situation. But as far
16 as calling 911, it kind of depends on a number of things.

17 Q. Okay. So just so I -- I want to just repeat this.

18 A. Okay.

19 Q. It's your understanding that there's not going to be a 911
20 call on each case?

21 A. No, sir.

22 Q. And the discretion to call 911, is that the first responder
23 all the time or could you call 911?

24 A. Yes, sir.

25 Q. Have you called 911 before?

1 A. No sir. Not on work.

2 Q. But you could, you could make that call? Would that be in
3 concert with a discussion that you've had with the first responder
4 or would you just say, hey, we need to get someone out here?

5 A. I guess it kind of comes down to the discretion of whoever's
6 out on the jobsite. I have no problem calling 911 if I feel that
7 they need to be on-site.

8 Q. Okay. In your training as a Mech II, though, and going up
9 from Utility A all the way through, is 911 covered each year in
10 the training? Do you recall?

11 A. As far as dialing 911, we've been given the okay. But having
12 to actually call them and kind of set up training with them, no,
13 we --

14 Q. No, I meant from the standpoint of when you have your
15 training sessions each year, are they always addressing the
16 responsibility of when 911 is called and who's going to call them?
17 Is that always part of your training?

18 A. Yes, sir.

19 Q. Okay. So, for yourself and based on your training, when you
20 go in with a meter, what is your criteria to say, okay, I have to
21 -- either I have to make a call to 911 or I have to have the first
22 responder person make this call? What is your indication, based
23 on your training, that a call should be made and evacuation should
24 occur?

25 A. Anytime we have gas inside a house or a building or if

1 there's potential for -- I guess, like I said, gas inside the
2 building or house or if there's, say, there's a fire or something.

3 Q. So is that to say that if the meter shows an LEL reading,
4 that it's time to evacuate?

5 A. It depends on the reading. Anytime it's over 20 LEL, we're
6 supposed to evacuate. Anything other, anything below that, we're
7 supposed to take certain precautions as to get the tenants out of
8 the house and not to create any hazardous -- what's the word I'm
9 looking for. Basically we don't create ignition sources or
10 whatnot.

11 Q. Um-hum. Okay. So 20 LEL -- 20 on the meter, right?

12 A. Yes, sir.

13 Q. Twenty on the meter is your actionable kind of number?

14 A. Yes, sir.

15 Q. Where, like, no one's allowed to be around the -- when you
16 get everybody out, when it says 20?

17 A. We're not allowed to enter their house -- excuse me -- the
18 house or the building. And we --

19 Q. If you have a 20 reading?

20 A. Yes, sir.

21 Q. I see.

22 A. But we got to do everything in our power to get the tenants
23 out, whether that be yelling into the house or whatnot.

24 Q. Okay. Just to go back, though. As far as the reading that
25 you would evacuate on the LEL, what is that reading?

1 A. Twenty LEL.

2 Q. To evacuate?

3 A. I'm sorry. I didn't --

4 Q. To -- when is it -- you were saying 20 LEL was your
5 actionable kind of number, but at what point on this LEL meter do
6 you start saying, okay, people, let's get out of here?

7 A. Oh, anytime there's -- anytime I have gas readings, whether
8 it be LEL or anything, it's best just to get the tenants out of
9 the house or out of the building. Any kind of readings.

10 Q. Okay. So, if it shows up on the meter, be conservative, get
11 the people out of the building?

12 A. Yes, sir.

13 Q. Okay. So once you make this call to get people out of the
14 building, where do you send them?

15 A. That's typically up to my supervisor. I get them out of the
16 area, if it's temporary or whatnot.

17 Q. Okay. Can you describe for us your knowledge of ignition
18 sources? What types of items are ignition sources and, you know,
19 what are the things to avoid if you know there's gas in the
20 building? What are those items, then?

21 A. It could be anything as simple as your cellphone all the way
22 up to the water heater kicking off; light switches, doorbells,
23 anything with a spark.

24 Q. Okay. So once you've had this situation where you have
25 evacuated the people out of the building, at what time would you

1 make a call to have the power killed by the utility?

2 A. Anything over 20 LEL inside the building or a house.

3 Q. That's an automatic pilot type thing? You -- everyone says,
4 okay, we're above 20, we got to make the call?

5 A. And it depends on a number of other things, too. So gas
6 inside the sewer, gas readings around water mains, any kind of --
7 I mean, are GOM says 100 percent gas in the sewer and any kind of
8 readings inside the house, or 100 percent gas by the water main
9 and any kind of readings in the house. Anything over 20 LEL in
10 the house, we got to get the grid shut down.

11 Q. Okay. So the person who makes the call for the -- having the
12 grid shut down, who is that normally?

13 A. It could be anyone on-site. I can call central dispatch, the
14 first responder, basically -- well, anyone on-site from UGI.

15 Q. Okay. So have you made that kind of a call before?

16 A. No, sir.

17 Q. Have you -- do you have any experience of how long it took
18 for someone else to make that call and how long it took to bring
19 the power down?

20 A. No, sir.

21 Q. Okay. So is that something that's gone over in all the
22 training that -- each year, do you -- is that something that you
23 hear about? Shutting down the power at 20 LEL, and -- that's a
24 typical part of each year's training?

25 A. Yes, sir.

1 Q. I would imagine there's core things that they address every
2 single year. I'm wondering if that's a core item, that's all.
3 I'm trying to figure that out.

4 A. Yes, it is. Sorry. It is taught in our training how to make
5 -- I'm sorry; it's coffee -- how to make the call and, I guess,
6 the steps to do it. We're told to contact our central dispatch to
7 have the grid shut down and then we notify the supervisor once
8 that call's been made.

9 Q. Let's talk about the pinching of pipe versus excavating. I
10 mean, excavating and pinching versus shutting a valve in the local
11 area.

12 When you -- in your training, like the core item I'm talking
13 about that they -- something that gets covered every year, do they
14 talk about how to, you know, if you have a pretty substantial leak
15 at first; you know, you're getting readings like crazy, way up
16 there, bar hole testing's saying, hey, we've got gas all over
17 here, the decision to close the valve versus pinch a line -- like
18 I know in this neighborhood there was a valve and I think there
19 was -- we've talked about that a lot through the interviews. But
20 is that something that's part of the core training, where they
21 say, if you have a bad leak you can make the decision to close the
22 valve that goes to the area or you can maybe excavate and pinch?

23 A. No, we've been told to close valves if we need to. It kind
24 of depends on the situation: where the valve's located, how many
25 valves are needed to shut down the area, versus where we're

1 digging to squeeze off the main. Do we need two squeeze-off
2 points; do we need one? It kind of depends on a number of
3 factors.

4 Q. Okay. Different line of questioning, let's say. So I
5 understand -- we were told that there are some memory issues with
6 this whole situation with you. We respect that 110 percent and,
7 again, we don't want you to guess and we don't want you to -- if
8 you don't know, you don't know.

9 A. Okay.

10 Q. Before you arrived on scene, do you have a recall of the
11 conversations that went through the radio or dispatch or whatever?
12 Do you have any recall of that?

13 A. I do have -- prior to me leaving the shop to head out to the
14 scene, yes, I, for the most part, have recollection of those phone
15 calls.

16 Q. Okay. Do you recall any times, timestamps that you could
17 give us as far as when you received calls?

18 A. Yes, sir.

19 Q. Who those call were from and --

20 A. I did bring my phone so I do have all the calls that I made
21 and that I received.

22 Q. Okay.

23 (Off the record.)

24 (On the record.)

25 BY MR. EVANS:

1 Q. So, Rob, we understand you have your telephone and your
2 telephone has -- with you, and you can go down the timestamps and
3 give us a rundown of the calls you made or calls received and who
4 they were from and the nature of the call. Could you describe all
5 that for us?

6 A. At 11:23, I received a call from Jason Trimble, the duty
7 supervisor. That was roughly -- well, it says 1 minute and 9
8 seconds. And that call was basically to inform me that there was
9 a gas leak and that he was calling out duty crew to go out and fix
10 it. And he gave me the location and he told me that it was
11 possibly a mechanical punch and tee leaking and to be prepared for
12 that.

13 Q. Okay.

14 A. And then after that, I received -- well, I had a missed call
15 from Richard Boudier at 11:32.

16 Right afterwards, I called him back and that was at 11:33.
17 And that was 1 minute, 55 seconds. And that was basically him to
18 kind of confirm the address where I was going, and he wanted to
19 confirm that I was the duty foreman and who else was coming out.

20 Q. Okay.

21 A. Then I had a call from Jason Trimble at 11:42, which was 1
22 minute and 41 seconds long. That was to ask me if I heard from
23 our operator, Norm Chancy, because he was having trouble getting
24 ahold of him, and he wasn't sure if I had spoke to Norm or not.
25 And then -- which I hadn't. I couldn't get ahold of Norm. Or he

1 didn't try to contact me.

2 Then I had another call from Jason at 11:52, was basically to
3 tell me that he found a backup for Norm, someone to replace him,
4 to come out and operate for me and that it was going to be Jessie
5 Ressler.

6 Q. Can you spell that name, Jessie Ressler, please?

7 A. It's -- first name is J-e-s-s-i-e, last name is
8 R-e-s-s-l-e-r.

9 After the call from Jason, I received a call from Jessie.
10 That was about 2 minutes and 25 seconds long, at 12:09, and that
11 was basically a formality. Jessie wasn't on call that weekend so
12 he was calling me to tell me that, hey, I got to get home, get my
13 work stuff and come back, then I'll head into the shop.

14 And I instructed Jessie that my -- well, at the time, my
15 laborer was Kenny Henry. He was going to drive the dump truck,
16 but I told Kenny to bring the backhoe out. And so when Jessie
17 called me, I told Jessie, hey, look we got the backhoe coming out;
18 I need you to bring an empty dump truck so that we could have it
19 on-site.

20 Q. And can you please spell Kenny Henry's -- that's K-e-n-n-y, I
21 guess, and --

22 A. Yes.

23 Q. -- H-e-n-r-y?

24 A. Yes.

25 Q. Okay. Thank you.

1 A. Well, let me confirm. What's his last name? Yes, H-e-n-r-y.

2 Q. Okay.

3 A. And then I didn't receive a call until after the explosion,
4 and I have a number of missed calls after that. Did you want me
5 to go through them?

6 Q. No, that's okay.

7 A. Okay.

8 Q. Yeah, you were there. So that is your recall from -- up to
9 the point where you left to go to the site?

10 A. After I spoke with Jessie, yeah, I don't remember anything
11 after leaving the shop, the grounds here.

12 Q. Any recall of the -- being evacuated or any of that stuff?

13 A. No, sir.

14 Q. And you had -- I guess you had a head injury, correct?

15 A. Yes, sir.

16 Q. Okay. So the person that -- and you say you were the -- on
17 the duty crew, right?

18 A. Yes, sir.

19 Q. So describe that for us. On that day, is it just for 1 day
20 that you have the duty or is it a weekend or is it for multiple
21 days? How does that work?

22 A. It's multiple days. Our duty crew schedule runs from Friday
23 to Thursday, 24 hours.

24 Q. Oh, so you're on call all that time?

25 A. Yes, sir.

1 Q. Twenty-four hours. So if anything happens, they can --

2 A. We do have our regular shift, 7 to 3, and typically we don't
3 -- they don't call duty out during those hours. But after hours,
4 roughly like 3, 3:30, then we go on call until the following day.

5 Q. And just curious, is the -- is when you're on duty, is it --
6 are you typically left alone or not typically left alone?

7 A. No, we have our crew and -- yeah, I have the operator and the
8 laborer, so I'm not alone.

9 Q. As far as the frequency of calls during this Friday and
10 Thursday thing, is that -- do you always get calls when you're on
11 duty?

12 A. No.

13 Q. You could have a whole week of duty and not --

14 A. Get called out once.

15 Q. -- not get called out once. Okay.

16 So on the day of the incident when you have a duty group, I
17 guess is what it's called, right?

18 A. Duty crew.

19 Q. Duty crew, excuse me. So you have a duty crew and you -- can
20 you go through that again, the names and the positions of those
21 people that would be on duty with you on that?

22 A. Well, the crews vary week from week.

23 Q. But for the week that, of the --

24 A. Okay.

25 Q. -- event, yeah.

1 A. The duty crew was me, myself, I was the duty foreman.

2 Q. Right.

3 A. Then I have a duty operator, who was Norm Chancy. He's our
4 operator for the backhoe. And then I have a duty laborer who
5 typically drives the dump truck, and that was Kenny Henry.

6 Q. And that's it, then? That's the whole --

7 A. Well, then we had the first responder, which was Richard
8 Boudier. But usually, yeah, he's not there the entire time
9 typically.

10 Q. I see. So for this duty crew, is there always a person who
11 gets assigned the role of first responder?

12 A. Yes. There's sign-ups just like duty crew. I mean, there's
13 a calendar downstairs as to who has what week and the positions.
14 Same with the first responder.

15 Q. So what is your understanding if the -- you know, let's just
16 say you take duty and then something comes up and, I don't know,
17 your wife's going through labor or something and -- early and now
18 you can't go. What's the procedure there?

19 A. There's -- it kind of depends on the situation. Are you
20 talking personally for me, or -- I can't really speak for the
21 other guys, but --

22 Q. Let's hear what -- personally for you.

23 A. If something comes up, like an emergency?

24 Q. Yes.

25 A. Well, I typically -- well, my -- I'm still supposed to

1 respond to leaks, but if there's an emergency, I will contact the
2 duty supervisor to inform him. And typically I'll try to find
3 someone who will relieve me, and if I can't, then I -- the duty
4 supervisor can. Just because that's me, not -- I can't speak for
5 the, like I said, the other guys. But if something came up for
6 me, I'll typically let the duty supervisor know what's happened
7 and then I'll tell him, hey, I'm going to call around and try to
8 get someone to cover for me. And if I can't, then I'll let the
9 duty supervisor know. But my primary role is to respond to the
10 leaks and --

11 Q. Right. So is there any sort of a auto callback? If you
12 don't answer that call, does it ring again in 5 minutes or 10
13 minutes or something?

14 A. Oh, for duty, yes. The supervisor will continue to keep
15 calling you until --

16 Q. Until you answer.

17 A. -- he gets ahold of someone, yes.

18 Q. Until you get ahold of someone. Okay. So that -- if you
19 were at a movie or something and you had your cell phone off and
20 you came out, you might see six missed calls or something?

21 A. Oh, no. I do not go to movies while I'm on call.

22 Q. Okay.

23 A. We have a time frame of when we're supposed to respond, and
24 me and my wife have an understanding that when I'm on call, I'm in
25 the house and my phone is glued to my hip.

1 Q. Okay. And in your career in this 4 years plus with the --
2 with UGI, have you had occasions when you went on a call and
3 someone that was supposed to be there didn't show up? Where they
4 -- you know, he wasn't Mr. Conscientious and he just -- he didn't
5 answer his phone and now you're one guy short? Has that happened
6 in your 4-year career?

7 A. Other than the day that it -- or the day of the event.

8 Q. Right.

9 A. It happened once, and it was just due to a miscommunication.
10 But it wasn't due to negligence or --

11 Q. Right.

12 A. But that was the only other event.

13 Q. Yeah. Okay. Going back to the training and -- I know you, I
14 know you were out a while with your accident and all that, your
15 injury and stuff. Did they do a -- did you have like a lessons
16 learned kind of session once all this was all -- you know, you
17 came back to work? Have you heard anything about any of the
18 details of what not to do next time? Did you get any lessons
19 learned, any sort of like, hey, if you're ever out there and you
20 have this situation, we don't want you to do this; we want you
21 to -- did you get anything like that?

22 A. Well, I've only been back to work -- this week was my first
23 week, and I'm only here for half-days for the time being. So I
24 don't think there's been an opportunity to do training.

25 Q. To talk to you about that stuff?

1 A. No, I -- I mean, I don't really want to talk about the event
2 and know the know-hows until after our -- the meetings were
3 concluded, because I've read online the events and the
4 investigation's going on and whatnot, and I -- it's kind of like
5 fuzzy and I --

6 Q. You want to keep it out of you mind?

7 A. Yes, sir. I want to keep the facts in my head and not assume
8 to know what happened and --

9 Q. Right. Okay. And I can see why it would be polite to not --
10 for your company not to, you know, delve into this especially
11 since you've had that head injury and stuff, so -- okay.

12 MR. EVANS: I think that's all I have for right now.

13 MR. KENDALL: Edward Kendall, NTSB. I just have a few
14 questions.

15 BY MR. KENDALL:

16 Q. You said when you spoke to Jason, I believe, that he informed
17 you there was a potential mechanical punching tee issue?

18 A. Yes, sir.

19 Q. Is that something you have dealt with before?

20 A. Yes. In previous leaks throughout my term of -- or I guess
21 my employment here at UGI.

22 Q. Okay. And so when he told you there might be a mechanical
23 punching tee, what did that mean to you?

24 A. Well, my first thought was that we might have to cut in a new
25 tee. My thoughts, you know, that's pretty much what it was when

1 he told me. I kind of had -- it gave me an idea of what tools I
2 might need on the job.

3 Q. Okay. And those tools were something you had in your truck?

4 A. Yes.

5 Q. Okay. In --

6 A. Some of the tools I needed to get, are kept here in the shop.
7 So it was just a matter of grabbing them and putting them in the
8 truck and heading out.

9 Q. And did you drive the backhoe out or did Kenny drive the
10 backhoe out?

11 A. Kenny Henry did.

12 Q. So what vehicle did you drive to the scene?

13 A. I had the street truck.

14 Q. Can you describe what the responsibilities of a foreman are?

15 A. There's a number of things.

16 Q. Sure. I can narrow it down. What are the responsibilities
17 of the duty foreman?

18 A. Okay. So I'm in charge of the crew, make sure procedures
19 and -- are getting followed, and pinpointing leaks, making sure
20 the paperwork gets done. Safety's a priority. I mean, there's a
21 number of things.

22 Q. During your normal workweek are you a foreman as well?

23 A. Yes, for the most part. They kind of -- it depends on the
24 workload. If they need me to go out and locate, I will, but a
25 majority of that time I am a foreman.

1 Q. And had you been a foreman basically the entire time you've
2 been a Mech II? Is that kind of how it works?

3 A. Yes.

4 Q. Okay. And what are the specific responsibilities of Mech II?

5 A. The qualifications, the -- are quite --

6 Q. Okay.

7 A. I mean, we have a huge list of qualifications.

8 Q. Sure. So I guess on the day that you were serving as the
9 Mech II duty foreman for this incident at issue, what did it mean
10 that you were the Mech II versus being the laborer or the
11 operator?

12 A. Typically, in a nutshell, the laborer's in charge of driving
13 the dump truck, helping out. They have a number of things they
14 have to do as well, but --

15 Our operator's in charge of, basically, the backhoe and
16 digging the holes. But once the holes are dug, then he's
17 typically helping out as well.

18 Duty foreman, for me it was making sure we have the necessary
19 tools, making the fixes. Like I said, safety, procedures are
20 being followed.

21 Q. So I think it was Norm that didn't answer as the operator.
22 As a Mech II, could you have also operated the backhoe?

23 A. Yes. But I didn't have the ability to because I can't drive
24 the street truck and the backhoe out to the job.

25 Q. Right. So you need -- no matter what, you need someone else?

1 A. Yes.

2 Q. Okay. In prior interviews we've discussed kind of the
3 classification of leaks as being A, B or C leak.

4 A. Um-hum.

5 Q. Could you just tell me what that means?

6 A. Well, C leaks are priority. The classifications are -- I
7 mean, there's a number of classifications, but A leaks being the
8 least serious of them all, B being like --

9 Q. Okay. And was, to your knowledge -- I know there's some
10 memory issues. Do you remember what classification this leak was
11 when you first dispatched?

12 A. It was a C leak.

13 MR. KENDALL: Okay. I think that's all the questions I have
14 for now. Thank you.

15 MS. COOPER-SMITH: Terri Cooper-Smith, PUC.

16 BY MS. COOPER-SMITH:

17 Q. I just want to kind of get an exact time here. I don't know
18 if you can get it exact, but at what point -- what was the very
19 last thing you remember?

20 A. Driving out the gate in the street truck. The gate being --

21 Q. The gate here?

22 A. Yes, ma'am.

23 Q. Okay. And the very last conversation you had with Jason was
24 that he had a backup for Norman?

25 A. Yes, ma'am.

1 Q. And that was Jessie --

2 A. Ressler.

3 Q. Ressler.

4 MS. COOPER-SMITH: Okay. That's all I have.

5 MR. MAURER: Gary Maurer, UGI. No questions.

6 BY MR. KRIEGER:

7 Q. One -- the only question I have is a timeline-related one.

8 12:09 you said you received a call from Jessie?

9 A. I believe so.

10 Q. And that he was heading into the shop. Is that the last call
11 you had?

12 A. Yes.

13 Q. I just wanted to make sure.

14 A. Well, that's the last call I -- that's the last person I
15 spoke to that I can remember that day.

16 Q. And then, as the foreman of the crew, typically -- you know,
17 you talked about some of the activities. Are you responsible
18 overall for overseeing the repair activity that occurs?

19 A. Yes, sir.

20 Q. Okay. And kind of in that role, you're -- you would then be
21 providing direction to the foreman -- or to the laborer and the
22 operator in the course of doing that activity?

23 A. Yes, sir.

24 MR. KRIEGER: Okay. That's the only question I have.

25 MR. EVANS: Yes. Just a few other questions.

1 BY MR. EVANS:

2 Q. When you are going to -- this is Roger Evans -- when you're
3 going to address a C leak and you know that when you're en route
4 to a C leak, can you go through all the steps in your -- you know,
5 that you're going to be thinking about?

6 So when you get there, do you have a checklist or do you have
7 -- you know, what steps you would go through before -- you know,
8 once you get out of the truck, what are you going to do?

9 A. Some of them are routine but it depends on the nature of the
10 leak. Not all of them are the same. But as far as the routine
11 stuff, it's -- I'm not thinking about it, it just happens when I
12 get out to the jobsite.

13 Q. Well, let's just go to, let's say, a C leak and you know the
14 C leak is a smell in a home. The odor's in the home. Tell us
15 what you would do from the moment you get out of the truck and go
16 forward with that.

17 A. You're saying, it's just -- there's just gas in the house?
18 Is that what you're saying?

19 Q. Yes.

20 A. Well, typically, I don't -- I'm not the first one there. The
21 first responder usually is the first one there. But if I get
22 there and there's gas into the house, I'd ask the first responder
23 if he's evacuated; is the area safe? On duty, we're not the first
24 ones on-site to, I guess, check the houses and try to pinpoint
25 inside leaks.

1 Q. But as your role as a duty person, you would never be a first
2 responder?

3 A. No. My purpose is to, like I said, run the crew, show up and
4 repair the leaks.

5 Q. So the decision that one would make to excavate by hand and
6 do a pinch, where did that -- where does that decision come from?

7 A. It can come from the duty supervisor; it can come from me.
8 Usually I -- well, I try to beat the rest of the crew out there,
9 but if it came down to -- well, typically -- I had all the
10 equipment on my truck, so it either comes from me or the duty
11 supervisor.

12 Q. Okay. And when you make a decision, though, to pinch a line,
13 what's the basis to say, okay, we're going to have to pinch it?
14 You know, what brought you to that decision, normally; in any
15 case?

16 A. Well, it depends on a number of factors. Are we talking is
17 -- their house is affected, where the area is, other utilities,
18 what kind of readings we're getting, where valves are located. It
19 -- I mean, it depends on the situation.

20 Q. But going back to -- do we have a timestamp for your arrival
21 on the scene?

22 A. I'm not sure. I don't remember. On the timeline, I think
23 there should be something on the timeline (indiscernible).

24 Q. Okay. I can look at it later. I was just curious.

25 A. Yeah, we'd have to look at the timeline to be sure.

1 Q. Okay. So you're saying the decision to pinch a line, a lot
2 of factors go into it. And I know you can't recall this
3 particular one, but -- so we'll go from there. Different
4 question.

5 Have you ever -- have you had a chance to work with the first
6 responder on a lot of these cases in the past?

7 A. I've worked with them on jobs, yes.

8 Q. But as -- with him as the first responder role?

9 A. Yes, but not as -- I wasn't the foreman. I was typically the
10 operator or laborer.

11 Q. Is it -- I mean, just based on your history of working with
12 this person, was his approach to these things like -- was he like
13 a super conservative guy, you know, with regard to playing by the
14 book or playing, you know, kind of like -- can you give us any
15 idea of how he would compare with other people you work with that
16 do this kind of work?

17 A. You're talking about Ricky Boudier?

18 Q. Yeah.

19 A. Ricky wasn't lax. He was gung-ho. I mean, I trust him.
20 He's -- he wouldn't allow anyone to get hurt or any co-workers to
21 get hurt, and he knew his stuff.

22 Q. Okay. Have you ever had an instance where you went on a
23 scene and Ricky removed a meter from a -- on a leak? Where the
24 meter was actually removed from the home?

25 A. Have I ever been on a leak where he removed a meter?

1 Q. Yes.

2 A. I couldn't recall. I mean, I've been on so many leaks during
3 my time here, I --

4 Q. Okay. Well, let's take Ricky out of the question and say,
5 the removal of a meter when you address a leak, has that been
6 something that you've seen in the past?

7 A. Yes.

8 Q. And can you give us a thumbnail discussion of why one would
9 do that?

10 A. If you have gas readings in a house, it's kind of like a
11 fail-safe. You turn off the riser valve; there's still a
12 possibility that that valve could fail, and then you'd have gas
13 still seeping into the house. So removing the meter would be a
14 fail-safe to make sure that, if that valve were to fail, that gas
15 isn't entering the house and it's venting into the atmosphere
16 outside. So that, that's where I've seen that.

17 Q. And is that a practice that they teach in this -- in your
18 training? In those 4 years you've been here, have you seen that
19 as a viable method to alleviate, you know, some of the risk by
20 removing a meter?

21 A. Yes.

22 Q. That is taught?

23 A. I couldn't tell you if it, verbatim, but, yes, that's
24 something we do in the field just -- I mean, if we can take a
25 precaution, then we're going to do it.

1 Q. So in the eyes of the average person who does what you do,
2 they see the removal of the meter as a safety precaution to
3 minimize risk?

4 A. It -- depending on a situation. If there's gas in the house
5 and we can't figure out how it's getting in there, yes.

6 MR. EVANS: Okay. I think that's all I have.

7 MR. KENDALL: Edward Kendall, NTSB. I just have one
8 question.

9 BY MR. KENDALL:

10 Q. Who's your supervisor in C&M?

11 A. Right now? Or typically?

12 Q. Or at the time of the accident, I guess.

13 A. Duty super was Jason Trimble and he's also my supervisor
14 during regular hours.

15 MR. KENDALL: Okay. That's all I have. Thank you.

16 MS. COOPER-SMITH: Terri Cooper-Smith. No questions.

17 MR. MAURER: Gary Maurer. No questions.

18 MR. KRIEGER: Bob Krieger. No questions.

19 MR. EVANS: Okay. This concludes the interview.

20 (Whereupon, the interview was concluded.)
21
22
23
24
25

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD



IN THE MATTER OF: RESIDENTIAL GAS EXPLOSION
ON SPRINGDALE LANE, MILLERSVILLE,
PENNSYLVANIA, JULY 2, 2017
Interview of Robert Lopez

ACCIDENT NO.: DCA17FP006

PLACE: Millersville, Pennsylvania

DATE: September 15, 2017

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.



Sharon A. Estes
Transcriber

D



**NATIONAL TRANSPORTATION SAFETY BOARD Office of
Railroad, Pipeline, and Hazardous Materials Investigations
Washington, D.C. 20594**

Pipeline Operations / Integrity Management

Group Chairman's Factual Report

Report Date: 25 Oct 2018

Accident Information

| | |
|--------------------------------|--|
| Accident Number: | DCA17FP006 |
| Location: | Millersville, Pennsylvania |
| Date: | July 02, 2017 |
| Time (approximate): | 12:32 p.m. Eastern Daylight Time (EDT) |
| Material Released: | Natural Gas |
| Type of System: | Gas distribution pipeline |
| Owner / Operator: | UGI Utilities, Inc. |
| Property site: | 206 Springdale Lane, Manor Township, PA. |
| Fatalities / Injuries: | 1 Fatality / 3 Injuries |
| Damage / Clean-up Cost: | \$ [data not provided by the distribution pipeline operator] |

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A. Group Members

Roger D. Evans (Pipeline Operations / Integrity Management - Group Chairman)
 Investigator-in-Charge
 Pipeline Accident Investigator
 National Transportation Safety Board
 Washington, DC

Robert S. Biggard (Pipeline Operations / Integrity Management - Group Member)
 Fixed Utility Valuation Supervisor, Gas Safety Division
 Pennsylvania Public Utility Commission
 Harrisburg, PA

Wayne Chan (Pipeline Operations / Integrity Management - Group Member)
 General Engineer – Pipeline Inspector
 Office of Pipeline Safety Eastern Region
 U.S. Department of Transportation
 Pipeline & Hazardous Materials Safety Administration
 West Trenton, NJ

B. Accident Summary

On Saturday, July 2, 2017, at approximately 12:32 p.m. EDT, a natural gas-fueled explosion occurred at the single-family residence located at 206 Springdale Lane, Millersville, Pennsylvania. The explosion completely leveled the residence and damaged six neighboring homes, one which was subsequently condemned.

Local authorities initially condemned the residences to the left and right of the demolished home following an assessment of the damages (see Figure 1). The home at 201 Springdale Lane was subsequently repaired, while the home at 202 Springdale Lane was torn down and completely rebuilt.



Figure 1. Debris field at cul-de-sac area where the explosion the occurred

Prior to the explosion, a neighborhood resident walking in the area smelled natural gas and called the local gas utility, UGI Utilities, Inc. (UGI), at 10:26 a.m. About half an hour of the gas odor being reported, a UGI service technician ¹ arrived to investigate. The technician confirmed a gas leak. An additional UGI technician and a Senior Supervisor arrived shortly thereafter. In response to UGI's Emergency PA One Call ², a Lancaster Area Sewer Authority (LASA) employee also arrived on scene to mark the location of the sewer lines. About 15 minutes prior to the explosion, UGI personnel directed the resident of 206 Springdale Lane to evacuate the residence. She left her residence by personal automobile. At 12:15 p.m., UGI requested fire department support on scene. The first fire truck arrived at 12:28 p.m. and assumed a 'stand-by mode' position. The household explosion occurred about four minutes later.

¹ UGI refers to the service technicians as Mechanics, which have a 'grade' designation of I, II, or III, as determined by the degree of qualifications, experience, etc.

² Ref, and for further information, see <http://www.pa1call.org/PA811/Public/>.

As a result of the explosion, one UGI employee was killed and three others were injured; two UGI employees and the LASA employee. The three injured individuals were transported and admitted at a local hospital. They were released within days of the accident.

Following the accident, the buried natural gas main and service pipelines for the cul-de-sac homes were tested with air pressure. All segments held pressure, with the exception of the Permalock®³ mechanical tapping tee on the main that connected the residential gas service line that served the destroyed dwelling. Subsequent inspection of the Permalock® mechanical tee revealed that it had two fractured Nylon bolts and leaked at the connection of the tee to the 2-inch main pipeline.⁴ At the time of the accident, the operating pressure of the line was 54 pounds per square inch gauge (psig), as measured at the closest monitoring point that was located approximately half a mile away from 206 Springdale Lane.

C. Accident Sequence of On-Scene Events

On July 2, 2017, shortly after the call by a neighborhood resident of a gas odor at 10:26 a.m. near 202 Springdale Lane, UGI Dispatch made a call to a UGI Mechanic III to respond to the complaint. At 11:00 a.m., the Mechanic III arrived on scene. As the first responder, the Mechanic III was the first UGI representative on site and was responsible for assessing the presence of a leak and the emergency, and began his assessment to determine the presence of a leak. Consistent with UGI policy and training, the Mechanic III was required to follow UGI's leak survey procedure (Gas Operations Manual, Section 70.20). Under that procedure, the Mechanic III used gas detection equipment and other tools to gather readings and investigate the leak reported at 202 Springdale Lane.⁵ The mechanic subsequently determined that the leak source was at 206 Springdale Lane, which was the adjacent residence.

At 11:18 a.m., the Mechanic III called the Senior Supervisor of Operations Construction and Maintenance (Senior Supervisor), who was the designated on-call UGI supervisor at that time. The Mechanic III requested a response crew and informed the Senior Supervisor that there were high gas readings.⁶ The Mechanic III informed the Senior Supervisor that he suspected that a mechanical tee was leaking, and that he measured a reading of 80% gas in the sewer and 98% gas over the tee.⁷ Based on the gas readings, the Mechanic III identified the leak as a "C leak," or an emergency leak because of the high percentage of gas identified.⁸ The Senior Supervisor contacted UGI Dispatch at about 11:20 a.m. and requested that they place an Emergency PA One

³ The Honeywell Elster Perfection PermaLock® Mechanical Tapping Tee is a tee that can be installed on the main to supply the individual gas service to a gas customer without the need to shut down the natural gas main.

⁴ See NTSB Materials Lab Report, 18-003, at page 4.

⁵ Source: NTSB interview transcript of UGI employee(s).

⁶ Source: NTSB interview transcript of UGI employee(s).

⁷ Source: NTSB interview transcript of UGI employee(s).

⁸ Source: NTSB interview transcript of UGI employee(s).

Call because, to respond to the confirmed leak, digging was anticipated at the accident location⁹; the Emergency PA One Call ticket was issued at 11:27 a.m.¹⁰

At approximately 11:20 a.m., the Senior Supervisor began assembling a crew to respond to the leak. He did so using the duty roster maintained by UGI, which reflects employees who are on paid “on-call” status or who have volunteered to be available to respond to an emergency.¹¹ The Senior Supervisor made several calls between 11:25 a.m. and 11:44 a.m. to the Mechanic II Duty Operator who was on-call and is required to answer all calls for response during off hours, including weekends. That Duty Operator did not respond and was later terminated by UGI. The Senior Supervisor contacted the next Duty Operator appearing on the on-call list, who answered and responded to the scene. By approximately 11:50 a.m., the Senior Supervisor had assembled a 3-person crew that was responding to the site.¹²

The Senior Supervisor, having made calls to another Mechanic who was to be on his way shortly, decided to head to the scene as well. He considered the travel time for the replacement Mechanic II Operator and the fact that the initial odor call had been made nearly an hour earlier. The Supervisor considered time to be of the essence; hence, he decided that he would personally respond to the scene. The Senior Supervisor explained that prior to arriving on-scene he reviewed the location of the nearest valve to the site. On his way, the Senior Supervisor also contacted the UGI Engineer and informed her that he expected to shut down a main.¹³ As the Duty Supervisor, the Senior Supervisor was allowed to exercise judgement to determine whether it was appropriate to squeeze-off the line or shut down a gas valve.¹⁴

Prior discussions had taken place between the Supervisor and other UGI employees as to the possibility of closing the valve on the main (See Figure 2); however, the Senior Supervisor made a decision to squeeze-off the main line because of his belief that doing so was the most rapid way of stopping the flow of gas.¹⁵ During his NTSB interview, the Senior Supervisor described the following factors that also influenced his decision to squeeze-off the main line: (i) prior to arriving on the scene, he reviewed the location of the nearest valve to 206 Springdale Lane¹⁶; (ii) he considered that given the circumstances surrounding the leak, even if the valve were turned off, gas would continue to flow to the leak until the system lost pressure; (iii) while he had the opportunity to stop the flow of gas using an excess flow valve fused to the outlet of the tee, the excess flow valve would not stop the gas from leaking out of the mechanical tee¹⁷; (iv) the line could be quickly and successfully excavated and squeezed, as compared to the time necessary to reach the valve; and (v) a vehicle may have been obstructing access to the valve.¹⁸

⁹ Source: NTSB interview transcript of UGI employee(s).

¹⁰ Source: UGI Dispatch Log.

¹¹ Source: NTSB interview transcript of UGI employee(s).

¹² Source: NTSB interview transcript of UGI employee(s).

¹³ Source: NTSB interview transcript of UGI employee(s).

¹⁴ Source: NTSB interview transcript of UGI employee(s).

¹⁵ Source: NTSB interview transcript of UGI employee(s).

¹⁶ Source: NTSB interview transcript of UGI employee(s).

¹⁷ Source: NTSB interview transcript of UGI employee(s).

¹⁸ Source: NTSB interview transcript of UGI employee(s).



Figure 2 -- Location of gas shut-off in relation to accident site

The Senior Supervisor also stated that he received a phone call on his way to the site from the Mechanic III, the UGI first responder on scene, who informed him that he measured 11% LEL in the basement at 202 Springdale Lane and was having trouble gaining access to the house located at 206 Springdale Lane.¹⁹ The Senior Supervisor informed the Mechanic III that he should do whatever was necessary, including a forced entry, to clear the house at 206 Springdale Lane.²⁰ The Mechanic III continued to attempt to make contact with the resident at 206 Springdale Lane.²¹

In response to UGI's Emergency PA One Call²², a Lancaster Area Sewer Authority (LASA) employee arrived on scene at approximately noon, to mark the location of the sewer lines.²³

Shortly after 12:00 p.m., the Senior Supervisor arrived at the scene and continued making calls from his vehicle to management and others keeping them abreast of the situation at hand.²⁴ Within ten minutes of arriving on scene, the Senior Supervisor made an assessment that the fire department was needed and at 12:14 p.m. he called UGI Dispatch to request that they contact 911, which occurred at 12:15 p.m.²⁵ The Mechanic II arrived on-scene at 12:19 pm.

The Senior Supervisor then left his vehicle, grabbed a shovel, and began unearthing the gas main with the Mechanic II. UGI procedures allowed for hand digging to address a gas leak without a

¹⁹ Source: NTSB interview transcript of UGI employee(s).

²⁰ Source: NTSB interview transcript of UGI employee(s).

²¹ Source: NTSB interview transcript of UGI employee(s).

²² Ref, and for further information, see <http://www.pa1call.org/PA811/Public/>

²³ Source: NTSB interview transcript of LASA employee.

²⁴ Source: NTSB interview transcript of UGI employee(s).

²⁵ Source: NTSB interview transcript of UGI employee(s).

response to an Emergency PA One Call to first identify underground facilities. The Senior Supervisor and the Mechanic II both began digging up the main at the location of the gas leak using hand shovels.²⁶ Eventually they reached the stone screenings and underground warning tape surrounding the gas main, where they began making preparations to install the ‘squeeze-off tool’²⁷.²⁸ After the gas main was uncovered, the Mechanic II went to retrieve the squeeze-off tool from his truck.²⁹

In concert with the excavation that was underway, the Mechanic III reported that he was reading 20% LEL at the stoop of the residence (206 Springdale Lane) and that he had trouble getting the occupant to respond to his knock at front door.

The Mechanic III had visited the residence to the left of the accident home (202 Springdale Lane) two times and had conversed with two individuals that were in the home at the time. The LEL reading on the first visit was 10%. Having returned thirty minutes later, he advised the couple that there was no need at the time to evacuate the premises as the percentage of gas LEL was now at 11%, less than UGI’s 20% LEL threshold for resident evacuation.

While the main line was being excavated, the occupant of 206 Springdale Lane finally responded to the Mechanic III’s many attempts to gain access to the home.³⁰ Based on the gas percentage readings in the home reading of 20% LEL, the Mechanic III decided to evacuate the home. The occupant requested permission to drive her personal vehicle out of the garage. The Mechanic III did not allow the occupant to use her garage door opener; however, he did manually open the garage door and allowed the occupant to start her vehicle, whereby, the occupant drove out of the garage and into the neighborhood and departed the area. The electrical power to the neighborhood remained activated at the time of the accident.³¹

The Mechanic III then went to the left side of the accident home (206 Springdale Lane) where the meter was located, and was near the gas meter at approximately 12:32 p.m. when the explosion occurred. The two gas employees that were digging at the main line in front of the home, had fully excavated the plastic main and were ready to squeeze-off the plastic main line when the explosion occurred. The representative from LASA had been walking in the cul-de-sac when the explosion occurred. The Mechanic III was killed, while the other three workers were injured from the blast.

²⁶ Source: NTSB interview transcript of UGI employee(s).

²⁷ Generally described, a squeeze-off tool is a mechanical device that’s found in certain pipeline operations that utilize plastic pipe, in which the tool principally consists of two parallel-positioned bars (also referred to as “jaws”) that compress around the outside diameter of the pipe, which results in a stoppage of the pipeline flow (ref, and for further information, see “General Guidelines for Squeezing Off Polyethylene Pipe in Water, Oil, and Gas Applications”, © The Plastics Pipe Institute, Inc. 2017, Irving, TX; [Internet] <https://plasticpipe.org/pdf/tn-54.pdf>).

²⁸ Source: NTSB interview transcript of UGI employee(s).

²⁹ Source: NTSB interview transcript of UGI employee(s).

³⁰ Source: NTSB interview transcript of UGI employee(s).

³¹ At 12:59pm, UGI Dispatch contacted the local electric power provider, PPL Electric Utilities (PPL), and requested that they shut off the power to the area affected by the accident. At 1:08pm, PPL confirmed that the electric power was shut-off and that their personnel were on site.

D. Description of the Operator

See Survival Factors – Factual Report, § 1.3 Natural Gas Retail Supplier/Distributor - UGI, for data of this topic-point.

E. Accident Site Description

See Survival Factors – Factual Report, § 1.2 Site Characterization – Pre-Event, for data of this topic-point.

F. Pipeline System

The natural gas main on Springdale Lane is plastic material installed on August 7, 1995. The maximum allowable operating pressure (MAOP) of the system main directly serving Springdale Lane is 60 psig. The pressure in the main at the time of incident was approximately 54 psig. This reading was taken from a supervisory control and data acquisition (SCADA) point located at the intersection of West Charlotte Street and Duke Street in Millersville.³² The print line (embossed label) from the main removed on Springdale Lane shows the pipe as 2" IPS SDR 11 UPONOR, ALDYL A, ROTASONIC INSPECTED, PE - 2406 CDAD, T 04 190 - 040595 - -FOR GAS USE ONLY ASTM D2513 Rotasonic Inspected.³³

The service line to the 206 Springdale Lane residence was installed in June of 1998³⁴, and was constructed of plain end, bare, ½-inch UAC 2000³⁵ plastic pipe manufactured by Uponor Aldyl Co. The total footage between the main and the meter at the residence was 50-feet.³⁶ The service line to the residence was protected with a 1-inch plastic pipe as a protective jacket. The jacket ran from the outlet of the service tee to the vicinity of the meter.

G. Mechanical Tapping Tees

See Safety Recommendation Report, “Installation of PermaLock® Mechanical Tapping Tee Assemblies”, Recommendation Number P-18-001 through -004, dated June 18, 2018, for data of this topic-point.

Supportive to the above referenced Safety Recommendation Report, an examination of the Mechanical Tapping Tee (recovered from the accident site) and related pipeline equipment, as well as an examination of exemplar equipment (from various sources, as described), was conducted by the NTSB Office of Research and Engineering, Materials Laboratory Division, the factual data of which was incorporated into Materials Laboratory Factual Report documentation,

³² UGI supplied documentation “Pressure of main at the time of the incident”

³³ UGI supplied documentation “Pipe Material Properties”

³⁴ The installation preceded the promulgation of the U.S. Department of Transportation, Pipeline and Hazardous Material Safety Administration’s Operator Qualification regulations under 49 C.F.R. 192.801-809, 195.501-509.

³⁵ UGI supplied documentation “Service Line Data”

³⁶ UGI supplied documentation “Service Line Data”

Report Numbers 18-003 (dated May 8, 2018), 18-004 (dated May 8, 2018), 18-005 (dated May 8, 2018), 18-006 (dated May 8, 2018), and 18-007 (dated May 8, 2018).

H. Activities at Time of Accident

See Survival Factors – Factual Report, § 5.2 Summary Timeline of Activities Immediately Prior to the Explosion, for data of this topic-point.

I. Pipeline Integrity Management

See Survival Factors – Factual Report, § 4.2 System Integrity Plan, for data of this topic-point.

J. Regulatory Enforcement Action

On October 4, 2018, the Pennsylvania Public Utility Commission / Bureau of Investigation and Enforcement, issued an “I & E Formal Complaint”, titled “Re: Pennsylvania Public Utility Commission, Bureau of Investigation and Enforcement, Complainant, v. UGI Utilities, Inc., Respondent, Docket No. C-2018-”³⁷. This complaint, as an enforcement action of that regulatory agency, alleged a number of safety violations that occurred during the gas leak response on Springdale Lane, to which a cumulative civil penalty of \$2,090,022 was proposed.

K. Initiatives Employed by UGI Subsequent to the Accident

See Survival Factors – Factual Report, § 7.2 UGI, for data on this topic-point.

Authorship

 // s // Date: 25 Oct. 2018
 Roger D. Evans
 Accident Investigator
 Operations / Integrity Management - Group Chairman

³⁷ Reference, and for additional information, see <http://www.puc.pa.gov/pcdocs/1588540.pdf>.

E



NATIONAL TRANSPORTATION SAFETY BOARD
Office of Railroad, Pipeline, and Hazardous Materials Investigations
Washington, D.C. 20594

Survival Factors

Group Chairman's Factual Report of the Investigation

– Emergency Preparedness / Emergency Response¹

Report Date: October 31, 2018

A. ACCIDENT

Accident Number: DCA17FP006
Location²: Millersville, Pennsylvania
Date: July 02, 2017³
Time (approximate): 12:32 p.m. EDT⁴
Event description: apparent unintended release of commercially supplied natural gas, and subsequent explosion within a residential dwelling
Property site⁵: 206 Springdale Lane, Manor Township, PA.

B. SYNOPSIS OF THE ACCIDENT

See documentation as compiled by the Investigator-in-Charge.

¹ The Survival Factors investigation exclusively addresses the emergency preparedness and emergency response, and injury causation elements of the accident.

² i.e., the accident site jurisdictional municipality reference as designated by the agency

³ NTSB initiated an investigation on the evening of July 2, 2017.

⁴ Eastern Daylight Time

⁵ i.e., the actual physical location of the accident site

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Note – photographs compiled during the investigation by the Survival Factors Technical Working Group will be forthcoming as separate Survival Factors factual report documentation.



Select abbreviations and acronym nomenclature used in this report

| | |
|-------|---|
| ~ | approximate, or approximately |
| BREMA | Blue Rock Emergency Management Agency |
| BRFD | Blue Rock Fire Rescue |
| BRRFD | Blue Rock Regional Fire District |
| CFR | Code of Federal Regulations |
| EDT | Eastern Daylight Time |
| F | Fahrenheit [temperature scale] |
| hrs | hours (ref to 4-digit, or 6-digit military time) |
| inHg | inches of Mercury [barometric pressure] |
| mph | mile per hour [speed] |
| MTPD | Manor Township Police Department |
| OPS | Office of Pipeline Safety, within the PHMSA |
| PHMSA | U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (see [Internet] http://www.phmsa.dot.gov/) |
| ref | reference, or in reference to |
| SF | Survival Factors [investigation] |
| UGI | UGI Utilities, Inc. |

C. SURVIVAL FACTORS -- TECHNICAL WORKING GROUP PARTICIPANTS

Mr. Richard M. Downs, Jr., PE
NTSB / Survival Factors - Emergency Response / Technical Working Group Chairperson

Mr. Gary Maurer
UGI Utilities, Inc. (UGI)

Mr. Duane E. Hagelgans
Blue Rock Fire Rescue - Station 90 (Blue Rock FR)

Ms. Terri Cooper-Smith
Pennsylvania [State] - Public Utility Commission (PA-PUC)

D. DETAILS OF THE INVESTIGATION⁶

1.0 Relevant Background Factors

1.1 Locality of the Accident / Civil Jurisdiction, and Property Identification

The accident (a natural gas leak, explosion and fire) occurred in a residential dwelling structure that was located at 206 Springdale Lane, in Manor Township, which is a municipality of Lancaster County, Pennsylvania (PA). The residential community of the accident site is also known locally as “Springdale Farms”.⁷ The accident site is within the emergency services jurisdiction (fire protection district) of the Blue Rock Fire Rescue - Station 90, which is located in Millersville, PA (see further § 3.1 in this report), and is within the law enforcement jurisdiction of the Manor Township Police Department (see § 3.4).

1.2 Site Characterization – Pre-Event

The area of the accident site is a ‘moderately’ dense (population density) suburban neighborhood, generally consisting of single-family, residential dwelling structures.⁸

⁶ Source: on-scene observations of, and field notations recorded by, the SF Group Chair, also utilizing data of the Party to the Investigation participants (that supported the investigation), and as further described.

⁷ Source: permanent signage located at the roadway entrance of the community.

⁸ Manor Township, Lancaster County, PA, comprises 38.33 sq. mi. [total area], and had a population of 19,612 persons; source: “US Census Bureau - Quick Facts” [data tabulation], 2010 census (for additional data, see [Internet] <https://www.census.gov/quickfacts/fact/table/manortownshiplancastercountypennsylvania/AGE275210>).

1.2.1 Accident Structure - Overall Physical Configuration^{9, 10}

The residential structure at 206 Springdale Lane that was directly impacted by the accident, which was demolished as a result of the explosion (see § 2.1.1), was a single-family, residential-use, stucco masonry veneer¹¹, wood-framed construction, dwelling. The dwelling was originally constructed in 1998, and was located on a ‘cul-de-sac’¹² roadway. The structure comprised 4,356 sq. ft., as situated on three levels (i.e., a basement, a first floor, and second floor), which included an attached 3-car garage (at the north end of the building), and an attached wood deck (at the west side of the structure). The front-entrance of the subject dwelling, which faces the ‘cul-de-sac’, is on the east side of the structure. The main portion of the dwelling was constructed on a concrete block perimeter wall foundation (that contained the basement areas), with the garage segment of the dwelling constructed on a concrete slab. At the time of the accident, the dwelling contained the personal effects of the owner / resident (i.e., household furnishings [furniture, etc.], major appliances, floor coverings, clothing, etc.), including one automobile that was parked in the garage.

Natural gas, which was sold to the subject property owner by a retail supplier / distributor, UGI Utilities, Inc. (see further § 1.3), was delivered to the subject residential dwelling via an underground distribution pipeline system, which was also likewise sold and delivered (in a similar manner) to the other residential dwelling properties that are located in the Springdale Farms residential community.

The distribution pipeline system at the subject property was comprised of a “main” pipeline, a “service” pipeline, and related appurtenances (i.e., pipeline fittings and fixtures; see further § 1.2.2). The natural gas was utilized as fuel for domestic heating (residential spaces), hot water heating (domestic use), household cooking (e.g., a kitchen stove), a gas fireplace, and a gas [laundry] dryer.¹³

A basic schematic floor plan illustration, depicting the accident site infrastructure (pre-event), was obtained by the investigation¹⁴, a copy of which is anticipated to be available in the NTSB docket. Photographic images of the exterior of the structure, recorded both prior to, and subsequent to the accident, were obtained by the investigation, which are anticipated to be available in the NTSB docket.

⁹ Ref, Lancaster County, PA, Property Assessment Office - tax records database documentation, and for further information, see [Internet] <http://lancasterpa.devnetwedge.com/parcel/view/4109447900000/2017>, and as further described.

¹⁰ Source: on-scene observations of, and field notations recorded by, the SF Group Chair, as supported by the SF Group - participating Parties, and also utilizing informational data of other sources as further described.

¹¹ Stucco is an exterior cement plaster material that is applied to a wall sub-surface (panel) of a structure.

¹² A ‘cul-de-sac’ is an infrastructure feature that is typically located at the end of a street that does not have an exit at the opposite end [of the entrance], in which the street terminates with an enlarged, usually somewhat circular-shaped roadway surface (i.e., the ‘cul-de-sac’), the area of which can be used by vehicles to facilitate a U-turn process.

¹³ Source: NTSB interview conducted with the property resident / owner; see the transcript for details.

¹⁴ Source, and for further information, see [Internet] <https://www.co.lancaster.pa.us/143/GIS-Division>, and <http://lancasterpa.devnetwedge.com/parcel/view/4109447900000/2017>.

In addition to the subject property (accident site dwelling at 206 Springdale Lane), the ‘cul-de-sac’ contained three other similarly constructed, two-story / single-family, residential dwellings (i.e., the properties at 197, 201, and 202 Springdale Lane). Additional residential dwellings were located on Springdale Lane that were situated to the east of the cul-de-sac. The properties located on the cul-de-sac, and properties located on Springdale Lane to the east of the cul-de-sac (in the accident site area), were bordered by a natural woodlands area that was identified as Springdale Park.

Several maps, describing the accident site dwelling, and the layout configuration of the residential dwellings that were located on the ‘cul-de-sac’ at the accident site, were obtained by the investigation, which are anticipated to be available in the NTSB docket.

1.2.2 Summary of Natural Gas Delivery Operations at the Accident Site¹⁵

The following provides a generalized description¹⁶ of the pipeline infrastructure, and related fittings and fixtures (operational equipment) at the accident site.¹⁷

See the Operations Group Factual Report for additional information detail on this topic.

a. Gas Delivery Infrastructure System at 206 Springdale Lane

A buried, two-inch (diameter) plastic gas distribution “main” [pipeline], owned / operated by UGI Utilities, Inc., which also supplied the natural gas product to the residential dwellings that were situated on the ‘cul-de-sac’ roadway, was located in front of the subject residential dwelling, about three feet from the curb-line of the ‘cul-de-sac’ roadway¹⁸. The distribution main [pipeline] was buried (at the accident site address) to a depth of soil coverage of about three feet, in which a mechanical connection was provided (as further described), to join the distribution main to additional buried piping that extended to the subject residential dwelling.

This mechanical piping connection (at the accident site address) was comprised of a one-inch [diameter] plastic “sleeve pipe”, which contained a one-half inch [diameter] plastic “service line” [pipeline], in which a device, referred to as a “saddle service-tee” (which is also referred to as a ‘tapping-tee assembly’), was also incorporated in this connection equipment, to mechanically

¹⁵ Source: on-scene observations of, and field notations recorded by, the SF Group Chair, utilizing informational data of UGI personnel (that supported the on-scene investigation), and as further described.

¹⁶ The intent of this report section is not to provide a detailed description of the gas delivery system at the accident site (in that, that topic will be addressed in greater detail in the Operations Group Factual Report of the Investigation), but rather, this section is supportive to a general understanding of the gas delivery system, relative to the actions immediately preceding the accident (explosion) and the emergency services response to the accident site.

¹⁷ Additional select / supplemental technical data [supportive to this report section] was provided in email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹⁸ The pathway (route) of the gas main at the site was characterized as being “behind” the curb-line, i.e., it was located in an area that could be visually identified (to the casual observer standing in the ‘cul-de-sac’) as being on the “front lawn” of the subject property (which was the pipeline-routing convention for the properties situated on the ‘cul-de-sac’), although the exact property line at the site was not specifically delineated in, nor is it of significant importance to, the investigation.

join the one-half inch “service line” to the two-inch “main”. The tapping-tee assembly contained a mechanical fixture that’s referred to an “excess flow valve”, and a mechanical connection point for the one-half inch service line. After the tapping-tee assembly connection point, the sleeve pipe / service line extended in the direction of the subject residential dwelling, in which the service sleeve initiated at a point about one foot after the tapping-tee connection, and terminated at a point about one foot from the mechanical connection point of the service riser (as further described).

At the point that the sleeve pipe / service line was proximate to (i.e., within about one foot of) the exterior sidewall surface (of the structural foundation) of the dwelling, the piping segment, which at that point is referred to as a “service riser”, then extended upward to the ground surface, which was on the south side of the subject residential dwelling. Upon exiting the ground, the service riser further extended upward to, and was mechanically connected to the inlet piping of the gas delivery equipment as installed in the piping system at that location, which is referred to as the “prefabricated meter set”. The prefabricated meter set is fitted with a manually-operated shut-off [flow control] valve, a service regulator device¹⁹, connection piping, and a customer [gas] meter²⁰. Piping, connected to the outlet of the gas meter equipment (which is also referred to as the “fuel line”), further extended to, and passed through the (basement) foundation wall of the subject residential dwelling, where it was connected to the various natural gas-fueled appliances of the dwelling (e.g., a furnace, hot water heater, stove, etc.).

b. Associated Gas Flow Control Equipment Configuration²¹

A “main valve” is one means for appropriately qualified personnel to control the flow of gas into a given segment of “main” [pipeline].²² Such a flow control function would include the ‘shut off’ (complete stoppage) of gas flow beyond the main valve, which in this case included the subject residential dwelling²³, among the other residential properties located on Springdale Lane (as situated beyond the “main valve”) that are serviced from that gas main. The main valve that was nearest to the subject structure, which was the only main valve that provided a flow control function in the gas main that extends to the accident site (i.e., a complete stoppage of the gas flow)²⁴, was located approximately 950 feet east (of the accident site) on Springdale Lane, at the intersection of Burr Oak Road.

¹⁹ A “service regulator means the device on a service line that controls the pressure of gas delivered from a higher pressure to the pressure provided to the customer” (ref 49 CFR 192.3 Definitions).

²⁰ A “customer meter means the meter that measures the transfer of gas from an operator to a consumer” (ref 49 CFR 192.3 Definitions), in which also the meter records the volume of gas usage data for later [data] recovery by the natural gas vendor.

²¹ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

²² Another [gas service] flow control device that is utilized in the field is referred to as a “curb valve”; see further § 4.4.3.

²³ i.e., utilizing a valve located on the “prefabricated meter set”; see further § 1.2.2.a.

²⁴ In some cases, a given segment of main [pipeline] may be supplied from two (opposite) directions, to which the “main valve” on both sides of that segment of main (at a given location) would need to be closed to successfully shut off the gas flow to a given location (gas customer).

Further, the accident site (subject residential dwelling) was located proximate to the far-end of that segment of the gas main [pipeline] that is located along Springdale Lane, in which the gas main terminates in (does not extend beyond) the ‘cul-de-sac’. Additionally, the investigation identified that, in some cases, a given segment of gas main [pipeline] that services a given customer site [address] may be supplied by gas product that flows from two opposite directions, to which a “main valve”, as (might be) located on both sides of that segment of gas main, would need to be closed to successfully stop the flow of gas to a given customer site.²⁵

1.3 Natural Gas Retail Supplier / Distributor - UGI^{26, 27}

UGI Utilities, Inc. (UGI) was the retail supplier / distributor of natural gas for the subject residential dwelling, as well as all the residential properties that were located in the area of the subject residential dwelling (see further § 4.0). UGI was a natural gas and electric utility that services approximately 700,000 customers in portions of 45 counties in Pennsylvania and one county in Maryland. The company, which operates about 13,000 miles of natural gas pipelines, is headquartered in Reading, PA, and is a wholly-owned subsidiary of UGI Corporation, which is based in Valley Forge, PA.²⁸ The natural gas product delivered by the company was purchased from several wholesale suppliers, and was delivered to its customers through a network of underground distribution pipelines of various diameters.

Supportive to its natural gas delivery operations, for service to customers in Lancaster County (i.e., the Millersville area), the company maintains²⁹:

- a Gas Operations Central Gas Control facility in Temple, PA, in which Gas Controllers [personnel] continually monitor the natural gas system pressures and flow rates at key points within UGI’s pipeline systems, using a Supervisory Control and Data Acquisition (“SCADA”) system³⁰,
- a Central Dispatching Office in Reading, PA (see § 4.4.3), to address assignments of field technical personnel,
- 28 “Field Operations Centers” that are situated throughout UGI’s service territory, which are staffed for conducting area field activities (which is collectively referred to as ‘infrastructure maintenance’), such as routine utility work, construction and maintenance, meter reading, emergency response, and other utility field activities³¹,
- (internal / company) training facilities in Reading, Middletown, and Bethlehem, PA, and

²⁵ Ref, and for further information, see the NTSB investigation of an apartment building explosion and fire, Accident Number DCA16FP003, that occurred in Silver Spring, MD, on August 10, 2016, as described in the public docket documentation of [Internet] https://www.nts.gov/investigations/Pages/2016_silverspring_md.aspx.

²⁶ Source, and for further information, see [Internet] <https://www.ugi.com/>, and as further described.

²⁷ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16, 20/2018.

²⁸ Source, and for further information, see [Internet] <https://www.ugi.com/about-us/>

²⁹ Ref, UGI Gas Operations Manual, Procedure Number 60.50 Emergency Plan, and as further described.

³⁰ Source, and for further information, see [Internet] www.puc.pa.gov/NaturalGas/pdf/Reliability/Winter_Reliability_2017-UGI.pdf.

³¹ Supplemental / select technical data in this section provided in email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

- a Customer Service ‘Call-Center’ facility, in Reading, PA ³², that both gas and electric customers and non-customers can contact, by calling [a toll-free line] (800) 276-2722, which:
 - operates weekdays (Monday through Friday) between 8:00 AM and 5 PM, to accept / process existing customer, and new customer inquiries (principally to establish new gas or electric service, address existing customer billing queries, and existing customer - service cessation requests),
 - and also handles emergency calls from the public (i.e., both customers, and non-customers), which is continually operational (24 hours per day / 7 days per week).

Additionally, one of the (above noted) 28 Field Operations Centers [that performs ‘infrastructure maintenance’] is located in the City of Lancaster, out of which its natural gas-service technical staff (field technicians) are stationed to address its natural gas customers in Lancaster County, which includes Manor Township.

1.4 Natural Gas Product Delivered ^{33, 34}

The principal constituent of the natural gas product that was delivered to UGI customers is methane.

An inert odorant, consisting of a sulfur-like material called mercaptan, is added, as a safety measure, to the natural gas product traveling through UGI distribution pipelines, usually before distribution ³⁵, to render it readily detectable by individuals with a normal sense of smell if a leak occurs. UGI is capable of monitoring the ‘odorization’ levels of the natural gas product [in its pipelines], and also can add additional odorant, as needed.

A Safety Data Sheet (SDS) ³⁶ for natural gas was obtained by the investigation, which provides information on the physical data, toxicity, health effects, first aid, reactivity, storage, disposal, protective equipment, and [unintended / uncontrolled] release-handling procedures of the product, as might be needed by emergency responders and any individual who might be exposed.³⁷

1.5 Regulation Applicable to Emergency Preparedness / Emergency Response

³² Ref, UGI Gas Operations Manual, Procedure Number 60.50 Emergency Plan.

³³ Source, and for further information, see [Internet] <https://energy.gov/natural-gas>, and as further described.

³⁴ Supplemental / select technical data in this section provided in email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16, 20/2018.

³⁵ UGI noted that, the majority of UGI’s supplies are odorized upstream of the UGI system by the Transmission Supplier.

³⁶ This documentation was previously referred to as a Material Safety Data Sheet (MSDS); Source, and for further information (as generic information on this topic); see [Internet] <https://energy.gov/ehss/material-safety-data-sheets>, and <http://www.api.org/oil-and-natural-gas/health-and-safety/health-and-safety-in-the-industry/sds-petroleum-industry-practices>.

³⁷ The creation, publication, and use of SDS / MSDS documentation are governed by the Hazard Communication Standard (HCS) that is promulgated by the Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor; ref, and for further information, see [Internet] <https://www.osha.gov/dsg/hazcom/>.

1.5.1 Federal³⁸

The Federal government establishes minimum pipeline safety standards under the U.S. Code of Federal Regulations (CFR), Title 49 "Transportation", Parts 190 - 199. Regulation that addresses pipeline shipment of natural gas is addressed in 49 CFR Part 192. The Office of Pipeline Safety (OPS), within the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration (PHMSA), has overall regulatory responsibility for hazardous liquid and gas pipelines under its jurisdiction in the United States. The OPS enforces pipeline safety regulations for interstate gas and hazardous liquid pipeline operators in Pennsylvania, based on the inspections performed by the state.³⁹

Specific regulation to address prospective Survival Factors issues (i.e., relative to emergency preparedness / emergency response aspects of the investigation) is addressed under the following sections of the Code of Federal Regulation (CFR), Part 192:

| | |
|----------------------|--|
| 49 CFR 192.605 | Procedural manual for operations, maintenance, and emergencies ⁴⁰ |
| 49 CFR 192.615 | Emergency plans ⁴¹ |
| 49 CFR 192.616 | Public awareness ⁴² |
| 49 CFR 192 Subpart P | Gas Distribution Pipeline Integrity Management ⁴³ |

1.5.2 State - Pennsylvania⁴⁴

The PHMSA / OPS enforces pipeline safety regulations for interstate gas and hazardous liquid pipeline operators in Pennsylvania, based on the inspections performed by the state. By signed agreement with OPS, the state inspects interstate gas and hazardous liquid pipeline operators in Pennsylvania. Through certification by OPS, the state inspects and enforces the pipeline safety regulations for intrastate gas and hazardous liquid pipeline operators in Pennsylvania. The State of Pennsylvania has developed its own pipeline standard(s), in which State pipeline standards may be more stringent, but cannot be less stringent, than Federal regulations.

The Pennsylvania Public Utility Commission (PA-PUC) is the designated agency of the State of Pennsylvania, as empowered by the Pennsylvania legislature, to perform, as an agent for the

³⁸ Source, and for further information, see [Internet] <http://phmsa.dot.gov/pipeline>, and as further described.

³⁹ Source, and for further information, see [Internet] https://primis.phmsa.dot.gov/comm/FactSheets/States/PA_State_PL_Safety_Regulatory_Fact_Sheet.htm.

⁴⁰ Ref [Internet] http://www.ecfr.gov/cgi-bin/text-idx?SID=bfcd0369491cb31ec126db7971c3b0c3&node=se49.3.192_1605&rgn=div8.

⁴¹ Ref [Internet] http://www.ecfr.gov/cgi-bin/text-idx?SID=bfcd0369491cb31ec126db7971c3b0c3&node=se49.3.192_1615&rgn=div8.

⁴² Ref [Internet] http://www.ecfr.gov/cgi-bin/text-idx?SID=bfcd0369491cb31ec126db7971c3b0c3&node=se49.3.192_1616&rgn=div8.

⁴³ Ref [Internet] <http://www.ecfr.gov/cgi-bin/retrieveECFR?gp=&SID=bfcd0369491cb31ec126db7971c3b0c3&n=sp49.3.192.o&r=SUBPART&ty=HTML>

⁴⁴ Source, and for further information, see [Internet] <http://www.puc.state.pa.us/>, and as further described.

OPS, inspections of natural gas pipeline operators in Pennsylvania, and to enforce the pipeline safety standards and regulations for certificated utilities engaged in the transportation of natural gas and other gas by pipeline in Pennsylvania.⁴⁵

The PA-PUC Gas Service safety standards and regulations⁴⁶ apply to the design, installation, operation, inspection, testing, construction, extension, replacement and maintenance of pipeline facilities, which are designed to assist operators in recognizing and preventing problems before they become hazardous. The PA-PUC may prescribe additional pipeline safety standards or regulations over and above federal standards (as prescribed by the OPS), provided they are not in conflict with the OPS safety standards and regulations. Also, each operator must have a damage prevention program and an emergency response program. The damage prevention program must include provisions to ensure compliance with the state's Underground Utility Protect Act, better known as the One Call Act.

The Gas Safety Section of the Bureau of Investigation (within the PA-PUC) conducts the inspections and enforces the pipeline safety regulations of the PA-PUC. If the PA-PUC identifies pipeline safety violations (as prescribed in the safety standards and regulations), it is empowered to direct the gas utility to take necessary steps to correct the violation.

Specific regulation to address prospective Survival Factors issues (i.e., relative to emergency preparedness / emergency response aspects of the investigation) is addressed under the following sections of the Pennsylvania Code⁴⁷:

- Title 52 PA Code § 59.11 Accidents
- Title 52 PA Code § 59.33 Safety
- Title 52 PA Code § 59.63 Natural gas emergency plans
- Title 52 PA Code § 59.71 Definitions [Gas Emergency Plans]
- Title 52 PA Code § 59.72 Natural gas emergency planning
- Title 52 PA Code § 59.73 Emergency action
- Title 52 PA Code § 67.1 General provisions

1.6 Industry Standards

A Recommended Practice (RP) document was developed, and is promulgated by the American Petroleum Institute (API)⁴⁸, to “provide guidance to be used by natural gas pipeline operators, to

⁴⁵ Source, and for further information, see [Internet] http://www.puc.state.pa.us/consumer_info/natural_gas/pipeline_safety.aspx.

⁴⁶ Ref Chapter 59. Gas Service of the Pennsylvania Code; ref for further information, see [Internet] <https://www.pacode.com/secure/data/052/chapter59/chap59toc.html>.

⁴⁷ The Pennsylvania Code is an official publication of the Commonwealth of Pennsylvania, which contains all [codified] rules, regulations, and other administrative documents of the Government of Pennsylvania, as further described in [Internet] <https://www.pacode.com/about/about.html>.

⁴⁸ As described in the “Mission” [statement] of the organization, the API is “to influence public policy in support of a strong, viable U.S. oil and natural gas industry” where the API “Engages in federal and state legislative and regulatory advocacy”, as further described in [Internet] <http://www.api.org/globalitems/globalheaderpages/about-api/industry-mission>.

develop and actively manage their Public Awareness programs”, as required under 49 CFR 192.616 (ref § 1.5.1, above), as follows.

API - RP 1162 Public Awareness Programs for Pipeline Operators ⁴⁹

The most recent revision of this document is the second edition, dated December 2010. However, the first edition, dated December 2003, is applicable to the circumstances of this investigation.⁵⁰

Although the term “recommended practice” potentially suggests ‘voluntary compliance’, conformity to this recommended practice is effectively a regulatory requirement, pursuant to Final Rule⁵¹ action, issued in May 2005 by the PHMSA-OPS, in which (mandatory) compliance with RP 1162 was “incorporated by reference”.

1.7 Communicating Emergency Response Information – Natural Gas / Hazardous Liquids Pipelines

A document titled “Guide for Communicating Emergency Response Information for Natural Gas and Hazardous Liquids Pipelines”, was observed to provide pertinent guidance information on the subject topic-point for both pipeline operators and public safety agencies.⁵²

1.8 Meteorological Factors ⁵³

The recorded weather at the approximate time of the accident was daylight, 86 degrees F, wind at 6 mph from variable directions, barometric pressure 29.59 inHg, relative humidity 51%, under scattered cloudy skies, with 10 miles visibility.

2.0 Accident Site Damage Characterization

2.1 Damage Description ⁵⁴

2.1.1 Residential Dwelling at 206 Springdale Lane

The explosion and subsequent fire at this property resulted in catastrophic damage to the entire structure. As a result of the explosion, material of the dwelling structure and household contents

⁴⁹ Available, as a “non-printable copy”, at [Internet] <http://www.techstreet.com/api/products/1757546>.

⁵⁰ Review of the subject regulation identified that the second edition of this [Recommended Practice] document has not been accepted in the Federal regulation.

⁵¹ Ref: as described in the Federal Register, Vol. 70, No. 96, May 19, 2005, page 28833; available at [Internet] <http://www.gpo.gov/fdsys/pkg/FR-2005-05-19/html/05-9464.htm>

⁵² Ref, and for further information, see [Internet] https://www.phmsa.dot.gov/sites/phmsa.dot.gov/files/docs/hmcrp_rpt_014.pdf.

⁵³ Source: Quality Controlled Local Climatological Data, [recorded] hourly, [data of] 02 July 2017, at 11:52 hours (the closest data recording time to the event), for Lancaster Airport (WBAN station 54737/LNS), which is about 9.4 miles northeast of the accident site, available from [Internet] <http://www.ncdc.noaa.gov/qcled/QCLCD>.

⁵⁴ Source: NTSB initial on-scene investigation / damage documentation notations, and as further described.

(e.g., pieces of Fiberglas insulation, fragments of splintered dimensional lumber, and personal effects) were found to have been expelled from the structure, in an outward direction, which resulted in a debris field proximate to the structure. These emitted materials were distributed on the ground, and in some of the adjacent trees, in all directions around the perimeter of the structure. Some of the displaced [expelled] materials from the structure were found up to several hundred feet from the structure. The explosion also resulted in a structural collapse of both the first and second floor of the dwelling, including the roof structure, in which some of the structure debris was also found to have collapsed into the basement area. Cracks were observed in the concrete block foundation (wall) of the structure. Some of the combustible materials of the dwelling, which came to rest within the perimeter walls of the structure, displayed evidence of fire damage. The automobile, which was parked in the garage at the time of the explosion, was found beneath collapse debris, in which the vehicle was also observed to have sustained damage.

2.1.2 Properties Adjacent to 206 Springdale Lane

a. Data Obtained During, and Subsequent to, the On-Scene Investigation ⁵⁵

Four similarly constructed, two-story / single-family, residential dwelling structures, located in the areas adjacent to the accident site structure (i.e., the properties at 197, 198, 201, and 202 Springdale Lane), reportedly sustained various degrees of substantial damage to the structures as a result of the explosion. The dwellings of these four properties, which (as a result of the explosion) were deemed unsafe pursuant to Manor Township policy and PA State Law, were ‘tagged’ with a “Notification of Unsafe Condition” placard (affixed to the front of the structure) by the jurisdictional fire department authority [BRFR], indicating that the structures should not be occupied due to a “Structural Damage” hazardous condition.⁵⁶ Additional residential dwellings of the properties on Springdale Lane, located to the east of the cul-de-sac (e.g., 193, 194 Springdale Lane), reportedly sustained various degrees of minor documented damage as a result of the explosion.

b. Data of UGI (Claims Department) ⁵⁷

“As determined by the evaluations by structural engineering resources the structure at 206 Springdale Lane was characterized as a total loss. The nearby structures including 193, 194, 197, 198, 201, and 202 Springdale Lane were deemed repairable. The property at 202 Springdale was razed although it was deemed repairable.”

2.2 Quantity of Pipeline Product Released ⁵⁸

⁵⁵ Source: NTSB initial on-scene, and subsequent investigation / damage documentation notations, and as further described.

⁵⁶ Source: email correspondence to NTSB / SF Group Chair, from the BRFR Party spokesperson, dated 7/06/2017.

⁵⁷ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018 (quoted verbatim).

⁵⁸ A calculation can be performed of the approximate quantity of pipeline product that is released, which requires identification of the event sequence and sources of release, duration of release, piping geometry, escape path geometry, differential pressures, inside piping diameters, and other pertinent factors to be incorporated into the equation.

The degree of damage sustained by the gas line piping (at the accident site) precluded performing a calculation to determine the approximate quantity of pipeline product released.⁵⁹

2.3 Accident Site Map

A site survey was conducted by resources of the natural gas retail supplier / distributor, which documented the accident site, a copy of which is anticipated to be available in the NTSB docket.

2.4 Time of the Event Occurrence⁶⁰

The jurisdictional [local] fire department had resources at the accident site at the time of the explosion (i.e., one fire engine, with 4 personnel, which arrived at the scene about 4 minutes prior to the explosion). A radio call, which initiated at 12:32:14 hrs, as placed by the BRFR command officer at the scene (i.e., the Fire Chief), provided a notification to fire department Dispatch that an explosion had occurred, thus depicting that an explosion had occurred immediately prior to this radio call.

3.0 Jurisdictional Emergency Services Agencies – Background and Emergency Preparedness Measures

3.1 Jurisdictional Fire / Rescue Agency - BRRFD⁶¹

The accident occurred on private property within the jurisdiction [fire protection district] of the Blue Rock Regional Fire District (BRRFD), which is comprised of the Blue Rock Fire Rescue (BRFR), and the Blue Rock Emergency Management Agency (BREMA), both organizations of which provided resources in response to the accident event.

3.1.1 BRFR - Background⁶²

The BRFR is the principal emergency services agency responsible for responding to fire suppression, emergency rescue, and an initial response to hazardous materials incidents within the fire protection district that encompassed the accident event, and was the initial fire / rescue agency that responded to the scene in this incident, as further described in this report. Briefly summarized, the BRFR:

- is an all-volunteer organization, in which (at the time of the accident) the BRFR maintained a roster of about 125 response personnel, of which the Millersville fire station maintained a

⁵⁹ In this event, because the damage sustained by the piping was so extensive, definitive piping data (e.g., pipe dimensions at release location(s), release duration, etc.), and other pertinent factors, could not be ascertained.

⁶⁰ Source: timestamp data of (automatically archived) CAD report data, and corresponding digital voice recordings, of the local emergency services dispatch service radio communications system.

⁶¹ Source, and for further information, see [Internet] <https://www.bluerockfire.com/about-us>, and as further described.

⁶² Source: data obtained during the on-scene, and subsequent, debriefing interviews / discussions with the Command Officers (e.g., the Fire Chief, Fire Commissioner) and Administrative personnel of the BRFR.

roster of 35 field-response personnel (firefighters), in which about 30% of the Millersville fire station response personnel maintained an emergency medical technician (EMT) credential,

- operates out of four fire stations (which are located in Millersville, West Lancaster, Highville, and Washington Boro), in which personnel / apparatus from the Millersville station provided the initial dispatch of resources to the incident [accident] site,
- in which the Millersville fire station maintains an apparatus roster [operational vehicles list] comprised of:
 - 2 Engine (Pumper) trucks,
 - 1 Tanker truck,
 - 1 Heavy Rescue truck,
 - 2 Collapse Team trucks,
 - 2 Rescue Squad trucks.
- the agency has formal “mutual aid” response agreements with fire department resources from neighboring jurisdictions (e.g., City of Lancaster, PA), and is available to respond to emergency incidents in those jurisdictions, and
- the agency does possess / utilize (hand-held) natural gas monitoring equipment, and
- training of the field personnel (firefighters) of this agency is conducted by the agency itself, as well as provided by the Lancaster County Public Safety Training Center ⁶³.

3.1.2 BFRF - Preparedness Plans / Measures - Natural Gas Release / Fire Event

a. Standard Operating Guidelines (SOG’s)

The BFRF maintains a series of formal / documented SOG’s, which the agency refers to as Policy and Procedure [documentation] that govern most of the routine fire / rescue, and related emergency services operations, to be employed in response to a natural gas release / fire event, which include, but are not limited to, the following.

| <u>Title</u> | <u>Ref #</u> | <u>Effective Date</u> |
|---|--------------|-----------------------|
| Self Contained Breathing Apparatus (SCBA) | 3001 | Jan. 2011 |
| Propane Emergency Operations | 4002 | Jan. 2011 |
| Natural Gas Emergency Operations | 4003 | Jan. 2011 |
| Public Notifications of Unsafe Conditions | 9003 | Feb. 2015 |

b. Equipment / Procedures / Practices - Specific to Addressing a Response to a Fire Event and/or a Report of a Natural Gas Release ⁶⁴

The BFRF documented to the investigation that:

⁶³ Source, and for further information, see [Internet] <https://www.lcpstc.org/>.

⁶⁴ Source: email correspondence to NTSB / SF Group Chair, from the BFRF Party spokesperson, dated 8/27/2018.

- [1] the principals and practices of the agency are, in effect, compliant and consistent with the guidance as stated in NFPA 1500 Standard on Fire Department Occupational Safety and Health Program, and NFPA 1720 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments, and
- [2] the BRFR has ‘intrinsically safe’ exhaust fan equipment on “various vehicles”, as might be needed in the mitigation of a natural gas release / fire event, and that “... what is most important is that whenever we have a dispatch to an incident where a fan may be needed, a minimum of one vehicle with an exhaust fan is always on the first due response [apparatus]. We have 8 ventilation fans on our six primary vehicles. However, not all vehicles have fans, but for instance on Springdale Lane, two of the first three dispatched vehicles had fans on them”.

c. Training Programs / Curricula - Specific to Addressing the Identification and Mitigation of a Natural Gas Release / Fire Event⁶⁵

The BRFR stated that the agency:

- does not offer any “stand-alone natural gas emergency response training” for its field [firefighter] personnel, but that training in the identification and mitigation of natural gas emergencies is embedded into entry level Firefighter I and II, and ‘Hazmat’ (hazardous materials - response actions) classes conducted by the agency, and
- the skillsets [on this topic] are augmented during Probationary Training of its field personnel with (hand-held) natural gas meter [monitoring equipment] operation / utilization training, and policy / procedure review (i.e., identify the presence of natural gas at a reported gas leak scene, or a fire-scene), and that
- periodic recurrent training [on this topic] is routinely provided for its field personnel.

3.1.3 Training History - Activities Conducted with/by the Natural Gas Retail Supplier / Distributor (UGI)⁶⁶

Specific to addressing response actions to a natural gas release / fire incident, the BRFR indicated that, within the five years prior to the incident [accident], as an agency, their field personnel had not participated in ‘classroom venue’ [lecture / group discussion session, etc.] training activities, or any ‘live-action’ training activities, as conducted with/by UGI, or a designated UGI training contractor.

3.1.4 Challenges of Attendance by Volunteer Firefighters at Initial and Recurrent Firefighting Training Activities⁶⁷

⁶⁵ Source: email correspondence to NTSB / SF Group Chair, from the BRFR Party spokesperson (admin-staff), dated 7/06/2017, and corresponding follow-up investigation [debriefing] discussion with the Party spokesperson.

⁶⁶ Source: email correspondence to NTSB / SF Group Chair, from the BRFR Party spokesperson, dated 5/01/2018.

⁶⁷ This report section was compiled to factually address the observation that the BRFR had not recently participated in ‘classroom venue’ or ‘live-action’ training activities, as made available by the natural gas retail supplier /

Research conducted by the SF Investigation, as supported by research conducted by the BRFR⁶⁸, identified and documented a number of observations and consideration-points, which factually characterize the challenges that are attributed to the volunteer firefighting community's inability to efficiently / effectively attend firefighting training activities, the consideration-points of which are briefly summarized as follows:

- *Career* firefighters (that receive [wage / salary] compensation to perform the duty-service) are fully paid to attend / participate in routine / scheduled firefighting training activities, whereas *volunteer* firefighters (that are not compensated to perform the duty-service) attend / participate in the firefighting training activities on their own time.⁶⁹
- Regulation-prescribed training requirements (for firefighters, whether career or volunteer) have been enacted over the past several decades, which require a sizeable amount of time to accommodate (e.g., many fire protection districts now require completion of a training regimen pursuant to “NFPA 1001 Standard for Fire Fighter Professional Qualifications”⁷⁰), of which the time to attend this training is fundamentally unavailable for many volunteer firefighters, due to family life commitments and their customary “compensated employment” (i.e., ‘regular / full-time job’) obligations, whereas career firefighters attend such prescribed training during their normal workday activities.⁷¹
- The number of overall fire calls (nationwide) has statistically dropped over the past several decades (e.g., due to improvements in the Fire Code, widespread use of [Fire Code mandated] smoke / fire alert features, and better fire-resistant residential dwelling construction, to cite a few), which has fundamentally resulted in fewer firefighters that are needed for a given fire protection district, which has commensurately resulted in less firefighters being recruited by those fire protection districts, which places a higher burden of time-dedication [to attend the requisite training activities] upon the existing (count of) firefighters of those fire protection districts.⁷²
- The number of volunteer firefighters in active service has dropped by about 11% since the mid-1980s, while the number of career (paid) firefighters has grown by more than 50%.⁷³

distributor (UGI), in which the cited observations / considerations are presented in no particular priority sequence, and the line-items cited do not necessarily catalogue the full spectrum of considerations that exists on this topic.

⁶⁸ Source: email correspondence to SF Group Chair, from the BRFR participant of the SF Group, dated 4/28/2018.

⁶⁹ Source, and for further information, see [Internet] <https://www.bls.gov/ooh/protective-service/firefighters.htm>, and <http://www.fireengineering.com/articles/print/volume-169/issue-6/departments/volunteers-corner/the-professional-volunteer-fire-department.html>.

⁷⁰ Ref, and for further information, see [Internet]: <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1001>.

⁷¹ Source, and for further information, see [Internet] <https://www.nytimes.com/2014/08/17/sunday-review/the-disappearing-volunteer-firefighter.html>.

⁷² Source, and for further information, see [Internet] <https://www.usfa.fema.gov/downloads/pdf/statistics/v17i8.pdf>, and <https://portal.nvfc.org/>.

⁷³ Source, and for further information, see [Internet] <https://www.nytimes.com/2014/08/17/sunday-review/the-disappearing-volunteer-firefighter.html>.

- Approximately 97% of the firefighters in Pennsylvania are volunteers, or are affiliated with firefighting agencies that are comprised mostly of volunteers, in which the State of Pennsylvania currently has about 50,000 volunteer firefighters (which is down from about 300,000 in the 1970's).⁷⁴
- Fundraising activities (in fire protection districts nationwide) occupy, on average, about one-half of the time that most volunteer firefighters spend “on duty”, which correspondingly competes with their “on duty” time that’s needed to address training activities, to which a considerable segment of the volunteer firefighter community deems such fund-raising activities as an inefficient use of their ‘professional skills’ [as a trained firefighter], but that this [fundraising] is often a necessary action that’s required to maintain the continued operation of the fire protection service.⁷⁵

3.1.5 The Importance / Benefits of a Natural Gas Retail Supplier / Distributor in Placing an Immediate / Parallel Notification of a Reported Natural Gas Odor to the Jurisdictional 911/PSAP Agency

Research conducted by the SF Investigation, as supported by research conducted by the BRFR⁷⁶, identified and documented, observations and consideration-points that characterize and exemplify the importance and/or benefits of a natural gas retail supplier / distributor, to promptly initiate an immediate / parallel notification of a reported natural gas odor, in the event that the report identifies that an occupied structure or other similar enclosure is involved, to the jurisdictional 911/ PSAP⁷⁷ agency, the consideration-points of which are briefly summarized as follows.⁷⁸

[1] “A natural gas leak or suspected leak is like any other potential emergency; it is dealt with as an emergency incident until it can be resolved. This is no different than the emergency services being called to an electric line arcing on a power transmission pole; the agency responds, an assessment of the situation is performed, in which incident command is established until the utility company arrives and mitigates the problem. Universally, whether it is a police officer, firefighter or utility company worker arriving first at any potential incident, Incident Command is established, for coordination and control of all resources by this first arriving entity. This is not a rule or policy of this emergency services agency [the

⁷⁴ Source, and for further information, see [Internet] <https://apps.usfa.fema.gov/registry/summary/>.

⁷⁵ Source, and for further information, see [Internet] <https://www.nytimes.com/2014/08/17/sunday-review/the-disappearing-volunteer-firefighter.html>.

⁷⁶ Source: email correspondence between NTSB / SF Group Chair, and the BRFR Party spokesperson, [dated] 05/08-08/27/2018, inclusive, and as further described.

⁷⁷ Such a facility or operation is also referred to as a Public Safety Answering Point (PSAP), as further described in [Internet] <http://www.nena.org/>.

⁷⁸ This report section was compiled by the SF Investigation to factually address consideration-points, relative to the factual observation that the retail vendor / distributor of natural gas in the accident (UGI) received an odor of natural gas report (notification) at 10:26 hrs, in which a notification of that odor report, and a request to provide a fire department response to the odor report site, was subsequently provided by UGI to the jurisdictional 911/PSAP agency at 12:16:15 hrs (1 hour, 50 minutes later).

Blue Rock Regional Fire District], it is federal law⁷⁹ under the National Incident Management System (NIMS)⁸⁰, and part of the Incident Command System (ICS) process⁸¹ to which emergency response personnel all train on and practice at incidents. This is the method that’s universally utilized by all emergency services agencies to control / mitigate a situation while preventing loss of life, injury and potential additional property damage. [Moreover,] this is the basis of the ICS and behind the need for an immediate / parallel dispatch of the jurisdictional emergency services agencies, and prompt communications among all entities when a suspected natural gas leak is reported.”⁸²

[2] NFPA⁸³ Standards / Recommended Practices

a. NFPA 329 Recommended Practice for Handling Release of Flammable and Combustible Liquids and Gases⁸⁴

Review of this document, relative to the applicable facts / circumstances / context of the investigation, identified, among other advice, the following ‘safety practices’ guidance.

Chapter 3 Definitions,

section 3.3 General Definitions,

subsection 3.3.14, “Purging [of] ... flammable ... gases, [means] the process of displacing vapors or gases from an enclosure or confined space.”,

Chapter 4 Flammable and Combustible Liquids and Gases,

section 4.1 General,

subsection 4.1.15, “Flammable and combustible liquids and gases include natural gas, propane, sewage gases, and refrigerant gases.”

Chapter 5 Initial Response,

section 5.2 Initial Response to Physical Discovery,

subsection 5.2.1, “Depending on the circumstances of physical discovery, conditions might exist where a potential hazard to life or property exists, in which case immediate steps should be taken to protect the public from the danger of an explosion or fire.”,

⁷⁹ Ref, and for further information, see Robert T Stafford Disaster Relief and Emergency Assistance Act, 42 USC 5121, et seq; 44CFR Part 206, the implementing regulations for the Stafford Act, the Homeland Security Act, Pub L 107-296, as amended; Homeland Security Presidential Directive 5, effective March 22, 2008; and Presidential Policy Directive 8, effective March 30, 2011, as collectively described in [Internet] <https://www.fema.gov/media-library/assets/documents/15271>, and associated legal resources.

⁸⁰ Source, and for further information, see [Internet] <https://www.fema.gov/national-incident-management-system>.

⁸¹ The NIMS protocols encompass the procedural elements and processes of the Incident Command System (ICS).

⁸² Source: statement (a collaborative edit [by NTSB] / excerpt from a more extensive narrative) to address the specific topical elements of this discussion-point, from the Fire Commissioner (BRFR participant of the SF Group), Blue Rock Regional Fire District, Millersville, PA (email correspondence - SF Group Chair, dated 7/17/2018).

⁸³ National Fire Protection Association (NFPA) is an international nonprofit organization, which produces and advocates scientifically-based consensus codes, standards, and recommended practices, many of which have been adopted by industry, and municipal / jurisdictional authorities, as a required safety standard or practice (see further [Internet]: <http://www.nfpa.org>).

⁸⁴ Ref, and for further information, see [Internet]: <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=329>.

- subsection 5.2.3, “Police should be asked to keep to public clear of any danger areas.”,
- subsection 5.2.4, “If necessary, the fire department should assist in fire control and purging.”,
- subsection 5.2.7, “No one should enter areas where flammable or combustible liquids, gasses, or vapors have been discovered, except as described in Section 5.4.”,
 - subsection 5.2.7.1, “If liquids, gases, or vapors within or above the flammable range are found in the building, the building should not be entered.”.
- section 5.4 Entering the Area,
 - subsection 5.4.5, “The gas or vapor concentrations in the affected area should be checked continuously or at intervals determined by a qualified person.”,
 - subsection 5.4.5.4, “Personnel should wear self-contained breathing apparatus when entering the affected area.”.
 - subsection 5.4.7, “Where natural ventilation is not capable of removing vapors from all areas, particularly from low, confined spaces, grounded and bonded mechanical exhaust ventilation equipment should be used.”.⁸⁵

b. NFPA 1500 Standard on Fire Department Occupational Safety and Health Program⁸⁶

Review of this document, relative to the applicable facts / circumstances / context of the investigation, identified the following ‘safety practices’ guidance.

Annex A – section A.8.5.1.1 cites, “It is recommended that a minimum acceptable fire company staffing level should be four members responding on or arriving with each engine and each ladder company responding to any type of fire.”

c. NFPA 1720 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments⁸⁷

Review of this document, relative to the applicable facts / circumstances / context of the investigation, identified the following ‘safety practices’ guidance.

Chapter 4 Organization, Operation, and Deployment,
section 4.3 Staffing and Deployment,

⁸⁵ Such “... grounded and bonded mechanical exhaust ventilation equipment ...”, as utilized in the context of this investigation, is also referred to as “intrinsically safe” exhaust equipment; ref, and for further information, see [Internet] https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_id=9884&p_table=standards.

⁸⁶ Ref, and for further information, see NFPA 1500 - Annex A – section A.8.5.1.1; available at [Internet] <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1500>.

⁸⁷ Ref, and for further information, see [Internet]: <https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1720>, and as further described

subsection 4.3.1, “The fire department shall identify minimum staffing requirements to ensure that a sufficient number of members are available to operate safely and effectively.”

Table 4.3.2 [titled] “Staffing and Response Time” cites, for a given Demand Zone (i.e., urban, suburban, rural, special risks), the Minimum Staffing [personnel to respond], and Response Time.

- [3] “In most emergency situations, and notably in the incident of the investigation, time works against emergency responders, whether paid or voluntary. As there are many less volunteer emergency responders (throughout the nation) today as compared to decades past⁸⁸, time is everything in preventing a disaster, particularly to a volunteer-based emergency services agency. Even a four-, or five-minute notification delay ... works against the agency’s ability to properly respond with the adequate personnel numbers to handle a response call, as stipulated in applicable NFPA Standards / Recommended Practices⁸⁹. Response requirements are further outlined in the NIMS, which defines the proper command structure for accountability and safety.⁹⁰ Whereas volunteers and career staff had been previously reasonably abundant, today, many fire-response vehicles are being dispatched with a minimum staffing count, in which sometimes it’s as low as two persons, or even just a driver.⁹¹ Thus, fundamental logic prescribes that having sufficient numbers of firefighting personnel, to properly and safely address an emergency incident, is critically dependent upon receipt of a timely notification (of an incident) to the jurisdictional emergency services dispatch agency.”⁹²
- [4] The investigation observed that a hesitancy of a natural gas retail supplier / distributor to place an immediate / parallel notification of a reported natural gas odor to the jurisdictional 911/PSAP agency may be due to a suspected substantial call volume increase that the natural gas retail supplier / distributor might have to deal with by making the immediate / parallel notifications to the jurisdictional 911/PSAP agencies, to which a review of the call-volume data for UGI for the Lancaster natural gas service area was conducted by the investigation, as further addressed in this report (see § 4.9).

3.2 Emergency Services – 9-1-1 Call Processing / Fire Department, EMS, and Law Enforcement Dispatching⁹³

⁸⁸ Source, and for further information, see [Internet] <https://www.nytimes.com/2014/08/17/sunday-review/the-disappearing-volunteer-firefighter.html>.

⁸⁹ See further § 3.1.5 [2].

⁹⁰ Source, and for further information, see [Internet] <https://www.fema.gov/national-incident-management-system>.

⁹¹ Source: excerpt from a national study of the volunteer fire service, compiled by Dr. Duane Hagelgans of the Millersville University's Center for Disaster Research and Education (email correspondence of Fire Commissioner, Blue Rock Regional Fire District (BRFR participant of the SF Group), to SF Group Chair, dated 7/17/2018).

⁹² Source: statement (a collaborative edit [by NTSB] / excerpt from a more extensive narrative) to address the specific topical elements of this discussion-point, from the Fire Commissioner (BRFR participant of the SF Group), Blue Rock Regional Fire District, Millersville, PA (email correspondence - SF Group Chair, dated 8/14-27/2018).

⁹³ Source, and for further information, see [Internet] <https://www.lcwc911.us/lcwc/>.

Telephone requests for fire / rescue, EMS, or police department emergency services in Lancaster County are placed via the Lancaster County-Wide Communications 9-1-1 PSAP [agency], which provided resources in response to the accident event. This agency, which is also known as “Lancaster County 9-1-1”, maintains a facility in Manheim, PA, which processes the incoming 9-1-1 call request(s) for services, and commensurately dispatches the appropriate resources for the subject jurisdiction (municipality).

3.3 Emergency Medical Services (EMS) / Ambulance⁹⁴ – L-EMS

Lancaster EMS (L-EMS) is the principal emergency services agency that provides emergency medical [ambulance] transport in Manor Township. The organization, which is a private operated “nonprofit 501(c)(3) emergency medical services association” enterprise, operates out of 10 operational facility locations in the County (which are referred to as EMS Stations), which is staffed by both paid professional employees and [clinically qualified] volunteer personnel. The operation can provide both Basic Life Support (BLS), or Advanced Life Support (ALS) ambulance transportation services, as well as non-emergency transport (e.g., Wheelchair Van transport), among other EMS support services (e.g., a Mass Causality Incident Trailer). The agency maintains an EMS Station in Millersville (identified as the West Station⁹⁵), the location of which also provided resources in response to the accident event. Primary dispatching⁹⁶ of the L-EMS [emergency operations services] is provided by the Lancaster County-Wide Communications 9-1-1 PSAP [agency].

3.4 Jurisdictional Law Enforcement (Police) – MTPD⁹⁷

The Manor Township Police Department (MTPD) is the primary local law enforcement agency responsible for responding to criminal activity complaints, civil disorder, or other law enforcement-relevant emergency events in Manor Township, which also provided resources in response to the accident event. Dispatching of the MTPD [emergency operations services] is provided by the Lancaster County-Wide Communications 9-1-1 PSAP [agency].

3.5 Jurisdictional Emergency Management Agency (Blue Rock EMA)⁹⁸

The Blue Rock Emergency Management Agency provides emergency management support in Lancaster County, which is a multi-jurisdictional emergency management agency comprised of personnel from various municipalities, emergency services agencies (fire /rescue, EMS, law enforcement), educational facilities within Lancaster County, and community members. The

⁹⁴ Source, and for further information, see [Internet] <http://www.lemsa.com/>, and as further described.

⁹⁵ The business office of this organization is also situated at this location.

⁹⁶ Primary dispatching refers to the initial notification [provided to a given EMS operation] that an EMS response is needed at a specified location, in which this organization also utilizes an internal dispatching operation, to identify and dispatch the most appropriate / available L-EMS asset (i.e., an EMS vehicle, as staffed by EMT/Paramedic, or other personnel) for the described response request call.

⁹⁷ Source, and for further information, see [Internet] <http://manortownship.net/police/>.

⁹⁸ Source, and for further information, see [Internet] <https://www.bluerockfire.com/brema>.

agency has an Emergency Operations Center at the district headquarters (in Millersville) that can coordinate operations during times of disaster, in which the agency members also have special emergency management training in dealing with disasters.

4.0 Natural Gas Retail Supplier / Distributor (UGI) – Background and Emergency Preparedness Measures ^{99, 100}

UGI Utilities, Inc. (UGI) supplied natural gas to all of the structures that used natural gas in the subject community (Springdale Farms), including the residential dwelling structure involved in the explosion / fire.

4.1 Emergency Preparedness and Response - Plans / Measures ¹⁰¹

Supportive to addressing a gas-related emergency event, UGI had developed and maintained a comprehensive document, which was comprised of a combined ‘preparedness plan’ and ‘technical guidance specification’, among other data, the document of which is referred to as the UGI “Gas Operations Manual” (GOM), a copy of which was made available (by UGI) to the investigation ¹⁰².

Review of the GOM document identified that it contained detailed Operations and Maintenance Procedures, as well as UGI’s Emergency Response Procedures, which are as follows.

| <u>Plan / Specification - Identification Title</u> | <u>Spec. Ref.</u> | <u>Rev. Date</u> |
|--|-------------------|------------------|
| Gas Operations Manual | 60.60.10 | Jan. 2016 |
| Emergency Plan | 60.50 | Sept. 2009 |

4.2 System Integrity Plan ¹⁰³

Pursuant to the requirements of 49 CFR 192 Subpart P [titled] Gas Distribution Pipeline Integrity Management, UGI had compiled a documented System Integrity Plan (SIP), which consisted of

⁹⁹ Source, and for further information, see [Internet] <https://www.ugi.com/>, and as further described.

¹⁰⁰ The characterizations of this report section describe resources / procedures that were in-place prior to the incident [accident], unless specifically indicated otherwise.

¹⁰¹ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018.

¹⁰² A copy of the subject UGI GOM document was received from this organization (data contributor), the content of which was marked, with the exception of the Table of Contents [segment of the document], as “confidential” [on each page] by the data contributor, wherein, due to this imposed confidentiality constraint, [1] the summary of data cited [in this report section] was based on, and made possible by, a review of the entire subject document content, in which a review of same [exclusively by the NTSB] for this purpose, was not prohibited by the imposed confidentiality constraint, providing no further disclosure [by the Investigation] of designated confidential content of the subject document, and [2] pursuant to the criteria under 49 CFR 831.6, the information provided in the “confidential” [marked] segments of the subject document was declared to be prohibited from public disclosure, which thus precludes such specific data from public release (i.e., said confidential data [content] shall not be cited in the SF Factual Report, or be placed in the NTSB public docket [of this, or any investigation]).

¹⁰³ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018, and 5/02/2018.

documentation that addressed integrity management of the company’s transmission pipeline system, and documentation that addressed integrity management of the company’s distribution pipeline system, titled, “UGI Distribution Integrity Management Program” (DIMP), revision [dated] June 2017, a copy of which was made available to the investigation ¹⁰⁴.

Relevant to the emergency preparedness / emergency response aspects of the SF investigation, among other managerial aspects of the utility’s safety management system, the investigation identified data in the DIMP documentation that addresses the component elements of the following:

- [1] “Emergency Plan” (as described in the Gas Operations Manual § 60.50), and
- [2] “Public Awareness Program” (as described in the Gas Operations Manual § 60.60.10).

On this topic-point, as additionally described by UGI ¹⁰⁵:

“Coupled with its Distribution Integrity Management Program, UGI has also established and maintains a detailed Long-Term Infrastructure Improvement Plan (LTIIP) ¹⁰⁶, which was filed with the PA PUC on Dec 12, 2013.”

4.3 Public Awareness Program ¹⁰⁷

Pursuant to the requirements of 49 CFR 192.616 [titled] Public awareness, and as addressed in the UGI DIMP [document] (see § 4.2), UGI had compiled a documented Public Awareness Program (PAP), revision [dated] December 2015, which is described in UGI’s Gas Operations Manual § 60.60.10, as further described in this report (see § 4.1).

Pursuant to the criteria of 49 CFR 192.616(a), “... each pipeline operator must develop and implement a written continuing public education program that follows the guidance provided in the American Petroleum Institute’s (API) Recommended Practice (RP) 1162”, which is “incorporated by reference” in 49 CFR 192.616.

¹⁰⁴ A copy of the subject UGI DIMP document was received from this organization (data contributor), the content of which was marked, with the exception of the Table of Contents [segment of the document], as “confidential” [on each page] by the data contributor, wherein, due to this imposed confidentiality constraint, [1] the summary of data cited [in this report section] was based on, and made possible by, a review of the entire subject document content, in which a review of same [exclusively by the NTSB] for this purpose, was not prohibited by the imposed confidentiality constraint, providing no further disclosure [by the Investigation] of designated confidential content of the subject document, and [2] pursuant to the criteria under 49 CFR 831.6, the information provided in the “confidential” [marked] segments of the subject document was declared to be prohibited from public disclosure, which thus precludes such specific data from public release (i.e., said confidential data [content] shall not be cited in the SF Factual Report, or be placed in the NTSB public docket [of this, or any investigation]).

¹⁰⁵ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹⁰⁶ Ref, and for further information, see [Internet] http://www.puc.state.pa.us/filing_resources/issues_laws_regulations/system_improvement_charges_act_11_.aspx.

¹⁰⁷ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018.

As cited in the UGI PAP documentation, a copy of which was made available (by UGI) to the investigation¹⁰⁸, responsive to the criteria in 49 CFR 192.616(a) regulation, UGI documented to the investigation that they had implemented (i.e., had in-place prior to the accident) a number of public education / communication programs that include, among other safety initiative measures:

- [1] the periodic dispersal of printed information (e.g., a pamphlet included in its mailed monthly billing statements), to help educate its customers on measures that should be employed to help ensure the safe use of its natural gas product (see also § 4.4.1), and
- [2] a professional instructional guidance training program that is made available to the emergency services agencies that are located within the UGI gas service territory (see also § 4.5), and
- [3] the distribution of emergency response procedures documentation to the emergency services agencies that are located within the UGI gas service territory (see also § 4.6).

4.4 Resources / Operational Procedures of UGI to Address a Gas Leak and Other Gas Safety Issues

Means and methods that are utilized by the company to address a natural gas leak, or to address other safety issues involving its product delivery and usage, include the following resources and functional departments of the company.

4.4.1 Emergency Telephone Contact

The company maintained and publicized, in its [Internet] web-site, a toll-free telephone number¹⁰⁹ as a means for individuals to contact the company in the event of a gas leak, or other safety issues involving its product delivery and usage. The company also indicated, in its [Internet] website¹¹⁰, and in information that's periodically mailed to its customers (e.g., a pamphlet included in its monthly billing statements), for individuals to call UGI or 9-1-1 in the event of a gas leak.

4.4.2 Customer Communication Center¹¹¹

¹⁰⁸ A copy of the subject UGI PAP document was received from this organization (data contributor), in which several [select] pages were marked "confidential" by the data contributor, wherein, due to this imposed confidentiality constraint, [1] the summary of data cited [in this report section] was based on, and made possible by, a review of the entire subject document content, in which a review of same [exclusively by the NTSB] for this purpose, was not prohibited by the imposed confidentiality constraint, providing no further disclosure [by the Investigation] of designated confidential content of the subject document, and [2] pursuant to the criteria under 49 CFR 831.6, the information provided in the "confidential" [marked] segments of the subject document was declared to be prohibited from public disclosure, which thus precludes such specific data from public release (i.e., said confidential data [content] shall not be cited in the SF Factual Report, or be placed in the NTSB public docket [of this, or any investigation]).

¹⁰⁹ The cited telephone number was 800-276-2722, which connects directly to the UGI Emergency Call Center, which operates on a 24-hour basis.

¹¹⁰ Ref, [Internet] <https://www.ugi.com/safety/natural-gas-safety/if-you-smell-natural-gas/>.

¹¹¹ Ref, [Internet] <https://www.ugi.com/customer-services/>.

The company maintained a “Customer Communication Center” (CCC), which was staffed by trained personnel (referred to as Customer Care Representatives), for natural gas and electric service customers, or other individuals who are within the UGI service territory, to communicate [place a telephone call, in reference to] various inquiries and requests (principally customer billing or service changes) as placed with the company. The Call Center was also available to receive notifications of a natural gas odor from the public, the information of which is then immediately conveyed to the Central Dispatching Office (see § 4.4.3).

4.4.3 Central Dispatching Office ¹¹²

The company maintained a “Central Dispatching Office” (CDO), which is the communications center for all messaging concerning gas service requests and potential emergencies. The CDO was staffed by trained personnel (referred to as Gas Operations Dispatchers), 24 hours per day, 365 days per year. Based upon the time of day, UGI had between two to five dispatchers on-duty at this location.

Generally described, the Gas Operations Dispatchers receive information from the Customer Communication Center regarding a routine gas service request, or information regarding a gas-related emergency event (i.e., a reported gas odor). Based upon what a caller indicates to the CDO staff, the Dispatchers will dispatch Gas Operations - service technician(s) (see § 4.4.4) to perform:

- [1] various routine gas operations service-call duties throughout the UGI system (e.g., service connections, disconnections, meter servicing, etc.), or
- [2] emergency gas operations duties, such as if a gas odor is reported, consisting of, for example, activities to repair / address damaged or struck gas lines, blowing gas, emergency ‘facility locate’ requests, requests for immediate support from external emergency response agencies (e.g., the local fire department, EMS, police, etc.), or suspected carbon monoxide complaints, to perform emergency support as needed, in which:
 - the Dispatchers (at the CDO) also coordinate with the local emergency services personnel (fire department, EMS, police, etc.) to perform other emergency support as needed, and also internally provide notification to key UGI operations personnel and Central Gas Control (CGC) during an emergency utilizing an Emergency Contact Matrix, and
 - the Dispatched personnel (in the field) may be required to perform an immediate shut-off of the gas flow valve(s) at a gas leak site (e.g., closure of a “main valve”, or a “curb valve”), or implement other emergency-initiated [natural gas] product flow-control operations (e.g., employ a “squeeze-off” [of plastic pipe] procedure ¹¹³), and/or

¹¹² Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16, 20/2018.

¹¹³ Briefly described, pursuant to UGI Gas Operations Manual, Procedure Number 60.50.30.5.2.5, the “squeeze-off” [activity] is a flow-control process, which is usually employed only in exigent circumstances (e.g., an emergency that requires an immediate gas flow stoppage, in which closure of a “main valve” or similar flow control device in the subject gas line [e.g., a “curb valve”] is not, or cannot, be utilized), whereby the [field-service] mechanic accesses the plastic pipe (which is usually buried underground), and then places a mechanical device that essentially clamps around the exterior of the pipe, that when ‘activated’, the device applies pressure against the exterior pipe surface, which compresses and deforms the pipe, to the point where the interior of the subject pipe is

coordinate with the local emergency services personnel (fire department, EMS, police, etc.).

In the event that a gas odor is reported to UGI's CDO, as a generalized procedural description, pursuant to the CDO's documented operational procedures [i.e., the "UGI Gas Operations Manual, Procedure Number 60.50 "Emergency Plan"], the received gas odor data (referred to as a 'service ticket') is processed in a prescribed response, which is briefly summarized as follows.

- [1] The gas odor data is logged by Customer Call Center personnel (or other qualified personnel) into the Gas Operations Computer Aided Dispatch (CAD) System by the CDO Dispatcher.
- [2] A Gas Operations Service Technician, who is closest to the reported odor site, is identified, as a general rule, by utilizing the GPS function of the 'mobile dispatch application' (see also § 4.4.5).
- [3] The received gas odor data ['service ticket'] is transmitted to that closest identified Service Technician (i.e., relayed as a digital message, via the CAD System, to a computer display in the Service Technician's vehicle), as preparation for dispatch of the Service Technician to the report site.
- [4] The Service Technician is to acknowledge receipt of the call within the CAD system and indicate electronically that he/she is responding and is enroute to the emergency, to which a telephone call is also placed by the Dispatcher to the Service Technician, to affirm that the 'service ticket' has been received and that the Service Technician is responding.
- [5] Upon arrival at the report site, the first responder [UGI field-personnel] is to affirm electronically, via UGI's 'mobile dispatch application' (see also § 4.4.5), that he/she has arrived, and then the UGI field-personnel are to begin to investigate the [elements of the] emergency call.
- [6] In the event that the reported gas odor is potentially of a significant consequence, as based on the Service Technician's findings (Step 5, above), a field supervisor and/or other resources may be notified, and may subsequently be dispatched to the reported gas odor site.
- [7] At the conclusion of the service call, the [field-service] mechanics report the outcome / closure of their service call (e.g., a gas leak report) to the CDO via the UGI CAD system.

Additionally, arrangements have been implemented by UGI, whereby the local emergency services communications centers (e.g., Lancaster County-Wide Communications 9-1-1 PSAP) can connect immediately with / directly to the Central Dispatching Office to report an emergency event (in a process analogous to a 'speed-dial system'), rather than having to relay reported gas odor data to the Dispatch Center via contacting the Customer Communication Center. Further, the above [seven] procedural response steps would also apply, in the event that a reported gas odor is received directly from a local emergency services communications agency (e.g., Lancaster County-Wide Communications 9-1-1 PSAP).

completely compressed, thus fully stopping the flow of gas through the pipe, as described in (as an illustrative example only) [Internet] <https://www.reedmfgco.com/en/products/plastic-pipe-tools/pe-squeeze-off-tools/>.

4.4.4 Gas Operations – [Field Service] Mechanics ^{114, 115}

Supportive to the Central Dispatching Office (CDO) operations, the company maintained a number of trained personnel, which have the job title of “mechanic” (which are sometimes informally referred to as ‘service technicians’), who were strategically situated at a number of assigned duty-station locations throughout the UGI operational system. The mechanics are assigned to respond to various service-calls throughout the UGI system, to:

- [1] perform routine gas operations duties in the field (e.g., gas service connections and disconnections, meter servicing, infrastructure [piping] installation and inspections, etc.), or
- [2] perform emergency operations duties, consisting of, for example, gas leak location identification, perform an expedited closure of gas flow valve(s) at a gas leak site, and/or coordinating with the local emergency personnel (fire department, police, etc.) to perform other emergency support as needed.

4.4.5 Gas Operations – Vehicle(s) Utilized by [Field Service] Mechanics ¹¹⁶

Mechanics are issued a vehicle (a specially equipped utility truck) to perform their service-calls (whether routine, or as an emergency dispatch). Communication of the [field-service] mechanics with the CDO personnel are by:

- company-issued cellular telephone (the principal voice-communication method), or
- two-way service radio (as fitted to UGI field-service vehicles, as used by the mechanics), or
- the Gas Operations - Computer Aided Dispatch (CAD) [digital data transmittal] System ¹¹⁷, which is also referred to [by the company] as a ‘mobile dispatch application’, which is fitted to the service technician’s vehicle, in which this digital data transmittal system also has a ‘GPS fleet tracking’ capability (which is also referred to as a ‘vehicle tracking’ system).

4.5 Gas Operations – Emergency Response Procedures - Available Instructional Guidance Training ¹¹⁸

UGI offers professional instructional guidance training in the principles and practices of emergency response procedures to address natural gas emergencies, which are available to personnel of the local emergency services agencies within the UGI gas-service operational

¹¹⁴ Source: on-scene discussion with the SF group / UGI Party representative, and corresponding follow-up [telecon] discussion (dated 03/29/2018), and supportive Party-supplied documentation (as indicated).

¹¹⁵ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018.

¹¹⁶ Source: on-scene discussion with the SF Group / UGI Party representative, and corresponding follow-up [telecon] discussion (dated 03/29/2018), supportive Party-supplied documentation (as indicated), and email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹¹⁷ The CAD digital data transmittal System was produced (originally manufactured) by company by the name of “FleetMatics”, which is currently owned by a company by the name of “Verizon Connect” (as described in [Internet] <https://www.verizonconnect.com/company/>); Source, and for further information [on the FleetMatics digital data transmittal System], see [Internet] <https://www.verizonconnect.com/solutions/gps-fleet-tracking-software/>.

¹¹⁸ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018.

territories (principally fire departments). The training information is provided either (a) online [Internet access], or (b) available through UGI-facilitated in-person training with emergency response personnel (typically held at the local emergency services facility), or (c) available through training activities referred to as “Liaison Meetings” (see § 4.5.1). The UGI training activities are offered at no cost to the recipient attendees, during which emergency response procedures documentation is also distributed (see § 4.6), which are summarized as follows.

4.5.1 Instructional Technical Lectures – In-person Participation (“Liaison Meetings”) ¹¹⁹

This aspect of the UGI training program involves the UGI sponsorship of instructional technical lectures, which are referred to as “Liaison Meetings”, which was conducted by a training support contractor by the name of Paradigm Liaison Services (Paradigm) ¹²⁰.

As additionally described by UGI ¹²¹:

“Paradigm provides support to the utility industry to provide public awareness and damage prevention training in accordance with the regulatory requirements under 49 CFR 192, 195, as well as API RP 1162. Paradigm provides annual liaison meetings for Emergency Services, Excavators and Public Officials for a consortium of pipeline and distribution companies on a state by state basis. [This contractor] also completed a bi-annual collaborative mailer, and have supported UGI with the US Department of Transportation-required 4-year effectiveness survey.”

These Liaison Meetings involve periodically scheduled ‘classroom venue’ training activities, in which the lecture involves a PowerPoint® (PPT) presentation (comprised of 39 slides), as narrated by the ‘meeting facilitator’, where the PPT presentation provides detailed technical aspects of emergency procedures to be implemented in the event of a gas leak or a fire. The meetings are typically held at a local commercial meeting facility (e.g., a hotel meeting room, or similar venue), in which a catered meal is usually provided for the attendees ¹²².

4.5.2 Supplemental In-Person Training Sessions ¹²³

Supplemental to the Liaison Meetings (see § 4.5.1), by request, UGI’s Damage Prevention & Public Awareness group will conduct In-Person (‘face-to-face’) training sessions with the local emergency service agencies within the UGI service territories. No specific [training session] data on this form of training activity was made available by UGI.

¹¹⁹ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018, and as further described.

¹²⁰ Source, and for further information, see [Internet] <http://www.pdigm.com/home>.

¹²¹ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018.

¹²² Meetings are usually conducted during meal times (a complementary dinner or lunch is offered), which are conducted at a time-period that’s found to be convenient for most attendees in the emergency services profession.

¹²³ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018, and as further described.

As additionally described by UGI ¹²⁴:

“Training on responding to natural gas emergencies is provided via a module titled, “A Shared View”. When requests for training are received, UGI typically schedules and conducts this training at local Fire Stations across its territory. UGI recommends that the Fire Company take the on line Responding to Utility Emergencies (RTUE) portion in advance of the face-to-face session as it has proven to greatly enhance the discussion. Training is attended by local Fire Services, Police, EMT and Municipal personnel. Instruction is provided on the basics of Natural Gas, responding to Gas emergencies, and collaborating with Emergency response personnel. UGI maintains in-person training documentation such as sign-in sheets for in-person training with local emergency response personnel.”

4.5.3 Instructional Technical Lectures – Online Presentation ¹²⁵

This UGI training program involves the UGI sponsorship of an online tutorial demonstration titled “ICS for Energy Infrastructure Emergencies Level I – First Responder”, which was administered by a training support contractor. ¹²⁶

As additionally described by UGI ¹²⁷:

“The tool is designed and tailored to conveniently reach, educate and train emergency responders for responding to natural gas and electrical emergencies. It is a video-based training including an extensive and interactive curriculum. There are multiple training tracks specific for Fire Service / Emergency Management Services, Law Enforcement and Community officials. UGI promotes this training annually through public awareness mailings to stakeholders and in person via displays at select emergency responder conferences and expos.

The Pa State Fire Academy invited all certified Pa State Fire Instructors to the Academy in October of 2015 and March of 2016 to a review of the natural gas and electric emergency modules, provided by UGI and available on the RTUE website. This resulted in the Academy adopting the natural gas and electric modules as the accredited training for Fire Service in Pennsylvania on June 1, 2016. This adoption and accreditation provides for any of the certified Fire Service Instructors to teach the modules through the Local Level Course program or at any of the (20) ETA’s (Educational Training Agency) across Pennsylvania.”

¹²⁴ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹²⁵ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018, and as further described.

¹²⁶ UGI identified a firm by the name of RTUE Online, LLC; ref, and for further information, see [Internet] <https://www.rtueonline.com/>, with the gas-operations tutorial presentation available at <https://rtue-gas.rtueonline.com/>.

¹²⁷ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

4.6 Gas Operations – Distributed Emergency Response Procedures - Instructional Guidance Documentation ¹²⁸

UGI distributed (through its training contractor) instructional guidance documentation during the Liaison Meetings, titled “Pipeline Emergency Response Planning Information – 2016 Emergency Responder Manual” that addresses gas emergency procedures, in which this document is also mailed to the constituent fire department agencies that are located within the UGI service territory that don’t attend the Liaison Meetings.

As additionally described by UGI ¹²⁹:

“This information is in addition to documentation that is made available through the other training programs discussed above, including UGI’s in-person on-site training, the RTUE, and the Liaison Meetings.”

4.7 Live-Action - Professional Training Facility or Mobile Training Equipment ¹³⁰

At the time of the incident [accident] the company did not operate or maintain a [so-called] ‘live-action training facility, or utilize mobile training equipment.

Subsequent to the incident [accident], the company procured an Incident Command Trailer that ‘doubles’ as a mobile training-support trailer, to facilitate field-training activities, which can be transported, for example, to a local fire station, such to conduct ‘live-action’ demonstration activities (see also § 7.2), in which, as additionally described by UGI ¹³¹:

“The [training] trailer is also used as [a] public awareness tool, and promotes the ICS protocols including enhancing UGI’s capabilities to respond to an emergency.”

4.8 Training History - Activities Conducted by UGI with the Jurisdictional Fire / Rescue Agency ¹³²

UGI research of the UGI (facilitated / sponsored) training history data for the 5 years prior to the incident [accident], indicated that personnel of the BRFR are not cited among the list of attendees, in which UGI also indicated that personnel of the BRFR had attended the UGI (facilitated / sponsored) training activity that was conducted in August 2017.

¹²⁸ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018, and as further described.

¹²⁹ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹³⁰ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018, and as further described.

¹³¹ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹³² Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/27/2018.

4.9 History of Emergency Call Activities - UGI Retail Natural Gas Supplier / Distribution System Operations ¹³³

Data on UGI emergency call activities, for UGI's retail natural gas supplier / distribution system operations, for the five-year interval prior to, and including the year of the accident (i.e., 2013-2017, inclusive) was made available to the investigation, which is included in Exhibit 1.

5.0 The Emergency Response

5.1 Event Chronology (“Timeline”)

An event chronology (“Timeline”) was constructed to identify the sequencing facts of the emergency response to the event, and to examine the execution of the emergency response effort (e.g., fire suppression / search and rescue). In support of this, the principal responding emergency services agencies, and the natural gas retail supplier / distributor (UGI Utilities, Inc.), were afforded the opportunity to provide incident response data and communications information as relevant to this event. NTSB staff also conducted individual interviews of gas utility company personnel, and personnel of the emergency services agencies, to identify the facts as cited in the Timeline narrative.

Commensurate to the above, data obtained from the organizations that were contacted in this data collection effort is as follows.

5.1.1 Emergency Services Agencies ¹³⁴

Data supportive to this topic was provided by the BRFR, which is included in Exhibit 2.

5.1.2 UGI ¹³⁵

Data supportive to this topic was provided by UGI, which is included in Exhibit 3.

5.2 Summary Timeline of Activities Immediately Prior to the Explosion ¹³⁶

Based upon Timeline data of the SF Investigation and supplementary data obtained ¹³⁷, a tabulation was compiled, to provide a brief summarization of key / significant activities that occurred immediately prior to, and including, the explosion at the subject residential dwelling [206 Springdale Lane], which is included in Exhibit 4.

¹³³ Source: email correspondence between SF Group Chair and the UGI participant of the SF Group, dated 5/03-17/2018, inclusive.

¹³⁴ Source: printed copy of the subject documentation, supplied during the on-scene phase of the investigation by the BRFR participant of the SF Group to SF Group Chair.

¹³⁵ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/16/2018.

¹³⁶ Source: on-scene observations of, and field notations recorded by the SF Group Chair, and as further described.

¹³⁷ Data source of the subject tabulation was the individual Timeline data of UGI and BRFR (Exhibits 2 and 3), and data made available by the Lancaster County 9-1-1 / Dispatch agency, and as further described.

An employee of one other utility service (the Lancaster Area Sewer Authority; see § 5.2.3), who was supportive of the gas leak response effort, was also present at the site (at the time of the explosion), in which the approximate physical locations of all the individuals at the site, at the approximate time of the explosion, and other significant observations relative to the corresponding activities of those personnel (at that time), are summarized as follows.¹³⁸

5.2.1 UGI Technical Personnel¹³⁹

Three employees of the company arrived at the site, in which:

- two of the employees were located in front of the subject dwelling, where they were positioned on the west side of the UGI service truck (that was located approximately at the curb line in front of the dwelling), where the individuals were also proximate to a hole that was being dug in the front yard of the structure (to access the gas main to ‘squeeze it off’ and stop the flow of gas¹⁴⁰), and
- a third employee was (based upon the post-event location of this individual) apparently located at, or near, the south end of the subject structure (which is proximate to the location of the residential gas meter that services the subject dwelling), in which no evidence was attained that identified the specific activity that this individual was performing at the time of the explosion.

5.2.2 BRFR Personnel¹⁴¹

Four firefighters of the agency (a Fire Chief, and three firefighters), who were performing stand-by support at the scene (on the prospect that fire-suppression would be needed), arrived at the site, via their vehicle (a fire engine), about four minutes prior to the explosion, in which:

- the Fire Chief, who was on foot, and was wearing firefighter turnout gear, was located proximate to the left / front corner of the fire truck (which was located near the entrance of the ‘cul-de-sac’ (which is at the east end of the ‘cul-de-sac’), and
- one firefighter, who was on foot, and was wearing firefighter turnout gear, was located proximate to the right side / mid-section area of the fire truck (adjacent to the ‘pump-panel’ [operating station] of the vehicle), and
- one firefighter, who was on foot, and was wearing firefighter turnout gear, was located proximate to a curbside fire hydrant that was situated adjacent to the mailbox of the residential dwelling at 177 Springdale Lane (which was about 320 feet to the east of the cul-de-sac), and

¹³⁸ Potentially supportive data to injury causation evaluation, or as otherwise supportive to the investigative process.

¹³⁹ Source: NTSB interviews conducted with the two surviving subject personnel; see the respective transcripts for details, and email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹⁴⁰ A flow control device that compresses / deforms the exterior pipe surface was utilized by the mechanic, as described in § 4.4.3.

¹⁴¹ Source: NTSB interviews conducted with the subject personnel; see the respective transcripts for details.

- one firefighter, who was on foot, and was wearing firefighter turnout gear and had donned SCBA (but was not utilizing the air supply), having just completed the placement of a non-charged fire hose (which was laid on the pavement, staged for potential immediate use ¹⁴²), was located proximate to the center of the cul-de-sac, approximately in front of the subject dwelling, in which this firefighter was facing away from the dwelling at the moment of the explosion.

5.2.3 Lancaster Area Sewer Authority Personnel ¹⁴³

A field-services employee of the Lancaster Area Sewer Authority (LASA) was at the site (on assignment, in response to the report of a suspected gas leak) to mark the location [on the pavement / grass surfaces, using a hand-held can of spray paint] of the sewer lines in that area. He stated that, at the moment of detonation, he was standing next to his work-vehicle, which was parked in the roadway across the ‘cul-de-sac’ from the subject residential structure. The employee stated that, from where he was located (next to his service truck), he heard the sound of the UGI service truck [diesel] engine running (idling) immediately preceding the explosion ¹⁴⁴, and that he could also smell natural gas at that location.

5.3 Execution of the Emergency Response

See the Timeline(s) of the Event (Exhibit 2, Exhibit 3, and Exhibit 4) for additional detail.

Generally described, the response activities of the emergency services agencies, and the natural gas retail supplier / distributor, in the incident [accident] are briefly summarized as follows.

5.3.1 BRRF

Personnel of this agency, which arrived at the scene immediately prior to the explosion, provided:

- [1] stand-by support at the scene (on the prospect that fire-suppression would be needed), in which,
- [2] upon the explosion occurring, this agency provided fire suppression of the subject residential dwelling that sustained explosion / fire damage, in which,
- [3] upon arrival of additional firefighting response personnel / equipment, provided search and rescue activities at the scene.

5.3.2 Lancaster EMS (Ambulance)

¹⁴² A non-charged fire hose is a hose that does not contain water.

¹⁴³ Source: NTSB interview conducted with the subject individual; see the transcript for details.

¹⁴⁴ The on-scene investigation team determined that, upon conducting a canvas of the ‘cul-de-sac’ area, the UGI service truck appears to have been the only vehicle that was situated proximate to the reported natural gas release location, in which (based upon the testimony of this witness, it appears that) the engine was operating [idling] at the time of detonation.

Personnel of this agency, upon arrival at the scene, provided injury triage, and then provided transport of the injured individuals from the scene to the local medical facility.

5.3.3 MTPD

Personnel of this agency, upon arrival at the scene, provided an exigent door-to-door canvas of the other [non-explosion involved] residential dwellings on the ‘cul-de-sac’, in an effort to determine if the occupants had been evacuated or needed assistance, and then provided the initial site-security at the scene (which was later replaced by a professional security services contractor as engaged by UGI).

5.3.4 Jurisdictional Emergency Management Agency (Blue Rock EMA) ¹⁴⁵

This agency made available ‘commissary support services’ (food / catering resources) to the responding on-scene emergency services agencies, provided coordination support to Incident Command [with other responding emergency services agencies], and afforded administrative and technical support to the official investigation of the event (as conducted by a Federal agency ¹⁴⁶).

5.3.5 UGI ¹⁴⁷

Three UGI technical personnel had arrived at the scene prior to the explosion, in which the personnel were engaged in activities to address the report of a gas odor, which was in process up to the time of the explosion. Upon the explosion occurring, additional technical personnel of the company (in response to a request for support from the three, already on-scene, UGI technical personnel), upon arrival at the scene, provided technical support to the on-scene fire department agency, consisting of performing odorant checks, the gas flow shut-off (valve closure in the gas line to the east of the ‘cul-de-sac’), monitored the site for possible additional gas leaks, summoned additional UGI technical personnel and heavy equipment to the scene, and supported the medical-response processing of their personnel who were injured in the accident.

5.4 Medical Facilities Utilized in the Response to the Accident

Medical facilities that received patients transported from the accident site are listed as follows. ¹⁴⁸

| <u>Facility</u> | <u>Location</u> |
|---|-----------------|
| Lancaster General Hospital ¹⁴⁹ | Lancaster, PA |

5.5 Post-Event Critique / Debriefing - After-Action Review Activities / Reports

¹⁴⁵ Source: email correspondence to NTSB / SF Group Chair, from the BRFR Party spokesperson, dated 4/21/2017.

¹⁴⁶ The Commissioner of this agency was also the Party Spokesperson that represented the BRFR in the NTSB investigation.

¹⁴⁷ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018.

¹⁴⁸ Ref: data as sourced from the emergency services agencies that responded to the accident.

¹⁴⁹ Ref, and for further information, see [Internet] <http://www.lancastergeneralhealth.org/LGH/Locations/ Inpatient/ Lancaster-General-Hospital.aspx>.

The responding jurisdictional fire service agency (BRFR), and the natural gas retail supplier / distributor (UGI), were afforded an opportunity to document to the investigation any post-event critique / debriefing - review meeting activities, or After-Action report documentation as might have been conducted / compiled in the event, the responses of which are as follows.

5.5.1 BRFR ¹⁵⁰

A document titled “Gas Leak on Springdale Lane After Action”, undated, as compiled by the agency, was made available to the investigation by the agency, which is included in Exhibit 5 (see also § 7.1).

5.5.2 UGI ¹⁵¹

A document titled “After Action Reports – Lessons Learned Reports”, dated April 17, 2018, as compiled by the company, was made available to the investigation by the company, which is included in Exhibit 6 (see also § 7.2).

6.0 Medical and/or Pathology Data ¹⁵²

6.1 Civilian – Injuries ¹⁵³

Two individuals reportedly sustained what were described as minor injuries:

- One resident (of the area) accidentally fell (post-event), which was commensurately treated.
- One resident (of the area) sustained what appeared to have been heat exhaustion, which was commensurately treated.

6.2 Emergency Responders

Three BRFR firefighters reportedly sustained what were described as minor injuries:

- One firefighter, who was situated in front of the subject residential dwelling [206 Springdale lane] at the time of the explosion, was struck by propelled debris as a result of the explosion, which was not immediately addressed by that individual (the individual described that the injury didn’t immediately appear to be of consequence at that time), which was commensurately addressed in follow-up examination / treatment at a local medical facility. ¹⁵⁴

¹⁵⁰ Source: email correspondence to NTSB / SF Group Chair, from the BRFR Party spokesperson (admin-staff), dated 3/22/2018, and corresponding follow-up investigation interview discussion.

¹⁵¹ Source: email correspondence to SF Group Chair, from UGI Party Spokesperson, dated 4/17/2018.

¹⁵² The investigation utilizes injury data sourced from the SF Group interviews conducted with the identified individuals (during the on-scene phase of the investigation), the responding local emergency services agencies, the transportation carrier (i.e., UGI, the natural gas retail supplier), and data identified in death certificate / pathology report documentation (obtained from the jurisdictional death investigation authority), and as further described.

¹⁵³ Source: notations of NTSB / SF Group interview conducted with the BRFR Command Officer (Fire Chief).

¹⁵⁴ Source: notations of NTSB / SF Group interviews conducted with the identified BRFR personnel.

- Two BRFR firefighters accidentally stepped on exposed nails during the (post-explosion) response effort, which were commensurately treated.¹⁵⁵

6.3 Employees of the Natural Gas Retail Supplier / Distributor (UGI)

6.3.1 Injuries Sustained¹⁵⁶

Two UGI employees, who were located immediately in front of the subject residential structure [206 Springdale Lane] at the time of the explosion, who were struck by propelled debris as a result of the explosion, sustained what were described as serious injuries, in which the individuals were transported by the responding EMS [agency] to the local medical facility for examination / treatment.

6.3.2 Fatalities¹⁵⁷

One UGI employee, who apparently was located at, or near, the south end of the subject residential structure [206 Springdale Lane] at the time of the explosion¹⁵⁸, sustained injuries that were consistent with having been struck by debris during the explosion¹⁵⁹, which resulted in non-survivable injury, as described in the Coroner's report documentation¹⁶⁰, which indicated (briefly summarized):

- [the forensic pathologic examination supported 'diagnostic observations' of] extensive blunt-impact head trauma, among other sustained injuries, in which,
- the Cause of Death was "Multiple Traumatic Injuries", in which,
- the Manner of Death was "Accidental".

6.4 Other Reported Injuries¹⁶¹

A field-services employee of the Lancaster Area Sewer Authority was struck by propelled debris as a result of the explosion, in which this individual sustained what was described as non-life-

¹⁵⁵ Source: notations of NTSB / SF Group interviews conducted (during the on-scene phase of the investigation) with the BRFR Command Officer (Fire Chief).

¹⁵⁶ Source: NTSB interviews conducted with the subject UGI employees; see the respective interview transcripts for details.

¹⁵⁷ Source: notations of NTSB / SF Group interviews conducted (during the on-scene phase of the investigation) with the BRFR Command Officer (Fire Chief) and other emergency response officials, and as further described.

¹⁵⁸ The location was based upon where the decedent remains were found by emergency responders (i.e., the BRFR, Lancaster EMS), as supported by notations of NTSB / SF Group interviews conducted with officials of the emergency services agencies.

¹⁵⁹ As supported by the physical description of how and where the decedent was found (at the scene), as documented in the Coroner's report.

¹⁶⁰ Source: official correspondence [data request response], dated 03/23/2018, containing the forensic pathology, and associated report documentation, received from [generated by] the Lancaster County, PA - Office of the Coroner (a copy of which is available directly from the agency; see [Internet] <https://co.lancaster.pa.us/133/Coroner>).

¹⁶¹ Source: notations of NTSB / SF Group interview conducted (during the on-scene phase of the investigation) with the subject individual.

threatening injuries, in which this individual was subsequently transported by the L-EMS [agency] to the local medical facility for examination / treatment.

7.0 Proactively Employed Initiative Measures / Actions - Implemented Subsequent to the Accident

SF Group participants of the investigation were afforded an opportunity for data feedback to the investigation ¹⁶², to describe specific / documented initiative measures that have been initiated or employed by these organizations subsequent to the event, such to take advantage of ‘lessons-learned’ in the accident, the response(s) of which are described below.

7.1 BRFR

A documented response, as received from this agency ¹⁶³, is provided in Exhibit 7.

7.2 UGI

A documented response, as received from the company ¹⁶⁴, is provided in Exhibit 8.

E. AUTHORSHIP

Compiled by: // s // Date Oct. 31, 2018
 Richard M. Downs, Jr., P.E.
 Mechanical Engineer (Crashworthiness)
 Survival Factors – Technical Working Group Chairperson
 Human Performance and Survival Factors Division (RPH-40)

Supervisory review: // s // Date Oct. 31, 2018
 Robert J. Beaton, Ph.D., CPE
 Chief, Human Performance and Survival Factors Division (RPH-40)

-- End of this report section --

¹⁶² Ref email inquiry from SF Group Chair, to the individual SF Group Party participants, dated 3/12/2018.

¹⁶³ Source: email to the SF Group Chair, from the subject SF Group Party participant, dated 04/06/2018.

¹⁶⁴ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, with an updated / ‘final revision’ transmittal, dated 10/31/2018; see additional [footnoted] notations in the Exhibit.

List of Exhibits

1. History of Emergency Call Activities - UGI Retail Natural Gas Supplier / Distribution System
2. BRFR - Event Chronology (“Timeline”)
3. UGI - Event Chronology (“Timeline”)
4. Summary Timeline – On-Scene Activities Immediately Prior to the Explosion
5. BRFR “Gas Leak on Springdale Lane After Action”
6. UGI “After Action Reports – Lessons Learned Reports”
7. BRFR - Proactively Employed Initiative Measures / Actions - Implemented Subsequent to the Accident
8. UGI - Proactively Employed Initiative Measures / Actions - Implemented Subsequent to the Accident

Exhibit 1. History of Emergency Call Activities - UGI Retail Natural Gas Supplier / Distribution System Operations ¹

1. Data on UGI emergency call activities, for UGI’s retail natural gas supplier / distribution system operations, for the five-year interval prior to, and including the year of the accident (i.e., 2013-2017, inclusive) was made available to the investigation, the data of which is as follows.

| UGI Gas – <u>Entire System</u> Operating Areas | | | | | |
|--|--------|--------|--------|--------|--------|
| Calendar Year | 2017 | 2016 | 2015 | 2014 | 2013 |
| Average Daily Call Count | 39 | 40 | 41 | 43 | 38 |
| Total Emergency Calls | 14,171 | 14,632 | 14,988 | 15,533 | 13,956 |
| Annual Counts of Component Call Types (of Total Emergency Calls): | | | | | |
| Odor Call Negative | 6,191 | 6,334 | 6,109 | 6,731 | 5,958 |
| Odor Call Confirmed* | 7,219 | 7,520 | 8,134 | 8,065 | 7,311 |
| Damaged Facility Leaking | 195 | 207 | 180 | 201 | 165 |
| Damaged Facility Not Leaking | 74 | 79 | 46 | 72 | 54 |
| Damage Call No Damage Found | 350 | 352 | 393 | 348 | 336 |
| Fire Call | 142 | 140 | 126 | 116 | 132 |
| *Odor Call Confirmed may result from UGI facility or a customer-owned facility | | | | | |

¹ Source: email correspondence between SF Group Chair and the UGI participant of the SF Group, dated 5/03-17/2018, inclusive.

| UGI Gas – <u>Lancaster</u> Operating Area Only | | | | | |
|--|-------|-------|-------|-------|-------|
| Calendar Year | 2017 | 2016 | 2015 | 2014 | 2013 |
| Average Daily Call Count | 7 | 6 | 7 | 6 | 6 |
| Total Emergency Calls | 2,530 | 2,284 | 2,389 | 2,360 | 2,038 |
| Annual Counts of Component Call Types (of Total Emergency Calls): | | | | | |
| Odor Call Negative | 1,088 | 983 | 974 | 1,059 | 903 |
| Odor Call Confirmed* | 1,338 | 1,204 | 1,310 | 1,196 | 1,037 |
| Damaged Facility Leaking | 29 | 20 | 20 | 27 | 36 |
| Damaged Facility Not Leaking | 12 | 12 | 14 | 10 | 7 |
| Damage Call No Damage Found | 56 | 62 | 69 | 66 | 52 |
| Fire Call | 7 | 3 | 2 | 2 | 3 |
| *Odor Call Confirmed may result from UGI facility or a customer-owned facility | | | | | |

2. Map (next page) of Pennsylvania, illustrating the UGI Retail Natural Gas Supplier / Distribution System and the UGI Lancaster Gas Operations Area.

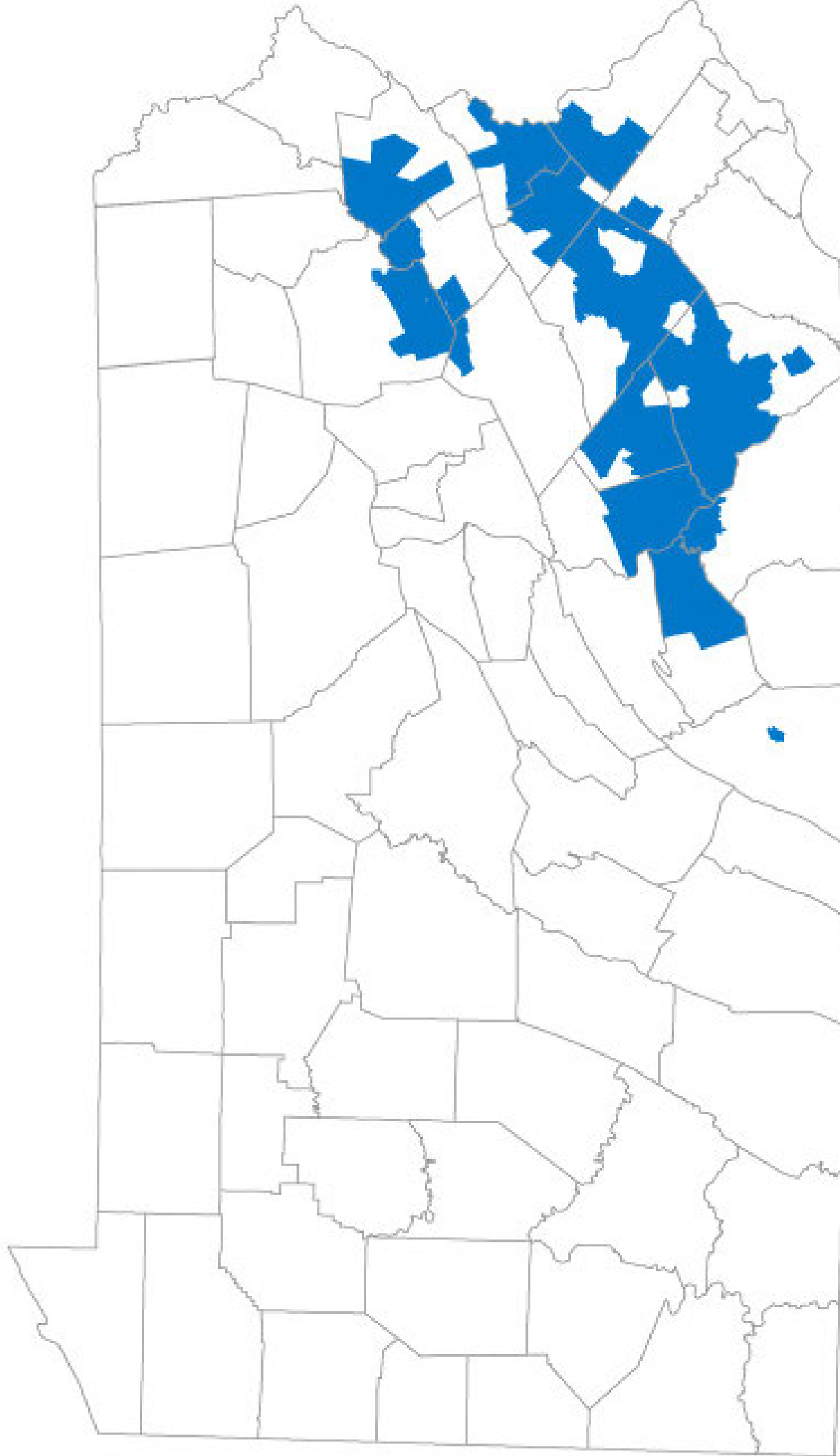


Exhibit 2. BRRF - Event Chronology (“Timeline”)

BLUE ROCK FIRE RESCUE – SPRINGDALE LANE - JULY 2, 2017

Incident # 1707001638

Gas Leak w/explosion and fire

July 2, 2017

Weather Time of Dispatch: (Millersville University Weather Observations)

Sunny

Temp – 85 degrees

Dew Point - 67 degrees

Rel. Humidity - 56%

Wind – WNW 2mph

Rain - 0

Times:

Dispatched: 12:16:56

Chief En-Route: 12:18

E905 En-Route: 12:23:28

On-Scene: 12:28:11

Explosion: 12:32:14

Cleared: 17:57:00

Fire department was dispatched to a gas leak with UGI on scene

206 Springdale Lane – Destroyed

201 Springdale Lane- Damaged - tagged

202 Springdale Lane- Damaged - tagged

197 Springdale Lane- Damaged – tagged

BLUE ROCK FIRE RESCUE – SPRINGDALE LANE - JULY 2, 2017

These times are not official times.

They are those captured by the scribe at the Command Post

Times:

12:16 Dispatched
12:18 Chief 905 En-route
12:23 Engine 905 & 901 En-route
12:28 Engine 905 OS
12:30 Reported Active Leak
12:31 Conversation with UGI Rep
12:32 Explosion
12:32 Report Missing workers
12:32 Additional EMS Units
12:33 Contact with LASA Employee (Walking Wounded)
12:35 PPL Request
12:35 Report Persons Trapped
12:41 Notify UGI of Conditions
12:43 UGI Notification completed
12:48 More EMS Units Required
12:57 4 more Engines Required
13:00 PEMA/LEMA Notified
13:00 Gas Shut off in street by UGI
13:13 4 Additional Engines
13:19 Coroner requested
13:19 FM Requested Trooper Cornetta
13:22 Gas shut off verified and bled off
13:22 Chaplin Requested
13:25 Support Group Requested
13:34 Pa Labor and Industry
13:39 HazMat requested
13:41 Chief 2 enroute
13:41 Red Cross Requested
13:48 Special Request for Canopies
14:19 Additional Fire Police
14:30 15 minutes crew rotates established
14:24 Foam 63 requested for additional foam
14:24 Water Company
14:39 UGI and Haz Mat working together
15:09 201 & 202 Cleared
15:20 198 Cleared
15:33 LASA Notified
17:58 FD Cleared

Exhibit 3. UGI - Event Chronology (“Timeline”)

A summary of substantive activities conducted by the distribution pipeline owner / operator during this event is as follows.

Notes –

- Data of this document was sourced from UGI, in which,
 - the individuals that are identified in this document refer to UGI personnel, unless described otherwise, and
 - no effort was expended by the NTSB to independently validate the accuracy / authenticity of the UGI supplied data tabulation.
- Certain job titles and descriptions cited in this document refer to UGI job titles and descriptions, unless described otherwise.
- The revision date of this document is May 14, 2018, in which this document incorporates the UGI-supplied activity data as cited in the three prior [revision] versions of this tabulation (as received from UGI).
- Redaction of certain personally identifiable information (PII), consisting of the family (sur) names of individuals, the last 4-digits of telephone numbers, or other distribution-restricted information as cited in this report, has been employed by the NTSB ¹.

Acronym nomenclature and abbreviations used in this Tabulation

| | |
|----------|--|
| 00:00 | hours:minutes (time references are denoted in 4-digit military time, EDT ²) |
| 911 | Lancaster County-Wide Communications 9-1-1 PSAP |
| Duration | refers to the length of time of the cited activity (which usually refers to a telephone call, unless described otherwise), is denoted in minutes:seconds |
| LASA | Lancaster Area Sewer Authority |
| NTSB | National Transportation Safety Board |
| PHMSA | Pipeline Hazardous Materials Safety Administration |



¹ engaged pursuant to NTSB report documentation practice

² Eastern Daylight Time

NTSB Request No. 51: UGI Timeline of Events
 Draft – Revision 7/7/2017, Revision 7/10/2017, Revision 12/21/17, Revision 5/14/18
 All events listed below occurred 7/2/2017 unless otherwise noted

| Time | Duration | Activity | Source |
|-------|---------------|---|---|
| 10:26 | Approx. 3 min | Joanne [REDACTED] called into the UGI Call Center (answered by Sharleen [REDACTED] (Call Center Rep 3) located at [REDACTED] Road, Reading, PA 19611 reporting gas smell in front of [REDACTED] Springdale Lane, Millersville | Call Center Call (Recorded); Sharleen [REDACTED] page 10, lines 2-21 and page 17, lines 13-18 (July 27, 2017) ¹ |
| 10:29 | | Emergency order generated by Sharleen [REDACTED] (UGI Call Center Rep) for outside odor at [REDACTED] Springdale Lane. (WR-499958) | Work Order Management System Creation Time; Christine [REDACTED] page 18, line 13 (Sept. 15, 2017) ¹ ; Sharleen [REDACTED] page 19, lines 4-5 (July 27, 2017) ¹ |
| 10:31 | | Order is dispatched to Rick [REDACTED] (Mechanic III) by Christine [REDACTED] (Dispatcher) | Mobile Dispatch Application Dispatch Time; Christine [REDACTED] page 18, lines 14-15 (Sept. 15, 2017) ¹ |
| 10:31 | 1:00 | UGI Dispatch calls from [REDACTED] Rd., Reading, Pa to Rick [REDACTED] (Mechanic III) to dispatch Rick [REDACTED] to [REDACTED] Springdale Lane, Millersville to respond to reported gas odor. | Call from 484-256-[REDACTED] to 610-972-[REDACTED] Christine [REDACTED] page 18, lines 14-15 (Sept. 15, 2017) ¹ |
| 11:00 | | Rick [REDACTED] (Mechanic III) arrives on scene at [REDACTED] Springdale Lane, Millersville. | Mobile Dispatch Application Arrival Time |
| 11:18 | 2:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to Jason [REDACTED] (Senior Supervisor Operations-C&M) to request crew to respond to confirmed leak. | Call from 610-972-[REDACTED] to 610-842-[REDACTED] Jason [REDACTED] page 18, line 22 to page 19, line 2 (July 25, 2017) ¹ |
| 11:20 | 3:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to UGI Dispatch to request that UGI Dispatch put a One-Call ticket in to enable UGI to perform dig in response to gas leak. | Mobile Cell Phone Records (Call from 610-842-[REDACTED] to 610-736-[REDACTED] Jason [REDACTED] page 19, lines 3-5 (July 25, 2017) ¹ |
| 11:23 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Robert [REDACTED] (Mechanic II, Duty Foreman) to inform Robert [REDACTED] that there was a gas leak and that he was assembling a response crew to repair leak. Jason [REDACTED] informed Robert [REDACTED] that Robert [REDACTED] should be prepared to respond to / assist with response to a leaking mechanical tee. | Call from 610-842-[REDACTED] to 717-666-[REDACTED] Jason [REDACTED] page 19, lines 10-11 (July 25, 2017) ¹ ; Robert [REDACTED] page 16, line 6 (Sept. 15, 2017) ¹ |
| 11:25 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to the work phone of Norm [REDACTED] (Mechanic II, Duty Operator) - (no answer). Jason [REDACTED] left message asking Norm [REDACTED] to call Jason [REDACTED] immediately because he was in need of Norm [REDACTED] services to assist with the gas leak at [REDACTED] Springdale Lane, Millersville. | Call from 610-842-[REDACTED] to 610-842-[REDACTED] Cell Phone Image; Jason [REDACTED] page 19, lines 14-17 (July 25, 2017) ¹ |
| 11:26 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Kenneth [REDACTED] (Utility A - 3 Year, Duty Laborer) to assemble response crew to be prepared to assist with cut out of a mechanical tee and replacement of a section of main. | Call from 610-842-[REDACTED] to 610-842-[REDACTED] Jason [REDACTED] page 20, lines 7-10 (July 25, 2017) ¹ |
| 11:27 | | UGI Dispatch places call to PA One Call (811) to notify of dig at or in proximity to [REDACTED] Springdale Lane, Millersville. | UGI Dispatch Log |
| 11:27 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Norm [REDACTED] (Mechanic II) home number (no answer, left message asking for him to return phone call). | Call from 610-842-[REDACTED] to 717-291-[REDACTED] Jason [REDACTED] page 19, lines 17-20 (July 25, 2017) ¹ |

| Time | Duration | Activity | Source |
|-------|----------|--|--|
| 11:30 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Sandy [REDACTED] (Engineer II) office to discuss plan to shutdown gas line due to gas leak. | Call from 610-842-[REDACTED] to 717-255-[REDACTED] Jason [REDACTED] page 21, lines 11-20 (July 25, 2017) ¹ |
| 11:31 | 1:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to UGI Dispatch. | Call from 610-972-[REDACTED] to 484-256-[REDACTED] |
| 11:32 | 1:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to Robert [REDACTED] (Mechanic II) (no answer). | Call from 610-972-[REDACTED] to 717-666-[REDACTED] Robert [REDACTED] page 16, lines 14-15 (Sept. 15, 2017) ¹ |
| 11:32 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Robert [REDACTED] (Mechanic II) but Robert [REDACTED] does not answer. | Call from 610-842-[REDACTED] to 717-666-[REDACTED] |
| 11:33 | 2:00 | Robert [REDACTED] (Mechanic II) calls from unspecified location to Rick [REDACTED] (Mechanic III) to discuss response crew arrangements and confirm address of gas leak. Rick [REDACTED] confirms that Robert [REDACTED] is the duty foreman and asks what other crew will be responding to the gas leak. Rick [REDACTED] also indicates that they will need to shut down the line and cut in a section of the main. | Call from 717-666-[REDACTED] to 610-972-[REDACTED] Robert [REDACTED] page 16, lines 16-19 (Sept. 15, 2017) ¹ |
| 11:35 | 1:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to Kim [REDACTED] (Rick's Wife) | Call from 610-972-[REDACTED] to 717-606-[REDACTED] |
| 11:38 | 1:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to UGI Dispatch regarding the need to contact PA One Call (811) to enable UGI to perform dig. | Call from 610-972-[REDACTED] to 484-256-[REDACTED] UGI Dispatch Log; Kenneth [REDACTED] page 37, lines 22-23 (July 25, 2017) ¹ |
| 11:42 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Robert [REDACTED] (Mechanic II) to discuss repair crew composition, specifically whether Norm [REDACTED] (an operator) had contacted Robert [REDACTED]. Robert [REDACTED] confirms that Norm [REDACTED] had not responded to phone call requests to serve as operator at the repair site. | Call from 610-842-[REDACTED] to 717-666-[REDACTED] Robert [REDACTED] page 16, line 21 (Sept. 15, 2017) ¹ |
| 11:43 | 1:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to Kenneth Sean [REDACTED] (Mechanic II), but there was no answer. | Call from 610-972-[REDACTED] to 484-256-[REDACTED] Kenneth [REDACTED] page 53, lines 9-11 (July 25, 2017) ¹ |
| 11:44 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Rick [REDACTED] (Mechanic III) and Rick [REDACTED] explained that he heard "Ken" was coming out to the job, but Kenneth [REDACTED] stated that it was not him. | Call from 484-256-[REDACTED] to 610-972-[REDACTED] Kenneth [REDACTED] page 9, lines 1-5 and page 52, lines 13-17 (July 25, 2017) ¹ |
| 11:44 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Norm [REDACTED] (Mechanic II) cell phone - (no contact, but leaves message informing him that he was calling the next operator on the list because he had not heard back from Norm [REDACTED]). | Call from 610-842-[REDACTED] to 610-842-[REDACTED] Cell Phone Image; Jason [REDACTED] page 19, lines 17-20 page 20, line 14 (July 25, 2017) ¹ |
| 11:46 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to UGI Dispatch to confirm whether UGI Dispatch was attempting to contact him because Kenneth Sean [REDACTED] had heard from Rick [REDACTED] that dispatch was attempting to contact "Ken." The Ken that UGI Dispatch is attempting to contact is confirmed to be Ken [REDACTED]. | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Kenneth [REDACTED] page 9, line 6 (July 25, 2017) ¹ |
| 11:47 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Jesse [REDACTED] (Utility A-III) cell phone. | Call from 610-842-[REDACTED] to 717-205-[REDACTED] Jason [REDACTED] page 20, lines 124-25 (July 25, 2017) ¹ |

| Time | Duration | Activity | Source |
|---------------|----------|--|--|
| 11:47 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Jason [REDACTED] (Senior Supervisor Operations-C&M) to offer to respond, and Jason [REDACTED] agrees to have Sean [REDACTED] assist on-scene. | Call from 484-256-[REDACTED] to 610-842-[REDACTED] Jason [REDACTED], page 23, lines 16-23 (July 25, 2017) ¹ ; Kenneth [REDACTED], page 9, line 10 and page 53, lines 15-16 (July 25, 2017) ¹ |
| 11:50 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Jesse [REDACTED]'s (Utility A-III) home phone and Jason [REDACTED] requests that Jesse [REDACTED] respond to gas leak as an operator replacement/substitute for Norm [REDACTED] because Norm [REDACTED] could not be reached by telephone. Jesse [REDACTED] agrees to respond (but Jesse [REDACTED] does not arrive to 206 Springdale Lane, Millersville until after the accident). | Call from 610-842-[REDACTED] to 717-682-[REDACTED] Jason [REDACTED], page 21, lines 2-6 and page 43, line 21 (July 25, 2017) ¹ |
| 11:52 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Robert [REDACTED] (Mechanic II) to discuss repair crew and to inform Robert [REDACTED] that an operator was located to replace Norm [REDACTED] if necessary -- that replacement operator was Jesse [REDACTED] Jason [REDACTED] indicated to Robert [REDACTED] that Jason [REDACTED] would dig at the site of the gas leak as the operator until Jesse [REDACTED] arrives, given that Jesse [REDACTED] lived some distance from the accident site. | Call from 610-842-[REDACTED] to 717-666-[REDACTED] Jason [REDACTED], page 21, lines 9-10 (July 25, 2017) ¹ ; Robert [REDACTED], page 17, lines 2-5 (Sept. 15, 2017) ¹ |
| Approx. 11:52 | | Jason [REDACTED] (Senior Supervisor Operations-C&M) places call to Sandy [REDACTED] (Engineer II) to discuss plan to shut down the main and to make sure that it would be okay to do what was necessary to make the situation safe (no answer, but Sandy [REDACTED] later returns this call) | Jason [REDACTED], page 21, lines 11-18 (July 25, 2017) ¹ |
| 11:53 | 1:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to Kenneth Sean [REDACTED] (Mechanic II). | Call from 610-972-[REDACTED] to 484-256-[REDACTED] |
| 11:53 | 1:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to Jason [REDACTED] (Senior Supervisor Operations-C&M) | Call from 610-972-[REDACTED] to 610-842-[REDACTED] |
| 11:53 | 3:00 | Rick [REDACTED] (Mechanic III) calls from unspecified location to Jason [REDACTED] (Senior Supervisor Operations-C&M) to discuss status of response efforts and readings. Jason [REDACTED] informed Rick [REDACTED] that Rick [REDACTED] should do everything possible to clear the house at 206 Springdale Lane, Millersville. | Call from 610-972-[REDACTED] to 610-842-[REDACTED] Jason [REDACTED], page 21, line 20 to page 22, line 6 (July 25, 2017) ¹ |
| 12:03 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to Sandy [REDACTED] (Engineer II) cell phone | Call from 610-842-[REDACTED] to 610-842-[REDACTED] |
| 12:04 | 5:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) receives a call from Sandy [REDACTED] (Engineer II) to discuss plan to shut down the main. Sandy [REDACTED] informed Jason [REDACTED] that it was OK to stop the flow of gas on the main line. | Call from 610-842-[REDACTED] to 610-842-[REDACTED]; Jason [REDACTED], page 22, lines 7-15 (July 25, 2017) ¹ |
| Approx. 12:05 | | Jason [REDACTED] (Senior Supervisor Operations-C&M) arrives on scene at house at 206 Springdale Lane, Millersville. Jason [REDACTED] begins to dig-up the main to squeeze-off the line. Jason [REDACTED] reports that, at that time, someone came to the door at 206 Springdale Lane, Millersville. Also, Jason [REDACTED] reports that Robert [REDACTED] (Mechanic II) arrived with a street truck and helped dig up the main. | Jason [REDACTED], page 22, line 14 to page 23, line 7 (July 25, 2017) ¹ |

| Time | Duration | Activity | Source |
|-------------------------|----------|---|--|
| 12:09 | 3:00 | Robert [REDACTED] (Mechanic II) receives call from Jesse [REDACTED] (Utility A-III) cell phone to discuss response crew arrangements, informing [REDACTED] to bring a dump truck. Jesse [REDACTED] indicated that he was not on call that weekend and that he needed to go to his home to get his work equipment before responding. Jesse [REDACTED] indicated that he would go to the UGI shop after he obtained his work equipment from home. Robert [REDACTED] also informed Jesse [REDACTED] that the laborer was Kenny [REDACTED] and that Jesse [REDACTED] needed to drive the empty dump truck to the gas leak site, and that Kenny was instructed by Robert [REDACTED] to bring the backhoe to the gas leak site. | Call from 717-666-[REDACTED] to 717-205-[REDACTED] Robert [REDACTED] page 17, lines 9-19 (Sept. 15, 2017) ¹ |
| 12:14 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from the scene to UGI Dispatch to request that, as a precaution, UGI Dispatch should call 911 to request emergency response support, stating that they needed the fire department on-scene. | Call from 610-842-[REDACTED] to 610-736-[REDACTED] Jason [REDACTED] page 23, lines 9-13, page 68, lines 13-14, page 68, line 23 to page 69, line 7, and page 77, lines 14-15 (July 25, 2017) ¹ ; Christine [REDACTED] page 16, lines 21-23 and page 21, lines 16-18 (Sept. 15, 2017) ¹ |
| 12:15 | | UGI Dispatch calls Lancaster County 911 to request emergency response assistance at 206 Springdale Lane, Millersville. | UGI Dispatch Log |
| Approx. 12:19 | | Robert [REDACTED] (Mechanic II) arrives on scene to assist with the repair. | Jason [REDACTED] page 70, lines 14-17 (July 25, 2017) ¹ |
| 12:25 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Jason [REDACTED] (Senior Supervisor Operations-C&M) to confirm address to where he should respond and informing Jason [REDACTED] that he was responding to assist with repair/response. | Call from 484-256-[REDACTED] to 610-842-[REDACTED] Jason [REDACTED] page 23, line 16 (July 25, 2017) ¹ ; Kenneth [REDACTED] page 53, line 16-20 (July 25, 2017) ¹ |
| 12:26 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) calls from unspecified location to UGI Dispatch. | Call from 610-842-[REDACTED] to 610-736-[REDACTED] Christine [REDACTED] page 18, lines 17-18 (Sept. 15, 2017) ¹ |
| Approx. 12:30 | | Jason [REDACTED] (Senior Supervisor Operations-C&M) observes that fire department arrives, that the main has been dug up, and asks the fireman about venting the house faster because the situation was "not good", that at any point something bad could happen. Jason [REDACTED] made sure that the fire chief understood him. Jason [REDACTED] observed Denny [REDACTED] from LASA marking sewer lines and (just prior to the accident) pointed out that the sewer line ran into the house. | Jason [REDACTED] page 24, lines 2-20 and page 56, line 3 to page 58, line 15 (July 25, 2017) ¹ |
| Approx. 12:31 and later | | Kenneth Sean [REDACTED] (Mechanic II) arrives on scene, observes two fire trucks, witnesses accident, leaves vehicle to search for victims, observes Robert [REDACTED] (Mechanic II) under material, and later helps Jason [REDACTED] (Senior Supervisor Operations-C&M). | Kenneth [REDACTED] page 9, line 20 to page 10, line 3 and page 16, lines 13-15 (July 25, 2017) ¹ |
| 12:36 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Jose [REDACTED] (Manager Operations) after the accident occurs but Jose [REDACTED] misses the phone call and then later returns the call to Kenneth Sean [REDACTED] | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Jose [REDACTED] page 15, line 21 to page 16, line 1 (July 25, 2017) ¹ ; Kenneth [REDACTED] page 17, lines 23-25 and page 54, lines 15-16 (July 25, 2017) ¹ |
| 12:39 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to UGI Dispatch to inform them that an accident has occurred and to confirm that the appropriate personnel were responding. | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Dispatcher [REDACTED] notes from day of event; Christine [REDACTED] page 18, lines 19-20 (Sept. 15, 2017) ¹ ; Kenneth [REDACTED] page 54, lines 17-20 (July 25, 2017) ¹ |

| Time | Duration | Activity | Source |
|-------|----------|--|--|
| 12:40 | 1:00 | Jose [REDACTED] (Manager Operations) receives call from Christine [REDACTED] (UGI Dispatcher), who informs Jose [REDACTED] of the accident and instructs him to go to the scene of the accident. | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Dispatcher notes from day of event; Christine [REDACTED] page 18, lines 21-22 (Sept. 15, 2017) ¹ ; Jose [REDACTED] page 15, lines 2-6 (July 25, 2017) ¹ |
| 12:42 | | UGI calls Christa [REDACTED] (CGC) and provides notice of the accident event. | Call from T. [REDACTED] (UGC); Copy of Dispatch Traffic, NTSB-UGI-01641-01647 |
| 12:42 | | UGI Dispatcher Christine [REDACTED] contacts her direct supervisor, Alana [REDACTED] to notify of accident event. | Christine [REDACTED] page 18, line 23 (Sept. 15, 2017) ¹ |
| 12:43 | | UGI Dispatcher Christine [REDACTED] contacts the acting supervisor in her department for the weekend, Tom [REDACTED] to notify of the accident event. | Christine [REDACTED] page 18, lines 24-25 (Sept. 15, 2017) ¹ |
| 12:43 | | UGI Dispatch contacts Steve [REDACTED] (Sr. Manager Business Development) to notify of the accident event. | Christine [REDACTED] page 19, line 1 (Sept. 15, 2017) ¹ |
| 12:44 | | UGI Dispatch contacts Gas System Operations to notify of the accident event. | Christine [REDACTED] page 19, line 2 (Sept. 15, 2017) ¹ |
| 12:44 | 1:13 | Ken [REDACTED] (Utility A-III) calls from unspecified location to UGI Dispatch. | Ken [REDACTED] Mobile Phone Image |
| 12:44 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to UGI Dispatch | Call from 484-256-[REDACTED] to 484-256-[REDACTED] |
| 12:43 | | UGI Dispatch calls Christa [REDACTED] (Gas Controller II, Central Gas Control) | Call from 610-736-[REDACTED] to 610-736-[REDACTED] |
| 12:46 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to UGI Dispatch to ensure appropriate personnel were responding to accident. | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Kenneth [REDACTED] page 54, line 18 and page 55, line 14 (July 25, 2017) ¹ |
| 12:46 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to UGI Dispatch (2nd time within the minute) to ensure appropriate personnel were responding to accident | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Kenneth [REDACTED] page 54, line 18 and page 55, line 14 (July 25, 2017) ¹ |
| 12:46 | | UGI Dispatch calls Dan [REDACTED] (Senior Manager Operations) and provides notice of the accident event. | Call from 610-736-[REDACTED] to 484-769-[REDACTED] Copy of Dispatch Traffic, NTSB-UGI-01641-01647; Christine [REDACTED] page 19, line 3 (Sept. 15, 2017) ¹ |
| 12:46 | | UGI Dispatch calls Eric [REDACTED] (Sr Manager Damage Prevention/Claims/Public Awareness) to notify of the accident event. | Call from 610-736-[REDACTED] to 610-842-[REDACTED] Christine [REDACTED] page 19, line 4 (Sept. 15, 2017) ¹ |
| 12:47 | | Central Gas Control calls Robert [REDACTED] (V.P. Operations) | Call from 610-736-[REDACTED] to 484-256-[REDACTED] |
| 12:47 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Brian [REDACTED] (Manager Operations) to confirm that Brian [REDACTED] was on his way to 206 Springdale Lane, Millersville. | Call from 484-256-[REDACTED] to 610-842-[REDACTED] Kenneth [REDACTED] page 55, line 9 (July 25, 2017) ¹ |
| 12:48 | | UGI Dispatch calls Brian [REDACTED] (Manager Operations) and provides notice of the accident event. | Call from 610-736-[REDACTED] to 610-842-[REDACTED] Copy of Dispatch Traffic, NTSB-UGI-01641-01647; Christine [REDACTED] page 19, line 5 (Sept. 15, 2017) ¹ |

| Time | Duration | Activity | Source |
|------------------------|----------|---|---|
| 12:48 | | UGI Dispatch calls Chester [REDACTED] (Sr Manager Engineering) and provides notice of the accident event. | Call from 484-256-[REDACTED] to 484-554-[REDACTED] Christine page 19, line 6 (Sept. 15, 2017) ¹ |
| 12:48 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Jose [REDACTED] (Manager Operations) to discuss shutting off the valve for the gas line; specifically, Kenneth Sean [REDACTED] indicated to Jose [REDACTED] that he wanted to shut the valve to cul-de-sac, and [REDACTED] instructed him to do so and told him that he was on his way to the accident site. | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Kenneth page 55, line 9 and page 55, line 21 to page 56, line 16 (July 25, 2017) ¹ ; Jose [REDACTED] page 16, lines 9-15 (July 25, 2017) ¹ |
| 12:50 | | Chris [REDACTED] (Director Operations South Region) notified of accident event by UGI Dispatch. | Call from 610-736-[REDACTED] to 484-256-[REDACTED] Christine page 19, line 7 (Sept. 15, 2017) ¹ |
| 12:51 | | Central Gas Control calls Robert [REDACTED] (V.P. Customer Relations) and provides notice of the accident event. | Call from 610-736-[REDACTED] to 570-696-[REDACTED] |
| 12:51 | | Don [REDACTED] (Sr Manager Operations Measurement & Regulation) notified of the accident event by UGI Dispatch | Call from 610-736-[REDACTED] to 717-360-[REDACTED] Christine page 19, line 8 (Sept. 15, 2017) ¹ |
| 12:53 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to UGI Dispatch. | Call from 484-256-[REDACTED] to 484-256-[REDACTED] |
| 12:55 | 1:00 | Kenneth Sean [REDACTED] contacts UGI Dispatch (Mechanic II) and reported that he had shut off at the main in proximity to 206 Springdale Lane, Millersville. | Call from 484-256-[REDACTED] to 484-256-[REDACTED] Christine page 19, lines 9-10 (Sept. 15, 2017) ¹ |
| 12:56 | | Central Gas Control calls Hans [REDACTED] (Chief Operating Officer) | Call from 610-736-[REDACTED] to 484-525-[REDACTED] |
| 12:56 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Rick [REDACTED] (Mechanic III) | Call from 484-256-[REDACTED] to 610-972-[REDACTED] |
| 12:59 | | PP&L contacted by UGI Dispatch to report that the power was shut off to repair area. | Landline phone log Leanne [REDACTED] (Dispatcher II); Dispatcher notes from day of event; Christine [REDACTED] page 19, lines 12-13 (Sept. 15, 2017) ¹ |
| 12:59 | | Central Gas Control calls Frank [REDACTED] (Director Engineering & Technical Services) cell phone. | Call from 610-736-[REDACTED] to 484-769-[REDACTED] |
| Between 12:40 to 13:00 | | Jose [REDACTED] (Manager Operations) called by Dan [REDACTED] (Senior Manager Operations) to report status of UGI response to accident. | Jose [REDACTED] page 16, lines 16 (July 25, 2017) ¹ |
| Between 12:40 to 13:00 | | Jose [REDACTED] (Manager Operations) called by Chris [REDACTED] (Director Operations South Region) to report status of UGI response to accident. | Jose [REDACTED] page 16, lines 17 (July 25, 2017) ¹ |
| 13:00 | 1:33 | Dan [REDACTED] (Senior Manager Operations) calls from unspecified location to Sumil [REDACTED] (PUC). | Dan [REDACTED] Cell Phone Records (Call from 484-769-[REDACTED] to 717-940-[REDACTED]) |

| Time | Duration | Activity | Source |
|------------------------|----------|--|---|
| Between 13:00 to 13:40 | | Jose [REDACTED] (Manager Operations) encountered Jason [REDACTED] (Senior Supervisor Operations-C&M) and Robert [REDACTED] (Mechanic II, Duty Foreman) on-scene at accident site. Jose [REDACTED] sees Jason [REDACTED] on stretcher, asks him how he is doing and reassures him that everything is going to be okay. Jose [REDACTED] also encounters Robert [REDACTED] how asks Jose [REDACTED] to contact his wife and father-in-law in order to let them know that he was going to the hospital. Jose [REDACTED] then approaches the cul-de-sac area. | Jose [REDACTED] page 16, line 20 to page 17, line 8 (July 25, 2017) ¹ |
| Between 13:00 to 13:40 | | Jose [REDACTED] (Manager Operations) encountered Ken [REDACTED] (Utility A-III) on the scene, who informed him that Rick [REDACTED] could not be located. | Jose [REDACTED] page 17, lines 12 (July 25, 2017) ¹ |
| Between 13:00 to 13:40 | | Jose [REDACTED] (Manager Operations) instructs UGI personnel on-site to shutdown all valves. | Jose [REDACTED] page 17, lines 17-20 (July 25, 2017) ¹ |
| Between 13:00 to 13:40 | | Jose [REDACTED] (Manager Operations) spoke with firefighter and police officers on the scene, and he learned of an employee fatality. | Jose [REDACTED] page 17, lines 20-25 (July 25, 2017) ¹ |
| 13:01 | | Central Gas Control calls Frank [REDACTED] (Director Engineering & Technical Services) home phone | Call from 610-736-[REDACTED] to 610-269-[REDACTED] |
| 13:01 | 3:00 | Chet [REDACTED] (Sr Manager Engineering) calls from unspecified location to Kenneth Sean [REDACTED] (Mechanic II) | Call from 610-554-[REDACTED] to 484-256-[REDACTED] |
| 13:04 | | Central Gas Control calls Edward [REDACTED] (Director Operations Support) | Call from 610-736-[REDACTED] to 610-372-[REDACTED] |
| 13:08 | | PP&L calls back to let UGI Dispatcher know power is shut off and PP&L personnel are on site | Landline phone log Christine [REDACTED] (Dispatcher I); Dispatcher notes from day of event; Christine [REDACTED] page 19, lines 12-13 (Sept. 15, 2017) ¹ |
| 13:08 | 1:00 | Chet [REDACTED] (Sr Manager Engineering) calls from unspecified location to Kenneth Sean [REDACTED] (Mechanic II) | Call from 610-554-[REDACTED] to 484-256-[REDACTED] |
| 13:08 | | Central Gas Control calls Kelly [REDACTED] (V.P. Engineering & Operations Support) | Call from 610-736-[REDACTED] to 610-223-[REDACTED] |
| 13:09 | | Central Gas Control calls Alisa [REDACTED] (V.P. Legislative Affairs) | Call from 610-736-[REDACTED] to 610-401-[REDACTED] |
| 13:10 | | Central Gas Control calls Alisa [REDACTED] (V.P. Legislative Affairs) office phone | Call from 610-736-[REDACTED] to 717-255-[REDACTED] |
| 13:10 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Chet [REDACTED] (Sr Manager Engineering) | Call from 484-256-[REDACTED] to 610-554-[REDACTED] |
| 13:12 | | Central Gas Control calls Mike [REDACTED] (Director Regulatory Affairs) cell phone | Call from 610-736-[REDACTED] to 484-824-[REDACTED] |
| 13:14 | | Central Gas Control calls Mike [REDACTED] (Director Regulatory Affairs) office phone | Call from 610-736-[REDACTED] to 717-255-[REDACTED] |
| 13:16 | | Central Gas Control calls Robert [REDACTED] (President & CEO UGI Utilities, Inc.) cell phone | Call from 610-736-[REDACTED] to 717-471-[REDACTED] |
| 13:17 | | Central Gas Control calls Robert [REDACTED] (President & CEO UGI Utilities, Inc.) home phone | Call from 610-736-[REDACTED] to 717-786-[REDACTED] |

| Time | Duration | Activity | Source |
|---------------|----------|---|--|
| 13:19 | | Christa [REDACTED] (Gas System Operations Supervisor) calls UGI Dispatch and informs them that everyone on their list had been contacted | Call from 610-736-[REDACTED] to 610-736-[REDACTED] Christine [REDACTED] page 19, lines 14-15 (Sept. 15, 2017) ¹ |
| 13:29 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from his wife | Call from 717-371-[REDACTED] to 484-256-[REDACTED] |
| 13:31 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from his wife | Call from 717-371-[REDACTED] to 484-256-[REDACTED] |
| 13:40 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from his wife | Call from 717-371-[REDACTED] to 484-256-[REDACTED] |
| After 13:40 | | Jose [REDACTED] (Manager Operations) spoke with UGI personnel on-site who informed him that they, together with the fire department, had begun to check other houses and Kenneth Sean [REDACTED] (Mechanic II) confirmed on-site that gas was shut off to the area. | Jose [REDACTED] page 18, lines 1-25; page 29, lines 23-25; page 31, lines 14-18 (July 25, 2017) ¹ |
| 13:44 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from Keith [REDACTED] (Utility A - 2 Year) | Call from 484-955-[REDACTED] to 484-256-[REDACTED] |
| 13:47 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) receives a call from an unknown person | Call from 717-342-[REDACTED] to 610-842-[REDACTED] |
| 13:50 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls from unspecified location to Jesse [REDACTED] (Utility A-III) cell phone | Call from 484-256-[REDACTED] to 717-205-[REDACTED] |
| 13:50 | 8:00 | Chester [REDACTED] (Sr Manager Engineering) calls from unspecified location to PHMSA Incident reporting line, Kevin [REDACTED] incident # 118291 (correct incident # 1182921) | Employee notes from day of event |
| 13:53 | 3:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) receives a call from an unknown person | Call from 484-256-[REDACTED] to 610-842-[REDACTED] |
| 13:54 | 3:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from Norm [REDACTED] (Mechanic II) | Call from 610-842-[REDACTED] to 484-256-[REDACTED] |
| 14:03 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from his wife | Call from 717-371-[REDACTED] to 484-256-[REDACTED] |
| 14:07 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from his wife | Call from 717-371-[REDACTED] to 484-256-[REDACTED] |
| 14:08 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) calls his wife | Call from 484-256-[REDACTED] to 717-371-[REDACTED] |
| 14:14 | | Chester [REDACTED] (Sr Manager Engineering) receives a call from Paul [REDACTED] PHMSA inspector on call | Employee notes from day of event |
| 14:16 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from his wife | Call from 717-371-[REDACTED] to 484-256-[REDACTED] |
| 14:24 | 2:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from Darren [REDACTED] (Mechanic II) | Call from 717-317-[REDACTED] to 484-256-[REDACTED] |
| Approx. 14:30 | | Timothy [REDACTED] (Senior Supervisor of Construction and Maintenance) arrives on the scene and began assisting Jose [REDACTED] and Chris [REDACTED] in mitigating the emergency. | Timothy [REDACTED] page 8, lines 16-17 (July 25, 2017) ¹ |
| 14:40 | | Ben [REDACTED] from County Hazmat and a firefighter assigned by Chief [REDACTED] of Blue Rock Fire Co. along with Ken [REDACTED] (Combustible Gas Indicator) and Louie [REDACTED] (Flashlight) checked for gas readings at [REDACTED] and [REDACTED] Springdale Ln; all readings negative | Eric [REDACTED] records; Employee notes from day of event |
| 14:57 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from Adam [REDACTED] (Utility A - 3 Year) | Call from 717-514-[REDACTED] to 484-256-[REDACTED] |
| 15:00 - 23:00 | | Heath Consultants performs a walking leak survey on gas mains and services in designated area (map shows surrounding development) | Heath paperwork records |
| 15:05 | | Chester [REDACTED] (Sr. Manager Engineering) receives a call from Kalukelly [REDACTED] from NTSB | Employee notes from day of event |

| Time | Duration | Activity | Source |
|---------------|----------|---|--|
| 15:10 | 1:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) receives a call from an unknown person | Call from 610-823-[REDACTED] to 610-842-[REDACTED] |
| 15:17 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from his wife | Call from 717-371-[REDACTED] to 484-256-[REDACTED] |
| 15:19 | 2:00 | Jason [REDACTED] (Senior Supervisor Operations-C&M) receives a call from an unknown person | Call from 610-823-[REDACTED] to 610-842-[REDACTED] |
| 15:30 | | Coroner on site, removes [REDACTED] (Mechanic III) from the area | Employee notes from day of event |
| 15:38 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) receives a call from Darren [REDACTED] (Mechanic II) | Call from 717-317-[REDACTED] to 484-256-[REDACTED] |
| ~16:15 | | Kenneth Sean [REDACTED] (Mechanic II), Kelly [REDACTED] (Utility A-III), & Brandon [REDACTED] (Mechanic II) were asked by non-UGI officials on site to check on a suspected propane odor behind 206. Kenneth Sean [REDACTED] used Combustible Gas Indicator along the back of the property and did not get any readings. | Employee notes from day of event; Employee notes/witness from day of event |
| 16:33 | 1:00 | Kenneth Sean [REDACTED] (Mechanic II) calls Adam [REDACTED] (Utility A - 3 Year) | Call from 484-256-[REDACTED] to 717-514-[REDACTED] |
| 17:30 - 18:45 | | Lou [REDACTED] (Utility A - 2 Year) (+ Mike [REDACTED] Safety and Compliance Inspector), Norm [REDACTED] (+ Tim [REDACTED] Operations Supervisor) leak checked w/ Combustible Gas Indicator inside of the homes along Springdale, except for [REDACTED] 206, and [REDACTED] in the condemned area. Also gathered contact information. Did not have access to [REDACTED] or [REDACTED]. Also disconnected the risers and plugged [REDACTED] and [REDACTED] to prepare for future air test. | Employee notes from day of event; Employee notes/witness from day of event |
| 18:39 | 1:00 | UGI Dispatch calls Kenneth Sean [REDACTED] (Mechanic II) | Call from 484-256-[REDACTED] to 484-256-[REDACTED] |
| 21:44 | 13:00 | Kenneth Sean [REDACTED] (Mechanic II) calls Johnathan [REDACTED] (Sales Representative II) | Call from 484-256-[REDACTED] to 484-663-[REDACTED] |
| 22:30 | | Properties at [REDACTED] and [REDACTED] were checked again for inside leaks by Lou [REDACTED] (Utility A - 2 Year) with a Combustible Gas Indicator prior to electric turn on, zero readings. | Employee witness from day of event |
| 23:00 | | Power is restored to all properties on Springdale Ln except for [REDACTED] 206, [REDACTED] by 23:00 | Employee witness from day of event |
| 23:08 | | David [REDACTED] (Director of Investigations from INA Inc.) arrives on site, receives direction from Dan [REDACTED] (Senior Manager Operations) on securing the site for the night. | Employee notes from day of event |
| 23:10 | | Lou [REDACTED] (Mechanic III) arrives on site with Flame Ionization unit, meets with supervisor Tim [REDACTED] to review leak survey location. Lou leak surveys the shut down main on Springdale Ln from Burr Oak Drive to the condemned section near [REDACTED] and [REDACTED] Springdale. Survey times were 23:15, 00:15, 01:20, 02:25, 03:30, 04:30, 05:10, and 06:10. No gas readings were found. | Leak Migration Report; Employee witness from day of event |
| 23:38 | 7:00 | Kenneth Sean [REDACTED] (Mechanic II) calls Johnathan [REDACTED] (Sales Representative II) | Call from 484-256-[REDACTED] to 484-663-[REDACTED] |

¹ Source: NTSB Interview Transcripts

Exhibit 4. Summary Timeline – On-Scene Activities Immediately Prior to the Explosion ¹

Based upon Timeline data of the SF Investigation and supplementary data obtained ², a tabulation was compiled, as presented below, to provide a brief summarization of key / significant activities that occurred immediately prior to, and including, the explosion at the subject residential dwelling [206 Springdale Lane].

| Activity Summary | Timestamp | Source |
|--|-----------|---|
| UGI CCC received a telephone call from a civilian, who (shortly prior to making this call) had been located near the accident site [i.e., near 202 Springdale Lane, as indicated by the caller], to report a gas odor, in which the call data was correspondingly relayed to the UGI CDO. | 10:26 am | UGI Timeline ³ , and Interview Transcript ⁴ |
| UGI CDO - Service Dispatcher contacted a UGI Mechanic (field technician), and placed a request to respond to the site of the gas odor report. | 10:31 am | UGI Timeline |
| The UGI Mechanic (field technician), who was notified by the CDO to respond to the site, arrived at the site of the gas odor report [202 Springdale Lane], the location of which was adjusted shortly thereafter to 206 Springdale Lane [which was the immediately adjacent property], in which the Mechanic began to address the reported gas leak. | 11:00 am | UGI Timeline |
| Additional technical personnel from UGI, who were also supportive of the gas odor response effort, subsequently arrived at the site and began activities to further assess the situation, stop the flow of gas and coordinate activities with responders of other organizations as they arrived. | | UGI ⁵ , and Interview Transcript ⁶ |

¹ Source: on-scene observations of, and field notations recorded by the SF Group Chair, and as further described.

² Data source of the subject tabulation was the individual Timeline data of UGI and BRFR (Exhibits 1 and 2), and data made available by the Lancaster County 9-1-1 / Dispatch agency, and as further described.

³ UGI Timeline, in this Tabulation, [globally] refers to the UGI Timeline document, compiled by that organization, as provided in Exhibit 2 of this report.

⁴ Source: NTSB interview conducted with the subject [9-1-1 caller] individual; see the transcript for details.

⁵ Source: email correspondence to SF Group Chair, from the UGI participant of the SF Group, dated 4/20/2018, which provided supplemental information detail for the Tabulation.

⁶ Source: NTSB interview conducted with a UGI employee [Mechanic] who had responded to the site to address the gas odor; see the transcript for details.

| | | |
|--|--------------------|---|
| <p>The resident / owner of the subject residential dwelling [206 Springdale Lane], who was in the dwelling at the time that the UGI personnel arrived at the site, was requested by one of the UGI personnel to immediately evacuate the subject property, in which that individual subsequently departed shortly before the explosion occurred.</p> | | <p>Interview Transcript⁷</p> |
| <p>A request to respond Fire Department resources to 206 Springdale Lane, Millersville, as placed by UGI, was received by Lancaster County 9-1-1 / Dispatch [agency].</p> | <p>12:16:15 pm</p> | <p>Lancaster County 9-1-1⁸</p> |
| <p>BRFR (Millersville Fire Station) was notified⁹ by Lancaster County 9-1-1, with a request to respond resources [apparatus and firefighter personnel] to the scene.</p> | <p>12:16:56 pm</p> | <p>Lancaster County 9-1-1</p> |
| <p>The Command Officer [the Fire Chief] of the first BRFR apparatus responded [in a radio call] that he was enroute to the Millersville Fire Station.</p> | <p>12:18:41 pm</p> | <p>Lancaster County 9-1-1</p> |
| <p>The Fire Chief of the first responding BRFR apparatus [a Fire Engine, Unit 905, comprised of the Fire Chief and crew of 2 firefighters (at that time)], reported [in a radio call] to Dispatch¹⁰ that they were “understaffed”¹¹ (and, thus, were unable to depart the Fire Station).</p> | <p>12:23:28 pm</p> | <p>Lancaster County 9-1-1</p> |
| <p>The Fire Chief of the first responding BRFR apparatus [Unit 905], comprised of the Fire Chief and crew of 3 firefighters¹², reported they [had departed Millersville Fire Station, and] were responding to the scene.</p> | <p>12:24:09 pm</p> | <p>Lancaster County 9-1-1</p> |

⁷ Source: NTSB interview conducted with the subject individual; see the transcript for details.

⁸ Source: Computer Aided Dispatch (CAD) documentation (and support documents), and related audio recordings [of telephone / service radio communications], of the incident, as made available by the Lancaster County 9-1-1 / Dispatch agency (to which, in this Tabulation, this source is [globally] referred to as Lancaster County 9-1-1).

⁹ This notification process is referred to, in the Firefighter Services profession, as being “toned-out” to a response call.

¹⁰ Dispatch (in this Tabulation) is a [global] reference to the Lancaster County 9-1-1 [agency], which also performs the dispatch services for the Lancaster County fire departments.

¹¹ Per the NTSB interview conducted with the subject individual [Fire Chief], the apparatus / crew was unable to immediately depart the Fire Station due to an “understaffed” condition of the apparatus (i.e., an insufficient number of firefighter crew had arrived at the Fire Station, such to provide the ‘minimum manpower count’ for the emergency call response).

¹² One additional firefighter arrived at the Fire Station shortly thereafter [making the “understaffed” notification radio call], in which the ‘minimum manpower count’ was then achieved, which allowed a departure from the Fire Station.

| | | |
|---|-------------|---|
| The Fire Chief of first BRFR apparatus [Unit 905] reported [in a radio call] to Dispatch that the Unit had arrived at the scene. | 12:28:11 pm | Lancaster County 9-1-1 |
| The Fire Chief [of Unit 905] reported to Dispatch [in a radio call] that there was an “active leak” [at the scene]. | 12:30:43 pm | Lancaster County 9-1-1 |
| Upon arrival at the scene, the BRFR Fire Chief initiated on-scene response activities; the Chief [in the role as Incident Commander] performed a ‘size-up’ of the situation ¹³ , in which the Chief conferred with a UGI employee (where the Chief was informed about what was occurring at the site), in which the BRFR firefighter personnel were also instructed accordingly [by the Chief]; the BRFR personnel laid-out a hose line, made a hydrant connection, prepared the pump panel [of the Fire Engine] for waterflow activation. | | Interview Notes (of the SF Group Chair), and subsequent [recorded] Interview transcript ¹⁴ |
| A radio call by the BRFR Chief [Unit 905], to Dispatch, reported that an explosion had occurred [at the scene], and placed a request to dispatch additional BRFR and associated response resources to the scene. | 12:32:14 pm | Lancaster County 9-1-1 |

-- End of Tabulation --

¹³ Generally described, this ‘size-up’ process, in the Firefighter Services profession, refers to conducting a ‘threat / risk assessment’ (of the situation, based upon information [of the incident] available at that time), and, in concert with knowledge of appropriate firefighting response actions, then correspondingly identifying specific steps that were to be taken to address the ‘threat / risk assessment’ elements during the on-scene response actions.

¹⁴ Source: NTSB interview conducted with the subject individual; see the transcript for details.

Exhibit 5. BRRF “Gas Leak on Springdale Lane After Action”

Gas Leak on Springdale Lane:

Notes/Questions:

- Question about the information provided the 911 center from the utility calling
- Question about the information provided to the responding apparatus from the call center
- Did the utility call anyone other than a required Call 1 call after confirming an active leak
- Why was the fire department not sent as part of the normal procedure response
- How do utilities do on-scene accountability

Lessons Learned:

- Apparatus parking is important
- Verify and check information even if from a utility on scene
- Terminology is different across the trades
- Fire Department focus/mission/goals is different than others working the scene
- Accountability of utility workers on scene difficult in a catastrophic event
- When an entire utility crew is disabled someone else must notify their home base
- Buildings affected by the blast have different mission requirements
- The blast zone effected buildings outside the original hot zone
- This scene changed within minutes very quickly from FD arrival
- Sole accountability for a very large zone is difficult, especially on nice days, with a public park walk way inside the original hot zone.

- Accountability of other utility worker(s) on-scene, if he didn't walk up, would have been his vehicle; with only a door sticker as an indicator, vehicles are the same color.
- Ramping up the command post is important
- Having met folks and worked with folks from the different agencies pre-incident is very helpful
- Having early on security of the scene helps with accountability
- Rotation of crews during long/hot events
- Plan for a media event
- Release of coordinated information between agencies
- It helped to have a one way in street
- Quickly turns into a medical needs event
- De-powering a large area for long periods of time creates a possible "special needs" list
- Enlist a building engineer earlier than later
- Events can go on for days/weeks
- Asking utilities to do something is difficult from the fire department

Exhibit 6. UGI “After Action Reports – Lessons Learned Reports”

**UGI UTILITIES RESPONSE TO NTSB INFORMATION REQUEST
APRIL 17, 2018**

NTSB Request No. 50: After Action Reports – Lessons Learned Reports

UGI Response:

The following actions were undertaken by UGI after the incident:

1. Immediately following the incident on July 2, 2017, daily leak surveys were completed on the mains and services in the development surrounding 206 Springdale Lane.
2. UGI also enhanced the response protocol to immediately address any leaks that were found, regardless of classification. There were (2) A leaks, (2) B leaks, and (1) C leak found during July 2017 which were fixed immediately.
3. UGI has replaced or abandoned all of the mains and services on Springdale Lane west of Burr Oak.
4. After close monitoring of the development, the leak surveys were reduced to a weekly frequency in mid-August, which has continued to present day.
5. System wide, UGI has also enhanced its leak survey processes in two ways. First, the criteria used to identify suspected mechanical tee locations has been reviewed and updated. Second, UGI has accelerated existing annual leak surveys of suspected mechanical tee locations to twice-annual leak surveys beginning in 2018.
6. On August 15, 2017, in accordance with established procedures, UGI held a “lessons learned” meeting following the July 2 incident on Springdale Lane. Attendees included representatives from the following organizations, Operations, Engineering, Damage Prevention, Safety, Training, Security & Facilities, Distribution Integrity, Standards, Dispatch, Legal, and Customer Service. The purpose of the meeting was to review the response of UGI to the incident and identify potential improvements to areas including dispatch, operational, or training practices. A general overview of the timeline of the events was reviewed based on the NTSB Preliminary Report on the incident.
7. Based on the lessons learned review of the emergency dispatch function, the following actions have been undertaken by the Company:
 - a. Dispatch personnel were instructed on July 21, 2017 to affirmatively ask questions regarding terminating electricity when a first responder contacts them about an emergency situation.
 - b. Mandatory Emergency Response Training was held with all Dispatch personnel in the Fall of 2017 and will be completed annually in the future.
 - c. A project is in progress to ensure all incoming calls to Dispatch are recorded.
 - d. Draft scripts were to be developed for dispatch/first responder communication mandating what information the first responder must convey to Dispatch.
 - e. Guidelines will be developed on what actions Dispatch should take if a certain amount of time has passed since making contact with the first responder.
 - f. UGI will investigate mobile technology that allows Dispatch, Engineering, and Operations access to the same information about a situation, with the ability to modify that information granted to approved personnel.

- g. UGI will provide Dispatch with a means to electronically log notes about a call.
 - h. A comprehensive Dispatch policy will be added to the Gas Operations Manual/Emergency Plan.
8. Based on the lessons learned discussion, the following actions have been undertaken or will be undertaken relative to the Company's Emergency Response Training Program:
- a. UGI created an Emergency Plan Manual that will be maintained and accessed separate from the Gas Operations Manual. The Emergency Manual reemphasizes the first priority of protecting life and property, including specific criteria for evacuation including the definition of a 330' safety perimeter. Revisions have added further specificity to the actions to be taken in hazardous conditions and provide additional clarity to the discretion field personnel have in making decisions for making the situation safe. All revisions were included in the 2017 Emergency Response Training held with field employees and were completed by December 31, 2017.
 - b. Electric shutdown procedures were included and reinforced as part of UGI's annual emergency response training.
 - c. Existing classroom based training was supplemented with table-top simulated field situations. In addition, situational training exercises are being developed incorporating both gas detection equipment simulations and live gas in a controlled field environment. Training emphasis, as it is currently, will include identification of uncontrolled hazardous situations and appropriate actions to be taken to protect life and property. In addition to the enhanced field training, additional experience based criteria are being considered for first responders on call and duty supervisors. Considering the logistics which must be addressed, such as development of the enhanced training curriculum and simulation environments, the program framework will be developed in the Fall of 2017, incrementally deployed as content is developed, with full deployment by the end of 2018.
 - d. UGI has conducted Incident Command System("ICS") facilitated video training, "ICS Awareness for Natural Gas Emergencies" across the service territory for Operations and Engineering Personnel. This module was developed and delivered by an external consultant with incident command expertise at Responding to Utility Emergencies ("RTUE") and a number of employees from UGI.
 - e. UGI has established a team to plan and manage the development of a Central Training Facility. In addition to classroom and computer learning, the facility will include an Emergency Response Safety Town where employees can receive hands-on, scenario-based training. The facility will simulate real-world conditions with functioning underground natural gas lines, house meters, and a variety of gas appliances inside the homes.
9. Lastly, the following enhancements are in progress or planned to improve the Operations Response to emergencies:
- a. UGI will investigate additional mobile technology options to facilitate the improved sharing of information in the field, such as customer lists and system maps.
 - b. UGI has ordered vests to identify command roles during emergencies.
 - c. UGI has acquired an Incident Command/Training Trailer.

- d. UGI developed decals listing specific evacuation criteria to place on gas detecting equipment.
- e. As part of the ICS training and Emergency Plan, UGI has developed a first hour checklist to assist with responding to emergencies.
- f. UGI has also distributed AEGIS Insurance Services Inc. emergency response tip cards which were placed in company vehicles and circulated a technical advisory reminding employees of the key make-safe actions to be taken during an emergency.
- g. UGI included in its Emergency Plan the mandate for all personnel to check in and out of an incident site. A designated area for sign in and media activities will also be identified during an emergency as ICS dictates.
- h. ICS training will reinforce the roles and responsibilities with Emergency Response personnel. During an emergency, the tasks completed will be documented and transferred to replacement employees as they arrive on site. There will also be procedures to hold daily meetings with all parties to discuss and understand goals for the day.
- i. UGI will create a manpower area near the incident site from which fresh crews are dispatched and a rehabilitation area for previously dispatched crews.
- j. During incidents similar to Springdale Lane, UGI will make efforts to dispatch two UGI employees to participate in customer/premise canvassing activities to ensure that there is a resource to document relevant activities.

Please note that UGI is driven to continuous improvement and will continue to incorporate changes into its procedures and training, as it has in the past, in the ordinary course of business.

Exhibit 7. BRRF - Proactively Employed Initiative Measures / Actions - Implemented Subsequent to the Accident¹

¹ Note – the described documentation is provided as received, in its entirety, from the Party participant, to which no effort was undertaken by the NTSB to validate or affirm that the identified Initiatives, as described by the Party participant, were fully implemented.

Blue Rock Fire Rescue Initiatives as follow-up to the
Springdale Lane Natural Gas explosion on July 2, 2017

First and foremost, we, Blue Rock Fire Rescue, believe there should be a technical working group established including representatives from the following groups: Lancaster County Fire Chiefs Association, Lancaster County Police of Chiefs, Lancaster County Emergency Medical Board, Lancaster County Emergency Management, Lancaster County-Wide Communications and UGI Corporation to address many health and safety issues that arose due to this tragic incident.

Blue Rock has an existing SOG: Natural Gas Emergency Operations, SOG 4003.

In reviewing this SOG, we have determined that we need to add a section on “Undetermined Gas leaks.”

We will create a technical working group to create this new section but have the below as a starting point for the discussion

In this section we will bullet the following:

- Establishment of Incident Command per other SOGs and the National Incident Management System, to include utility company personnel working at the scene
- Proper accountability of all personnel working at the scene to include but not limited to emergency responders, private contractors, utility company employees
- Proper staging of ALL vehicles away from the area of any suspected natural gas leak
- Proper evacuation of any area, residents, bystanders in an area of an unknown natural gas leak
- Timely and proper dispatch immediately upon notification of any unknown potential Natural gas leak
- Metering of all areas of a suspected natural gas leak, both within and outside structures
- Requesting of the utility company to immediate close any remote valves when there is an unknown leak from an unknown source or area
- If necessary evacuate all personnel, including utility company employees out of the immediate danger zone

In addition to the proposed revisions to the above SOG, we have also completed an After Action Review process, in which we have come up with the following proposed initiatives, some of which, as documented, have already been imitated or begun:

- Meet with Utility companies and Lancaster County-wide Communication, LCWC, (9-1-1) to ensure that the fire department is always notified immediately (in parallel) of any known or suspected natural gas leak (which did not occur in this incident)
 - In this incident it was well over an hour, which could have been even more catastrophic then this tragic event already was, producing potentially more loss of life
 - Make sure that all information given to the 9-1-1 center is conveyed to the fire department
 - Make sure that a system exist in which all information given to the utility company is conveyed to the fire department

- There NEEDS to be communications from the utility worker on the scene to the incident commander/emergency services
- Ensure that LCWC has a SOG that addresses the above issues of communication and dispatch protocol
 - The NTSB specifically addressed the issue of the written detail from the LCWC documents about the incident. There appeared to be gaps in what was logged.
 - Is there a protocol for extra telecommunicators to assist at major events
 - Is there a protocol for what is written in the LCWC Log during an active incident/major incident?
- Ensure that the utility companies have a SOG that addresses the above issues of communication and dispatch protocol
- Ensure that a system is in place in which all personnel working on the scene are operating within the Incident Command System (NIMs)
 - All personnel, including emergency responders and utility company employees must properly communicate with the Incident Commander
 - Ensure that all personnel, including emergency responders and utility company employees, log in and have a system of accountability (Identification tags)
 - Blue Rock Fire Rescue will provide accountability tags for ALL Manor Township and Millersville Borough law enforcement, so that they can give their accountability tags to the accountability officer working within the ICS.
- Ensure that there is training with the emergency response community and the utility in which a formal understanding of the ICS system is explained and common terminology can be identified.
 - In this incident, the utility workers and responders were using terminology such as percentages and number, which were in conflict, as the sides had different understanding of what some of these “numbers” meant.
- We plan to work with the NTSB Training Branch to host a course on Media Communications at large scale incidents, inviting all local public sector and select private sector organizations to the training. (Contact has already been initiated with Training Branch)
 - While the emergency services were coordinated with their media message, the utility company did news releases and news conferences sometimes outside the formal ICS structure
- We believe there is a need locally to be educated on “how to interact with federal investigators.” While the overall results have been very good, there was a steep learning curve, having never been involved with a high level federal investigation previously.
 - This training will be beneficial for local government, local level emergency management, law enforcement, fire service and emergency medical service agencies.
- There needs to be yearly training between the emergency services and the utility workers who “actually respond” to these events as their day to day job, not just with utility company management
- Utility companies NEED to be responsive to the request and needs of the emergency services.
 - Tunnel vision as to their core mission is many times a detriment to the overall mission by the incident commander
 - Utility workers (those first on scene and working) MUST understand the bigger picture and work with the Incident Commander

Exhibit 8. UGI - Proactively Employed Initiative Measures / Actions - Implemented
Subsequent to the Accident^{1, 2}

¹ Source: to supplement the prior UGI Initiatives List transmittal dated 5/25/2018 (as cited in the SF Factual Report § 7.2), an updated Initiatives List, and supplemental data supportive to resultant NTSB questions, was provided in a series of email correspondence from the UGI participant to the SF Group Chair, dated 10/18-29/2018, inclusive, to which a final transmittal submission was received from this Party participant on 10/31/2018, wherein acceptance of the subject UGI documentation is stipulated as a 'late-received replacement submission' to the [total of] four prior Initiatives List transmittals (all containing "draft" and 'confidentiality constraint' notations) as issued by UGI.

² Note – the described documentation is provided as received, in its entirety, from the Party participant, to which no effort was undertaken by the NTSB to validate or affirm that the identified Initiatives, as described by the Party participant, were fully implemented by the Party participant.

UGI UTILITIES RESPONSE TO NTSB INFORMATION REQUEST

NTSB REQUEST NO. 152: **UGI after accident initiatives**

UGI RESPONSE AS OF OCTOBER 31, 2018: The UGI procedures and programs that were in place at the time of the accident met or exceeded applicable regulatory requirements, as well as industry standards. While no deficiency existed with respect to UGI's procedures and programs, following the events of July 2, 2017, and as part of UGI's ongoing efforts to proactively continue to improve and enhance its commitment to safety, UGI implemented the following improvements.

UGI took the tragic events of July 2, 2017 as an opportunity to reinforce and enhance the procedures and programs specifically revolving around emergency response to ensure employee preparedness, competence, and confidence when responding to emergency situations. Enumerated below is a summary of emergency response enhancements UGI implemented across departments and job functions.

All initiatives listed are as of the date of this document. Some initiatives are ongoing.

1. Immediately following the accident, UGI instituted the following limited duration initiatives to manage the integrity of the system on Springdale Lane from the intersection of Burr Oak Drive west to the end of the cul-de-sac:

- A daily walking leak survey with a Flame Ionization (FI) unit on the main will be performed until all known mechanical tees are remediated or replaced.
- Work commenced to remediate or replace all known mechanical tees on Monday, July 10, 2017. This work has been completed.
- The existing gas main will be replaced in its entirety as soon as necessary permits and permissions have been received. This work has been completed.

UGI has also taken the limited duration actions below to manage the integrity of the surrounding neighborhood defined by the boundaries of North Duke Street, Blue Rock Road, Letort Road, and Little Conestoga Creek.

- Perform a daily driving leak survey of the main in the neighborhood as defined above.
- Perform a daily 8-hour walking leak survey with a Flame Ionization (FI) unit of the main in the neighborhood as defined above.

Any leak that is found through the surveys listed above, regardless of classification, will be immediately repaired and reported to the Pennsylvania Public Utility Commission.

2. **Pipeline & Public Safety (P&PS) Enhancements:** Since the events of July 2, 2017, the PP&S group has undertaken several training initiatives to emphasize the incident command system. Outreach efforts with external Emergency Response departments has also increased to strengthen the awareness of natural gas pipeline safety. Below is a summary of these enhancements.
- UGI has enhanced and expanded their gas safety training for external emergency responders by developing the “A Shared View” presentation. The presentation provides training and discussion on the following:
 - Properties of Natural Gas
 - Odorant and Rotten Egg comparison
 - Components of Natural Gas Systems and their purpose
 - Controlling Ignition Sources
 - ROW's and Pipeline Markers
 - Gas valve operation do's and don'ts
 - Responding to CO emergencies
 - Responding to Natural Gas emergencies and odors
 - Audio of 3rd Alarm Philadelphia gas explosion from 2011
 - Lafayette Indiana Incident Case Study
 - UGI's annual Paradigm Public Awareness meetings
 - UGI's Responding to Utility Emergencies (RTUE) online training programs for gas and electric
 - 811 and Pennsylvania 811 Firehouse Sign contest
 - Paradigm Liaisons meetings with pipeline stakeholders were enhanced post-accident to include CORE – Coordinated Response Exercise, where the Operators in attendance mixed in with the stakeholders (Emergency Responders & Public Officials) and worked through a series of Emergency Response/Incident Command decisions much like a table top exercise. This enhanced approach was interactive and required cross functional participation and engagement for responding to simulated emergency situations.
 - On August 21st, 2017, UGI held their Natural Gas Safety program, “A Shared View” at Millersville University. The event was coordinated through Blue Rock Regional Fire District and was offered to other mutual aid companies in the region as well as the Lancaster County 911 Center. The Pennsylvania PUC Inspectors attended along with (67) other Emergency Services personnel.
 - UGI has increased advertising frequency to monthly in the PA Fireman's Magazine promoting the Responding to Utility Emergencies “RTUE” (now called Energy Emergencies) product and related information on the site. Energy Emergencies (previously RTUE) is an external facing curriculum that provides Emergency Management personnel the ability to train, test and certify in responding to Natural Gas & Electrical Utility emergencies at no cost to emergency responders. The PA Fireman's Magazine is distributed monthly to all Fire Houses in PA and adjoining states and is a product of the Lancaster County Fireman's Association.

- UGI has held executive and management level meetings since July 2017 with PPL Electric, the electric Utility serving the Millersville area, to refine and enhance electric shutdown protocols with an emphasis on public and employee safety.
- On November 30, 2017, three Incident Command System “ICS” breakout sessions were conducted at the semi-annual UGI Operations Supervisor Meeting. These were conducted by the P&PS group in coordination with external facilitators from Energy Emergencies (previously RTUE) which included two current active Fire Chiefs and Fire Academy Training Staff.
- UGI has designed, purchased, and received a Pipeline & Public Safety – Incident Command Trailer that is capable of being used at various sites to enhance outreach and training opportunities with emergency responders, public officials and excavators. This trailer will also be utilized internally in the event of a warranted emergency. This trailer will promote the ICS protocols and enhance UGI’s efforts in responding to an emergency.
- UGI is continuing the process of implementing the Everbridge mass notification system that can be used in the event of various emergency situations. UGI integrated a single sign-on feature which will allow company personnel to log into the system and update personal contact information using their company credentials. Although the system has not been fully deployed yet, message testing with an internal test group (UGI Ambassadors) and scenario templates is planned to be completed by end of the calendar year.
- As a central point for external Emergency Responders, Excavators and Plumbers to schedule Gas Safety Training, a scheduling tool has been added to the UGI Web site, effective July 2018. This tool will provide external Emergency Responders, Excavators and Plumbers the ability to register for a training session covering any of our (3) primary safety messages:
 - Natural Gas or Electric Emergencies
 - 811 Call Before You Dig and reducing damages
 - Cross Bore Awareness for drain cleaning
- UGI Presented their Gas Safety module at the November 2017 PFESI – Pennsylvania Fire & Emergency Services Institute Annual Conference. UGI is a prime sponsor for the 2018 Conference and anticipates doing a presentation at that conference.
- In December 2018 UGI held a Gas Safety presentation, “A Shared View” at the Lancaster County Fire Chief’s Association meeting.

3. **Training and Field Compliance Enhancements:** UGI undertook several enhancements in an effort to increase the skill set of our employees when responding to an emergency. Below is a summary of these enhancements.

- Skilled UGI Staff (encompassing Operations, Engineering, Training, & Pipeline Safety members) in collaboration with Energy Emergencies, developed an interactive video module covering incident command. This lesson was facilitated by UGI P&PS Staff while the core Incident Command Structure “ICS” content is delivered via video by external facilitators. The video lesson is titled “ICS Awareness for Natural Gas Emergencies” and covers key aspects of UGI First Responder actions and decisions, the ICS structure and role assignments and the three Priorities of Emergency Response; Life Safety, Incident Stabilization, Property Conservation. To date, 716 UGI employees have taken this instructor facilitated video lesson.
- UGI developed and delivered an enhanced scenario-based Annual UGI First Responder Refresher Training and Requalification Program (Operator Qualification for Covered Task #27, Investigating Leak/Odor Complaints). During classroom training, breakout groups participated in tabletop emergency response scenarios. Situational training exercises are also being developed in order to reinforce UGI first responder skills in emergency situations.
- UGI developed and distributed Emergency Response stickers to be placed on each Gas Measurement Indicator “GMI” used by UGI first responders. These stickers provide responders visual reminders and guidance for actions to be taken when encountering atmospheric readings of 20% LEL or greater. They focus on reinforcing life safety, eliminating ignition source/electric shutdown, and use of UGI’s First Hour Check List, First Responder Actions checklist. The stickers are placed on GMI’s utilized by UGI emergency responders to further reinforce their role and expectations in an emergency situation. Please refer to Standards & Procedures enhancements below for a detailed summary of the First Hour Check List, First Responder Actions checklist.
- As an enhancement to prior emergency response initiatives, UGI ensured all UGI Emergency Response vehicles contained the AEGIS Insurance Services Tip Card Visor handouts covering Emergency Response. The Natural Gas Emergency Tip Cards are a set of 5 cards to assist UGI first responders in determining the proper actions to take when responding to an emergency. These tip cards cover the topics of:
 - Gas Explosions
 - Inside Gas Leak Investigations
 - Outside Gas Leak Investigations
 - Inside Carbon Monoxide Leak Investigations
 - Facility Damages

UGI utilizes these tip cards to reinforce general emergency response guidelines for its emergency responders.

- UGI Issued Technical Advisories: T2017-16 Blowing Gas Procedures, T2018-03 Gas Emergency Shutdown, and T2018-05 Electrical Shutdown for Gas Emergency Response to further emphasize emergency response. Please refer to Appendix A for a copy of these three technical advisories. UGI will include Technical Advisories in the Gas Operations Manual and Emergency Plan as links in an appendix in each manual.
 - All UGI Compliance Inspectors attended the National Safety Council Incident Investigation – Root Cause Analysis (RCA) course in February 2018 to increase their knowledge of performing and documenting incident investigations. The course included Incident Investigation Kits, Incident Investigation Report, Causal Factors and Corrective Action Forms, and Five Questions to Ask. The form to document RCA's has been digitized and is centrally stored.
 - UGI developed and implemented a Mechanical Tee Remediation Inspection SharePoint application for the field compliance inspectors to audit and record ongoing remediation procedure compliance.
 - UGI's (3) Gas Leak Simulation Fields have been upgraded at the Lewistown, Reading and Wilkes-Barre locations. The upgrades include the placement of mock-up buildings, the installation of new simulated piping and associated safety equipment and the installation of curbing, signage, and sub-structure items (surface-placed manholes, curb boxes and mock-up gas services). The Lewistown installation includes the placement of gas appliances to support live gas turn-on and light-up training and simulations.
 - UGI has expanded and further enhanced its Gas Leak Investigation Training Module. This new multi-day program has been developed for UGI first responders and will utilize the Gas Leak Simulation Fields for both initial first responder training and for remedial training on gas leak investigations. In association with this training session is the use of new technology, featuring a Combustible Gas Indicator (CGI) capable of displaying variable gas readings and controlled by the Training Instructors tablet PC. Our Technical Instructors can use this training aid to simulate inside leak scenarios without the use of actual natural gas sources.
4. **Pipeline Facility Enhancements:** UGI undertook several enhancements to ensure the safe and reliable delivery of natural gas to our customers.
- UGI is proactively remediating the mechanical tee installations of all single family homes in the Springdale Lane Development. To date, 99 total mechanical tees have been remediated or replaced in the development. In addition to the remediation process, UGI has replaced the main on Springdale Lane from Burr Oak Circle to the cul-de-sac at the end of Springdale Lane which encompasses approximately 994 feet of distribution pipeline. UGI also replaced a portion of main in the townhome section of the development.

- UGI has increased remediation activity of mechanical tees throughout our distribution system, remediating or replacing approximately 2,577 total mechanical tees since the accident and through Oct 4, 2018.
 - UGI continues to research main and service facilities suspected of utilizing mechanical tee installations. As UGI refines the data, a list of potential locations is generated and prioritized to facilitate the removal of mechanical tees from its distribution system.
 - UGI is piloting a camera project to inspect gas mains utilizing an inline camera system capable of identifying and viewing service taps and collar depths in the main.
5. **Dispatch Enhancements:** Since the events of July 2, 2017, UGI enhanced its dispatch procedures and protocols. These enhancements streamlined dispatch processes in order to proactively identify the need for electrical shutdown and additional help. Listed below are the Dispatch Enhancements made or in the process of being implemented since the events of July 2, 2017.
- UGI Dispatchers receive Annual Emergency Response and ICS Training to familiarize them with emergency response through the viewpoint of an emergency responder.
 - To serve as a reminder to UGI first responders, UGI Dispatchers are instructed to ask UGI first responders if they require the interruption of electric facilities when responding to an emergency.
 - As an enhancement to their existing dispatch GPS technology utilized in MobileUP, UGI recently deployed Verizon Connect software for GPS fleet tracking. UGI Dispatchers utilize this GPS location tool to help locate and identify the closest qualified UGI first responder for emergencies in the event additional manpower is necessary.
 - As an enhancement to existing phone recording technology, all UGI Dispatcher landline phone lines are recorded utilizing the NICE phone recording server.
 - UGI enhanced their landline phone call logs by utilizing a third-party software application, ShoreTel Brightmetrics.
 - In addition to company issued cell phones, to enhance communication between the field, Central Dispatch, and local operating offices, UGI is conducting a study to determine if two-way radio communication is feasible as the primary mode of communication throughout UGI's operating areas.
6. **Standard & Procedure Enhancements:** UGI has created an Emergency Plan document separate from the Gas Operations Manual ("GOM"). UGI's Emergency Plan contains similar content as previously included in GOM 60.50 – Emergency Plan. The procedures have been revised to add further clarity to emergency response situations and actions

undertaken. Please refer to Appendix B for a detailed summary of the changes made to UGI's Emergency Plan. A summary of changes made include:

- UGI developed a “First Hour Check List, First Responder Actions” checklist as an appendix to its enhanced Emergency Plan. This checklist serves as a handy safety reminder for UGI emergency responders arriving at the scene of an emergency and reinforces the principals of protecting the public and all personnel responding to an emergency. In this checklist, UGI emergency responders are reminded of the important steps to take within the first hour of arrival, such as evacuating the public, identifying the need for additional resources, communicating with Emergency Departments/Incident Commander, and the internal transfer of incident command. Please refer to Appendix C for a copy of this checklist.
 - Updating procedures to include safety perimeter criteria. This perimeter is situation dependent, but provides additional guidance for removing the general public away from a natural gas emergency.
 - UGI reinforced the discretion UGI first responders have to shut down a pipeline. Existing procedures prior to the events of July 2, 2017 empowered UGI first responders to act appropriately should they feel that life and property were in imminent danger. To reinforce this responsibility, UGI issued Technical Advisory T2018-03 “Gas Emergency Shutdown”. This advisory identified prudent actions for UGI first responders during gas leak investigations for the emergency operation of system valves.
 - UGI enhanced its emergency response investigation procedure to further define the distinctions between a controllable and non-controllable incident. This revised definition is coupled with actions to be taken by UGI first responders in each circumstance.
 - The UGI dispatch procedures were revised to provide additional guidance and expectations to UGI first responders which further enhance their preparedness.
 - UGI clarified and specified in its operating procedures scenarios where electrical power (which can be considered a source of ignition) shall be shut down, including a form to collect the information to be provided to Central Dispatch to facilitate the request.
 - UGI created two checklists for leak investigations: EP Appendix G2 Inside Leak Checklist and EP Appendix G3 Outside Leak Checklist.
7. **911-Related UGI Initiatives:** To enhance safety and ensure 911 emergency responders are timely notified, UGI will implement the following initiatives:
- UGI will expressly identify in its emergency response procedures specific emergency situations where immediate 911 notification is required by UGI personnel.
 - UGI will review and update its dispatch procedures to include a decision matrix which will identify situations and keywords where immediate 911 notification is required.

- UGI will survey peers within the industry, Emergency Response subject matter experts, and other stakeholders to insure the Company’s practices are in line with industry best practices.
8. **Safety Culture Assessment Project:** In June 2018 UGI began an engagement with DuPont Sustainable Solutions (“DSS”) to assess our safety culture, efficacy of safety related initiatives and incident investigation process, and to create a unified safety brand. The assessment included a comprehensive evaluation that provided a baseline to understand the current state and the development of an improvement strategy to advance the culture, systems and processes as part of a world class safety program.
- The safety perception survey resulted in 1,366 respondents, or 81% response rate across UGI.
 - DSS visited ten different UGI locations and conducted interviews and field visits with nearly 200 employees at all levels of the organization.
 - Safety branding and communication sessions were held with Executive leaders, safety leaders, Union leaders, operations management and front-line supervision to develop UGI’s internal safety brand.
 - UGI is currently working with DSS to develop a long-term improvement strategy that focuses on safety governance and safety leadership skills and for employees throughout the organization.

TECHNICAL ADVISORY



Blowing Gas Procedures

Released: October 5, 2017

When operating motorized vehicles, tools or equipment in the vicinity of escaping natural gas, good judgement and prudent precaution should be taken to prevent accidental ignitions or similar incidents. Like other sources of ignition, internal combustion engines should be kept a safe distance and a safe perimeter should be established at each work site. Continuous monitoring of atmospheric readings should be taken with a combustible gas indicator. Consider the following factors at any given work site to determine and establish a safe work zone and always consider changing conditions when placing vehicles and equipment in the work zone:

- * **Controlled or uncontrolled escaping gas (venting or leaking)**
- * **Nature of the gas leak, including the pattern of dispersion and exposure of the facility**
- * **Location of the leaking facility (subsurface, surface or above the surface)**
- * **Volume of gas leaking and pressure system involved (low, medium or high pressure)**
- * **Prevailing wind direction and weather conditions**
- * **Access to utilize intrinsically safe and/or pneumatic tooling on the leaking facility**
- * **Proximity to roadways, highways, buildings and pedestrians**

Always utilize the proper PPE and ensure that fire extinguishers are in proper working order and placed at the ready when working in the proximity of escaping gas. In addition, ensure that operators of non-UGI vehicles and equipment near the work zone are aware of the potential hazards and directed accordingly.”

Consider cordoning off the area of potential hazard to prevent entry of ignition sources.



"Keep vehicles and equipment clear of possible gas leak sources."



Critical Reminder: Gas Emergency Shutdown

Effective Date: 3/1/18
T2018-03

PURPOSE: This advisory identifies prudent actions for first responders during gas leak investigations for the emergency operation of system valves and other considerations to affect a shutdown. It is provided as a reminder to steps outlined in detail in the UGI Emergency Plan procedures.

SCOPE: The scope covers response to both natural gas and propane leaks and focuses on shutting off the gas supply when Life Safety could be compromised. "Make safe" means taking actions that eliminate the hazards for employees and the public. The first priority of emergency response is Life Safety and may require evacuating people from the area depending on the nature of the leak.

SYSTEM SHUTDOWN METHODS:

- Closing valves is the generally preferred method of shut down, especially when rapid isolation is needed to protect people and property.
- On-site employees and supervisors who are familiar with the system are authorized to close valves to make the situation safe, **without waiting for engineering approval.**
- **If it is not clear which valves are needed to isolate the pipeline,** contact Dispatch or Area Engineering to evaluate which valves need to be closed or what other steps might be required to affect a shutdown.
- The Sr. Area Engineering Manager or designee shall determine the appropriate in-line valves to close and isolate the system. These valve numbers and their location shall be promptly communicated to field personnel and to Central Dispatch.
- As required, request Dispatching to send additional employees if needed to isolate the system.

Considerations for gas system shutdown include:

- Imminent Danger from a Hazardous Condition
- A Rapidly Migrating or Widespread Leak
- A Mechanical Tee Failure
- Blowing Gas Threatening Life Safety
- Mitigation of Potential Property Damage

*For full details on Emergency Response and Gas Leak investigation refer to the
Emergency Plan on the Operations page @ InsideUGI
<https://ugi.sharepoint.com/departments/operations/emergencyplan/SitePages/Home.aspx>*



Electrical Shutdown for Gas Emergency Response

Effective Date: 3/26/18
T2018-05

PURPOSE

Electrical power shall be shut off to the emergency site (including back-up electrical sources such as whole house generators or solar panels) when there is an uncontrolled gas migration or accumulation which results in any of the following conditions:

- Any gas reading in the atmosphere of multiple buildings in the leak area.
- Gas readings at or above 20% LEL in the atmosphere of a building.
- Situations in which a repeatable 80% LEL gas reading is found in manholes or ducts.
- Any time evacuations have been initiated by on site UGI personnel, except when the evacuation is only in response to Carbon Monoxide readings.
- Blowing gas situations where overhead electrical lines could cause ignition.
- When access cannot be gained to a building where an odor complaint was reported and inside gas readings cannot be verified.
- **Imminent danger exists in the judgment of UGI field personnel.**

SCOPE

The prevention of accidental ignition from electrical sources.

PROCEDURES

Requests to have the electric shut off should be made through the UGI Central Dispatch Office. Information to provide Central Dispatch includes the following:

- The location of the incident as precisely as can be determined. This may include street addresses, and municipality, nearest cross streets.
- Electric utility pole numbers or underground pad-mounted transformer identification numbers. **(See page 2 for examples and suggestions).**
- The nature of the emergency.
- If applicable, the number and type (fire, police) of emergency personnel at the event location and a contact number of the incident commander.
 - If power has already been shut off, or has previously been requested to be shut off by emergency responders, communicate to Central Dispatch the name, telephone number of the person who made that request and the time of the request.
 - Central Dispatch will record this information and contact the electric provider to ensure the request to have the electric cut off has been communicated.

Emergency Plan EP 3.1

Please review the Emergency Plan referenced above on the Operations page on *Inside UGI* for details, or contact a supervisor.

**DCA17FP006 – Millersville – NTSB
NTSB-UGI-04694**

Electric Utility Facility Number

Wooden distribution pole with standard PPL grid location of **58542s47030**.

Most pole tags are in yellow or gray/silver and will be shown in two rows like the image to the left. The designation standards are 5 digits, then a letter (either N or S), followed by another 5 digits. Depending on where in PPL the device is located the letter on the second row should be either N (north) or S (south).

UG padmounted transformer with standard PPL grid location of **58605s46980**.

Most residential subdivisions have underground construction and are serviced by what are referred to as padmounted transformers. Below is an example of what a padmount tag would look like. The naming convention is the same as a pole.



The ID number can usually be found at a height of 6 feet from the ground.

There are many types of utility pole identifiers as shown, and sometimes you will find more than one row of numbers on a utility pole. If you should happen to find more than one row of numbers on a utility pole always document all numbers or letters from the top most or left most number or letter. This information with the nearest location; street, city, E, W, N, S, in front of building number, etc.



The correct pole # is as indicated, **36520**.

When in doubt document:

Top Row: **36520**
Second Row: 13
Third Row: 0249
Fourth Row: 013

First Energy-Pole # **34197-36580**

Pennsylvania First Energy Companies

- Met Ed
- Penelec
- Penn Power
- West Penn Power

Emergency Plan EP 3.1

Please review the Emergency Plan referenced above on the Operations page on *Inside UGI* for details, or contact a supervisor.

Appendix B: Detailed Summary of Emergency Plan enhancements.

1 Introduction and Levels of Emergencies

1.1 Emergency Plan Introduction

1.2 Levels of Emergencies ****New Document****

2 Receiving and Classifying Emergencies

2.1 Call Center Procedures ****New Document****

2.2 Gas Central Dispatch Procedures ****New Document****

2.3 Gas Control Procedures ****New Document****

3 Gas Emergencies

3.1 Gas Leak Investigation

- Define make safe and associated actions, including actions required to shut down gas quickly
- Identify criteria for electrical (ignition source) shutdown
- Identify information to be provided to Central Dispatch for electrical shutdown
- Identify actions to be taken when arriving on scene, including locating the vehicle in a safe area
- Evacuating structures – Identify criteria and distance (330 feet) to keep displaced occupants a safe distance away from the area involved
- Identified actions to keep personnel safe during leak investigation
- Now includes new checklists (see Appendices G.1, G.2, G.3 & G.4)

3.2 Gas Explosion and/or Fire

- Identify actions to take when arriving on-scene of a fire or explosion
Identify with whom to make contact upon arrival (emergency responders, local officials, etc.)
- Responsibilities when arriving on the scene of a fire or explosion
- Actions to take to preserve life and property

3.3 System Overpressure

- Identify actions to be taken for various levels of system overpressure situations

3.4 Emergency Shutdown and Loss of System Pressure

- Identify response criteria for the different conditions, including how to identify those conditions
- Actions to be taken in the event a loss of system pressure or emergency shutdown occurs
- Identify actions to be taken in order to restore service

3.5 Natural Disaster

- Converted to new format and enhanced

3.6 Carbon Monoxide

- Converted to new format and enhanced
- Lowered the minimum CO concentration in air to trigger evacuation from 200 PPM to 100 PPM
- Now includes a new checklist (see Appendix G.5)

3.7 LNG Emergencies ****New Document****

3.8 Propane Emergencies ****New Document****

- 3.9 Gas Supply Emergencies ****New Document****
- 3.10 Gas Emergency Training
 - Converted to new format and enhanced
 - Now includes requirements for ICS training (ICS 100 and ICS 200 modules) and Awareness for Natural Gas Emergencies training module (developed by UGI in cooperation with Mike Callan)
 - Identified effectiveness measures
- 4 Environmental Emergency
 - 4.1 Environmental Emergency
 - Updated to include reference to the Emergency Plan and environmental requirements
- 5 Suspicious or Threatening Activities
 - 5.1 UGI Owned Building Evacuation Procedure
 - Converted from the UGI safety manual and updated to now include evacuation minimum distances of 330 Feet, where applicable.
 - 5.2 Bomb or Other Threats' Response Procedure ****New Document****
 - 5.3 Active Shooter Response Procedure ****New Document****
 - 5.4 Workplace Violence Response Procedure ****New Document****
 - 5.5 Physical Security Breach Response Procedure ****New Document****
 - 5.6 Cyber Security Breach Response Procedure ****New Document****
 - 5.7 National Emergencies' Response Procedure ****New Document****
- 6 PHMSA Reporting
 - 6.1 Incident Reporting
 - Converted to new format and enhanced
 - See Appendices F.1, F.2, F.3 and F.4
 - 6.2 Safety Related Condition Reporting
 - Converted to new format and enhanced
 - Now includes Appendix F.5
- 8 Liaison with Outside Agencies
 - 8.1 Liaison with Emergency Response Agencies
 - Converted to new format and enhanced
 - 8.2 Mutual Assistance
 - Converted to new format and enhanced
- Appendices
 - A. Emergency Contact Matrix
 - B. Emergency Contact Information
 - C.1 Emergency Material
 - D. Mutual Assistance
 - F.1 DOT Reportable Incident Flow Chart
 - F.2 Guidelines for Notifications
 - F.3 PA UCTA-8 Accident Report Form
 - F.4 MD EN-6 Utility Accident Investigation Report
 - F.5 Safety Related Condition Table
 - G.1 1stResponder – First Hour Checklist ****New Document****

- G.2 Indoor Leak Investigation Checklist ****New Document****
- G.3 Outdoor Leak Investigation Checklist ****New Document****
- G.4 Electric Shutoff Information ****New Document****
- G.5 Carbon Monoxide Checklist ****New Document****



- Approach the scene with caution wearing appropriate PPE**
- Consider vehicle placement in relation to the report or observations**
- Is there a Hazardous Condition Present?**
 - If Yes** – is Evacuation of the occupants necessary? Direct persons to evacuate approximately 330 feet from the affected structure, or to an area as determined by the Incident Commander.
When in Doubt, Get them Out! (Life Safety)
- Single resource on site - Notify Dispatch of conditions and request they:**
 - Notify 911 if there are injuries, fire, or other help is needed.
 - Dispatch additional UGI resources (tell them what is needed and where to report).
 - Notify electric power company if power needs to be cut.
 - Notify 811, if pinpointing or excavation activities are needed.
 - Establish status update interval with Dispatch and continue investigation.
- Is 911 (Emergency Services) on the scene – If Yes:**
 - Identify yourself to the Incident Commander (IC)
 - Discuss what actions have been taken and what you will be doing.
 - Confirm if any evacuations have taken place. Request assistance to evacuate additional occupants if necessary.
 - Discuss establishment of an appropriate Safety Perimeter and deny reentry.
Emergency Services will generally start at 330' for the Public.
 - Let the Incident Commander know what additional resources were requested, and the estimated time of arrival.
- Are additional non - UGI resources needed?**
Type: Locksmith, Other Utilities, Leak Survey, Environmental, etc.

Transfer of Command Checklist: *Communicate the following where applicable*

- Incident history (what has happened) (Where is the gas?).
- Review of the scene.
- Any severe safety considerations or limitations.
- Incident potential for escalating or getting worse.
- Priorities and objectives (what you and the Incident Commander want to accomplish).
- Current plan (what you are doing to meet the objectives).
- UGI Resource(s) on scene, requested and arrival time.
- Any important communications and documentation.
- Any specialty tools or equipment required.
- If 911 is on the scene – Name, and to the extent possible their activities to this point.
- Explain any safety perimeters that have been established and who is allowed in each.
- Establish location for Command Post (In the Cold Zone).

MAP

F

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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RESIDENTIAL GAS EXPLOSION
ON SPRINGDALE LANE, MILLERSVILLE,
PENNSYLVANIA, JULY 2, 2017

Accident No.: DCA17FP006

* * * * *

Interview of: JEANNINE AND GARY HUGHES

Blue Rock Fire Hall
Millersville, Pennsylvania

Wednesday,
July 26, 2017

APPEARANCES:

ROGER EVANS, Investigator in Charge
National Transportation Safety Board

EDWARD KENDALL, Attorney
National Transportation Safety Board

RICHARD DOWNS, Survival Factors Group Chair
National Transportation Safety Board

TERRI COOPER SMITH, Fixed Utility Evaluation
Engineer III
Pennsylvania Public Utilities Commission,

GARY MAURER, Manager, Operations Programs
UGI Utilities

ROBERT KRIEGER, Vice President of Operations
UGI Utilities

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I N T E R V I E W

(10:07 a.m.)

1
2
3 MR. EVANS: Good morning. Today is July 26th, 2017. It is
4 now 10:07 in the morning. My name is Roger Evans, and I'm an
5 investigator with the National Transportation Safety Board out of
6 Washington, D.C. We're at the Blue Rock Fire Hall in
7 Millersville, Pennsylvania.

8 This interview is being conducted as part of the
9 investigation into the residential explosion on Springdale Avenue
10 here in Millersville that occurred on July 2nd, 2017. The NTSB
11 case number for this is DCA17FP006.

12 The purpose of the investigation is to increase safety, not
13 assign fault, blame or liability. The NTSB cannot offer any
14 guarantee of confidentiality or immunity from legal actions.

15 This interview is being recorded and may be transcribed at a
16 later date. A copy of the transcript will be provided to the
17 interviewee for review prior to being entered into the public
18 docket.

19 Jeannine Hughes, you're permitted to have one other person
20 present during the interviews. This is a person of your choice --
21 an attorney, supervisor, a friend, family member, or nobody at
22 all. Please state for the record who you have selected.

23 MS. J. HUGHES: Gary Hughes.

24 MR. EVANS: Okay. And Jeannine, can you please spell your
25 name?

1 MS. J. HUGHES: J-E-A-N-N-I-N-E.

2 MR. EVANS: Okay. And Gary, can you please spell your name?

3 MR. G. HUGHES: G-A-R-Y, H-U-G-H-E-S.

4 MR. EVANS: H-U-G-H-E-S?

5 MS. J. HUGHES: H-E-S.

6 MR. EVANS: Okay. Thank you. Now I'd like to go around the
7 room and make some introductions of who's here.

8 MR. KENDALL: Edward Kendall, K-E-N-D-A-L-L, attorney, NTSB.

9 MR. DOWNS: Richard Downs, D-O-W-N-S. I do the Survival
10 Factors Technical Working Group. I'm the chairperson of that,
11 NTSB, Washington, D.C.

12 MS. COOPER SMITH: Terri Cooper Smith, C-O-O-P-E-R, Smith, S-
13 M-I-T-H, Pennsylvania Public Utility Commission, Fixed Utility
14 Valuation Engineer III.

15 MR. MAURER: Gary Maurer, M-A-U-R-E-R, Manager of Operations
16 Programs with UGI Utilities.

17 MR. KRIEGER: Robert Krieger, K-R-I-E-G-E-R, and I'm the Vice
18 President of Operations for UGI Utilities.

19 MR. EVANS: Okay, thank you, the both of you, for agreeing to
20 speak with us today. Before we begin, we'd like to just get some
21 background information.

22 INTERVIEW OF JEANNINE HUGHES

23 BY MR. EVANS:

24 Q. As far as the home that you live in now, how long have you
25 been there?

1 A. Since -- well, we were there from May 2009.

2 Q. Okay. And how many residents -- I mean, how many people were
3 in the home?

4 A. At the --

5 Q. At the time of the incident.

6 A. Two. I mean, not -- you mean, at the time that, like, that
7 lived there, or that were actually physically there?

8 Q. Well, you can -- how many people lived there? Let's go with
9 that question.

10 A. Okay.

11 MR. DOWNS: Residents.

12 BY MR. EVANS:

13 Q. Residents. How many --

14 A. Okay. Three people lived there.

15 Q. Okay. And their names?

16 A. Connor Hughes -- well, is that right? I mean -- yeah.

17 Q. And who else?

18 A. Ryan Hughes. Although they physically weren't there.

19 Q. Okay. That's fine.

20 A. Right.

21 Q. And then yourself?

22 A. Correct.

23 Q. And at the time of the accident, how many people were in the
24 home?

25 A. Just myself.

1 Q. Okay. So let's begin by -- from the moment that you -- I
2 guess, tell us about your day, what you recall, the very first
3 thing from the time that you awakened until the time you left.

4 MR. DOWNS: The day of the accident.

5 MS. J. HUGHES: Correct.

6 MR. EVANS: Yeah.

7 MS. J. HUGHES: All right. I have it on my phone, actually.
8 11:53, my son called me. At approximately the same time, as I'm
9 talking to him, there's a pounding on the door. And I go to the
10 front window and look out, and see that there's UGI people out
11 there. And I, when I -- I say to my son, listen, I got to get off
12 the phone; I got to find out what's going on.

13 Like -- so I hung up the phone, and got dressed, because I
14 was sleeping, and went down and went outside.

15 BY MR. EVANS:

16 Q. And when you said you were sleeping, can you tell us, the
17 11:53 timestamp you have there, what does that represent?

18 A. That's me sleeping extremely late. Is that what you mean?

19 Q. Yeah. Is that --

20 A. Yes.

21 Q. Were you awakened with the phone call?

22 A. Yes. Yes. When he called me at 11:53. Yeah.

23 Q. Okay.

24 A. Woke me up.

25 Q. And that -- and the basis for that timestamp is a cell

1 phone --

2 A. Yeah.

3 Q. -- call; is that correct? Okay.

4 A. I mean, I can -- I mean, I don't -- I feel bad, because it
5 seems like I'm sleeping really late, but there's a -- like the
6 reason behind it, like I'm -- I was reading two books, and --

7 Q. Oh.

8 A. -- you know, so I'm totally like late. And then I have
9 trouble sleeping, so I actually take trazodone, which is a
10 sleeping medication. And so when the phone call came -- I always
11 make sure that I take that phone call from him.

12 Q. Okay.

13 A. And that's what woke me up.

14 Q. So from the time you woke up until the time you hung up the
15 phone, how many minutes was that?

16 A. I can -- I think it was 3 minutes, because, you know, I said
17 listen, I got to go and figure out what's going on. Because what
18 I didn't know at the time, okay -- when the call woke me up and I
19 answered it, because it woke me up, I was like in a stupor or
20 whatever, and I said, what's that smell? Is that cat litter or
21 what? You know, it's like gas or cat litter. I can't tell.
22 Right.

23 And then I hear the pounding and I'm like -- and I look out
24 and I see it's UGI, and I'm thinking oh, I got to answer this, so
25 I got to go. But -- what am I doing?

1 I'm looking for the length of the call. It was like 2
2 minutes, or 3 minutes or something.

3 Yeah, it was 11:52 for 4 minutes. And that's the first call
4 that I had that day, you know.

5 MR. DOWNS: 1-1-5-2?

6 MS. J. HUGHES: Yeah. 1-1-5-2 a.m.

7 MR. DOWNS: Four minutes?

8 MS. J. HUGHES: Correct.

9 BY MR. EVANS:

10 Q. Okay. So once you hung up the phone, you mentioned --

11 A. Got dressed.

12 Q. You got dressed. Okay.

13 A. Yeah. And went down, and the knocking had stopped. So I
14 went outside, and he was out at the, I guess, the Howards. Was
15 that their name?

16 Q. You can use this to tell us where it was.

17 A. Okay. This is the Gutierrez's, and this would be --

18 Q. Yes.

19 A. -- the other family. Howards? Is that the name, just to
20 clarify?

21 Q. That's Don Howard.

22 A. Yeah. I never get names right. Okay, so he was out here
23 with the meter, and he said -- I said hey, you know, sorry, I am
24 in here. And then he said, oh, okay, we found out that this --
25 the leak is definitely at your house. Like I guess they had done

1 a testing over here -- over here, and then determined that in the
2 scope of it, it was here, right? So --

3 MR. EVANS: And the witness is pointing to the edge of the
4 sidewalk at the Howard residence at 201 Springdale Lane.

5 MS. J. HUGHES: Right. So then he, like he -- we're walking
6 towards each other. We end up meeting like right here, as --

7 MR. EVANS: And now she is pointing to the middle of the yard
8 between the middle of her home, between the edge of the cul-de-sac
9 and the edge of the sidewalk, and she's halfway between.

10 MS. J. HUGHES: And it's -- I mean, are the things that I say
11 actually going to be in the report, literally? Because I say
12 some --

13 MR. DOWNS: Transcript. Go off for a second.

14 MS. J. HUGHES: I say some stupid things.

15 MR. EVANS: Yeah. We can go off record for a second.

16 MR. DOWNS: Off the record.

17 (Off the record.)

18 (On the record.)

19 MR. DOWNS: Back on the record.

20 BY MR. EVANS:

21 Q. Let's continue. You were talking about having a discussion
22 with the UGI person in front of your home between the cul-de-sac
23 and the sidewalk. And he had just left the Howard residence. And
24 now, let's continue.

25 A. Right. So I joked with him about how I heard him pounding

1 and it sounded like the police, right.

2 Q. Okay.

3 A. And so he said, they're not -- well, I don't know that he
4 actually said anything to me, but like we walked towards the
5 house. He said, well, we're here; You know, we found that your
6 property is the source of the gas leak, because on either side, I
7 guess, they tested it or something. I'm -- that's a surmise. I
8 mean --

9 MR. EVANS: Okay. The witness is describing that the gas
10 was tested on the residence to the left of the home and to the
11 right of the home, and that the technician determined that the gas
12 source was the Hughes residence.

13 MS. J. HUGHES: Right. So we go inside the house, and he
14 said, well, there's -- you know, we're going to have to ask you to
15 leave for a couple of hours. Let's open up some windows, you
16 know.

17 MR. G. HUGHES: So can I interrupt? This is Gary Hughes. I
18 just wanted to remind you about the meter reading. That did -- I
19 thought --

20 MS. J. HUGHES: Yeah, but that's -- that didn't happen yet.

21 MR. G. HUGHES: Oh, okay.

22 MS. J. HUGHES: Okay.

23 MR. G. HUGHES: I apologize. Right.

24 MS. J. HUGHES: He has the meter with him, because he was
25 doing the meter readings at the thing. He's got that meter thing

1 that they use, right.

2 So as he comes into the house, he's testing on the first
3 floor, the meter -- the level or whatever that level is, and it's
4 like 11. And then he goes upstairs, and it's 12. And I said,
5 well, what does that mean? Is that really bad? And he goes,
6 well, you know, it's not good. It's higher than it should be.
7 Let's open up windows.

8 So I'm helping him open up windows. Actually, we started
9 upstairs. And then we did like the sun room windows, and we
10 opened up the doors to the deck, and the windows in the kitchen.
11 And he said to me, we're going to ask you to leave for a couple of
12 hours. We're going to bring a guy down with some fans and we're
13 going to air out your house, you know.

14 And so I said, okay. And I guess he went downstairs, and I
15 grabbed a bag and thought, what am I -- how am I going to kill a
16 couple of hours? And so I put a bathing suit and a hair -- well,
17 actually I didn't. I came back up for the hair clipper, but -- in
18 my bag. And I thought, well, I'm going to go somewhere to a pool
19 and I'm going to swim for a few hours and wait for his call.

20 So anyway, so he's downstairs, still opening up windows when
21 I come down, and he said that I'm not going to want to use the
22 garage door opener, right. And so I said, well, can you help me?
23 Because I know there's that emergency pull, and I can't reach it,
24 in the garage, right. So he comes out in the garage and he does
25 the emergency pull.

1 And then it opens, and then I start my car. And I'm sitting
2 there, I'm like, oh crap, I forgot my hair clippy. So I go back
3 in the house and I get my hair clippy. And I come back out. But
4 the point is, I guess, like the thing that -- there was -- I don't
5 know -- there was just, there wasn't a sense of urgency in all of
6 this, to me. Like I'm walking around, opening up windows with
7 him. He did tell me not to turn on any light switches, which I
8 didn't. And it wasn't like, ma'am, you need to get the heck out
9 of this house right now. It wasn't anything like that. It was
10 like, okay, you're going to leave for a couple of hours, we're
11 going to bring some fans in, and we're going to call you to come
12 back.

13 Well, as I'm pulling out of my driveway, I realize he doesn't
14 have a number to call me back. So I pull out of my driveway to
15 the end where the mailbox is, where at this point -- okay, after
16 he opened the manual pull, he said, I'm going to go back out
17 front, right. So, you know, I'm in my car, and then, you know, go
18 back and get the hair clippy and come back out, get in my car,
19 back out and say, oh, he doesn't have my number. Pull out to the
20 end of the driveway with my car running, get out, go over to where
21 they are.

22 They've dug -- like right here, at the end, they've dug it so
23 that -- I guess that's the coupling thing, is exposed. And, you
24 know, which isn't much. It's not a lot of dirt. It's just like a
25 couple of things.

1 There was a man standing there. And the other guy was there.
2 And I said to him, I said, well, you know, did you find it? And
3 he goes, well, we're checking. And I said, what -- well, how do
4 you know -- like how can gas get into my house from this, right?

5 So he has this meter. And he like, he shows me that the
6 levels are like 80 percent and higher as you get towards the
7 house, right. Like it's -- actually, I don't want to transpose
8 them, but I'm pretty sure, you know, it was between 80 and 100 all
9 along the way right there, right. So -- and I said, well, that's
10 not good, you know.

11 And then he's like, no, it's not. But I said, okay, well,
12 let me give you my number, and you can give me a call and I'll
13 come back whenever.

14 So I'm trying to think if there's anything I'm leaving out of
15 that.

16 But like, I'm standing there as the hole is dug. Like I'm
17 standing there with him, with the shovel, the other guy, right,
18 with it exposed. I'm talking to them, walking towards the house
19 with the meter, showing me. I'm not feeling a sense of anything
20 other than I'm going to be gone for a few hours, really.

21 And so when I leave -- actually, on my phone, I call --
22 11:52. Okay. So I'm out of there by probably before 12:17,
23 because -- yeah. I was on my way. And I called Gary, and I was
24 like, do you know where there's a cheap hotel that has a pool,
25 because I didn't feel like spending a lot of money.

1 And he goes, well, why -- you can come down and lay out --
2 you know, but it didn't have a pool so I don't want to. So I want
3 to swim, because it's fricking hot, right. So that's -- well, I
4 call him at 12:17, and then we talk at 12:18, okay, so for 20-some
5 minutes. So we talked the whole time I was on my way, deciding
6 what hotel I was going to go to.

7 So then I check into the hotel at the Days Inn, right. And I
8 just get my key. And this was at 12:47 that Connor texts, I
9 guess -- is that a text? Texts me that the house is gone. And
10 I'm like, what are you talking about? And he sends me a picture.
11 Somebody in the neighborhood had taken a picture.

12 So immediately I call Gary, and immediately call Gary again.
13 And then who -- what's this on there? I don't know what that
14 number is. But I turn -- you know, immediately, when I heard --
15 like I literally just had gotten the key. I open up the door, got
16 the picture, picked everything back up again. I was in complete
17 shock, like -- like I remember, as I was walking out of the hotel,
18 I said to some complete stranger, my house just blew up.

19 And so then I get in my car, and I drive back, and there is
20 like, you know, the things, the blockade way back -- like when you
21 pull in on Springdale and you take the first turn, it was way, way
22 like into the beginning of Springdale. And then, that's it.

23 BY MR. EVANS:

24 Q. Okay. So let's go back to the moment you woke up. Your
25 bedroom is located on which floor?

1 A. The -- I guess the third --

2 MR. G. HUGHES: Second floor.

3 MS. J. HUGHES: Second floor.

4 BY MR. EVANS:

5 Q. The second floor?

6 A. Basement, first, second. Second floor, yeah.

7 Q. And that's the same floor your thermostat's on as well,
8 right?

9 A. No. The thermostat's on the kitchen level, which is this
10 level.

11 Q. Okay. Okay.

12 A. Right. The second. The --

13 MR. G. HUGHES: First floor.

14 MS. J. HUGHES: -- second. Yeah, first floor. Second floor
15 is my bedroom.

16 BY MR. EVANS:

17 Q. Okay. So you're in the second --

18 A. And all the bedrooms, actually.

19 Q. Okay, second floor. So when you awakened that day -- and I
20 know you had told us that you took some meds, but was there any
21 physical trait about being extra drowsy that day, or did you feel
22 kind of a little off --

23 A. Well, I'll tell you. What happened was, I didn't even
24 remember the conversation that I had with Ryan until later. Like,
25 he told me that I said -- I mean, this is going to be on the

1 record?

2 Q. Yes.

3 A. Yeah. Okay. When I answered the call, and the pounding was
4 on the door and I looked out, I said, listen, I got to go. I got
5 to get dressed, right. Actually, what I said was, I got to get a
6 bra on, right.

7 MR. G. HUGHES: Can I interrupt for a second?

8 MS. J. HUGHES: Sure.

9 MR. EVANS: Yes.

10 MR. G. HUGHES: This is Gary Hughes. I just wanted to advise
11 you that what he's asking is, did you feel drowsy. That's it.

12 MS. J. HUGHES: All right. I'm sorry.

13 MR. G. HUGHES: Something like that.

14 MS. J. HUGHES: I know, but --

15 MR. G. HUGHES: That -- all right.

16 MS. J. HUGHES: But yes, I did. But the point is that, yes,
17 I did, because I didn't -- but I thought it -- you know, I felt
18 out of it, like what the heck is going on, right?

19 MR. G. HUGHES: No, no. Let me interrupt again. It's Gary
20 Hughes. He's just asking you, did you feel drowsy. Just, that's
21 just a yes or no question.

22 MS. J. HUGHES: Yes.

23 MR. G. HUGHES: Okay.

24 MS. J. HUGHES: Okay, sorry. Yes.

25 MR. EVANS: So did you feel more drowsy than you --

1 MS. J. HUGHES: Absolutely.

2 MR. EVANS: -- than you normally would?

3 MS. J. HUGHES: Yes.

4 MR. EVANS: Okay.

5 MS. J. HUGHES: I don't feel drowsy when I get up.

6 BY MR. EVANS:

7 Q. Okay. Okay. So you felt drowsy?

8 A. Yeah. Though, like this would -- yeah, this was extreme.

9 Q. Okay.

10 A. First of all, to be asleep until 11:53 is extreme in the
11 first place.

12 Q. Okay. So when you -- you're in your bedroom. You were going
13 to get dressed. And then you hear the knocking on the door. And
14 what --

15 A. No. It's simultaneous. When I'm on the phone with Ryan,
16 it's -- the knock on the door is simultaneous.

17 Q. Okay.

18 A. So I -- because as I'm talking to him, I walk and see the
19 UGI, and I say, listen, I got to go, you know, UGI's here.

20 Q. So what door was he knocking on?

21 A. The front door.

22 Q. The front door?

23 A. Yeah.

24 Q. Okay. And did you happen to hear a doorbell, by chance?

25 A. No. And our doorbells don't -- I don't know --

1 MR. G. HUGHES: I don't think they work.

2 MS. J. HUGHES: Do we have a basement doorbell, and they
3 might -- maybe they rang the basement doorbell. Like there's two
4 doorbells there.

5 BY MR. EVANS:

6 Q. Okay. But there definitely -- you did not hear a doorbell
7 that day?

8 A. No.

9 Q. Okay. So whenever the gentleman -- you finally met the
10 gentleman at the door, right?

11 A. Not at the door, no. He was already -- like he had --
12 because I had to get dressed, right.

13 Q. Okay.

14 A. He was pounding as I get off the phone, and then I got
15 dressed.

16 Q. Right.

17 A. And then I went down. His pounding had already stopped, and
18 he was out --

19 Q. And that's when you --

20 A. He was out there by then.

21 Q. So then you --

22 A. He was out on this side.

23 Q. -- you went out of the house to meet him, then?

24 A. Right. Right, right, right.

25 Q. Okay. Okay. So he hadn't made -- his attempt to get you to

1 come to the front door, he just does -- he gave up and said, I'll
2 go out and do this, and --

3 A. Right.

4 Q. And then you came out and said, okay?

5 A. Yeah.

6 Q. Okay.

7 A. Right.

8 Q. Okay, good. So when you saw this person -- can you just
9 repeat everything that transpired as far as the conversation?

10 A. As best I can.

11 Q. Yeah.

12 A. That -- I said hey, sorry I didn't answer the door; you were
13 pounding like the police pound.

14 Q. Right.

15 A. And I have teenage sons so, you know, whatever. I've had my
16 share of that. So he said, oh, no problem. And then -- but
17 before -- well, now I don't know if it was before, because I was
18 walking out to him, and I knew he was over here when I was saying
19 that. And he was saying, well, we found the gas leak and it looks
20 like it's your house. Like because he was here, and whatever he
21 determined from there. And so he started walking to me.

22 Now there was another person, I'm not sure where he was, you
23 know, at that time because I didn't see him until I pulled out of
24 the driveway. But okay. So wait, we're back to conversation,
25 right? Right. So we meet here, and he's got the meter in his

1 hand. And he's like, yeah, it looks like we have a leak.

2 And he comes in the house. And I asked him about the meter
3 because I didn't understand what the -- oh, here's something else
4 I said that -- you know, when I woke up, I was like, was that cat
5 litter? What is that smell? But when I went outside the house,
6 right, and then back in the house, it was like you could totally
7 tell that there was a smell in there, right. But because I was
8 inside the house, it wasn't really a -- I didn't really notice it
9 as something extreme. But once I left and came back in, it was
10 strong.

11 Q. And the strong odor you, that you smelled was the natural gas
12 odor? I trust you know what natural gas smells like, right?

13 A. Right.

14 Q. And --

15 A. But it was -- I do, but it wasn't like that. It was like --

16 Q. Okay.

17 A. It was stronger than that, or something.

18 Q. Okay. So as you're walking outside, did you hear anything?

19 A. No.

20 Q. Any hissing noise, anything like that?

21 A. Oh, no. Not at all.

22 Q. Okay. So then --

23 A. I mean, mind you, that I wasn't trying to hear anything --

24 Q. Right. I'll just --

25 A. -- but no way. No, I didn't.

1 Q. If you recall something like that.

2 A. Right.

3 Q. So eventually the two of you were in the home and you were --
4 where did he start with the opening the windows? The upstairs,
5 the basement, or the first floor? Where did he start?

6 A. I want to say upstairs, because I was -- I'm -- you know
7 what? I'm not 100 percent sure which came first because, like in
8 the sun room, you know, I was saying to him these windows -- we
9 don't even open the windows, so they don't even have screens in
10 them. And some of them, you know, were hard to open, and he was
11 helping. And like some of the windows crank out, and he was doing
12 that. And he opened doors that I didn't -- you know, the doors
13 out to the deck.

14 And I was opening windows, so we were doing separate things.
15 But like, upstairs, I opened the bedroom windows, and he was in
16 other rooms, you know. So I don't -- I want to say that it was
17 upstairs first, because that's where he told me that it was 12.

18 Q. Okay.

19 A. And then downstairs was 11. And I don't know, I don't recall
20 that he necessarily opened the garage, the door that goes out to
21 the garage. I don't know if he did or not. Like I didn't look
22 down that way. I mean, mind you, I did not think that this was an
23 emergency.

24 Q. Right.

25 A. So I did not think that, oh, my God, is he opening every

1 single window, or anything like that. I just wasn't really
2 necessarily paying attention to what he was doing. I was opening
3 up windows because I needed to air out the house. You know,
4 like --

5 Q. Okay.

6 A. So --

7 Q. While he was opening -- before he started opening windows,
8 did he talk to you about where your thermostat was?

9 A. Yeah, I think he did. And I told him it was in the dining
10 room.

11 Q. Do you know if he adjusted the thermostat? To put --

12 A. I don't know. No.

13 Q. Do you recall hearing your -- I mean, it was a hot day, July,
14 right?

15 A. Yeah.

16 Q. Very warm that day, because we were there the next day. Do
17 you recall hearing the air conditioning click on while you were in
18 the home?

19 A. No.

20 Q. Okay.

21 A. I mean, I don't think I would hear it anyway. I don't --
22 it's just --

23 Q. I mean, did you hear the rumble of the air going through the
24 vents in your home, I guess, is my --

25 A. No, on my -- yeah. No, it's really quiet. No, I did not

1 hear anything.

2 Q. But you didn't feel the breeze of something coming through
3 your ductwork?

4 A. No.

5 Q. Okay.

6 A. No, because it's cold in my house anyway. You know what I
7 mean? Like, it wouldn't be -- like I don't notice a burst of cold
8 air as it's coming --

9 MR. G. HUGHES: I'm sorry. Can I interrupt?

10 MS. J. HUGHES: What?

11 MR. G. HUGHES: This is Gary Hughes. Either you noticed the
12 air conditioner was on or not. It doesn't really matter why.

13 Just --

14 MS. J. HUGHES: Well, to me, the air conditioning's always
15 on.

16 MR. G. HUGHES: Well, if you didn't hear anything --

17 MS. J. HUGHES: I didn't hear anything.

18 MR. G. HUGHES: All right. That's it.

19 MR. EVANS: Okay.

20 MR. G. HUGHES: Don't --

21 MR. EVANS: Great.

22 MR. G. HUGHES: That's it.

23 BY MR. EVANS:

24 Q. Okay. Just, and you don't know --

25 A. Sorry.

1 Q. -- and you don't know for sure if the technician adjusted the
2 air conditioning?

3 A. I do not know that.

4 Q. Okay. And once he said, no electrical, and all that kind of
5 stuff, nothing was touched that you know of?

6 A. No.

7 Q. Okay. And let's get down to the -- so you think he went to
8 the first floor -- I mean, excuse me, the second floor and started
9 there, and he said there was a 12 up there?

10 A. Right.

11 Q. And you perhaps went down to the next floor. And you're
12 saying that he was at 10?

13 A. Eleven.

14 Q. Eleven. Excuse me, 11. What about the basement? Anything
15 that he --

16 A. We didn't go in the basement.

17 Q. He did not go in the basement at all?

18 A. Not with me, no.

19 Q. Okay.

20 A. Didn't even ask me about the basement.

21 Q. Okay. So once he -- you opened the windows --

22 A. Right.

23 Q. Did he have a sense of urgency, as far as getting you out of
24 the home?

25 A. No.

1 Q. He did not? Okay. So when you discussed leaving the house
2 and -- did he make any sort of comments, or any sort of
3 suggestions as to how long it would be before you could come back?

4 A. Yes.

5 Q. And what was that exact --

6 A. A couple of hours.

7 Q. A couple of hours?

8 A. Uh-huh.

9 Q. Okay. And then, when the topic came up of how you were going
10 to leave the home, did he make any comments as to, I need you to
11 leave by walking out of the house, or versus driving your car out?
12 Did anything --

13 A. No.

14 Q. Did you make mention to him that you were wanting to drive
15 your car out of the house?

16 A. Well, he opened up the garage door so that I could drive my
17 car out.

18 Q. But how did that decision get made, that --

19 A. Well, because I was going to be driving away. I don't know.
20 Like --

21 Q. No, but I mean, I'm just saying, was there any --

22 A. He just said, I need you to leave for a couple of hours, and
23 I said okay. And he said, well don't use the automatic garage
24 door, use the emergency. And I said, well can you help me with
25 that? And he did. And that's --

1 Q. So it was understood that, with that exchange of information,
2 that you didn't see any resistance with his voice, or --

3 A. Oh, absolutely not.

4 Q. -- mannerisms or anything about you driving out of the
5 garage?

6 A. No. No, not at all.

7 Q. Okay.

8 MR. G. HUGHES: I'm sorry. This is Gary Hughes. In fact, I
9 believe she told me, he assisted you in driving out of the garage
10 by opening up the garage door, right? That was the whole point of
11 it, that --

12 A. Well, yeah. That's what I just said. Yeah.

13 Q. Yeah. Okay. And the vehicle that you drove, was it a
14 gasoline or diesel?

15 A. Gasoline.

16 Q. Okay. And you have another car in the garage as well?

17 A. Correct.

18 Q. And which car do you normally drive the most? The --

19 A. The white one, the one that I have.

20 Q. Okay.

21 A. The other one's a convertible, and I don't drive it on really
22 hot days, and so --

23 MR. G. HUGHES: Which car, what's the type of car, I think
24 he's asking.

25 MS. J. HUGHES: Oh. Oh, BMW.

1 BY MR. EVANS:

2 Q. Okay. A BMW convertible that you don't drive on a hot day,
3 so you took your pickup truck?

4 A. No. I took the BMW sedan. It's a four-door sedan, 528i. I
5 don't have a -- but do you think I have a pickup truck?

6 Q. No. I mean --

7 A. Oh.

8 Q. We don't know what you have.

9 A. Oh, okay.

10 Q. So let's go back to the -- what were the make and model of
11 the two cars in your garage?

12 A. Okay. There was a 2003 BMW Z4.

13 Q. All right.

14 A. And there was a 2009 BMW 528ix --

15 Q. Okay.

16 A. -- which is my main driving car.

17 Q. Right.

18 A. And I drove that.

19 Q. Okay.

20 A. And it was in the middle garage, of the three-car garage.

21 Q. You have a three-car garage?

22 A. Right. And it was in the middle spot.

23 Q. Okay. But you have two cars in that garage?

24 A. Correct.

25 Q. Okay. Is there anything else on the other side?

1 A. No.

2 MR. EVANS: Okay. That's all for me for right now.

3 BY MR. DOWNS:

4 Q. Ms. Hughes, thanks so much for joining us today. I'm going
5 to refer to the map up here, because it maybe shows a little
6 better here. Okay. We have your house, the 206 property here.
7 We got your neighbors over here, and so on.

8 A. Okay.

9 Q. We used these stickies before because we were doing other
10 interviews as well, for layout, say for example, the fire
11 department, when they came, and that kind of thing.

12 A. Right.

13 Q. So I'm going to just recount a little bit, make sure I have a
14 good understanding.

15 A. Okay.

16 Q. You were awakened by your phone call from your son, is it
17 Ryan, or Brian?

18 A. It's Ryan.

19 Q. Ryan.

20 A. R, yeah.

21 Q. Okay. R-Y-A-N?

22 A. Uh-huh.

23 Q. Okay. And you were on the phone for maybe what, 4 minutes,
24 you would say?

25 A. Correct. Yeah.

1 Q. Okay. And during that phone call, maybe it was kind of the
2 tail end of the phone call, you heard a pounding at the door, you
3 were saying?

4 A. Uh-huh.

5 Q. And you --

6 A. I think -- I don't even know if it was the tail end. I mean,
7 I'm not sure. It could have been --

8 Q. At some point --

9 A. -- right in there. It was like, it happened.

10 Q. At some point --

11 A. Yeah.

12 Q. -- in the call you heard a pounding at the door, and you said
13 you went to the window and looked out?

14 A. Uh-huh.

15 Q. And you saw -- what did you see? Gas --

16 A. I saw --

17 Q. Gas company truck or something?

18 A. I saw the UGI guy, and the truck.

19 Q. And the truck?

20 A. Uh-huh.

21 Q. In front of that house?

22 A. Correct.

23 Q. Okay. And at that point you said, basically, you had to get
24 off the phone --

25 A. right.

1 Q. -- and do what you needed to do, right?

2 A. Right.

3 Q. So you got dressed?

4 A. Uh-huh.

5 Q. And by the time you got dressed and got down, you went out
6 the front door?

7 A. Correct.

8 Q. The person that was there had walked, apparently, over to
9 here?

10 A. Not all the way. He was right on the corner, right there.

11 Q. Right where the --

12 A. Right there. Yeah.

13 Q. -- edge of the driveway is on the --

14 A. Right. Right by the -- like, right beside the fire hydrant,
15 probably, that would -- used to be there.

16 Q. By the fire hydrant --

17 A. Right. Yeah, standing --

18 Q. -- in front of the 201 building?

19 A. Right. Yeah, yeah.

20 Q. Okay. And you walked across the lawn?

21 A. Right. Yeah.

22 Q. Toward --

23 A. Like I was going towards him, and then he said --

24 Q. He started walking to you?

25 A. Yeah. Your house is the one that, you know, looks like it

1 has the leak. And I said, oh, sorry I didn't, you know, answer
2 the door --

3 Q. Okay. And then a little dialogue there.

4 A. Right. Correct. Correct.

5 Q. And the two of you walked back to your front door?

6 A. Yeah.

7 Q. And the two of you went in the front door. He had the hand-
8 held meter?

9 A. He did. Yeah.

10 Q. And you had discussion. He was reading the meter?

11 A. Yeah, because I was curious about what that meant, and --

12 Q. And he was telling you numbers?

13 A. Right.

14 Q. And you said, you think he went -- the two of you went
15 upstairs first?

16 A. Right.

17 Q. And he's checking he meter?

18 A. Right.

19 Q. And he's saying, Oh, we got to open the windows?

20 A. Right.

21 Q. Okay.

22 A. Right.

23 Q. And he proceeded to help you open windows?

24 A. Yes.

25 Q. And you started at the second floor?

1 A. Yes.

2 Q. And did you work your way down to the first floor, after you
3 did the second floor?

4 A. Yeah.

5 Q. And you opened some windows around the house on the first
6 floor?

7 A. Yes.

8 Q. Okay. About how long, best guess at this point, how long did
9 that take? Two, 3 minutes, 10 minutes?

10 A. Well it wasn't a rushed scenario. I mean --

11 Q. Yeah. You were saying you didn't get the impression that he
12 was really rushed?

13 A. Yeah. I didn't. I really didn't.

14 Q. Okay.

15 A. So I don't know, 5, maybe.

16 Q. Five minutes, maybe? Something in that --

17 A. Yeah. Maybe. Yeah.

18 Q. Okay. That's fine. And you were indicating that you did not
19 go to the basement?

20 A. No.

21 Q. At all?

22 A. I wasn't asked one single thing about the basement at all.

23 Q. Okay. Okay. And it looks like you have a big deck in the
24 back of the house.

25 A. Correct.

1 Q. Is that about right? Okay.

2 A. And there's two doors that go to it, that were opened by him.

3 Q. Two doors going to the deck?

4 A. He opened those. Yes.

5 Q. Okay. And basically he said you're going to have to leave,
6 and you had a little discussion there. You gathered up some
7 things and jumped in your car. He opened the garage door for you.
8 You backed your car out. You got maybe to the cul-de-sac edge --

9 A. Right there. Yeah. Right there.

10 Q. And you stopped, remembered you have to go back for
11 something, right?

12 A. No, no. I stop -- no. No. I -- when I was in the garage,
13 and I'd started my car, I realized I needed to go back in and get
14 a hair clippy.

15 Q. You hadn't moved your car yet?

16 A. Right. So then I back -- as I'm backing out, I'm like, he
17 doesn't have my phone number to call me when to come back. So I
18 park right in the front where they are -- no, out in -- right
19 there.

20 Q. In the cul-de-sac?

21 A. And I get out, and -- where they're digging, and I walk over
22 to them. And then I see the pipe. I said, oh, is this where the
23 leak is? And they go, we don't know. And I said -- because he
24 told me a little bit about dirt and how gas can travel, and how it
25 can travel into your house from like, holes in the dirt or

1 whatever.

2 Q. Okay.

3 A. I said, oh yeah? And then, he goes -- I go, well what's the
4 meter say out here, or something like that. I can't remember
5 exactly how it came up, but that the meter readings were, like 80
6 to 100, like as you go, like from the road in, not there, over --

7 Q. Toward --

8 A. Oh wait. Oh yeah, yeah, yeah, correct.

9 Q. Toward the house?

10 A. Yeah. Yes, correct. Correct.

11 Q. Okay.

12 A. And to be honest with you, I can't remember if the whole
13 thing was, okay, when he was telling me the meter number on the
14 main level as we're walking out of the house -- no. It wouldn't
15 have -- it couldn't have happened that way, because we didn't walk
16 out of the house that way.

17 Okay. So yeah, it had to happen when I was standing there
18 and asking him questions about how it travels. And then he
19 show -- he was like, showing me, look. Like as we go towards the
20 house, this happens, you know, by the, I guess where the meter --
21 we didn't go around the side of the house, but right up close to
22 that. Right.

23 And so the meter readings were really high. And I'm like,
24 oh, well that's not good.

25 Q. You could see the numbers on the meter?

1 A. Yeah. At one point, I saw 80.

2 Q. Eighty?

3 A. And then at one point, I thought I saw a hundred, but that
4 would be crazy, right? I mean, I don't know. I thought I saw a
5 hundred. I really did. So then I say, listen, well let me give
6 you my cell phone number. Oh, and at -- you know, at that point,
7 there's a person there that I hadn't seen, that had dug.

8 Q. So there's --

9 A. Right. He had dug right there.

10 Q. -- two or three people?

11 A. Well, at that point, there was only one.

12 Q. Only one?

13 A. That I saw. Right. That had the, I believe it was a square
14 shovel. And there was -- you could see the coupling. You could
15 see the pipe, or I guess it's a -- is that a -- whatever.
16 Whatever that was, was right there. And I said, if that was the
17 main, and he said, well to your house, but not the main one, or
18 whatever.

19 And then you could see that there was some dirt dug
20 underneath of where the pipe was. But there wasn't like this huge
21 mound of dirt next to it. It was just like shovel, like just
22 shoveled off the top of it, at that point. And then that's when I
23 gave him my number. And then I said, all right, give me a call
24 then. And I drove away.

25 Q. Okay. You got back in your car and drove away. Were there

1 two UGI employees, or three?

2 A. At that point, I only saw two.

3 Q. Did you ever see three?

4 A. I saw a person at two -- like as I was driving away, like
5 walking down by 197. And he had, I believe -- 197's over the --
6 but -- left. Left.

7 Q. So over there, right by here?

8 A. Yeah. Walking right in front there. I believe he had a red
9 fan in his hand.

10 Q. A red fan?

11 A. Yeah. I think it was a --

12 Q. Was it a big fan? Small fan?

13 A. It was like this big. And I think it was round.

14 Q. A round fan?

15 A. Right.

16 Q. It was red?

17 A. I think it was.

18 Q. Maybe a foot and a half or so, diameter?

19 A. Yeah. Yeah, like that.

20 Q. Okay.

21 A. And --

22 Q. And that person --

23 A. He looked like a younger person. He was thin. But I didn't
24 know who he was, or what he had anything to do with.

25 Q. Okay. Was he in the same --

- 1 A. No.
- 2 Q. -- attire as the --
- 3 A. No, he was not.
- 4 Q. Different clothing than the --
- 5 A. Yeah.
- 6 Q. --UGI? Okay.
- 7 A. Yes. Correct.
- 8 Q. And that person, just to make sure I understand, was
- 9 sitting -- standing in the cul-de-sac?
- 10 A. He wasn't standing. He was walking.
- 11 Q. Walking in the cul-de-sac, and --
- 12 A. Walking towards my house with that fan.
- 13 Q. Towards your house from the area of the 197?
- 14 A. Well, yeah. In front of it. I mean, just -- yeah. Yeah.
- 15 There. I don't know if he parked there. Maybe there was a car
- 16 there. I don't know.
- 17 Q. Okay.
- 18 A. I just saw him.
- 19 Q. Okay.
- 20 A. Because I saw the red fan.
- 21 Q. So --
- 22 A. That's what I --
- 23 Q. Definitely a red fan?
- 24 A. Yeah. Yeah.
- 25 Q. Okay. Good. We're good on the fan. Okay. Walking towards

1 your house?

2 A. Right. You're pointing to a different house, but yeah.

3 Q. And you drove off. As you're passing by him, you happen to
4 look over --

5 A. I see him walking towards my house --

6 Q. Okay.

7 A. -- with that fan.

8 Q. And you continued east on --

9 A. Right.

10 Q. -- Springdale?

11 A. Correct.

12 Q. Did you happen to look in your rear-view mirror to see if
13 that person continued walking to the house? Or you didn't --

14 A. No. I assumed he was, because they told me they were going
15 to bring fans in, you know, to air the house out.

16 Q. The same guy, or a different guy?

17 A. No. The guy that --

18 Q. The guy that you had the discussions with?

19 A. Yeah. He told me they were going to bring fans in to air the
20 house out.

21 Q. You never had a discussion --

22 A. No. No.

23 Q. -- with this person?

24 A. No. Never made eye contact, nothing.

25 Q. Okay. Very good. You went off your merry way. You were

1 looking for a swimming pool to go swimming or something, you were
2 saying --

3 A. Correct. Right.

4 Q. Okay. And then you got the text that the house was gone, you
5 were saying.

6 A. Right.

7 Q. So you came back to the property, et cetera?

8 A. Yes.

9 Q. Okay. Great. We tried to get a little bit of the layout of
10 the house, so in our mind, we could resolve exactly who was where,
11 that kind of thing. On the back deck here, do you have a gas
12 grill or anything back there by chance, that's got gas bottles to
13 it?

14 MR. G. HUGHES: Yeah. On the deck.

15 MR. DOWNS: On the deck itself? Okay. How about under the
16 deck? The deck is maybe what, 8 feet high or something, off the
17 ground, in that area?

18 MR. G. HUGHES: It's about 12 feet, actually.

19 MR. DOWNS: Twelve feet? Okay. Did you have anything stored
20 under the back deck, extra bottles for the grill or anything like
21 that?

22 MS. J. HUGHES: No.

23 MR. DOWNS: Okay.

24 MR. G. HUGHES: The only thing -- sorry. This is Gary
25 Hughes.

1 MR. DOWNS: It's okay.

2 MR. G. HUGHES: The only thing that was under that deck was
3 the lawn mower.

4 MR. DOWNS: Lawn mower? Gasoline, conventional lawn mower?
5 Was it like a tractor lawn mower?

6 MR. G. HUGHES: Yeah. Yes.

7 BY MR. DOWNS:

8 Q. Okay. Great. And did you happen to store, inside the house
9 anywhere, gas bottles for the gas grill or anything like that?

10 A. No.

11 Q. In the basement?

12 A. No.

13 Q. Extra bottle, or something like that?

14 A. On the deck, we had the gas, attached to --

15 MR. G. HUGHES: It was empty, though. Right?

16 MS. J. HUGHES: Well, we had the gas bottle attached to the
17 grill. I mean --

18 MR. G. HUGHES: Right.

19 MR. DOWNS: To the grill? And is --

20 MR. G. HUGHES: There was one on the grill, but there was
21 another one, you told me, that was empty, right?

22 MS. J. HUGHES: Right. Right. Next to it.

23 MR. DOWNS: Right next to it?

24 MS. J. HUGHES: Right.

25 MR. G. HUGHES: Yes.

1 MR. DOWNS: Okay. Because often people will have a spare
2 bottle --

3 MR. G. HUGHES: Right.

4 MS. J. HUGHES: Right.

5 MR. DOWNS: -- for the gas grill. And that's the only two --

6 MS. J. HUGHES: Yes.

7 MR. DOWNS: -- that you guys can recall that you had that was
8 out on the deck somewhere?

9 MS. J. HUGHES: Right.

10 BY MR. DOWNS:

11 Q. Was it like on this side of the deck, the west side of the
12 deck, or --

13 A. It was --

14 Q. Why don't you go ahead and point it out?

15 A. It's literally -- you can see it, actually. That's -- I
16 believe that's pretty -- kind of --

17 Q. So it's kind of on the eastern corner of the deck?

18 A. Yeah.

19 Q. Kind of right near the edge of where the house roof line is?

20 A. Yes.

21 Q. And then that -- up here then?

22 A. There's a door right here that goes into the house, and right
23 next to it, there's like a little bit of wall. And it was just --

24 Q. Okay. (Indiscernible) there.

25 A. Yes.

1 Q. Okay, great. Okay. How about the garage itself? You had
2 indicated you had the two cars in the garage, right?

3 A. Correct. Yeah.

4 Q. And the third bay of the garage was empty, vacant?

5 A. Right.

6 Q. Okay. Anything in the garage in the way of something that
7 might be flammable?

8 A. Well, I think there --

9 Q. Turpentine? Sometimes people have paint thinner or whatever
10 in their garage, that kind of thing.

11 MR. G. HUGHES: There was definitely paint, but I don't
12 recall any paint thinner.

13 MR. DOWNS: Some paint cans of some sort? The stuff you'd
14 find in a garage, typically?

15 MR. G. HUGHES: Right.

16 MS. J. HUGHES: Right. Yes.

17 BY MR. DOWNS:

18 Q. But nothing unusual, extraordinary, that might be a flammable
19 that was in the garage, that you can think of?

20 A. No. I mean, like -- you mean gas for the lawn mower?

21 Q. Gas for the lawn mower. Sometimes people have hobbies where
22 they have lots of ammunition, firearms or whatever.

23 A. No. Huh-uh.

24 Q. Nothing that would be flammable, inherently flammable in the
25 garage itself?

1 MR. G. HUGHES: No.

2 MR. DOWNS: Or the basement?

3 MR. G. HUGHES: I want to clarify something, that even the
4 gas for the lawn mower, there wasn't, because the lawn mower
5 hadn't run in over a year. There was no gas or nothing like that.

6 MS. J. HUGHES: Yeah. You're right. It had been a year.

7 MR. G. HUGHES: Yeah. And so --

8 MR. DOWNS: It's a regular lawn mower, so it would be a
9 regular lawn mower size tank anyways.

10 MR. G. HUGHES: Right.

11 MR. DOWNS: Right?

12 MR. G. HUGHES: Right.

13 MR. DOWNS: So there wouldn't be a whole extra quantity
14 there, as well?

15 MR. G. HUGHES: No.

16 MS. J. HUGHES: No.

17 MR. DOWNS: Okay. Great. Now we're just trying to -- from
18 the fire response perspective, we're trying to get an idea if
19 there's anything unusual in the property. So we're kind of going
20 down that road a little bit.

21 MR. G. HUGHES: Right.

22 MR. DOWNS: And it sounds like that there wasn't.

23 MR. G. HUGHES: No.

24 MR. DOWNS: Okay, great. Over the -- you say you -- I
25 got the -- bought the house in May of 2009. Has there been, over

1 the years, any issues with gas in the house leaking or anything
2 like that, that you know of, no other prior problems?

3 MS. J. HUGHES: No.

4 BY MR. DOWNS:

5 Q. Okay. And you bought the house from a previous owner, or was
6 it built new, or for a previous owner?

7 A. Uh-huh.

8 Q. Let me ask a kind of an oddball question. We are hearing
9 that when the development was built, the developer had like a book
10 of plans, and they would go to the various owners and say, would
11 you like this house, would you like that house? And my thinking
12 is, do you happen, in driving through, see a like house that might
13 have matched your house, in your driving in and out of this area,
14 by chance?

15 A. Well, not on this side of the neighborhood, but -- not
16 exactly like it --

17 Q. Close.

18 A. -- but on the other side, like on the -- like --

19 MR. G. HUGHES: Can I interrupt again?

20 MS. J. HUGHES: On the West -- if you go down -- instead of
21 turning to Springdale Lane, if you just keep going on West
22 Charlotte, there's a -- and go up around, there's a couple of
23 houses similar.

24 BY MR. DOWNS:

25 Q. Similar?

1 A. But they don't have, like three-car garages. It isn't --

2 Q. A little bit different --

3 A. -- they're smaller, three bedrooms.

4 Q. -- but generally --

5 A. Yeah.

6 Q. Generally, the view of the house might be considered a little
7 bit similar?

8 MR. G. HUGHES: Same style, I guess.

9 MR. DOWNS: Same style.

10 (Simultaneous speaking.)

11 MR. DOWNS: Okay. That -- yeah, that's my question, that
12 might have jogged your memory, oh, that's kind of similar to our
13 house.

14 MS. J. HUGHES: Right. Right.

15 BY MR. DOWNS:

16 Q. And you're thinking it's over on West Charlotte somewhere?

17 A. Yeah, definitely. Yeah.

18 Q. Okay.

19 A. Well, it's West Charlotte, and then there's like, on West
20 Charlotte, you can go up and around.

21 Q. It loops around, as I recall.

22 A. Yes. It does. Yes.

23 Q. Okay.

24 A. Yes.

25 Q. Okay, good. Because this idea -- you know, unfortunately,

1 the house is gone, so we're trying to reconstruct it in our minds,
2 the layout of the house, that might help explain the scenario as
3 it unfolded after you had left. So --

4 A. Right.

5 Q. -- that will help us, perhaps, to locate a similar house.

6 A. Right. Right.

7 Q. With a similar floor plan. Appreciate that.

8 A. I mean, of course I have no idea if the floor plan's the
9 same. I'm just saying, based on the outside, it's --

10 Q. Right.

11 A. -- a tinier version, but yeah.

12 Q. Very good. Very good. Okay. That's about -- I have it for
13 now, for my questions. Thank you much.

14 A. All right, thanks.

15 MR. EVANS: Next.

16 MS. COOPER SMITH: Terri Cooper Smith, PUC.

17 BY MS. COOPER SMITH:

18 Q. Okay. You determined the AC was -- the house was cool when
19 you woke up?

20 A. Yeah.

21 Q. Am I correct?

22 A. Yes.

23 Q. Okay. You said that the UGI employee said that it was 11 on
24 the first floor and like a 12 on the second floor?

25 A. Uh-huh.

1 Q. Did he show you his instrument? Did you see 11 or 12 on his
2 instrument?

3 A. I think I did. Yeah.

4 Q. Okay.

5 A. I'm pretty sure I did.

6 Q. And do you remember what his instrument kind of looked like?

7 A. It was yellow, like kind of a rectangular thing, and it had
8 like a gray screen.

9 Q. Was it like a hand-held --

10 A. Yes.

11 Q. -- kind of thing?

12 A. Yes, uh-huh.

13 Q. And do you remember hearing it -- hearing any kind of sound
14 coming from that unit, as he was walking through the house? Any
15 kind of beeps, buzzes, anything like that?

16 A. No. I mean, I -- no. Huh-uh.

17 Q. No? Okay. And then you said that when you were outside, he
18 was saying that he had an 80?

19 A. Yeah.

20 Q. And -- but that, you actually saw on his unit?

21 A. Yeah.

22 Q. Did you see the numbers, the number 80, and any letters next
23 to that number?

24 A. I didn't. No.

25 Q. You just saw the number 80?

1 A. Yeah.

2 Q. And again, when you saw that 80, did you hear anything coming
3 from his -- from the hand-held device, any buzzes, beeps, sounds?

4 A. I don't want to speculate. I mean, it might have been, you
5 know, like a -- like a thing like a, every now and then it goes
6 "beep." And then every now and then it goes, "beep." But I don't
7 want to say that I can say that for sure.

8 Q. Okay.

9 A. But -- or the regularity of it, or anything like that.

10 Q. Okay. Can you do me a favor and just go up to the --

11 MR. EVANS: Chalk board.

12 MS. COOPER SMITH: Okay. I'll come up here. This gives me a
13 chance to stretch. Oh, are you all right?

14 MS. J. HUGHES: Yes. Sorry. It's my purse.

15 BY MS. COOPER SMITH:

16 Q. Can you show me exactly where the air conditioner compressor,
17 the unit outside --

18 A. Yeah. You can see it there.

19 Q. -- is located?

20 A. That's it right there.

21 Q. So it's on this --

22 MR. DOWNS: So for the record, it's on the southern tip of
23 the, of where the house wall stands.

24 MS. COOPER SMITH: Yes.

25 MS. J. HUGHES: Correct. Yeah.

1 MS. COOPER SMITH: Okay.

2 MS. J. HUGHES: And the meter is right there.

3 BY MS. COOPER SMITH:

4 Q. Okay. And when he -- when you saw him, when you came out of
5 the house after you were dressed and everything, he was standing
6 here, right?

7 A. Yeah.

8 Q. On the opposite side of your driveway, but right at the
9 corner?

10 A. Right. Yeah, like right here.

11 Q. Right here? And did he say that he had readings on this
12 side? He said it was definitely coming from your house?

13 A. Yeah, because he had been over here, and he'd been over here.
14 And so he could determine that it came from us. You know what I
15 mean?

16 Q. Okay.

17 A. Or it was at our house.

18 Q. At your house?

19 A. Yeah.

20 Q. When you came out -- okay. So you were in the garage, and
21 you realized you forgot your hair tie, right? So did you keep the
22 car running in the garage when you went upstairs to go get it?

23 A. Uh-huh, yes.

24 Q. Okay. So you go get it. You get back in the car.

25 A. Uh-huh. And the door's open.

1 Q. And the door's open?

2 A. Yeah.

3 Q. You are backing out of your driveway, right?

4 A. Right.

5 Q. And then you come around, and then you realize you didn't
6 give him your cell phone number?

7 A. Right.

8 Q. Do you come out and park right here?

9 A. Yeah. I come out and park, like -- I think he had a couple
10 of cones or something, maybe. But I came right out and kind of
11 stopped, like in the middle of the road, like, and just got out --

12 Q. Okay. So you're --

13 A. -- and walked over here.

14 Q. You're not parked where there was a --

15 A. No. I'm not -- I wasn't parked by the curb --

16 Q. -- where their truck --

17 A. -- like where it should have been.

18 Q. Okay. So you weren't --

19 A. It didn't make sense.

20 Q. You weren't parked where their truck was?

21 A. No. No.

22 Q. Okay. So you're more like out here, kind of half on your
23 driveway, half out? Or are you totally out?

24 A. Well, I think I was actually out.

25 Q. Okay.

1 A. Because I was leaving, so I probably came as close as I
2 could, like right to my way of leaving, and just got out of the
3 car and thought, I'll just give him my number, and then it turned
4 into a conversation, but --

5 Q. Okay. And when you got out of the car that time, did you
6 leave the car running?

7 A. Yeah.

8 Q. Okay.

9 A. I'm pretty sure.

10 Q. Okay.

11 A. Because it wasn't going to be like a big thing. And I left
12 the door open, because it was just going to be like I was going to
13 give him --

14 Q. The number.

15 A. -- my number but, you know, I had -- I'm nosey, so I asked
16 questions and, you know, that.

17 Q. And lastly, the person that you saw running -- not running.
18 The person that you saw with this red fan was coming from this
19 direction?

20 A. He was, like --

21 Q. Oh, there?

22 A. -- right here. Like, I'm trying to think of where there --
23 there was a tree, like for whatever reason -- I think these people
24 have a tree right here. And for whatever reason, it seems like he
25 was right around that tree. It didn't cast, like a shadow over

1 him, but there is shadow from the tree, and I just remember him
2 with the fan, like coming down.

3 Like, I'm not sure if he -- where he came from, but yeah, he
4 was right, like right around here.

5 Q. Do you recall seeing any vehicles over here?

6 A. I think so, but I don't know for sure.

7 MR. DOWNS: And for the record, that's the northern crescent
8 of the cul-de-sac.

9 MS. COOPER SMITH: Right.

10 MS. J. HUGHES: I can't -- I couldn't be certain.

11 BY MS. COOPER SMITH:

12 Q. You couldn't --

13 A. I couldn't swear to it. No.

14 Q. And you were pretty sure that that person was not a UGI
15 employee because?

16 A. Because he had, I think he had like a dark blue shirt on.

17 Q. Dark blue shirt? You don't remember seeing a vest on him, or
18 anything like that?

19 A. No.

20 Q. Do you remember seeing a vest on the UGI employees?

21 A. Definitely a hard hat. I'm not sure about the vest.

22 Q. So the person with the red fan did not have on a hard hat?

23 A. Well I didn't say that. I just said I know that his shirt
24 was blue.

25 Q. Okay.

1 A. I don't know about his head.

2 Q. Okay.

3 A. I just, I was looking at the fan, and so behind the fan would
4 have been whatever he was wearing. I didn't --

5 Q. And it was blue?

6 A. Yeah.

7 Q. Okay.

8 A. You know what I mean?

9 MS. COOPER SMITH: Okay. Thank you very much. That
10 concludes my questions.

11 MR. MAURER: Gary Maurer, UGI Utilities.

12 BY MR. MAURER:

13 Q. All the discussions from the banging on the door with the UGI
14 employee, related to the readings inside, all the way out to when
15 you stopped to give your phone number, when you were parked out on
16 the street, were they with the same employee, or were they with
17 different employees at different times?

18 A. It was the same employee. And I had a brief, like
19 interaction with the guy that had the shovel, about the main
20 thing. But most of it was with the same guy.

21 Q. And you -- did you actually see the pipe?

22 A. I did.

23 Q. That they were digging to --

24 A. I did.

25 Q. Do you recall the, what it looked like, the color of the pipe

1 A. It was rusty.

2 Q. Rusty? Was it -- do you think it was metal?

3 A. Metal. Yeah, it was metal.

4 Q. Rusty metal?

5 A. Yeah. Well -- yeah. Okay. Yeah. The coupling thing that
6 comes up, like it has like a little -- right, that comes up, and
7 the pipe that's attached to it, yeah, they were both rusty metal.

8 Q. Okay. And that was in the hole that they were digging with
9 the shovel?

10 A. Yeah. Yeah.

11 Q. Okay. And the red fan, was that in a vehicle the entire
12 time, or was somebody carrying it?

13 A. Oh, he was carrying it. Yeah. I didn't see anybody in any
14 vehicle. I saw a guy carrying a red fan, who I think was wearing
15 a blue shirt.

16 Q. Okay.

17 A. Dark blue shirt, walking towards my house.

18 MR. MAURER: That's it for me.

19 MR. KRIEGER: Robert Krieger, UGI.

20 BY MR. KRIEGER:

21 Q. On the red fan, can you give me -- can you show me about the
22 size of what this fan looked like? Are you --

23 A. Because he's, like had it in front of him like this, as he
24 was walking.

25 Q. Could it have been some other type of instrument, other than

1 a fan?

2 A. It really looked like a fan. I mean, I don't know what other
3 kind of instrument it could be, because it had --

4 Q. With the -- was it -- go ahead. I'm sorry. I didn't mean to
5 interrupt you.

6 A. I mean, it looked like a kind of a roundish fan, square --
7 maybe sort of -- it wasn't square. It was definitely kind of
8 round. And the way the grates were indicated that it was like the
9 cover for a fan. You know what I mean? Like, it didn't look like
10 anything else. It didn't look like an instrument, or a piece of
11 equipment, if that's what you're asking.

12 Q. Did it -- yeah. But was it maybe like a T shape? Or was it
13 --

14 A. No.

15 Q. -- round? Was it --

16 A. Yeah. It was like round.

17 Q. It was round?

18 A. Yeah. Maybe --

19 Q. What diameter would you say it might have been?

20 A. Well whatever that is. I don't know. Like something --

21 Q. You're showing at about --

22 MR. DOWNS: Roughly 18 inches.

23 MR. KRIEGER: -- 18 inches in diameter?

24 MS. J. HUGHES: Yeah. Something like that. I mean, I guess
25 that would depend on the size of him as well, what I'm basing that

1 on.

2 BY MR. KRIEGER:

3 Q. And this was a --

4 A. But he was a slight guy. He wasn't like a big, heavysset guy,
5 or old guy. He was a younger guy. And he seemed to be thin to
6 me, so the size of the fan, I think, is going to be reflective of
7 the size of him. Like -- you know what I mean?

8 Q. Right. I understand. So -- but he was carrying it toward
9 your house?

10 A. Correct.

11 Q. You didn't see him place it in your house, or anything like
12 that, did you?

13 A. Oh no.

14 Q. Okay.

15 A. No, no. I did not.

16 Q. When you went outside, you said that the -- or initially,
17 when the UGI employee was inside, you said he had a yellow
18 instrument with a gray screen.

19 A. Uh-huh.

20 Q. And then later, I believe it was when you had gone outside to
21 provide your phone number to him, and that you were looking at the
22 instruments, and you saw the -- and this was Terri's questions,
23 you saw the numbers, was that the same instrument, or was it a
24 different instrument that he was using at that time?

25 A. Yeah. It looked like the -- well, as far as I know, it

1 looked like the same instrument. Yeah. It was like the same
2 size. He had it in his hand in the same kind of way.

3 Q. Was he doing anything, putting anything into the ground to
4 capture the readings that you were seeing, or --

5 A. No.

6 Q. -- or not? He wasn't doing that?

7 A. No. It was just a matter of walking.

8 Q. With respect to the garage, you said the UGI employee went
9 into the garage and disengaged the garage door opener. That
10 wasn't -- or was that at your request, to --

11 A. That was at my request.

12 Q. You requested that he do it?

13 A. He said, don't use your automatic garage door opener. He
14 said, use the emergency pull-down. And I said, hey, can you help
15 me, because I can't reach it.

16 Q. Did you have a conversation with the employee about leaving
17 in your vehicle, or was that -- would you say that was more kind
18 of an implied?

19 A. Well, it's more than implied, because --

20 Q. Okay.

21 A. -- the emergency opening is literally over top of the trunk
22 of my car. So I wouldn't need to open it if I wasn't going to
23 take my car.

24 Q. What was the timing of that? When did that occur? So he
25 was -- you said you went -- they went into the house. He went to

1 the second floor. You had opened some windows and you were
2 evacuating. Came to the first floor. There was -- or yeah, there
3 was some -- second floor, you were also opening windows. Then
4 it -- did you then immediately go into the garage, or was that
5 sometime later, that they went into the garage to do that?

6 A. Well, we separated, because I was opening windows, like say,
7 in like one room, and I guess he went down the hall to, like my
8 sons' rooms and was opening windows. I was opening it in my
9 bedroom. And then -- then wait, so what was the question? The
10 meet -- the --

11 Q. Just the timing of when he did the garage. Were you together
12 when --

13 A. Oh, the --

14 Q. -- the garage door was opened? Or did he do that --

15 A. Well, okay.

16 Q. -- you know, when you were separated.

17 A. Okay. Okay. Because when he was saying -- you know, he told
18 me about leaving for a couple of hours. So when he was opening
19 other windows, down the hall or whatever, is when I was thinking,
20 okay, what the heck am I going to do for a couple of hours? So
21 that's when I grabbed my bathing suit and stuff, and opened up the
22 windows in my bedroom. And so -- wait. What was the -- what'd
23 you say?

24 Q. When you went into the garage, was the garage door open, or
25 was the garage door closed?

1 A. Oh, it was closed.

2 Q. It was closed then?

3 A. Oh yeah. Yeah.

4 Q. When you went into the garage?

5 A. Yeah.

6 Q. Okay. So after you had your bathing suit --

7 MR. G. HUGHES: Excuse me. Can I clarify something? This is
8 Gary Hughes. Which door are we talking about? The door you walk
9 through, or the garage door, the main garage?

10 MR. KRIEGER: My question is about the garage door, and it
11 just --

12 MR. G. HUGHES: The garage door that the car goes through, or
13 the garage door --

14 MR. KRIEGER: Yes.

15 MR. G. HUGHES: -- you walk through? Okay.

16 MS. J. HUGHES: Oh, it was closed.

17 BY MR. KRIEGER:

18 Q. It was -- so when you had your bathing suit, you had your
19 bag, you had everything, and you walked into the garage door, that
20 you were going to be taking with you, except for your hair --

21 A. Right.

22 Q. -- piece, or was it a brush? Or what -- for your hair?

23 A. It was a hair clippy.

24 Q. A hair clip. Okay. So everything but your hair clip that
25 first time, when you went into the garage, was the garage door

1 open or was the garage door closed?

2 A. It was closed.

3 Q. It was closed.

4 A. I mean --

5 Q. Okay.

6 A. Because he told me not to --

7 Q. And he was with you?

8 A. He -- yeah. He was right there. And he said, don't use the
9 garage door opener. And so when I went into the garage, and I
10 looked at where it was located, and then I couldn't reach it, I
11 said hey, can you help me? And so he did.

12 Q. So at that --

13 A. And when he opened it with the automatic -- when he opened it
14 with the emergency thingy (ph.), he goes, okay, I'm going to head
15 back out front. And that's when he went out front. And that's
16 when I went in and started my car, realized I forgot the hair
17 thingy, opened up my door, went up and got my hair clippy and
18 backed out.

19 Q. And that was the same person that originally knocked on the
20 door?

21 A. Uh-huh.

22 Q. When you were split, do you think that there was -- or could
23 you say for certain that he didn't go downstairs? Would he have
24 been in that portion of the house that he could have gone down
25 into the basement?

1 A. No. Huh-uh. I don't think he could have.

2 Q. Were you upstairs at that time, getting your clothes?

3 A. Yeah, but he was upstairs, too.

4 Q. So while you were getting your clothes, he was in the same
5 area as you for the whole time?

6 A. I mean, literally, I'm talking, grabbed a bathing suit, so it
7 wasn't like -- it was in the midst of me opening the windows,
8 getting my bathing suit, deciding that's what I'm going to do.
9 But you're right, he was in other -- he was in the other parts of
10 the upstairs, doing stuff. Whether we met at the top of the
11 stairs, or whether we met back up downstairs, I don't know, like
12 downstairs in the kitchen area.

13 Q. So there were --

14 A. But as far as I know --

15 Q. All right. So there were --

16 A. -- there was --

17 Q. There were times, though, that you were separated as this was
18 going on?

19 A. Yeah.

20 Q. And how many minutes, from the time that he knocked onto the
21 door until all of that transpired? Was that 5 minutes? Was it 10
22 minutes? Was it -- again, I don't know what the time frame was.

23 A. Well, the only thing I can tell you is the time that it took
24 me to call Gary was 12:17, so by the -- say it took me 5 minutes
25 to get dressed, whatever to get out there, all that blah, blah,

1 blah, opening up the windows, you know what I mean? I don't know.
2 Like it, the whole thing took probably -- because I didn't call
3 Gary immediately after pulling out of the driveway, because I
4 talked to the guy for a couple of minutes. So the whole thing
5 took probably, from start to finish, 20 minutes. Maybe more. You
6 know.

7 Q. So approximately 20 minutes. I'll just say approximately --

8 A. Yeah.

9 Q. -- 20 minutes.

10 A. I mean, I -- like, I'm totally surmising.

11 MR. G. HUGHES: What time did Ryan call?

12 MS. J. HUGHES: He called at 11:52.

13 MR. G. HUGHES: And what time did you call me?

14 MS. J. HUGHES: I called you at 12:17.

15 MR. G. HUGHES: Okay. So the most it could be would be --

16 MR. DOWNS: 17-8 is --

17 MR. G. HUGHES: 17 plus 8, right, and 25 minutes.

18 MR. DOWNS: Yeah, 25.

19 MR. G. HUGHES: Yeah.

20 MS. J. HUGHES: Right. But I'm saying I know that's not the
21 case because I didn't call you as soon as I left, and --

22 MR. G. HUGHES: But that's the most it could be.

23 MS. J. HUGHES: Oh, okay. Okay.

24 MR. G. HUGHES: It's going to be 25 minutes or less.

25 MS. J. HUGHES: I'm sorry. I'm sorry.

1 BY MR. KRIEGER:

2 Q. So approximately, 20, no more than 25 is fair to say. And
3 then in that time, you had said that there were times that you
4 were separated from him?

5 A. Right.

6 Q. And you had said that he did -- you know, he did open the
7 garage door, you're saying he did that for you. You did see pipe
8 in the hole?

9 A. I did, yeah.

10 Q. Was anybody in that hole when you saw it? Was there -- was
11 the person with the shovel still in the hole, or was he outside of
12 the hole?

13 A. You mean the hole -- you don't mean physically, personally in
14 the hole?

15 Q. Yeah.

16 MR. G. HUGHES: Yeah. He's asking what size was the hole.
17 It might be --

18 MS. J. HUGHES: Oh, the hole. I told you, it was a couple of
19 shovels full. Like I could see the coupling, or whatever that
20 main thing is right there. And I could see the pipe coming from
21 it, very little, but there was just like a -- he just started. It
22 was like not like this deep, like he's been working hard. It
23 literally just started.

24 BY MR. KRIEGER:

25 Q. So it was just -- so he was almost at the surface of the

1 ground? He was not -- there was not a deep hole?

2 A. No. It was not a deep hole.

3 Q. Okay. So it's just -- okay.

4 A. Like, the overlay --

5 Q. It was shallow?

6 A. -- that exposed what was underneath was gone. Like you could
7 see the thing. I could see under it, slightly. Like, so I don't
8 know how many shovelfuls that is. It's not that many.

9 Q. Okay.

10 A. Because it's, the coupling itself or whatever that is, is not
11 that big.

12 Q. And you said that you -- there was no discussion as you were
13 driving up. You two were separated at that time?

14 A. You mean as I drove out to the end of the driveway?

15 Q. As you physically drove out of your garage, there was no
16 discussion at that point. You ended up -- you said you parked --

17 A. Right.

18 Q. -- outside, and then --

19 A. Right.

20 Q. -- picked up with him?

21 A. Correct. Because he said -- after he opened the emergency
22 thing, he said, I'm going to head back out front, and I said okay.
23 Thanks a lot.

24 Q. Inside your house -- and again, just to understand, you
25 have -- you said there were three people that were living in the

1 house?

2 A. Uh-huh.

3 Q. And you said you did not smell gas any time prior --

4 A. No.

5 Q. -- to this? Were the other two people in the house at any
6 time within the, I guess, 72 hours prior to this?

7 A. No.

8 Q. Okay. Nobody was in the house. Did you have anybody, or had
9 there been anyone, friends, family, anyone that had been in that
10 house in that time period? So that -- so nobody else would have
11 been able to say they smelled anything or didn't smell anything?

12 A. No. And actually, I hadn't left my house since Friday night,
13 at all.

14 Q. And you -- okay. So that was Friday night prior. And you
15 had not smelled anything, kitty litter, gas or anything until the
16 knock on -- that pounding on the door?

17 A. That's correct.

18 Q. Okay. Let's talk about the appliances. You had put a
19 diagram together of where your appliances were. You said that you
20 have a electric dryer?

21 A. Correct.

22 Q. Have you always had an electric dryer?

23 MR. G. HUGHES: Yes.

24 MR. KRIEGER: So you've always had an -- because you --

25 MR. G. HUGHES: When we moved into the house, there was no

1 dryer, I think. And then we bought a -- I installed the dryer,
2 and I know I don't do piping, so I plugged it in.

3 MR. KRIEGER: Okay. Ha, ha, ha. And you did that in 2000
4 and?

5 MR. G. HUGHES: '09 I guess, right.

6 MR. EVANS: May of '09, yeah.

7 MR. KRIEGER: Do you know if you had a gas connection for
8 your, for a dryer?

9 MR. G. HUGHES: I don't know, if you're asking me.

10 MR. KRIEGER: Okay.

11 MS. J. HUGHES: I definitely don't know.

12 BY MR. KRIEGER:

13 Q. You don't know. Okay. How about, with respect to laundry,
14 had you done any laundry in that 72-hour period prior, that you
15 recall?

16 A. No.

17 Q. No? Okay. So you hadn't -- had you been in that, kind of,
18 that laundry area at any point? You said that's a separate room;
19 is that correct, that was off of your kitchen?

20 A. It is a separate room. Yeah. No. I would have no reason to
21 go in there.

22 Q. So you don't recall, at any time, being in there?

23 A. No. Because my son went out of town, so I didn't have any
24 laundry I had to take care of.

25 Q. When would he have gone out of town?

1 MS. J. HUGHES: Did he leave Thursday or Friday?

2 MR. G. HUGHES: I don't know.

3 MS. J. HUGHES: I think Friday.

4 BY MR. KRIEGER:

5 Q. Friday, your son -- what son was that, that went out of town?

6 A. Connor.

7 Q. And you don't think Connor -- he had never mentioned smelling
8 gas or anything prior to that?

9 A. No.

10 Q. Okay. Do you have any idea when the last time you might have
11 been in that laundry room?

12 A. Well, let me think about that. I mean, I might have been in
13 it, like Friday, trying to help him pack. You know what I mean?
14 But not to actually --

15 Q. So Connor would have --

16 A. I don't think I actually did any --

17 Q. Connor would have been in there as well, packing clothes, or
18 getting clothes to --

19 A. Oh yeah. Yeah.

20 Q. -- getting -- yeah.

21 A. Because that's where, you know, we have -- we keep their
22 clothes on top of the --

23 Q. Clothes are on top of the --

24 A. Like, there's like a, there's cabinetry. And then there's a
25 countertop. And then I put folded clothes on top of there,

1 like -- because he had just --

2 Q. Was that behind, or next to the dryer, above the dryer?

3 MR. G. HUGHES: Across from it.

4 MS. J. HUGHES: Yeah, across.

5 MR. KRIEGER: Across? Okay. Located across from -- so it --

6 MR. G. HUGHES: Whether -- so facing the dryer, it would be
7 behind you.

8 MR. KRIEGER: All right. So it would be -- okay. Behind
9 you. So that -- and then washer and the dryer are next to each
10 other, I assume? Just to --

11 MS. J. HUGHES: Uh-huh.

12 BY MR. KRIEGER:

13 Q. Okay. I'd say just opposite side of room. Is that right?

14 A. Yeah. I mean, it's a tiny room, so it would be -- yes.

15 Q. Have you had any recent appliance repairs that were done?
16 Anything come to mind?

17 A. No, other than I got something stuck in the washing machine,
18 like the cap of a Clorox plastic --

19 Q. In the machine itself?

20 A. In the washing machine. And the guy came and took it out.

21 Q. When would that have been done?

22 A. I don't know.

23 MR. G. HUGHES: It was at least 6 months --

24 MS. J. HUGHES: Six months, yeah.

25 BY MR. KRIEGER:

1 Q. Six months ago? Okay. Just -- yeah. You had talked -- from
2 the time you answered the door, he came in at that point in time
3 and started taking readings, and then you walked through the house
4 and did some -- opened some of those --

5 A. Uh-huh.

6 Q. Did you make any other phone calls before you had left?

7 A. No.

8 Q. No. Did you -- you said you only heard the pounding once,
9 and that was while you were on the phone? You didn't hear it
10 multiple times?

11 A. Well, it wasn't like he just pounded one time.

12 Q. No. It was like --

13 A. Right. Yeah. Right.

14 Q. -- a bang, bang, bang.

15 A. Right.

16 Q. But it was only one instance of, that he was pounding --

17 A. Yeah. That I --

18 Q. -- that you heard, because again, you were asleep. Okay.
19 That's reasonable. And we have where your furnace and that is
20 located, water heater. And you were upstairs, you said, when the
21 pounding occurred?

22 A. Yes. Uh-huh.

23 Q. You didn't mention that -- I don't believe, but the basement,
24 is the basement -- was the basement finished? Was it a finished,
25 completely finished basement? And you said that the -- I believe,

1 earlier, off the record, that you had said that the water heater
2 was in its own room?

3 A. Uh-huh.

4 Q. The furnace, is that in its own room as well?

5 A. No. It's behind, like closet doors.

6 Q. So it's behind a door. But it would -- that would then be
7 kind of behind a finished area?

8 A. Would you call it -- I'm not --

9 MR. G. HUGHES: This is Gary Hughes. I'll jump in. The
10 water heater was in a unfinished part of the finished basement,
11 you know --

12 MR. KRIEGER: Okay.

13 MR. G. HUGHES: -- a utility area.

14 MS. J. HUGHES: The storage --

15 MR. G. HUGHES: With some storage. And the furnace was also
16 behind a drywall, drywalled unfinished area, but accessible by a
17 sliding closet door.

18 MR. KRIEGER: Sliding door.

19 MR. G. HUGHES: Double doors.

20 MR. KRIEGER: Okay. And what else would have been in that
21 unfinished area with the water heater? Anything -- you said it
22 was storage?

23 MR. G. HUGHES: Just -- I'm sorry. There's shelves there.

24 MS. J. HUGHES: Yeah. There's shelves that had like,
25 sleeping bags and --

1 MR. G. HUGHES: Just -- doesn't matter what's on there, but
2 there was (indiscernible) shelves.

3 MS. J. HUGHES: Oh, yeah. I'm sorry.

4 MR. KRIEGER: Anything else you would store in that
5 unfinished area? So it was a water heater, sleeping bag?

6 MS. J. HUGHES: I think there was -- I'm pretty sure there
7 was an elliptical, like that replaced the newest, latest, greatest
8 machines. But other -- you know, just that type of stuff.

9 MR. G. HUGHES: There might have been there a table there, or
10 a tabletop or something.

11 BY MR. KRIEGER:

12 Q. At any point, did the employee, beyond telling you -- you had
13 said, kind of good or bad, with respect to readings, did he do any
14 explanation about the readings? Kind of what the numbers were, or
15 what they meant, or?

16 A. Well the only thing that I -- that he had said, and I don't
17 know if it was him or the other guy, but somebody, you know, like
18 I told you, said that gas travels underground, or can travel
19 underground between crevices in dirt, or whatever, like that.

20 Q. Right.

21 A. And that it can get into your house that way. And that's --

22 Q. But he didn't go into any specific detail about --

23 A. About what 80 meant?

24 Q. Yeah.

25 A. No.

1 Q. Okay.

2 A. No. Because I mean, if I would have known, I probably would
3 have took off running. I mean, I had no -- I really didn't get
4 it. I mean, obviously, if it was 12 in the house and it was 80
5 outside, I kind of figured well, that's higher. That's not good.
6 But I don't know.

7 MR. KRIEGER: I appreciate your time. Thank you for
8 answering my questions.

9 MR. EVANS: So I have plenty of other questions.

10 MS. J. HUGHES: Oh.

11 MR. EVANS: And I suggest we take a 5 to 10-minute break.

12 MS. J. HUGHES: Okey-doke.

13 MR. DOWNS: Okay. Off the record.

14 (Off the record)

15 (On the record)

16 MR. EVANS: Back on the record with Jeannine Hughes.

17 MR. DOWNS: On the record.

18 MR. EVANS: Actually, I'd like to ask Gary Hughes some
19 questions.

20 INTERVIEW OF GARY AND JEANNINE HUGHES

21 MR. EVANS: Gary, in the basement we, in the debris file --
22 pile, we saw an inordinate number of boards, and it looked like
23 you had a blade server down there, perhaps, or server rack. I
24 don't know how --

25 MR. G. HUGHES: Yeah. Okay.

1 MR. EVANS: Yeah. Can you explain what was in the basement,
2 and if it was live, or if it was just storage?

3 MR. G. HUGHES: Well, unfortunately, you may have found it in
4 the basement, but what you are referring to was not in the
5 basement. It was in the office area on the left-hand side of the
6 property.

7 MS. J. HUGHES: Is this the first floor?

8 MR. G. HUGHES: Yeah. They're both the same. So --

9 MS. J. HUGHES: It's this room.

10 MR. G. HUGHES: This -- I'm sorry. Hold on a second.

11 MS. J. HUGHES: Yes. It is. It's this room. I'm telling
12 you. That's the room.

13 MR. G. HUGHES: This room right here. Okay.

14 MR. EVANS: Okay. So that's the southeast --

15 MR. G. HUGHES: That's the -- yeah.

16 MR. EVANS: -- room of the home?

17 MR. G. HUGHES: That's the -- that --

18 MS. J. HUGHES: The front of the house.

19 MR. G. HUGHES: That room right there was where the devices
20 you're referring to were stored, on shelves. Okay.

21 MR. EVANS: Okay.

22 MR. G. HUGHES: There was a, what you're referring to as a
23 server rack, it's an 18-inch rack, that I was contemplating, okay,
24 using as a training device for my company.

25 MR. EVANS: Okay.

1 MR. G. HUGHES: But nothing was powered up. These were just
2 stored devices. Okay. They're older, electronic modules that are
3 used in power plants, but --

4 MR. EVANS: Okay.

5 MR. G. HUGHES: But nothing was powered up. They're just on
6 shelves. The rack, I'd bought, because I thought I might power it
7 up at some stage to use for training, but I just never got around
8 to doing it.

9 MR. EVANS: Okay. So was there any thermostatically
10 activated devices in that room itself, or that would, it would
11 turn on with heat?

12 MR. G. HUGHES: No. Absolutely not. It's just like bits of
13 -- it would be like, kind of, bits of computers, let's say.

14 MR. EVANS: Okay.

15 MR. G. HUGHES: Like mother boards, things like that.

16 MR. EVANS: Okay. Did you have anything in your basement
17 that was related to your work, that would have the need for an
18 exhaust fan or any kind of a fan that would kick on with heat?

19 MR. G. HUGHES: No. The answer to that question is no.

20 MR. EVANS: Okay.

21 MR. G. HUGHES: Just to elaborate a little bit, at one point,
22 we had some of those modules in the basement in a cardboard box.
23 I believe we brought everything up into that office, and put
24 everything on the shelves. I don't think there was anything left.

25 MS. J. HUGHES: Oh, there definitely wasn't.

1 MR. G. HUGHES: Right.

2 MS. J. HUGHES: Because there were mattresses there.

3 MR. G. HUGHES: But regardless, even if they were all in
4 the basement, there's nothing special about how I ventilated them
5 or anything like that. You know, there was no --

6 MR. EVANS: Okay.

7 MR. G. HUGHES: There were just the boxes.

8 MR. EVANS: Okay.

9 Back to you, Jeannine. As far as your basement goes, did you
10 have any special fan, exhaust fans down there, for anything at
11 all, for your exercise room?

12 MS. J. HUGHES: No.

13 MR. EVANS: No? No automated fan of any sort?

14 MS. J. HUGHES: No.

15 MR. EVANS: Okay. And then this question is actually for
16 both of you. I lived in Atlanta for a long time, and I had a home
17 on a similar elevation as yours. Okay. And I had a lot of
18 trouble with cracks in my foundation, a lot of trouble with it.
19 And water actually came in.

20 But sometimes you could have those cracks, and water doesn't
21 make its way in, but air can make its way in. So did you have any
22 foundation cracks in your basement that you knew of?

23 MS. J. HUGHES: No.

24 MR. G. HUGHES: Hold on. I can say this. As you say, I had
25 a concern that behind the water heater there was a crack in the

1 block work. Okay. But since it wasn't leaking, it kind of -- as
2 far as I ever looked, it almost looked like it had been, tried to
3 be repaired at some point, like it was darker gray. I don't want
4 to call it caulking, but maybe something.

5 But I looked at it, and I was a bit concerned about it, but
6 no moisture was coming out of it, and to this day, till since you
7 mentioned that, I never considered that. There was a -- just
8 were --

9 MS. J. HUGHES: Actually, that wall still exists.

10 MR. G. HUGHES: Right. You could probably -- well, it's kind
11 of --

12 MR. EVANS: You can see a crack in the wall on that face, by
13 the way, if you're talking about the face right here.

14 MS. J. HUGHES: Yeah.

15 MR. G. HUGHES: Right. Yeah, yeah.

16 MS. J. HUGHES: That's the wall.

17 MR. EVANS: Yes, that --

18 MR. G. HUGHES: Right. Now, since you mention it, it just
19 didn't occur to me, but I'd noticed it before, and I'm like, oh,
20 but since it wasn't leaking, I didn't ever --

21 MR. EVANS: Okay. So let me ask this question. Whenever you
22 purchased the home -- in most every city in the United States
23 these days, and I've had seven homes in my life, I've always had
24 to sign disclosure documents when I sell a house. And when I buy
25 a house, I have to review that disclosure document with the

1 realtor, right?

2 MR. G. HUGHES: Right.

3 MR. EVANS: Do you recall having a disclosure document for
4 that crack in this foundation?

5 MS. J. HUGHES: No. I would have probably objected at some
6 point, but I didn't notice it, and I don't remember signing
7 anything that acknowledged that I knew that crack -- you know,
8 that we talked about it or anything.

9 MR. EVANS: Okay. So when you last observed the crack, and
10 this is for you, Gary.

11 MR. G. HUGHES: Yeah.

12 MR. EVANS: When you last observed that crack in the wall,
13 was it of the nature of the crack was a physical crack that you
14 could slide a, perhaps a couple toothpicks into?

15 MR. G. HUGHES: No. Toothpicks? I don't know. I don't
16 know. I just know that it was visible, and it was -- how can I --
17 well, it kind of followed, like one block up, and then it would go
18 across to the -- you know, across the block there, to the next
19 block, so it was kind of like a stepping kind of crack.

20 MR. EVANS: That's the exact pattern of the --

21 MR. G. HUGHES: Right.

22 MR. EVANS: -- that I saw when I was out there day before
23 yesterday. Yeah, so I saw what you're talking about.

24 MR. G. HUGHES: So that crack -- I don't remember the last
25 time, or when I first noticed it, but it was, it's been there for

1 quite a while.

2 MR. EVANS: Okay. So Jeannine, your knowledge of that crack,
3 what can you --

4 MS. J. HUGHES: I don't have any knowledge of that crack. I
5 only knew that what --

6 MR. G. HUGHES: I didn't mention it.

7 MS. J. HUGHES: -- where the wall that he -- that when he
8 said, water heater, what wall he was talking about, and that it
9 was still standing, because I remember, like standing in the back
10 of it. You know.

11 MR. EVANS: Okay.

12 MS. J. HUGHES: But I didn't -- even when I looked at it, I
13 wasn't looking at the fact that there was a crack there. I
14 looked -- oh wow, that wall is still there. That's --

15 MR. EVANS: Okay.

16 MS. J. HUGHES: -- the extent of my thoughts.

17 MR. EVANS: So a different topic. I know, in this area, that
18 radon is a must, and you probably can't get a home loan without a
19 radon device in your home here. And I've been in those areas as
20 well, and played that game. They do a radon test, and next thing
21 you know, you got a radon system in your house. Did the radon
22 system happen during your ownership?

23 MR. G. HUGHES: I don't think we had a radon system. I don't
24 believe we did. I don't remember. I don't recall any radon
25 system.

1 MS. J. HUGHES: We didn't put any radon system in.

2 MR. G. HUGHES: No.

3 MS. J. HUGHES: I mean, do you have to do something if you
4 have a radon system?

5 MR. EVANS: Well, I was told by the fire commissioner that
6 every home in this neighborhood is required to have radon,
7 because --

8 MR. G. HUGHES: I don't --

9 MS. J. HUGHES: What's -- I mean, what's radon -- what's a
10 radon system look like?

11 MR. DOWNS: Downs here. Maybe I can elaborate. It's either
12 a system, or have a radon test that's performed to determine if
13 you do have radon gas that accumulates in the basement.

14 MR. G. HUGHES: Going from memory, I believe that we had a --
15 there was a radon test done --

16 MR. DOWNS: Test.

17 MS. J. HUGHES: -- when we bought the property.

18 MR. DOWNS: Right.

19 MS. J. HUGHES: But we didn't have a radon system, as far as
20 I know.

21 MR. DOWNS: Yeah. It's either a test done with a system
22 certified, the basement certified to be radon free, hence you
23 don't need a radon system.

24 MS. J. HUGHES: Oh, okay. That makes sense.

25 MR. DOWNS: Or, if it's tested positive, then you need to get

1 a radon system that pumps off the radon gas that naturally
2 accumulates in the soil.

3 MR. G. HUGHES: No. We didn't have a radon system, and I --

4 MR. EVANS: So to your knowledge, there was no radon system
5 in your home?

6 MS. J. HUGHES: Huh-uh.

7 MR. EVANS: I mean, you would know it, because through the
8 years, there's a filter that has to be changed. You have to have
9 someone come do things to it.

10 MS. J. HUGHES: Oh, no.

11 MR. EVANS: It plugs in. You'll hear it when you walk into
12 the home. Usually it's -- I've been all around those homes, and
13 I've walked by radon systems, and I wanted to hear the noise.

14 MR. G. HUGHES: No. We didn't have a radon system.

15 MR. EVANS: And so you didn't --

16 MS. J. HUGHES: What is the noise?

17 MR. EVANS: A little humming noise, because the little fan is
18 moving.

19 MS. J. HUGHES: Oh.

20 MR. G. HUGHES: We didn't have a radon system. No.

21 MR. EVANS: Okay. So great. Different subject, topic then.
22 So the next one is, in your home, and depending on locations in
23 the United States, sometimes they leave a gap between the concrete
24 floor and the wall itself. And sometimes that's like a quarter of
25 an inch.

1 And I was in a home in your neighborhood, and I looked at it.
2 It looked to be about 3/8 of an inch of a gap. And the person had
3 actually caulked it with this pretty strong caulking material, to
4 seal that. And that was because the radon guy said, oh you have
5 to do this in order to trap the radon so it goes under the slab
6 and out, how it's supposed to.

7 Do you recall any sort of a gap in your floor, and sometimes
8 it's hard to see it if you weren't looking for it, if it had any
9 sort of a gap between where the wall came up -- the floor came up
10 to the wall, so the gap would be right there. It'd be kind of --

11 MS. J. HUGHES: You mean, in the basement?

12 MR. EVANS: In the basement,

13 MS. J. HUGHES: I don't know.

14 MR. EVANS: Okay.

15 MS. J. HUGHES: I never --

16 MR. G. HUGHES: I don't recall any gap. I didn't notice any
17 gap.

18 MR. EVANS: Okay.

19 MR. G. HUGHES: It doesn't mean it wasn't there. I just
20 never --

21 MS. J. HUGHES: I didn't notice anything. Yeah.

22 MR. EVANS: Okay. The other -- this is a Google Earth view
23 of your home, right. And you see we have these windows on the
24 side of the home. At any time during your stay in this property,
25 were those -- were any of those windows kind of like left open,

1 maybe to air out a basement, anything like that? Did you ever
2 touch those windows? Was it always air-tight?

3 MS. J. HUGHES: They were never opened.

4 MR. EVANS: Never opened them?

5 MS. J. HUGHES: I don't know.

6 MR. G. HUGHES: I mean, those windows wouldn't air out the
7 basement anyway. They're in the office.

8 MR. EVANS: Okay. Were there any windows, any openings in
9 the home that were open, ever --

10 MS. J. HUGHES: What do you mean?

11 MR. EVANS: -- that you just had, you know --

12 MR. G. HUGHES: Well, we opened the kitchen window once in a
13 while. I mean --

14 MR. EVANS: But not in the basement?

15 MS. J. HUGHES: No.

16 MR. G. HUGHES: There was no -- the only windows in the
17 basement were the two --

18 MS. J. HUGHES: Those doors.

19 MR. G. HUGHES: -- two walk-out doors, and those doors have
20 been locked for quite a long time.

21 MR. EVANS: Okay. Had you ever had water at the base of
22 those doors, from rain?

23 MR. G. HUGHES: The door -- those doors, there's a concrete
24 pad on the outside, like a sill or, you know, stoop, if you want
25 to call it. I mean, maybe if it rained on it, it would be with

1 standing water, but we never had any water coming into the house
2 or anything like that.

3 MR. EVANS: Okay. Okay. Great. Did you ever have -- like,
4 I have a son close to your son's age, that's -- he loved to live
5 in the basement. Had a wonderful bedroom up on the third floor of
6 our home, but he had to live in the basement in his own little
7 gigs, you know.

8 MS. J. HUGHES: Oh yeah.

9 MR. EVANS: Digs, I guess he called it. I have to have my
10 own digs, Dad. Anyway, so we let him stay down there. Half the
11 time when he'd go down there, he would crack open windows, in the
12 middle of winter sometimes. So did you ever have a resident in
13 the basement?

14 MR. G. HUGHES: No.

15 MS. J. HUGHES: No.

16 MR. EVANS: No one ever lived in your basement?

17 MS. J. HUGHES: No.

18 MR. EVANS: Okay. When you exercise, and on your machines, I
19 saw a lot of exercise machines.

20 MS. J. HUGHES: When I -- yeah. There was a lot of exercise
21 equipment, a lot of new exercise equipment.

22 MR. EVANS: There's a lot of equipment down there. Was there
23 a time when you exercised that someone would actually open
24 windows?

25 MR. G. HUGHES: As I said, there's no windows --

1 MS. J. HUGHES: It's cold in the basement.

2 MR. G. HUGHES: There's no windows. It's just two, the two
3 double doors.

4 MR. EVANS: Oh, that's it?

5 MR. G. HUGHES: Yeah.

6 MS. J. HUGHES: Yeah. It's really cold in the basement, too.

7 MR. G. HUGHES: There's two French -- yeah, the -- actually,
8 it's not even a double door. It's a single door. There's one --
9 there's a --

10 MS. J. HUGHES: Yeah. It's like -- well, I mean --

11 MR. G. HUGHES: There's a glass and a door --

12 MS. J. HUGHES: -- the other one can open, but --

13 MR. G. HUGHES: -- a glass --

14 MS. J. HUGHES: -- it doesn't open -- they both don't open.

15 MR. G. HUGHES: Yeah.

16 MS. J. HUGHES: Like one opens, and then you can make a
17 special effort to open two, but it's not like a typical double
18 French door.

19 MR. G. HUGHES: It's just two double doors, with one door
20 that normally opens, and that -- I'm sure those doors haven't been
21 opened in at least a year.

22 MR. EVANS: Okay. So how about as far as this area of the
23 basement over here on the south side of your dwelling? Did you
24 ever have any sort of dampness or water in this area of the
25 building?

1 MR. G. HUGHES: No.

2 MS. J. HUGHES: No.

3 MR. EVANS: So you've never -- have you ever had water in
4 your basement?

5 MS. J. HUGHES: Nope.

6 MR. EVANS: And do you have a sump pump?

7 MR. G. HUGHES: No.

8 MR. EVANS: No sump pump?

9 MR. G. HUGHES: No. I don't believe there's a sump pump.

10 MR. EVANS: Okay.

11 MR. G. HUGHES: Going back to -- we had one -- we had some
12 water in the basement at one point, because we had a problem with
13 the air conditioner, and it overflowed, and we had some moisture
14 run in the --

15 MR. EVANS: Oh yeah.

16 MR. G. HUGHES: You know, that's about it. But nothing from
17 outside.

18 MR. EVANS: Okay. So this is for Gary.

19 Gary, have you ever cut the grass in the -- did you -- have
20 you been known to cut the grass in that -- or is it --

21 MR. G. HUGHES: I haven't --

22 MR. EVANS: I'm not trying to insult you.

23 MR. G. HUGHES: No, no, no. I hear what you're saying, but I
24 haven't cut the grass in a couple of years, probably.

25 MR. EVANS: Okay. A couple of years.

1 MR. G. HUGHES: I haven't cut the grass. Yeah, we have some
2 guy. One time we had a service --

3 MS. J. HUGHES: Four years.

4 MR. G. HUGHES: Four years?

5 MS. J. HUGHES: Yeah.

6 MR. G. HUGHES: Yeah, 4 years.

7 MS. J. HUGHES: It's been a long time.

8 MR. G. HUGHES: Yeah.

9 MR. EVANS: Okay, 4 years. So anyway, let's talk about
10 something up here. Up in front of this -- right where your
11 mailbox is, right? Right here.

12 MR. G. HUGHES: Right.

13 MR. EVANS: Right over here, there's a sewer riser --

14 MR. G. HUGHES: Yeah.

15 MR. EVANS: -- a pipe, that comes up out of the ground. And
16 all your neighbors have caps on -- we went all around your
17 neighborhood, and I looked at maybe eight of them, and every one
18 of them was -- there was two styles of caps. But the cap is
19 missing on yours. So do you ever recall seeing a cap in your
20 front yard, that you would have to kind of mow around, weed whack
21 around or what have you?

22 MR. G. HUGHES: Yeah. The last time I saw it, it was
23 protruding, and it had a cap on it.

24 MR. EVANS: Do you recall --

25 MR. G. HUGHES: So you'd have to go around it. Yeah.

1 MR. EVANS: Do you recall when that was?

2 MR. G. HUGHES: I haven't mowed that lawn in a couple, 3
3 years, probably, 4 years, according to Jeannine.

4 MR. DOWNS: If I could ask a question?

5 MR. EVANS: Wait. Hold your own questions.

6 So, as far as your recall of that cap, had you ever mowed the
7 grass?

8 MS. J. HUGHES: I mowed the grass about 2 years ago.

9 MR. EVANS: Do you recall seeing the cap on the grass at that
10 time?

11 MS. J. HUGHES: Yeah. I was using one of those lithium ion
12 type --

13 MR. EVANS: Battery --

14 MS. J. HUGHES: Yeah, because I like to do diagonals in the
15 front yard or whatever. Yeah.

16 MR. EVANS: Okay. So you saw the cap. But you can't date
17 when you last saw the cap, I guess. Is that what you're saying?
18 You saw it a couple of years ago, but since that time, you don't
19 recall seeing the cap?

20 MR. G. HUGHES: I mean, I don't recall seeing it missing. I
21 mean --

22 MS. J. HUGHES: I mean, I don't pay attention to it.

23 MR. G. HUGHES: You know, I didn't notice that it was open or
24 anything like that, you know, anytime walking through the yard,
25 or --

1 MR. EVANS: Okay.

2 MR. G. HUGHES: -- or on the sidewalk, or anything like that.

3 MR. EVANS: Okay. So do you have someone that cuts the grass
4 now? Could we get his name and phone number?

5 MS. J. HUGHES: Well, his name is Tran Chau, and he drives
6 around the neighborhood.

7 MR. EVANS: Oh, he just --

8 MS. J. HUGHES: Yeah.

9 MR. EVANS: Oh, he kind of like shows up and say hey, do you
10 want me to --

11 MS. J. HUGHES: Yeah.

12 MR. EVANS: -- cut the grass today? But you don't --

13 MS. J. HUGHES: He doesn't speak English, and it's like,
14 awkward, but I put the --

15 MR. EVANS: Do you know of anyone who uses him on a regular
16 basis that would know his contact?

17 MS. J. HUGHES: Not -- no. I mean, everybody else uses --
18 you know, like Don does his own, and the Gutierrez do their own.
19 So no.

20 MR. EVANS: So when was the last time that Tran cut your
21 grass? Would you know? I mean, was that like a few weeks ago, a
22 week ago? Are you getting it cut --

23 MS. J. HUGHES: Well he comes like, like once a week.

24 MR. EVANS: Okay.

25 MS. J. HUGHES: And I just pay him whenever he comes, because

1 I work out of my house, so I just would give him --

2 MR. EVANS: Okay.

3 MS. J. HUGHES: -- you know, the money.

4 MR. EVANS: So, and how do you think he -- any idea how you
5 spell his name? T-R-A-N? Like that?

6 MS. J. HUGHES: Yeah.

7 MR. EVANS: And C --

8 MS. J. HUGHES: H-A-U.

9 MR. EVANS: C-H-A-U?

10 MS. J. HUGHES: I think, yeah.

11 MR. EVANS: Okay.

12 MS. J. HUGHES: Pretty sure.

13 MR. EVANS: And do you know that from writing checks to him,
14 or?

15 MS. J. HUGHES: Well, just by what he said.

16 MR. EVANS: Okay. Okay.

17 MS. J. HUGHES: I mean, we didn't communicate very well
18 together. There was a lot of hand gesturing, but I think that's
19 what --

20 MR. EVANS: Okay. Okay.

21 Rick, go ahead with your question.

22 MR. DOWNS: Oh, I was just going to ask if we have the
23 contractor, but you'd answered the question. Thank you.

24 MR. EVANS: Oh, okay. Okay.

25 MS. J. HUGHES: And he's only been -- he's been -- I think he

1 cut my grass like four or five times, you know. Prior to that, it
2 was my -- like for this season, anyway. Prior to that, it was --
3 my cousin Randy did it last year.

4 MR. EVANS: Do you have his number?

5 MS. J. HUGHES: He's in prison.

6 MR. EVANS: Oh, okay. Well, we still may want to chase that
7 down. We'll let you know.

8 MS. J. HUGHES: All right.

9 MR. EVANS: Okay. On the -- and I'm not trying to get
10 personal with this, but when you awakened that day, did you
11 actually go and take a shower?

12 MS. J. HUGHES: No. I mean, no. I mean, literally,
13 literally, my son called, and there's a knock on the door. Like
14 11:53, think about that, 11:53, had to be out of the -- I was out
15 of the house, on my way to the hotel at 12:20-something. No.

16 MR. EVANS: Okay. And when you enter into your bathroom and
17 you turn the light on, does the fan automatically go with the
18 light?

19 MS. J. HUGHES: No.

20 MR. EVANS: Or do you have -- it's two separate switches?

21 MS. J. HUGHES: Three. Yeah, it was three different
22 switches. I don't think --

23 MR. EVANS: Okay.

24 MS. J. HUGHES: No.

25 MR. EVANS: I was just curious about that. Had you run

1 your -- I mean, my wife is famous for this, when she wakes up, to
2 do something with the washer, dryer or dishwasher. Did you do any
3 of those things at all? Had you clicked on the dryer? Had you
4 done anything at all?

5 MS. J. HUGHES: No.

6 MR. EVANS: No?

7 MS. J. HUGHES: No. No.

8 MR. EVANS: Nothing like that?

9 MS. J. HUGHES: Literally, no. Literally went from getting
10 my clothes on to going out the front door.

11 MR. EVANS: Okay.

12 MS. J. HUGHES: I mean, after -- I might have fed my cats.
13 That's the only thing I might have done before I went outside.
14 I'm not sure.

15 MR. EVANS: Okay. Okay.

16 MS. J. HUGHES: I'm not positive about that.

17 MR. EVANS: So no washer, no dryer, no dishwasher, none of
18 that was touched?

19 MS. J. HUGHES: Oh, no. Nope.

20 MR. EVANS: Okay. Okay. Did you -- where you were at the
21 Days Inn, and I don't know how far it is, but did you hear an
22 explosion?

23 MS. J. HUGHES: No.

24 MR. EVANS: You didn't hear it? Okay. I'm just curious
25 about that. You had mentioned earlier that when you left the

1 home -- earlier in the discussion --

2 MS. J. HUGHES: Right.

3 MR. EVANS: Very early in the discussion today, you said,
4 well when I went back in the home, it smelled quite, kind of
5 strong. Okay. And I failed to ask you, when you say it smelled
6 strong, was that strong kitty litter, strong natural gas?

7 MS. J. HUGHES: Well, I don't know what natural gas really
8 smells like, but it smelled like -- like when my catalytic
9 converter went out on my car one time, you know what I mean? I
10 think it emitted like a, this rotten egg smell, or something like
11 that.

12 MR. EVANS: Perfect example. Yeah. Rotten egg.

13 MS. J. HUGHES: It kind of smelled like that. Yeah.

14 MR. EVANS: Okay. So you had the rotten egg smell when you
15 went back in the house, but before you left the home, you didn't
16 smell the rotten egg smell? It was --

17 MS. J. HUGHES: Oh no. When I answered the phone with Ry, I
18 said, oh my gosh, that stinks. What is that? Is that cat litter,
19 or what is that? You know what I mean? Like I didn't know -- I
20 knew something stank, but I didn't know what it was. Like, I
21 mean, literally when you're -- I'm woken up and disoriented like
22 that, I didn't even have time to process what was going on.

23 And the knocking at the door was there. And I just didn't
24 like -- then I knew, because the gas company was there, well you
25 know, I think it must be the gas. You know, I got to go.

1 MR. EVANS: Okay. So let's make sure that we make -- get
2 this in the record. The smell that you smelled when you walked
3 back into the home from the front yard, versus the smell that you
4 smelled when you woke up in the morning, were they the same?

5 MS. J. HUGHES: I would say yeah.

6 MR. EVANS: Okay. That's fine.

7 MS. J. HUGHES: But I didn't -- but it wasn't in -- it wasn't
8 intense when I woke up. I don't know why. I even said that to
9 him. I said, holy crap, it really does smell in here. Like, I
10 didn't get that, you know, because when I woke up, it was like, I
11 don't know if it's because I was in it or whatever, but I knew
12 there was a smell, but I didn't know what it was. You know?

13 MR. EVANS: Okay.

14 MS. J. HUGHES: Because I hadn't -- I mean -- I knew that it
15 was a smell. But only when -- I mean, when you -- when I went
16 back outside and went back in, it was like yeah, that stinks.

17 MR. EVANS: Okay. So do you recall ever getting the scratch
18 and sniff cards from the --

19 MS. J. HUGHES: I just got one the other day.

20 MR. EVANS: But had you received those in the past, that you
21 actually did the scratch and sniff thing?

22 MS. J. HUGHES: No.

23 MR. G. HUGHES: I never even heard of them.

24 MS. J. HUGHES: I know. I couldn't -- I was kind of like, I
25 can't believe they sent one. But I know they just were randomly

1 doing it to everybody, but I felt like, because they sent it to
2 206 Springdale Lane.

3 MR. EVANS: Mass mailing.

4 MS. J. HUGHES: Yeah, mass mail. That's what I figured,
5 but --

6 MR. EVANS: So can we go on the record as saying that you
7 don't have confidence that you know what natural gas smells like?

8 MS. J. HUGHES: Well I did the scratch and sniff.

9 MR. EVANS: No, no, I mean --

10 MS. J. HUGHES: Oh.

11 MR. EVANS: I meant, before the incident, if someone exposed
12 you to the -- it's called mercaptan, is the odorizer they put in
13 gas. It's that -- it's a rotten egg kind of smell.

14 MS. J. HUGHES: Right. Oh no, there's a rotten egg.

15 MR. EVANS: So is that -- can we go on the record to say that
16 you were unaware that natural gas smelled this way?

17 MS. J. HUGHES: Right.

18 MR. EVANS: Until --

19 MS. J. HUGHES: Absolutely.

20 MR. EVANS: Okay.

21 MS. J. HUGHES: Yeah.

22 MR. EVANS: So you didn't -- you did not know that --

23 MS. J. HUGHES: I did not know what that smell was, at all.

24 MR. EVANS: Okay. I mean, that's not unusual, because
25 there's a lot of people that live through their whole life and

1 never smell ammonia. And they don't smell mercaptan in natural
2 gas.

3 MS. J. HUGHES: Yeah. Yeah, I never smelled that before.

4 MR. EVANS: Or chlorine, sometimes. They've never smelled
5 chlorine.

6 MS. J. HUGHES: Oh, I'd know chlorine --

7 MR. EVANS: Yeah. Most people know chlorine.

8 MS. J. HUGHES: -- because of the pool and stuff, but yeah.

9 MR. EVANS: Okay. When was the last time that you used your
10 stove? Did you make coffee that day, or?

11 MS. J. HUGHES: No. I had just got up.

12 MR. EVANS: Okay.

13 MS. J. HUGHES: Literally. But I wouldn't have used the
14 stove for my coffee anyway. But I was on Nutrisystem, so I don't
15 know if you're familiar with that, but it's all frozen food.

16 MR. EVANS: Oh yeah. I am -- right.

17 MS. J. HUGHES: So I haven't used the stove in quite a while.

18 MR. EVANS: Okay. So what -- does your coffee maker have any
19 kind of a timer on it?

20 MS. J. HUGHES: No. I mean, it does, but I don't use the
21 timer.

22 MR. G. HUGHES: It has an automatic turn-off. That's what.

23 MR. EVANS: Okay. It does have an automatic turn-off?

24 MR. G. HUGHES: There is a timer, but we didn't -- we
25 wouldn't ever use it.

1 MS. J. HUGHES: Yeah. I don't use that.

2 MR. G. HUGHES: But it will turn itself off, if you leave it
3 on long enough.

4 MR. EVANS: Did you have any sort of alarm clock set?

5 MS. J. HUGHES: No.

6 MR. EVANS: Nothing like that?

7 MS. J. HUGHES: No.

8 MR. EVANS: Okay.

9 MS. J. HUGHES: As a matter of fact, my clock is like, off.
10 Just bing, bing, it's got the wrong time.

11 MR. EVANS: Okay. Okay. How about a whole house fan,
12 that's --

13 MR. G. HUGHES: No. There's no whole house fan.

14 MR. EVANS: How about a thermostatically controlled vent fan
15 in your attic. Do you have one of those?

16 MR. G. HUGHES: No. No.

17 MR. EVANS: You're pretty sure of that?

18 MR. G. HUGHES: Well, let me take that back. If there is, I
19 wasn't aware of it. I don't know if I've ever really been -- I've
20 been in the attic in the garage, but I haven't been in the attic
21 in the house. So if there was one, I wasn't aware of it.

22 MR. EVANS: Well, I mean, I have to say, I've owned a home
23 for several years and never -- until I had someone in my house one
24 day, they go, you know you have a thermostatically controlled fan.
25 And I didn't even know I had one. But what they do is, they just,

1 when the temperature gets to like 125 degrees in your attic, it
2 automatically kicks on, and exhausts that hot air.

3 MR. G. HUGHES: Well --

4 MS. J. HUGHES: Oh, that would have been nice.

5 MR. G. HUGHES: The only thing that I will say is that I
6 wasn't aware of it, and we're not aware of it. We didn't -- we
7 don't -- we didn't see any external vent for that, and we'd never
8 heard it --

9 MS. J. HUGHES: Yeah, like --

10 MR. G. HUGHES: -- kick on inside that, so --

11 MS. J. HUGHES: Because the -- it would have like --

12 MR. G. HUGHES: And I don't remember --

13 MS. J. HUGHES: The attic access, right, is in my closet.

14 MR. G. HUGHES: Right.

15 MS. J. HUGHES: Is that what you're talking about?

16 MR. G. HUGHES: We've never been in there.

17 MS. J. HUGHES: And like, my closet would have been, you
18 know, somewhere -- just, well wait, the bathroom is like, is right
19 here.

20 MR. G. HUGHES: Like, it hasn't showed up, so we don't think
21 so.

22 MS. J. HUGHES: The bathroom's right here, and there's no --
23 you can see there's no --

24 MR. EVANS: Okay.

25 MS. J. HUGHES: -- vent fan. So no, I've never heard of

1 that, or known anything about that. Right.

2 MR. EVANS: Do you have a -- as for you, Gary, do you have
3 any sort of a small compressor?

4 MR. G. HUGHES: We had a small compressor in the garage, a
5 very small one for, you know, pumping up tires and things like
6 that.

7 MR. EVANS: Right.

8 MR. G. HUGHES: And maybe --

9 MR. EVANS: Do you know if it was plugged in?

10 MR. G. HUGHES: I'm not aware. I don't think so. I would
11 say no.

12 MR. EVANS: Is it the kind of compressor that if you had it
13 plugged in and the air bled down, it would kick back on its own?
14 Is it -- was it that kind of compressor, with that instrumentation
15 aboard?

16 MR. G. HUGHES: It would be that kind of compressor. Yeah.

17 MR. EVANS: Okay.

18 MS. J. HUGHES: Yeah.

19 MR. EVANS: When was the last time that was used?

20 MR. G. HUGHES: A couple of years.

21 MR. EVANS: A couple of years? Okay.

22 MR. G. HUGHES: I mean, yeah.

23 MR. EVANS: Okay. Good. Can you think of anything in your
24 home that -- any item at all, that's electrical --

25 MR. G. HUGHES: That's all (indiscernible).

1 MR. EVANS: -- that has some sort of a trip to it that
2 would -- you know, your furnace is going to trip, attic fans trip,
3 you know, compressors trip, you know, a lot of these things -- oh
4 how about your car? Does your car have that automatic feature
5 when it gets hot, it'll -- so you hadn't used your car that day,
6 right?

7 MS. J. HUGHES: Uh-uh.

8 MR. EVANS: Oh, okay. So you can't think of anything else in
9 your home that has --

10 MR. G. HUGHES: The only thing I will say is that once in a
11 while we had an issue with the GFCI in the basement, depending on
12 if it was raining or something like that. Once in a while, it
13 might trip. We'd have to reset it. That's about the only thing I
14 can think of that --

15 MR. DOWNS: What did the GFCI go to?

16 MR. G. HUGHES: It goes to the -- that particular GFCI goes
17 to anything in the outside receptacle.

18 MR. DOWNS: Outside receptacle?

19 MR. G. HUGHES: Yeah.

20 MR. DOWNS: Right.

21 MR. G. HUGHES: Now, I would -- and once again, I don't want
22 to speculate but, you know, I'd say it's just occasionally, if
23 we'd put like the Christmas lights, for example, like that, if we
24 got any moisture and it would trip the GFCI, we would have to
25 reset that. But as far as anything automatically turning on and

1 off, other than things like you know about, thermostats and the --
2 I mean, the water heater is a -- I don't think a pilot light on it
3 or anything. You know, I can't think of anything.

4 MR. EVANS: But you hadn't used water to cycle the water
5 heater, is what you're saying, right?

6 MS. J. HUGHES: Right. Yeah.

7 MR. EVANS: You didn't take a bath, so --

8 MS. J. HUGHES: No.

9 MR. EVANS: That's why I asked if you took a bath, to see if
10 you'd cycled the water heater. Okay, that's all I have.

11 MR. DOWNS: Downs, NTSB. Let me do some quick follow-up
12 questions here.

13 Ms. Hughes, back to the red fan, I'm going to beat the red
14 fan to death.

15 MS. J. HUGHES: Okay.

16 MR. DOWNS: Electrical cords, did you happen to see an
17 electrical cord hanging from the fan, or coiled up?

18 MS. J. HUGHES: I did. Yes, I did.

19 MR. DOWNS: So that struck you as a --

20 MS. J. HUGHES: Yeah.

21 MR. DOWNS: -- recollection, so it definitely was an
22 electrical fan?

23 MS. J. HUGHES: Yeah.

24 MR. DOWNS: Okay. Got that. It looks like your phone might
25 be some good timestamps in terms of determining the start of the

1 event versus when you were driving away. We have the call from
2 Ryan at 11:52. And I think it sounded like your last call, as you
3 were leaving the property, was that to Gary?

4 MS. J. HUGHES: Uh-huh.

5 MR. DOWNS: And whereabouts were you when you started that
6 call? Do you remember?

7 MS. J. HUGHES: Probably out towards the end, like leaving
8 Springdale, because I was asking him my -- what he -- where he
9 thought I should -- a cheap motel would be, that --

10 MR. DOWNS: So you were all the way, way down the far end at
11 Springdale?

12 MS. J. HUGHES: Yeah. Yeah.

13 MR. DOWNS: And that's probably half a mile or so distance.

14 MS. J. HUGHES: Yeah, yeah. Yeah.

15 MR. DOWNS: And do we have the timestamp on that call? I'm
16 trying to get our timeline down a little tighter, if we can.

17 MS. J. HUGHES: 12:17. Well, I called him at 12:17, and I
18 guess he didn't answer. And then 12:18 is when we actually
19 talked.

20 MR. DOWNS: 12:18, and that was at the far end of Springdale?

21 MS. J. HUGHES: Yeah.

22 MR. DOWNS: Okay. Great. Has your hot water heater ever
23 been worked on over the years since you owned the house?

24 MR. G. HUGHES: It was replaced --

25 MR. DOWNS: Replaced?

1 MR. G. HUGHES: -- probably about 4 years ago.

2 MR. DOWNS: About 4 years ago or so?

3 MR. G. HUGHES: Four or 5 years now.

4 MR. DOWNS: Okay. And it is gas hot water heater, you said,
5 with a pilot light?

6 MR. G. HUGHES: Right.

7 MR. DOWNS: Okay. About 4 years. Okay. And other than
8 that, it's been no trouble over the years? Okay. And your
9 washing machine repair was about 6 months ago or so, you were
10 saying?

11 MS. J. HUGHES: Uh-huh.

12 MR. DOWNS: And that's a conventional electrical? There's no
13 gas involved with that, right? Okay.

14 MS. J. HUGHES: Right.

15 MR. DOWNS: And I think you said, Ms. Hughes, that you
16 typically have all the windows closed and the air conditioning on
17 when you're at home?

18 MS. J. HUGHES: Uh-huh.

19 MR. DOWNS: Okay. I got that. Okay. Ms. Hughes, when was
20 the last time you were in the basement that you can remember? You
21 were saying you had got -- you were still at the house since
22 Friday or so?

23 MS. J. HUGHES: Yeah. Well it definitely wasn't then. It
24 would have been weeks.

25 MR. DOWNS: Weeks ago?

1 MS. J. HUGHES: Uh-huh.

2 MR. DOWNS: Okay. And let's see. Have you received anything
3 in the mail, or maybe even hanging upon your door on leak
4 information from UGI?

5 MS. J. HUGHES: No.

6 MR. DOWNS: You get a gas bill, right?

7 MS. J. HUGHES: Right.

8 MR. DOWNS: In the gas bill, were there any fliers or
9 pamphlets that you remember, any in the bill envelope itself, that
10 might have given you information on what to do in the event of a
11 gas leak?

12 MS. J. HUGHES: Not that I recall. I mean --

13 MR. DOWNS: You don't recall?

14 MS. J. HUGHES: No.

15 MR. DOWNS: And sometimes the gas company will leave a little
16 flier on the doorknob, just go around the neighborhood to make
17 sure that everybody's aware. You've not received anything in
18 recent memory on that?

19 MS. J. HUGHES: No. No.

20 MR. DOWNS: Okay. Would you know what to do though, in the
21 event of a leak? Let's say UGI wasn't there when you looked out
22 the window and got the knock on the door and everything.

23 MS. J. HUGHES: Well to be honest, I probably would have
24 called Gary.

25 MR. DOWNS: Okay.

1 MS. J. HUGHES: Said something stinks.

2 MR. DOWNS: Okay.

3 MS. J. HUGHES: Because I don't think I would have known what
4 it was.

5 MR. DOWNS: All right.

6 MS. J. HUGHES: You know.

7 MR. DOWNS: You were saying you had trouble identifying
8 natural gas by itself, right?

9 MS. J. HUGHES: Well, that smell, I didn't -- I don't know
10 what that smell --

11 MR. DOWNS: You didn't recognize it?

12 MS. J. HUGHES: Well no, I didn't get what that was.

13 MR. DOWNS: Okay.

14 MS. J. HUGHES: So I probably would have called Gary and
15 said, you know, something really smells, and he probably would
16 have said --

17 MR. G. HUGHES: Call UGI.

18 MS. J. HUGHES: Yeah, call UGI.

19 MR. DOWNS: That would have been your response, simply to
20 call UGI and address it?

21 MS. J. HUGHES: Well he probably would have asked me like
22 50,000 questions, like what's it smell, you know. And then --

23 MR. DOWNS: Okay. Okay.

24 MR. G. HUGHES: I work in the power industry, so I would have
25 said call UGI.

1 MR. DOWNS: Okay. So you've never had any familiarization
2 from anybody in terms of what to do, call 911 or call the gas
3 company or anything like that?

4 MS. J. HUGHES: No.

5 MR. DOWNS: No?

6 MS. J. HUGHES: No.

7 MR. DOWNS: Okay. Okay. Contractor. We got the lawn
8 mowing contractor, the fellow that occasionally makes rounds,
9 and you just flag him down, or he comes to the door, and --

10 MS. J. HUGHES: Well, we started establishing --

11 MR. DOWNS: A routine?

12 MS. J. HUGHES: Yeah. Yeah.

13 MR. DOWNS: Okay. Good. All right. You don't have a radon
14 system, you're aware.

15 And Gary, you mentioned the GFCI outside receptacles that was
16 repaired?

17 MR. G. HUGHES: It wasn't -- it's not -- it's really kind of
18 doing its job, right. And so, I mean, it was a -- once in a
19 while, if you would get some moisture in an outside extension
20 cord --

21 MR. DOWNS: It'll trip?

22 MR. G. HUGHES: -- it would trip. Yeah.

23 MR. DOWNS: And it's basically stayed tripped? You never --

24 MR. G. HUGHES: No, no. I would reset it, if we needed it.
25 Yeah.

1 MR. DOWNS: You'd manually reset it?

2 MR. G. HUGHES: Yeah.

3 MR. DOWNS: Okay. All right. Okay. All right. That's good
4 for my questions for the moment. Thank you.

5 MS. COOPER SMITH: I'm Terri Cooper Smith from the PUC. When
6 you woke up, strong smell of gas -- or strong smell of something,
7 not sure if it's gas or cat litter. When you came downstairs, did
8 you smell -- was it as strong downstairs?

9 MS. J. HUGHES: I really couldn't tell you, because I was
10 just answering the door.

11 MS. COOPER SMITH: Okay.

12 MS. J. HUGHES: You know what I mean? Like, it was like,
13 okay, the guy was knocking at the door. I got off the phone. I
14 got dressed. I was just focused on, you know, finding out what's
15 up. So I wasn't really paying attention to that. No.

16 MS. COOPER SMITH: Okay. But you noticed when you left the
17 house and came back in, you --

18 MS. J. HUGHES: Right.

19 MS. COOPER SMITH: -- definitely smelled it?

20 MS. J. HUGHES: I did. Yeah.

21 MS. COOPER SMITH: Okay. All right. When was the last --
22 wait. Let me back up. The fireplace in the basement is gas. The
23 fireplace upstairs is not. When was the last time you used the
24 fireplace in the basement?

25 MS. J. HUGHES: Never.

1 MS. COOPER SMITH: You've never used it?

2 MS. J. HUGHES: Never.

3 MR. G. HUGHES: It was there when we bought the house, but I
4 don't believe it's ever been turned on.

5 MS. COOPER SMITH: When you bought the house, did you have
6 anybody check that fireplace?

7 MR. G. HUGHES: We had a home inspection, right?

8 MS. COOPER SMITH: And the home inspection didn't say, bring
9 up anything for that fireplace?

10 MR. G. HUGHES: (Indiscernible).

11 MS. J. HUGHES: No. I mean, it --

12 MS. COOPER SMITH: Okay.

13 MR. G. HUGHES: We would have taken care of it.

14 MS. J. HUGHES: Yeah. I mean --

15 MS. COOPER SMITH: Okay. Do you have a sprinkler system?

16 MR. G. HUGHES: No.

17 MS. COOPER SMITH: Outside, for your yard?

18 MR. G. HUGHES: No.

19 MS. COOPER SMITH: No. And Jeannine, you said you work from
20 home?

21 MS. J. HUGHES: Uh-huh.

22 MS. COOPER SMITH: What is the nature of the work that you do
23 from home?

24 MS. J. HUGHES: Day trading.

25 MS. COOPER SMITH: So you're generally in one room of the

1 house? Okay. And which room would that be, typically?

2 MS. J. HUGHES: By the front door, like when you go in the
3 front door to the right.

4 MS. COOPER SMITH: It's an office?

5 MS. J. HUGHES: Yeah.

6 MS. COOPER SMITH: Okay. Okay. That's it for my questions.
7 Thank you.

8 MR. MAURER: Gary Maurer, UGI. The day of, and a couple of
9 days prior to the incident, do you recall any thunderstorms, or
10 any storms that were -- that jogged your memory?

11 MS. J. HUGHES: Like no. I couldn't say for certain.

12 MR. MAURER: I have no other questions.

13 MR. KRIEGER: I have a couple of questions.

14 MR. EVANS: Name?

15 MR. KRIEGER: Bob -- Robert Krieger, UGI. Do you, or did you
16 say that you were aware that you had a floating basement floor?
17 Roger had asked that question earlier --

18 MS. J. HUGHES: A floating?

19 MR. KRIEGER: -- where there's a gap -- yeah. It kind of
20 floats, so there's a gap that, around the outside of the --

21 MR. EVANS: On the edge of the wall.

22 MR. KRIEGER: -- edge of the wall.

23 MS. J. HUGHES: Uh-huh.

24 MR. EVANS: In the basement.

25 MS. J. HUGHES: Did I say whether I knew?

1 MR. KRIEGER: Yeah. Do you know if you do?

2 MS. J. HUGHES: Oh, no.

3 MR. KRIEGER: You don't know?

4 MR. EVANS: And Gary, you don't know at this time?

5 MR. G. HUGHES: No. I don't know.

6 MS. J. HUGHES: I mean, you don't mean the floor, right? I
7 mean, because there's carpet on the floor.

8 MR. G. HUGHES: Well in, you know, what --

9 MR. KRIEGER: It's finished, so --

10 MR. G. HUGHES: -- in the unfinished areas, was there a gap
11 between the wall and the floor, but --

12 MS. J. HUGHES: Oh, oh.

13 MR. G. HUGHES: Yeah.

14 MS. J. HUGHES: No. I have no idea.

15 MR. KRIEGER: You said you had a problem with the AC, that
16 there was water in the basement at one point in time. What about
17 the timing of that?

18 MR. G. HUGHES: Several -- 3, 4 -- 5 years ago.

19 MS. J. HUGHES: Yeah.

20 MR. G. HUGHES: Yeah, 5 years ago. And I can't remember. It
21 was the, you know, the drain, I guess, plugged or something.

22 MR. KRIEGER: Do you have an alarm system in the house?

23 MR. EVANS: Security system.

24 MR. KRIEGER: Security system.

25 MS. J. HUGHES: That's not --

1 MR. KRIEGER: It's not activated?

2 MS. J. HUGHES: It's not hooked up. I mean, we have the --
3 like, the -- it's there, but it's not hooked up. You know what I
4 mean?

5 MR. KRIEGER: Not activated? Okay.

6 MS. J. HUGHES: Yeah. Yeah. Not activated.

7 MR. KRIEGER: For your thermostat, is it -- have you ever
8 heard -- you would know if you had it, but a smart house, where
9 you can operate your thermostat or you can operate other things.
10 Was this a remote, or could this be a remote operated thermostat?

11 MS. J. HUGHES: No.

12 MR. G. HUGHES: No.

13 MR. KRIEGER: No?

14 MR. G. HUGHES: It wasn't the old-style mercury.

15 MR. KRIEGER: Okay.

16 MR. G. HUGHES: But it was, but it wasn't a very
17 sophisticated electronic --

18 MS. J. HUGHES: It was like a Honeywell plastic thing.

19 MR. G. HUGHES: -- electronic thermostat.

20 MR. KRIEGER: But you know what I'm talking about?

21 MR. G. HUGHES: Yeah.

22 MR. KRIEGER: With respect to a smart house?

23 MR. G. HUGHES: No, it's not.

24 MS. J. HUGHES: Yeah.

25 MR. KRIEGER: Okay. You had said when you woke up, or I

1 think it was when you were on the phone, you characterized what
2 you were smelling as kitty litter or natural gas. How did you
3 arrive at -- if you don't know what the smell of natural gas is,
4 how did you arrive at the conclusion that it was natural gas?

5 MS. J. HUGHES: Well, I don't know, because I guess I
6 couldn't figure anything else that it could be. What else would
7 smell? I know what fire smells like. I mean, there -- yeah. I
8 don't know. And the pounding on the door might have been a hint.
9 I don't know.

10 MR. KRIEGER: For your UGI gas bill, do you open that and
11 write a check on a monthly basis, or are you on an automatic
12 payment plan where you would typically --

13 MS. J. HUGHES: Automatic, yeah.

14 MR. KRIEGER: -- get that bill -- so you're an automatic
15 payment?

16 MS. J. HUGHES: Uh-huh.

17 MR. KRIEGER: Are you a budget bill customer?

18 MS. J. HUGHES: Uh-huh. I think. I know I am for PP&L. I'm
19 not sure about gas, because gas really isn't very much.

20 MR. KRIEGER: Okay. How often then -- if you're an automatic
21 payment and you think you may be a budget bill customer, how often
22 do you take that bill, open it up to look at the contents of what
23 might be in there?

24 MS. J. HUGHES: Well, I mean, I open it only because I keep,
25 like I keep a file of my bills for the year. You know what I

1 mean? And staple them at the end of the year, whatever. But as
2 far as, you know, whether I keep everything that comes in, no, I
3 don't. I just keep the --

4 MR. KRIEGER: Have you ever had occasion to visit the UGI
5 website for information about natural gas or anything like that?

6 MS. J. HUGHES: No. I just visited the UGI website for the
7 first time to set up where I just moved, but --

8 MR. KRIEGER: When was that?

9 MS. J. HUGHES: Wednesday.

10 MR. KRIEGER: So prior to Wednesday, you would say you
11 haven't?

12 MS. J. HUGHES: No.

13 MR. KRIEGER: Okay. Okay.

14 MS. J. HUGHES: Well, other than to set up the auto-pay in
15 the first place, years ago or whatever. Well it wasn't that long
16 ago that you could do auto-pay with UGI, actually. They just
17 started that a couple of years ago.

18 MR. KRIEGER: I don't have any other questions. Thank you
19 very much.

20 MR. EVANS: I have one other question. You said that your --

21 Gary, this is for you. This is Roger Evans. You say that
22 you had the home inspected. Do you happen to know the name of the
23 home inspection company?

24 MR. G. HUGHES: No. I mean, it was such a long time -- no.
25 I don't know who did it. And that, now that I say that, did we

1 just have the termite, or did we do the whole home inspection? I
2 think we did an inspection.

3 MS. J. HUGHES: We didn't use a realtor. He had a for sale
4 by owner sign in the yard.

5 MR. EVANS: Oh, so you didn't do a realtor? Oh.

6 MS. J. HUGHES: No.

7 MR. G. HUGHES: But I --

8 MS. J. HUGHES: So I don't really --

9 MR. G. HUGHES: I don't recall --

10 MS. J. HUGHES: I don't really remember the whole thing.

11 MR. G. HUGHES: I can't -- I don't recall what kind of
12 inspection we had or who did it, to be honest with you.

13 MR. EVANS: Yeah, because if we can -- if we could pin down
14 the inspection, that person normally has a layout of the house,
15 with photographs. That would be nice if --

16 MS. J. HUGHES: I mean --

17 MR. G. HUGHES: I mean, there's photographs of --

18 MS. J. HUGHES: Doesn't the bank have --

19 MR. EVANS: Pardon?

20 MS. J. HUGHES: Doesn't the bank have that stuff?

21 MR. EVANS: The bank may have it.

22 MR. G. HUGHES: The -- I know that --

23 MR. EVANS: We'll have to subpoena --

24 MR. G. HUGHES: I know that the, when the house was for sale,
25 on the Internet, there was pictures of the house. There may have

1 been a layout, too. So if you go back through a realtor --

2 MS. J. HUGHES: Can you do that?

3 MR. G. HUGHES: Yeah, I --

4 MS. J. HUGHES: Don't they get rid of it?

5 MR. G. HUGHES: I don't think so. I think that stuff --

6 MR. EVANS: Actually, I made an attempt at that, but I
7 couldn't find anything on that. Okay, that's all I have.

8 MS. J. HUGHES: Okay.

9 MR. EVANS: Anybody else?

10 MR. DOWNS: Downs, just a quick follow-up question. We're
11 trying to do our best to figure out how the gas got from out by
12 the curb into the house. That's why the questions on the cracks
13 in the foundations and all that stuff.

14 MR. G. HUGHES: Right. I see.

15 MR. DOWNS: And having the house plans would be very helpful
16 in that regard, so forgive us for probing on that a lot. And
17 you'd already indicated to the effect that you really don't have
18 any plans that -- am I getting that correct?

19 MS. J. HUGHES: Yeah.

20 MR. DOWNS: Of the house.

21 MR. G. HUGHES: I mean, I can do a search on my computer,
22 because I know at one time I had at least the information for when
23 we were buying the house. But it's several computers ago, but I'd
24 be happy to look through some of my old --

25 MR. DOWNS: Yeah. If you happen to --

1 MR. G. HUGHES: -- files, I think --

2 MR. DOWNS: -- come up with anything that would be helpful on
3 that regard, to be able to track that down as best we can, that
4 would be very helpful. And if you had --

5 MS. J. HUGHES: Yeah, but you never had, like the plan, plan,
6 did you?

7 MR. G. HUGHES: Yeah. I downloaded the PDF off the -- how it
8 was advertised for sale by owner. And if there was a house plan
9 sort of inset into that, that may be, you know.

10 MR. DOWNS: Yeah. Sometimes they will have a floor plan laid
11 out for your different floors and that kind of thing.

12 MR. G. HUGHES: Right. Right.

13 MS. J. HUGHES: Oh, okay.

14 MR. DOWNS: It's certainly not architectural drawings --

15 MR. G. HUGHES: Right.

16 MR. DOWNS: -- but it's a good idea --

17 MS. J. HUGHES: Oh, okay. I was like, I didn't remember
18 seeing that.

19 MR. DOWNS: It's a good idea as to what you have. And your
20 security system's not hooked up and you didn't have a security
21 camera in there anywhere, did you?

22 MS. J. HUGHES: No.

23 MR. DOWNS: Okay. Okay. That does it for me pretty much. I
24 like to close my questions -- is there any kind of thoughts that
25 you want to offer, in terms of questions that we haven't asked in

1 our probing here today? Closing thoughts or anything?

2 MR. G. HUGHES: The only -- what I have a question about when
3 the property's going to be available for us to clear.

4 MR. DOWNS: Oh, well that's out of our hands, particularly,
5 right now. Yeah. We're not involved with that anymore.

6 MR. G. HUGHES: Well who's involved with it?

7 MR. DOWNS: It's been turned over to the --

8 MR. EVANS: Except the sewage system. We have -- the orange
9 fence -- this is Roger Evans. The orange fence that you see out
10 there right now is, we've been told by DC to wait for the
11 completion of the interviews before we release the sewer system.
12 And we'll probably discuss this with them early next week. And
13 I'll call back and say okay, the sewer system is now released.
14 And then the city will have it, and then you should be good to go.

15 MS. J. HUGHES: Oh, so we're looking at weeks here?

16 MR. EVANS: A week, probably.

17 MR. G. HUGHES: That orange fence was put up by our insurance
18 company.

19 MR. EVANS: Oh, there's another orange fence.

20 MR. G. HUGHES: Oh, there's another one? Okay.

21 MS. J. HUGHES: Like there's two? No?

22 MR. DOWNS: Well just around the septic line, the sewer line,
23 because we want to take a closer look at the sewer line as a
24 possible path of the gas into the house. That's the last
25 remaining area we're looking at right now.

1 MR. EVANS: And this is Roger Evans. So to let you know, we
2 scoped the sewer to see if we could find any compromised sewer
3 pipe. And it was inconclusive. DC may require us to go out there
4 and dig the sewer up. We don't know yet. But we're going to
5 communicate to them what we found out through all these interviews
6 and see where it goes. But my own personal feeling is that sewer
7 is going to be released.

8 MR. G. HUGHES: That, you say a fence -- is it the sewer
9 area, or are we just restricted access to that area, or restricted
10 access to the whole property? Because we want to remove the
11 debris, basically, is what we're trying to do.

12 MR. EVANS: Yeah. You should be able to remove the debris.
13 Okay, so this is the mailbox. It goes like this. That's the
14 tied-up area right now.

15 MR. G. HUGHES: Okay.

16 MR. EVANS: That's the orange fenced area.

17 MR. G. HUGHES: Right.

18 MR. EVANS: Okay. Your insurance company has all of this
19 now. They should be able to start doing everything but that.

20 MR. G. HUGHES: Okay. All right. So everything outside of
21 this is accessible? Okay.

22 MR. EVANS: Yeah. So they can start clearing it, if they
23 want to.

24 MR. G. HUGHES: Okay. All right.

25 MS. J. HUGHES: Well, because I just talked to -- I talked to

1 someone from UGI yesterday and they told me that we couldn't.

2 MR. DOWNS: I think there's some ongoing activity with --
3 between UGI and Allstate.

4 MR. EVANS: Oh, okay.

5 MR. DOWNS: As the insurance company.

6 MR. EVANS: I mean, from our standpoint.

7 MS. J. HUGHES: Oh, from your standpoint. Well, so then no,
8 we can't do it?

9 MR. G. HUGHES: Well, we have to talk to --

10 MR. EVANS: I think it --

11 MR. G. HUGHES: -- Allstate.

12 MR. DOWNS: Allstate.

13 MS. J. HUGHES: Right.

14 MR. EVANS: All right. That concludes my questions. Do we
15 have anybody else?

16 MS. COOPER SMITH: I have one last quick question. And I
17 might have missed it earlier. Did you guys do any major
18 improvements to the home since you've been there?

19 MR. G. HUGHES: The only thing we did was put the -- was
20 extend the deck.

21 MS. COOPER SMITH: The deck? Okay.

22 MR. G. HUGHES: On the back.

23 MR. EVANS: Okay. Thank you very much. That ends the
24 interview.

25 MR. KRIEGER: I have two.

1 MR. EVANS: Oh.

2 MR. KRIEGER: Two quick ones. I'm sorry. Robert Krieger.
3 Lawn service. Do you have a lawn service where they fertilize in
4 front of your yard or anything like that?

5 MS. J. HUGHES: No.

6 MR. KRIEGER: You don't? Did you notice any, in that front
7 area, any kind of dead grass or anything, just visually?

8 MS. J. HUGHES: No.

9 MR. KRIEGER: No? All right.

10 And then, you had mentioned, Gary, the crack, or the wall.
11 It looked like there had been a repair there? It was darker
12 than --

13 MR. G. HUGHES: Yeah. I don't know if it was a repair, or it
14 was just maybe a little bit of moisture. I don't know. But there
15 definitely wasn't any standing water leaking through or --

16 MR. KRIEGER: No standing water?

17 MR. G. HUGHES: -- anything like that. I mean, it wasn't
18 severe enough that I thought, you know, hey, it's going to cause a
19 problem.

20 MR. KRIEGER: So you were just seeing -- you saw kind of a
21 darker --

22 MR. G. HUGHES: Yeah. Yeah.

23 MR. KRIEGER: -- along where that, where the cinder blocks
24 came together? You didn't --

25 MR. G. HUGHES: Yeah. Well, that -- it kind of looked like -

1 - I'm not sure where the crack was either in the grout, but I
2 think it might even have been, like one of the cinder blocks
3 might have been cracked. But as you say, it's there. It's pretty
4 much, what's there is --

5 MR. KRIEGER: But there was -- go ahead. I'm sorry. I
6 didn't mean to interrupt.

7 MR. G. HUGHES: I'm saying there was -- I couldn't be for
8 sure say that the cracks were only in the grout. I think that
9 there might have been a crack down one -- the middle of at least
10 one of the cinder blocks.

11 MR. KRIEGER: So you saw a separation, then?

12 MR. G. HUGHES: Separation, and it looked darker. And I
13 didn't inspect it close enough to see if it was actually a repair,
14 but thinking back, it could easily have been, someone tried to put
15 some sort of rubber sealant on it. But that would have been
16 before -- I mean --

17 MR. KRIEGER: So you think --

18 MR. G. HUGHES: We didn't do it.

19 MR. KRIEGER: Oh, so it may have been a rubber sealant or
20 something? Okay.

21 MR. G. HUGHES: It may have been like that. So once again,
22 that's speculation.

23 MR. KRIEGER: I have no further questions.

24 MR. EVANS: This is Roger Evans. One last question. I know
25 it's been in the news that, you know, earthquakes have been

1 occurring in Oklahoma and all these other places. Have you ever
2 had a tremor?

3 MR. G. HUGHES: Yeah.

4 MS. J. HUGHES: Oh, yeah. We were on the phone at the time,
5 recently.

6 MR. EVANS: When was --

7 MS. J. HUGHES: In April, there was a 2.2 magnitude.

8 MR. G. HUGHES: Yeah.

9 MS. J. HUGHES: And I was sitting on my bed, talking to Gary.
10 And I said, did you feel that? And my cat jumped right off the
11 bed, like --

12 MR. EVANS: Was that the first one that you ever felt?

13 MR. G. HUGHES: No. We had one before, several years ago.
14 It probably would have been 7 or 8 years ago. We remember it was
15 a pretty significant one.

16 MR. EVANS: So if we were going to the UGS people, we could
17 probably get them to give us --

18 MS. J. HUGHES: The who?

19 MR. EVANS: The geological survey --

20 MS. J. HUGHES: Oh.

21 MR. EVANS: -- government people.

22 MR. G. HUGHES: The last one was -- you could probably Google
23 it. The last one was reported in the news, in the --

24 MR. EVANS: Okay.

25 MS. J. HUGHES: -- in the *Atlantic* --

1 MR. EVANS: Well we'll look that up, because that's pretty
2 important. Okay.

3 MS. J. HUGHES: Okay.

4 MR. DOWNS: Downs. I have one final question, maybe just for
5 Gary. Carbon monoxide alarm, did you happen to --

6 MR. G. HUGHES: No.

7 MR. DOWNS: -- have a -- similar to the smoke detectors?

8 MR. G. HUGHES: No. No. We just had smoke detectors.

9 MR. DOWNS: Okay.

10 MR. EVANS: Okay. Off the record.

11 (Whereupon, the interview was concluded.)
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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD


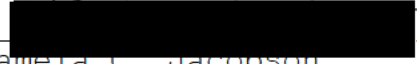
IN THE MATTER OF: RESIDENTIAL GAS EXPLOSION
ON SPRINGDALE LANE, MILLERSVILLE,
PENNSYLVANIA, JULY 2, 2017
Interview of Jeannine and Gary Hughes

ACCIDENT NUMBER: DCA17FP006

PLACE: Millersville, Pennsylvania

DATE: July 26, 2017

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.



Pamela C. Jacobson
Transcriber

G

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:

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RESIDENTIAL GAS EXPLOSION

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ON SPRINGDALE LANE, MILLERSVILLE,

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Accident No.: DCA17FP006

PENNSYLVANIA, JULY 2, 2017

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Interview of: Roberto Gutierrez, Jr.
Roberto Gutierrez, Sr. and
Meea Loy

Blue Rock Fire Hall
Millersville, Pennsylvania

Wednesday,
July 26, 2017

APPEARANCES:

ROGER EVANS, Investigator in Charge
National Transportation Safety Board

EDWARD KENDALL, Attorney
National Transportation Safety Board

RICHARD DOWNS, Survival Factors Group Chair
National Transportation Safety Board

TERRI COOPER SMITH, Fixed Utility Evaluation
Engineer III
Pennsylvania Public Utilities Commission,

GARY MAURER, Manager, Operations Programs
UGI Utilities

ROBERT KRIEGER, Vice President of Operations
UGI Utilities

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I N T E R V I E W

(4:19 p.m.)

1
2
3 MR. EVANS: Good afternoon. Today is July 26, 2017. It is
4 now 4:19 p.m. My name is Roger Evans. I'm an investigator with
5 the National Transportation Safety Board in Washington, D.C.
6 We're at the Blue Rock Fire Hall in Millersville, Pennsylvania.
7 This interview is being conducted as part of the investigation
8 into the residential gas explosion on Springdale Lane here in
9 Millersville that occurred on July 2, 2017. The NTSB Case Number
10 for this is DCA17FP006.

11 The purpose of the investigation is to increase safety, not
12 to assign fault, blame or liability. The NTSB cannot offer any
13 guarantee of confidentiality or immunity from legal actions.

14 This interview is being recorded and may be transcribed at a
15 later date. A copy of this transcript will be provided to the
16 interviewee for review prior to being entered into the public
17 docket.

18 For the purposes of the transcriber, we have three people in
19 the room today. We are actually interviewing Roberto Gutierrez,
20 Jr. and his girlfriend Meea Loy. Roberto's father is here,
21 Roberto Gutierrez, Sr., but we're going to be asking the junior to
22 be -- spell his name and who you have as your representative? And
23 you can go ahead and do that.

24 MR. GUTIERREZ, JR.: My name's Roberto Gutierrez,
25 R-O-B-E-R-T-O, G-U-T-I-E-R-R-E-Z. And I have here my father and
26 my girlfriend, Meea Loy.

1 MR. EVANS: Okay. And Meea, can you please spell your name?

2 MS. LOY: Yeah. My name is Meea. It's M-E-E-A and last name
3 Loy, L-O-Y.

4 MR. EVANS: Okay. And Roberto, just --

5 MR. GUTIERREZ, SR: My name's Robert Gutierrez,
6 R-O-B-E-R-T-O, G-U-T-I-E-R-R-E-Z.

7 MR. EVANS: Okay, great. I'd like to go around the room now
8 and just have introductions, affiliations and job titles.

9 MR. KENDALL: Sure. Edward Kendall, K-E-N-D-A-L-L, attorney,
10 NTSB.

11 MR. DOWNS: Richard Downs, D-O-W-N-S. I'm with NTSB. I'm
12 the Survival Factors Technical Working Group Chairperson. We
13 review the emergency preparedness and emergency response of the
14 investigation.

15 MS. COOPER SMITH: Terri Cooper Smith, C-O-O-P-E-R and that's
16 Smith, S-M-I-T-H. I am with the Pennsylvania Public Utility
17 Commission. I am the Fixed Utility Evaluation Engineer III.

18 MR. MAURER: Gary Maurer, M-A-U-R-E-R, Manager of Operations
19 Programs for UGI Utilities.

20 MR. KRIEGER: Robert Krieger, K-R-I-E-G-E-R, and I'm the Vice
21 President of Operations for UGI Utilities.

22 MR. EVANS: Okay, thank you, and thank you all three for
23 agreeing to appear today.

24 For the record, I'm going to be asking all the questions
25 pretty much to Roberto, Jr. And we ask that if you are going to

1 speak that you introduce yourself before you speak. And I would
2 imagine your voices may sound a little bit familiar, so it might
3 be kind of -- if you just say Senior and Junior speaking, that
4 will be fine.

5 MR. GUTIERREZ JR: Okay.

6 MR. EVANS: Okay? And you accent's going to be female voice
7 and all that, they'll know who you are. So okay, so a little bit
8 of background.

9 INTERVIEW OF ROBERTO GUTIERREZ, JR.

10 BY MR. EVANS:

11 Q. How long have you lived in that home?

12 A. We lived in that home for 3 months.

13 Q. Three months, okay. And that address, the address of that
14 home is?

15 A. 202 Springdale Lane.

16 Q. 202 Springdale Lane. And generally speaking the consecution
17 of that home is what?

18 A. The what?

19 Q. The construction of that home?

20 MR. GUTIERREZ, SR: Wood frame or -- senior speaking. It's
21 brick along the outside, concrete foundation, wood frame above.

22 MR. EVANS: And is the back of the home is it brick as well?

23 MR. GUTIERREZ, SR: The lower half.

24 MR. EVANS: The lower half is brick.

25 MR. GUTIERREZ, SR: Yes.

1 MR. EVANS: So we have a three-sided brick home with a half
2 side on the back?

3 MR. GUTIERREZ, SR: That is correct.

4 MR. EVANS: Okay. Thank you.

5 BY MR. EVANS:

6 Q. So we'd like to just kind of have you give us a play-by-play
7 of what you experienced that day from the moment that you noticed
8 any sort of UGI, whatever you noticed, the first time that it was
9 brought to your attention that something was going on on that
10 Sunday?

11 A. Well, the UGI worker came and knocked on our door.

12 UNIDENTIFIED SPEAKER: I can hardly -- pardon me. I can
13 barely hear you.

14 MR. GUTIERREZ, JR: I'm sorry.

15 UNIDENTIFIED SPEAKER: So if you could just speak up a little
16 it would be very helpful.

17 MR. GUTIERREZ, JR.: The UGI worker, he came and knocked on
18 on the door. And he asked if he can come in the house and read
19 the gas levels? So he did that and it came up as, like, 10 around
20 the house. And then I was sitting there talking to him and he's
21 saying that it's been smelling like someone reported that it
22 smelled like gas from outside so he has to go in the houses. So
23 then he left and I called my father and let him know what
24 happened. So my father asked me to go ask him if it was okay for
25 us be in the house.

1 So I went outside, asked him that and he said, yeah, you guys
2 are fine. So I was, like, all right. So that made me feel more
3 comfortable because I wouldn't think that somebody would put their
4 own self in harm. So and I was -- I went back to the couch. He
5 said he will come back in 30 minutes to check again, and he did
6 just as that. And he came back in and said that it's at 11 now
7 and that he evacuated the neighbor's house. The woman was
8 sleeping upstairs.

9 And then that's when I got concerned and I asked him, I said,
10 are you sure we're okay for being in this house? I don't know a
11 thing -- I don't anything about gas stuff and all this, and I kept
12 asking him because he evacuated the woman, so I would think he
13 would evacuate us. But he said, no, you guys are fine and
14 everything's all right.

15 So after that second time he told me that, that's when I
16 thought everything was good. I was, like, we're fine and I did
17 see them, like, on the side of the house digging something. They
18 were digging somewhere on the side of the house. And then I went
19 back and laid back down on the couch. We was watching TV, me and
20 my girlfriend.

21 And like 10, 15 minutes later the whole house just, like,
22 shook. And I heard glass. I couldn't really, like, it is hard to
23 explain, but like the whole house just shook. Everything fell.
24 Glass fell. The insulation from the other house came in in like a
25 second and I think that was from my father's room because his

1 whole room was gone, so I'm pretty sure everything came in from
2 there, Because we were just as far as the room from me to you.
3 and I jumped over the couch and I went and grabbed my dog and I
4 told her she needs to run.

5 I opened the garage door and I noticed I couldn't get out
6 there because the whole garage was just dented in. and then at
7 first I didn't know where to go. I was scared. I was thinking
8 the house is going to -- I thought it was going to be a chain
9 reaction, like, after one the next house is going to blow up, so I
10 didn't know what was going to happen. So the best bet I had
11 was -- I wasn't going out back. I had to just run through the
12 front and that was horrible. We couldn't see anything. It was
13 all black. It was insulation everywhere. It was -- you couldn't
14 see nothing. I almost forgot it was daytime at the time, like, it
15 looked like it was at night and it was just snowing. And I just
16 knew I couldn't run left. That's towards that house, the
17 neighbor's house.

18 So I ran right, just guessing wherever, and that's when I
19 seen the firetrucks and I was trying to ask them where should I
20 go? But I don't think they heard me or something, but then I seen
21 my one neighbor. He called me over and that's when me and her
22 went over there, and that's how everything happened.

23 BY MR. EVANS:

24 Q. Okay. So do you have a recollection of a time that gentleman
25 knocked on your door? Was it --

1 A. I think it was --

2 MR. GUTIERREZ, SR: I'm sorry. Senior speaking. It was
3 right after 11:00 because he had called me right before we went.
4 We were at Bethany Beach and we were going up to Cape Henlopen,
5 which takes about 25 minutes to get there. So he called me right
6 -- I'd say it was a little after 11:00, 11:50, 11:20, when he had
7 called me.

8 And the only reason I asked him to go speak to UGI is because
9 I'm in the construction business. I'm a construction manager for
10 a company and we have protocols when there's a utility strike. So
11 my first reaction was go outside, ask the guy if it's okay because
12 the house can explode. That's exactly what I told him. That's
13 when he went outside and talked to them and then came back in.
14 The next call I got was the house was gone.

15 MR. EVANS: Would you happen to have either of those
16 cellphones with you right now?

17 MR. GUTIERREZ, SR: Um-hum.

18 MR. GUTIERREZ, JR: It's -- well, he has the cellphone I
19 called him --

20 MR. EVANS: Could you give us a time stamp of when --

21 MR. GUTIERREZ, JR: -- the house phone.

22 MR. GUTIERREZ, SR: I tried looking at it and all I had was
23 my XFINITY, which I didn't delete. Their call -- they called me
24 at 12:33 just letting me know that the alarm was set off by smoke
25 and we had talked before that. I don't have a time stamp. I'd

1 probably have to go in and look at our records to --

2 MR. EVANS: So 12:33 was when your alarm company --

3 MR. GUTIERREZ, SR: Called.

4 MR. EVANS: -- called and they said that a smoke alarm had
5 gone off?

6 MR. GUTIERREZ, SR: Yes.

7 MR. GUTIERREZ, JR: But that -- this is junior talking. That
8 was by the time, like, I guess I got to my neighbors' house and
9 that's when I called him, and he just told me that that alarm got
10 sent to him. He didn't believe me at first, like, you wouldn't
11 think a house is going to just blow up if there's people out there
12 telling you everything's fine. So he didn't believe it, so I
13 Facetimed him and showed him and that's when they rushed down.

14 MR. GUTIERREZ, SR: Yeah, he was just screaming on the phone.
15 Sorry, senior speaking, he was screaming on the phone and I
16 couldn't really fathom what he was saying, that the house was
17 gone.

18 BY MR. EVANS:

19 Q. Right. Okay. So earlier in the day, where did you spend
20 most of your time in the home?

21 A. Right there on the couch.

22 Q. On the couch.

23 A. Yeah.

24 Q. And the couch was on the --

25 A. First floor.

1 Q. -- first floor. Okay. And out to the first floor is there a
2 deck on the back at that same level?

3 A. Yeah.

4 Q. Okay. Did you ever go outside at all that Sunday?

5 A. I did because I was watching my dog while they were at the
6 beach, and I did let him out, but I only let him out once at that
7 time. And then I came back in.

8 Q. Did you smell anything out of the ordinary when you went out?

9 A. I actually didn't at all. Until when he came in and told me
10 I still didn't smell it, all like that. I didn't smell anything
11 really until when I -- when he told me to go outside and ask him
12 if everything was okay the first time. That's when I kind of
13 smelled something, but I was thinking, like, maybe that's just
14 them. It's they're working so I'm like, all right, so it's
15 obviously going to smell like gas if they're working on it.

16 Q. Right.

17 A. So then I didn't think anything of it.

18 Q. Did you hear the noise of them working with the tools and
19 things on it?

20 A. No, I did not. I know they had some long green thing, I
21 guess like it looked like a -- it almost looked like a golf club,
22 but I could -- something also at the top also that they see that I
23 guess it was reading something.

24 Q. Right.

25 A. And then I seen -- there was two of them. I don't know about

1 -- I'd never seen a third one, but I seen the guy that came up to
2 my house and talked to me with somebody else on like the side,
3 like right by where that tree's at. And they were digging.
4 That's when I seen them. I think they were digging or sticking
5 something in the ground.

6 Q. So did you happen to hear any, like shortly before the
7 explosion, did you hear any sort of noise at all?

8 A. I didn't hear nothing.

9 Q. Did you have the stereo on, the TV on or something?

10 A. Yeah, the TV was on. We were watching a movie.

11 MR. GUTIERREZ, SR: This is senior speaking. The house is
12 very well-insulated and when you sit towards the back of the house
13 where my living room is --

14 MR. GUTIERREZ, JR.: You can't hear it.

15 MR. GUTIERREZ, SR: -- you can't really hear much of what's
16 going on in the front.

17 BY MR. EVANS:

18 Q. Now, do you have surround sound or something?

19 A. No, I didn't have that on.

20 Q. You didn't? Okay.

21 A. No.

22 Q. Did you have the TV on loud though?

23 A. Yeah.

24 Q. Okay. So you didn't hear anything, did not smell anything,
25 and what kind of dog do you have?

1 A. Is he a French and English -- he's a French mixed with
2 English bulldog.

3 MR. GUTIERREZ, SR: He's a bulldog, French and English mix.

4 MR. GUTIERREZ, JR: Yeah.

5 BY MR. EVANS:

6 Q. Is it -- but it's short-haired?

7 A. Yes.

8 Q. Okay. And is it blond in color?

9 A. White.

10 MR. GUTIERREZ, SR: Yeah, it's white.

11 BY MR. EVANS:

12 Q. White. Okay. Did you have an occasion -- did anyone walk
13 the dog outside that morning do you know?

14 A. No.

15 Q. Okay. When the explosion occurred, did you have -- did you
16 feel any sort of second event after the first event?

17 A. Not that -- I mean, I honestly don't know because I wasn't --
18 like, I was more paying attention of trying to get out of the
19 house and what's happening. So like, I mean, the -- it sounded
20 like -- it was so quick that it sounded like when you pop a
21 balloon, like, you didn't hear it coming. Like it was just, like,
22 it just happened. And it sounded like it went on for like 5
23 minutes, like, the sound of it. It was insane. You couldn't
24 really hear anything really. You just heard -- I just heard glass
25 breaking. I heard stuff getting stuff getting hit, going nowhere,

1 like --

2 Q. So once the explosion took off it was -- sounded like it
3 lasted for a long time?

4 A. Yeah. It sounded like it lasted for a little while.

5 Q. Yeah, okay. Your -- at any time during the, let's say, weeks
6 before, days before, did you ever smell anything at all in the
7 neighborhood?

8 A. I did like probably like a week or two before. I came in the
9 house and I told my dad, I was, like, it smells like gas. But
10 that was, like, when he was done cutting the grass so then I
11 wouldn't think anything of it. But like --

12 MR. GUTIERREZ, SR: This is senior speaking. That's
13 something that my wife used to point out all the time.

14 MR. GUTIERREZ, JR: Yeah.

15 MR. GUTIERREZ, SR: But it just so happened to be right after
16 I cut the grass and I parked my tractor in the basement. So I
17 would always say it was probably just the tractor that was parked
18 in the basement because it was -- that was about the only time
19 that they would complain about it, that smelled like gas in the
20 house.

21 MR. EVANS: Did you ever have -- and this is to senior, did
22 you ever have any time when you cut the grass and, whoa, that
23 grass should not be dead in that spot?

24 MR. GUTIERREZ, SR: No.

25 MR. EVANS: Never any dead grass?

1 MR. GUTIERREZ, SR: Did not. And I'm familiar with the smell
2 of gas because of being an excavating foreman at one time before I
3 went into the office. And I feel pretty confident in that I can
4 spot whether it's tar or the smell of gas when we were excavating.
5 And I'd never smelled it, so when my wife would say something to
6 me, I really didn't think much of it because it really didn't
7 smell like that sulfur smell like gas usually does smell like.

8 MR. EVANS: So, I mean, the grass cutting season is --
9 obviously it's been -- it's July, so --

10 MR. GUTIERREZ, SR: Um-hum.

11 MR. EVANS: So had you had these complaints from your wife
12 about the gas smell ever since you moved there? You've only been
13 there for --

14 MR. GUTIERREZ, SR: Every time I cut the grass. It was every
15 time I'd cut the grass and I would park the mower and she would
16 say it smelled like gas.

17 MR. GUTIERREZ, JR: All the time.

18 MR. GUTIERREZ, SR: And I'd have to tell her all the time.
19 I'd say, hon, I just cut the grass.

20 MR. EVANS: But --

21 MR. GUTIERREZ, SR: So I always related that to it was the
22 mower in the basement. I never smelled the sulfur at all.

23 MR. EVANS: Could, and this is to senior, as far as that
24 smell, could it be -- could your wife have mistaken that for
25 gasoline?

1 MR. GUTIERREZ, SR: Probably.

2 MR. EVANS: -- instead of natural gas?

3 MR. GUTIERREZ, SR: That's what I think it was, probably from
4 the exhaust of pulling the machine into the basement and then
5 closing the doors. That's what I think she was smelling was the
6 gasoline in the exhaust. It wasn't necessarily gas.

7 MR. GUTIERREZ, JR: And the basement door is right next to,
8 like, where we all are.

9 MR. GUTIERREZ, SR: Yeah. Where we spend most of our time in
10 the house, which is the kitchen and the living room. I park the
11 tractor basically right under that. so when you pull in it's
12 still warm after running it. The exhaust smells.

13 MR. EVANS: Right. Okay.

14 MR. GUTIERREZ, SR: And we didn't have dead grass along the
15 side of the house there. I'd cut the grass every 4 days and
16 really didn't have any brown spots. So nothing concerning.

17 MR. EVANS: Okay.

18 MR. GUTIERREZ, SR: We were getting it treated by TruGreen,
19 but --

20 MR. EVANS: Yeah. So in the 3 months you have lived there,
21 do you recall getting -- this is for senior, by the way -- do you
22 recall getting mailers in the mail about from the gas company?
23 Did you ever see that about what to do in case of an emergency or?

24 MR. GUTIERREZ, SR: No.

25 MR. EVANS: Okay. Did you get -- are you signed up for

1 electronic or paper?

2 MR. GUTIERREZ, SR: Paper. UGI still sends paper.

3 MR. EVANS: Okay. So and in the bills you never saw anything
4 either?

5 MR. GUTIERREZ, SR: There's some advertisements and some
6 other things in there, but I really never pay too much attention
7 outside of the bill. We've had -- we hold safety meetings once a
8 month at my job, and we've had 811 guys come in and share some
9 stories and educate my guys in the field. And I had some of that
10 training on that side.

11 MR. GUTIERREZ, JR: And this is junior talking, but I
12 wouldn't have known anything about it. It don't know anything
13 like that so I don't have any training in -- to know that I should
14 evacuate myself or anything like that. So like if it was in -- if
15 he was there we would have been out, but I wouldn't know nothing
16 about that.

17 MR. EVANS: Okay.

18 MR. GUTIERREZ, JR: I've never been in a situation like that.

19 MR. EVANS: In your home you have gas log lighter and gas
20 furnace --

21 MR. GUTIERREZ, SR: Um-hum. Gas dryer.

22 MR. EVANS: Gas dryer. Gas dryer, okay. And plus you have a
23 gas oven?

24 MR. GUTIERREZ, SR: Um-hum.

25 MR. EVANS: Okay. So you're all --

1 MR. GUTIERREZ, SR: Sorry, no. The stove was electric.

2 BY MR. EVANS:

3 Q. Okay. So Junior, are you confident that you comprehend the
4 smell of natural gas though and you've been around long enough to
5 know what it smells like?

6 A. Not -- I know that gas, like, you put in like the, like cars
7 and like that type, like gasoline motors. But I can't -- I'm not
8 -- I wouldn't be able to tell the differences.

9 Q. And it's commonly called -- it's a chemical called mercaptan
10 and it's odorized and the common comparison is rotten eggs. And
11 you smell the rotten eggs. So the rotten egg smell you did not
12 smell a rotten egg smell the day of the incident?

13 A. Not at all.

14 MR. EVANS: And how about you, Meea? Did you smell it?

15 MS. LOY: No, I didn't.

16 MR. EVANS: Okay. Well, that's all I have for right now.

17 MR. DOWNS: Downs, NTSB. Mr. Gutierrez, probably senior,
18 you've been there 3 months --

19 MR. GUTIERREZ, SR: Yes, sir.

20 MR. DOWNS: -- at the property?

21 MR. GUTIERREZ, SR: We settled the end of March.

22 MR. DOWNS: So you recently purchased, okay.

23 MR. GUTIERREZ, SR: Um-hum.

24 MR. DOWNS: To follow up on Roger's point, you get a paper
25 bill and often there's a flyer in there. You just don't pay much

1 attention to those fliers?

2 MR. GUTIERREZ, SR: No. No.

3 MR. DOWNS: Okay. But it sounds like when you were
4 describing before that you would know what to do in an emergency?

5 MR. GUTIERREZ, SR: Yes.

6 MR. DOWNS: But Junior, you wouldn't necessarily know what to
7 do in the event of an gas leak in terms of the odor and where to
8 report it things of that sort?

9 MR. GUTIERREZ, JR: Well, he never told me --

10 MR. GUTIERREZ, SR: And again, it's only because of my
11 construction experience. We have utility strike protocols that we
12 follow, that my guys follow.

13 MR. DOWNS: Right, okay.

14 So you wouldn't have an understanding of what to do other
15 than to call your dad and --

16 MR. GUTIERREZ, JR: Yeah.

17 MR. DOWNS: -- which is what you did in this --

18 MR. GUTIERREZ, JR: Yeah, I have no idea.

19 MR. DOWNS: -- particular case. Okay, very good.

20 You're in the construction business?

21 MR. GUTIERREZ, SR: Yes, sir.

22 MR. DOWNS: And Junior, you're in -- you're a student or?

23 MR. GUTIERREZ, JR: I work at R.R. Donnelly.

24 MR. DOWNS: Sorry?

25 MR. GUTIERREZ, JR: R.R. Donnelly.

1 MR. DOWNS: R.R. Donnelly?

2 MR. GUTIERREZ, JR: It's a printing company.

3 MR. DOWNS: A printing company.

4 MR. GUTIERREZ, JR: Yes.

5 MR. DOWNS: So you're in the printing business, okay.

6 And how many occupants do we have in the building right now?

7 Three? Four?

8 MR. GUTIERREZ, SR: There's seven of us.

9 MR. DOWNS: Seven total?

10 MR. GUTIERREZ, SR: Yeah. My --

11 MR. DOWNS: Big house.

12 MR. GUTIERREZ, SR: Hence the big house. My daughter with my
13 two grandkids live with us.

14 MR. DOWNS: Okay.

15 MR. GUTIERREZ, SR: And thank God she had just left the house
16 at 12.

17 MR. DOWNS: Very good.

18 MR. GUTIERREZ, SR: With my 7-month-old grandson.

19 MR. DOWNS: Had just left the house.

20 MR. GUTIERREZ, SR: At 12.

21 MR. DOWNS: At 12 noon?

22 MR. GUTIERREZ, JR: No, it was at --

23 MR. GUTIERREZ, SR: Yeah.

24 MR. GUTIERREZ, JR: That was at -- no, the explosion happened
25 around --

1 MR. GUTIERREZ, SR: No, the explosion happened after, which
2 was right around that 12:20 something, 30 range.

3 MR. GUTIERREZ, JR: She left around 10, because then she had
4 to do --

5 MR. GUTIERREZ, SR: No, because that's when she left with
6 Christy.

7 MR. GUTIERREZ, JR: She wasn't there when I was there.

8 MR. GUTIERREZ, SR: Oh, okay.

9 MR. GUTIERREZ, JR: She left around 10.

10 MR. GUTIERREZ, SR: She told me she left around 12.

11 MR. GUTIERREZ, JR: I came in. I seen her leave.

12 MR. GUTIERREZ, SR: Okay.

13 MR. GUTIERREZ, JR: And she went to pick up that boy and then
14 go get something to eat.

15 MR. DOWNS: Nonetheless, she was not at the house when it --

16 MR. GUTIERREZ, SR: Yeah. Nonetheless my --

17 MR. DOWNS: Which (indiscernible) --

18 MR. GUTIERREZ, SR: Because two rooms up at the top that
19 got (indiscernible) --

20 MR. GUTIERREZ, JR: Thank God.

21 (Simultaneous talking.)

22 MR. GUTIERREZ, SR: I mean, that got the most damage was her
23 room and my grandson's room.

24 MR. DOWNS: Very good. Okay. I'm good with the questions.

25 Next question?

1 MS. COOPER SMITH: Terri Cooper Smith, Pennsylvania Public
2 Utility Commission. Okay. I lost my train of thought here for a
3 second.

4 There's seven of you that stay at the property?

5 MR. GUTIERREZ, SR: Yes.

6 MS. COOPER SMITH: Mr. and Mrs. Gutierrez, Mr. Gutierrez,
7 Jr., your daughter --

8 MR. GUTIERREZ, SR: My son -- yes.

9 MS. COOPER SMITH: -- and two grandkids and --

10 MR. GUTIERREZ, SR: And my younger son.

11 MS. COOPER SMITH: And your younger son.

12 MR. GUTIERREZ, SR: That's Jonathan.

13 MS. COOPER SMITH: Okay.

14 MR. GUTIERREZ, SR: He was with me down at our beach house.

15 BY MS. COOPER SMITH:

16 Q. Okay. Roberto, you said you saw somebody go around the
17 house. You saw a UGI worker go around the house?

18 A. Yeah. I'm pretty sure it's the one that passed away.

19 Q. Where at -- can you go up to the front --

20 A. Yeah.

21 Q. -- and just show me exactly where you saw him walking?

22 A. He went to a lot of houses. When I first came out to ask him
23 if it was okay, he was across the street over here and he had his
24 wand and he was walking around over here. And then I came out. I
25 came out and I asked him and he came across and he said, yeah,

1 you're fine and I went back in.

2 The second time he came is -- the second time he came in he
3 came in and I asked him again. Then he walked out and I think he
4 said that's when his guys were coming. They just pulled up. And
5 I seen him, because I came back, like, later to see what's
6 happening and he was, like, right on this side right there,
7 somewhere right here --

8 Q. Okay.

9 A. -- digging or doing something.

10 MR. DOWNS: So let's for the record, you saw him first at the
11 197 property?

12 MR. GUTIERREZ, JR: Yeah, over here.

13 MR. DOWNS: And then he came over to your property at 202?

14 MR. GUTIERREZ, JR: Yeah.

15 MR. DOWNS: You have a discussion.

16 MR. GUTIERREZ, JR: Um-hum.

17 MR. DOWNS: And you went back in the house.

18 MR. GUTIERREZ, JR: Yeah.

19 MR. DOWNS: And he went towards the 206 house?

20 MR. GUTIERREZ, JR: Yeah.

21 MR. DOWNS: And he was just past the corner of your house --

22 MR. GUTIERREZ, JR: Yeah, like, right around here.

23 MR. DOWNS: -- the northwest corner of the 202 house, your
24 house, and that's the last time you saw him?

25 MR. GUTIERREZ, JR: Yeah.

1 MR. DOWNS: Great.

2 BY MS. COOPER SMITH:

3 Q. Okay. Did he actually enter your house?

4 A. He entered my house and went around -- like, when you walk
5 into the house you see the steps on the side on the right, but if
6 you keep walking straight there's a kitchen that goes around it.

7 Q. To get the kitchen, yes.

8 A. He walked all the way around there and stopped right there
9 and then came back and then me and him was just talking and then
10 he left. That's when I called my father and --

11 Q. Okay. What was he doing when he came into the house?

12 A. He had some reader thing with some wand. It was like some --
13 it was like a long stick.

14 Q. So you remember what color it was?

15 A. Black.

16 MS. LOY: It was black.

17 Q. It was black. Okay.

18 A. I'm pretty sure.

19 Q. So it was -- he had a handheld black --

20 A. Yeah, yeah.

21 Q. -- thing, for lack of a better word, and it had a wand --

22 A. Yeah.

23 Q. -- attached to it. Do you remember it making any kind of
24 noise?

25 A. It never made any noise. He did show me the number on it, on

1 the box thing that he was holding in his left hand, and it did say
2 10. And he said that's when he was just, like, everything's fine.

3 MR. DOWNS: He said everything is fine for 10?

4 MR. GUTIERREZ, JR: Yeah, and that's why I was thinking,
5 like, all right so we're fine then. And --

6 BY MS. COOPER SMITH:

7 Q. Did you see 10 on the box?

8 A. Yeah, I seen 10 on the box.

9 Q. Did you see 10 and then some letters next to it?

10 A. No, I did not.

11 Q. Or just the number 10?

12 A. I seen the 10. It was in red. I'm sure it was in red.

13 Q. Okay. So that was the first time he came to your house?

14 A. Yeah.

15 Q. Okay. And then the second time he didn't come to the house,
16 you actually went out and engaged him?

17 A. No, after that first time he left the house.

18 Q. Right.

19 A. And that's when I called my father when I was in the house.

20 Q. Right.

21 A. And then in that timeframe right there that's when I went out
22 -- after I called him --

23 Q. Right.

24 A. -- I asked him if it was okay. I came back inside. Thirty
25 minutes later he came back to check it again.

1 Q. Oh, he did come back in the house again?

2 A. Yeah.

3 Q. Okay. So the second time when he come in the house, did he
4 have the wand?

5 A. Yeah, he did the same thing, went around the same spot and
6 that's when he told me it was 11 and he said he evacuated the
7 neighbors, saying that there's was at 12. And that's when I got
8 really worried and kept asking him, and he just kept -- like he
9 was laughing and smiling about it so, like, I wouldn't think --
10 like, if somebody that works with that kind of stuff is telling me
11 yeah, you guys are fine, you guys are okay, you don't need to go
12 anywhere, I mean, I'm going to feel safe then. I'm like, all
13 right.

14 Q. Okay. So when he told you he had 11 at your house and he
15 told you that the neighbor had 12 --

16 A. Yeah.

17 Q. -- right, your assumption is that he was talking about 206,
18 right?

19 A. Yeah, 206.

20 Q. Was it also your assumption that when he said 11 and 12 that
21 it was the same scale, like 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12?
22 Or did you think it was he was talking about two different types
23 of numbers? Did you feel like, oh, you're one below the person
24 next door is what I'm saying?

25 A. I guess. I mean, because he told me -- I was just -- I think

1 it's just numbers like 1, 2, 3. He's telling me our house is at
2 11, here's is at 12. I have no idea what kind of stuff that is,
3 so, like --

4 Q. Right.

5 A. -- even if --

6 Q. Yeah. I just want to make sure that when he said 11 for you
7 and he said 12 next door you figured, well, I'm close to that and
8 so forth.

9 A. Yeah.

10 Q. Is that what you were thinking?

11 A. That's why I kept asking him.

12 Q. Okay.

13 A. Yeah.

14 Q. Okay. At that point, he said you were fine to stay in the
15 house?

16 A. Yeah.

17 Q. So that you wouldn't --

18 A. He said it both times.

19 Q. He said it both times that you're fine to stay in the house.

20 A. Yes.

21 Q. So you went back to watching TV or whatever on the couch?

22 A. Yep.

23 Q. And then all of a sudden, not too long after --

24 A. It was, like, 15 minutes. It was, like, 15 minutes.

25 Q. About 15 minutes later --

1 A. Twenty minute? Yeah.

2 Q. -- the house explodes.

3 A. Yeah.

4 Q. Okay. And then you grab the dog and --

5 A. Ran out the front.

6 Q. -- ran out of the house. Okay.

7 MS. COOPER SMITH: And you run behind him, Meea?

8 MS. LOY: Yeah.

9 MS. COOPER SMITH: Okay. Okay. That's all I have for the
10 moment. Thank you.

11 MR. MAURER: None at this time.

12 BY MR. KRIEGER:

13 Q. Robert Krieger. You said it was 15 minutes after his second
14 visit that you heard the house next door, approximately?

15 A. Yeah, it was -- yeah, approximately like 15, 20 minutes.

16 Q. And that was when he was in your house. You also had
17 mentioned by showing on the diagram that you had gone outside of
18 your house at 202 and saw the individual and that he then walked
19 to the side of the house?

20 A. Yeah.

21 Q. Did that happen before his second visit or after his second
22 visit?

23 A. That was the first -- the only time I walked outside was
24 after I got off the phone with my father the first time.

25 Q. The first visit then.

1 A. Yeah. And then the second time is when I asked him when he
2 was inside the house if everything was all right, if it's all
3 right for us to be in the house. And he said yeah.

4 Q. And did he only -- did he only check with his wand and black
5 device --

6 A. Yeah.

7 Q. -- on the first floor or did he go to any other floor in the
8 house?

9 A. He only went on the first.

10 Q. Did he ever mention any letters?

11 A. No, not at all.

12 Q. As far as when you looked at the area, when he was showing
13 you the reading did he mention any letters --

14 A. Not at all.

15 Q. -- or anything? And he did not qualify what the readings
16 were. He just gave you a number?

17 A. Yeah.

18 Q. And did he give you that number or did you oversee it?

19 A. Well, he told me it and that's when I asked. Like, I was
20 just -- like I seen it. He told me the second time is when he
21 showed me it, and like it was at 12, not 12, at 11.

22 Q. Was 11 the -- I'm sorry, not 11. It wasn't 11 o'clock.

23 A. No.

24 Q. Do you know the timing of the two visits that he was in your
25 house approximately?

1 A. Not at all.

2 Q. And you said you didn't have any real understanding of what
3 the numbers meant.

4 A. I had no understanding of --

5 Q. It was just what he said. It was just what he told you.

6 A. -- anything that they were doing.

7 MR. KRIEGER: Thank you. I have a few questions for senior.
8 You said that you -- you're on the construction side?

9 MR. GUTIERREZ, SR: Yes, sir.

10 MR. KRIEGER: And that you've been -- you've had 811 training
11 that was done for you at that point in time. I assume that was
12 related to lines being struck, excavation activity outside for
13 811?

14 MR. GUTIERREZ, SR: Yeah. I've taken our guys to 811
15 training.

16 MR. KRIEGER: Okay.

17 MR. GUTIERREZ, SR: They have free seminars that they do.

18 MR. KRIEGER: Free seminars.

19 MR. GUTIERREZ, SR: Yeah.

20 MR. KRIEGER: Have you ever seen UGI at those seminars?

21 MR. GUTIERREZ, SR: I don't think I did one with UGI at the
22 seminar.

23 MR. KRIEGER: You don't recall seeing them?

24 MR. GUTIERREZ, SR: I do not.

25 MR. KRIEGER: Okay. Has UGI ever done 811 -- is it your

1 business or is it --

2 MR. GUTIERREZ, SR: No, I'm the construction manager.

3 MR. KRIEGER: Okay. Have you ever seen UGI personnel provide
4 811 training for your --

5 MR. GUTIERREZ, SR: No.

6 MR. KRIEGER: -- for your company? Okay. Thank you. With
7 respect to the bills, you said you get a UGI bill?

8 MR. GUTIERREZ, SR: Um-hum.

9 MR. KRIEGER: Who typically pays the bills at your house?

10 MR. GUTIERREZ, SR: I do.

11 MR. KRIEGER: You do? And you would -- you're not on an
12 automatic payment or anything like that?

13 MR. GUTIERREZ, SR: No.

14 MR. KRIEGER: You write a check or --

15 MR. GUTIERREZ, SR: No, I usually pay it online through my
16 bank, which is one of the reasons why I don't pay too close
17 attention to the envelope. I know what the bill is. We just
18 moved into this house so I didn't have a budget set up. Before I
19 had budget set up so I knew what I had to pay every month. So
20 every month there is just send it out and it was done. This house
21 we were only in there for 3 months so I did not. I did not set
22 that up yet.

23 MR. KRIEGER: Okay. I'm sorry. It's Meea?

24 MS. LOY: Yeah.

25 MR. KRIEGER: Meea, anything that, you know, you saw or did

1 you have any interaction with the UGI employee that came to the
2 house?

3 MS. LOY: No. We were all in the same room when he walked
4 into the house. I was -- just watched him walk around with the
5 reader and then spoke to Roberto and then he left.

6 MR. KRIEGER: I have no further questions.

7 MR. EVANS: Okay. No further questions from me here.

8 BY MR. DOWNS:

9 Q. Any injuries on any of part of you two?

10 A. I guess I got hit from -- I got hit from something. I didn't
11 show anything at the time. I had -- I got hit from something on
12 my arm and I had blood going down my leg.

13 Q. A little laceration there?

14 A. Yes.

15 Q. Your left shoulder?

16 A. It was the left, yeah. But as of at that moment no, but as
17 of still to this day, like, my anxiety's out the roof now. I
18 can't sleep. I'm on sleeping meds now. I still have nightmares,
19 like, even being in houses, like, I can't ever -- I don't ever
20 feel comfortable anymore being in houses.

21 Like, even when I'm in a house like if I hear anything I
22 jump. If I hear -- like, she lives in an apartment and I'm over
23 there now and you hear the neighbors at the top and the neighbors
24 downstairs when they move things, and we're always like so jumpy
25 now. It's just horrible. Like, it's -- I don't think I can ever

1 get back to how I was because I feel like after this situation it
2 messed my head up so bad that, like, I just won't ever feel safe
3 again.

4 Q. Well --

5 A. Like, even if they were to build this house again there and I
6 wouldn't -- I still wouldn't be safe, like, feel comfortable with
7 that even if they rebuild it and do it over. I can't. I wouldn't
8 be able to.

9 Q. Okay.

10 A. And to be that close to death, like, to -- and know that I
11 talked to that guy.

12 Q. Were you transported to the hospital for your injury?

13 A. Actually when I came outside I kept trying to get the EMS
14 because I had a lot of insulation, like, I was like almost like
15 swallowing it, and, like, it was in my eye. I couldn't see out of
16 my eye. And but they just -- I guess they were -- they went to
17 the UGI guys because they had -- they were -- they had bigger
18 injuries, I guess. But at that time I was more trying to
19 communicate with my father and tell him what's happening, trying
20 to find out.

21 Q. But they didn't transport you in an ambulance to the --

22 A. No.

23 Q. Did you ultimately seek medical attention for that?

24 A. Yeah, I did.

25 Q. Through your private medical?

1 A. Um-hum, yeah.

2 MR. DOWNS: Okay. Meea, how about you? any injury on your
3 part?

4 MS. LOY: I had -- I don't know if -- I've had really bad
5 neck and back pain. Like I have MRIs set up to go get checked
6 out. I'm experiencing the same trouble with sleeping. I got
7 prescribed some medications and, I mean, I don't know if this is
8 okay to say or not, but, like, we typically -- I mean, we're 20,
9 and typically we've never drank before. And now it feels like we
10 have to drink to be able to actually go to sleep at night and,
11 like, not think about things when we go to sleep.

12 It's terrifying and, like, I honestly can't even put it into
13 words, like --

14 MR. GUTIERREZ, JR: This is junior talking. And even the
15 stuff that they prescribe us, I've -- like, yeah, it helps you.
16 You get tired and drowsy, but the thought it's still, like, in our
17 head. Like, we can't -- I still feel like I can't ever not think
18 about it. And what messes me up the most is knowing that I talked
19 to this -- like, I was the last person that talked to this guy,
20 and he was -- he was all good. Like, he was happy, and it just
21 tears me apart.

22 MR. DOWNS: You have minor physical injury, you both have
23 anxiety, is that a good summary?

24 MS. LOY: Um-hum.

25 MR. GUTIERREZ, JR: Yeah.

1 MR. DOWNS: And neither one got transported by ambulance to
2 the hospital?

3 MS. LOY: No.

4 MR. DOWNS: Did you seek medical attention or --

5 MS. LOY: No. I haven't tried to get some oxygen, but I just
6 laid down in the grass and closed my eyes.

7 MR. DOWNS: Very good. Okay. The UGI employee, did you see
8 other than the meter that this person was carrying with the wand?
9 Did you see any other tools that this person might have had, a
10 wrench or anything like that?

11 MR. GUTIERREZ, JR: Not at the time.

12 Did you?

13 MS. LOY: No.

14 MR. GUTIERREZ, JR: I didn't.

15 MR. DOWNS: Anyway, that concludes my questions.

16 MS. COOPER SMITH: Well --

17 MR. DOWNS: He wasn't transported. You sought your own
18 medical attention, right?

19 MR. GUTIERREZ, JR: Yes.

20 MR. GUTIERREZ, SR: Yes.

21 MR. DOWNS: Yeah. The name of your physician or your medical
22 facility?

23 MR. GUTIERREZ, SR: That's Abbeyville Family Medicine.

24 MR. DOWNS: A-B-B-Y?

25 MR. GUTIERREZ, SR: E-Y-V-I-L-L-E.

1 MR. DOWNS: V-I-L-L-E --

2 MR. GUTIERREZ, SR: Family Medicine.

3 MR. DOWNS: Medicine. Very good, thank you.

4 BY MS. COOPER SMITH:

5 Q. Terri Cooper Smith, PUC. Roberto, you said that the last --
6 the very last time that the UGI worker left your house you saw him
7 go around the side of the house.

8 A. I didn't see him when he left. That's after he left the
9 house, like, I did come back to, like, the front and like seeing
10 what was happening.

11 Q. Um-hum.

12 A. And the only time I seen him was when he was where I pointed
13 out at the side of the building.

14 Q. Okay. So where were you standing when you saw him, in your
15 living room?

16 A. No. We don't have windows like that can see out the front.
17 Our living room is in the back of the house. I went up to the
18 door. We had glass on either side.

19 Q. Right, on either side of the door (indiscernible). And the
20 master bedroom's on the -- was on the left?

21 MR. GUTIERREZ, SR: Yes. Well, if you're looking at my house
22 it's on the right.

23 MS. COOPER SMITH: Oh, it's on the right. I'm sorry.

24 MR. GUTIERREZ, SR: Right next to the couch.

25 MS. COOPER SMITH: Okay. Those are all the questions I have.

1 MR. MAURER: No further questions.

2 MR. KRIEGER: No further questions.

3 MR. EVANS: I have no further questions. Thank you very
4 much, appreciate the --

5 MR. DOWNS: That concludes the hearing.

6 (Whereupon, the interview was concluded.)

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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF: RESIDENTIAL GAS EXPLOSION
 ON SPRINGDALE LANE, MILLERSVILLE,
 PENNSYLVANIA, JULY 2, 2017
 Interview of Roberto Gutierrez, Jr.
 Roberto Gutierrez, Sr. and
 Meea Loy

ACCIDENT NUMBER: DCA17FP006

PLACE: Millersville, PA

DATE: July 26, 2017

was held according to the record, and that this is the original,
complete, true and accurate transcript which has been transcribed
to the best of my skill and ability.



Teresa Holevas
Transcriber

H



COMMONWEALTH OF PENNSYLVANIA
PENNSYLVANIA PUBLIC UTILITY COMMISSION
P.O. BOX 3265, HARRISBURG, PA 17105-3265

October 4, 2018

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, PA 17105-3265


Re: Pennsylvania Public Utility Commission, Bureau of Investigation
and Enforcement v. UGI Utilities, Inc.
Docket No. C-2018-
**I&E Formal Complaint (Proprietary and Non-Proprietary
Versions)**

Dear Secretary Chiavetta:

Enclosed for paper filing please find the original of the Proprietary Version of the Formal Complaint on behalf of the Bureau of Investigation and Enforcement of the Pennsylvania Public Utility Commission in the above referenced case. A Non-Proprietary Version of the Formal Complaint has also been electronically filed in this matter.

Copies have been served on the parties of record in accordance with the Certificate of Service.

Sincerely,


Stephanie M. Wimer
Senior Prosecutor
PA Attorney ID No. 207522

Enclosures

cc: As per Certificate of Service

| | | |
|--------------------------------|---|--------------------|
| Pennsylvania Public Utility | : | |
| Commission, Bureau of | : | |
| Investigation and Enforcement, | : | |
| Complainant | : | |
| | : | |
| v. | : | Docket No. C-2018- |
| | : | |
| UGI Utilities, Inc., | : | |
| Respondent | : | |

NOTICE

A. You must file an Answer within twenty (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:

Rosemary Chiavetta, Secretary
 Pennsylvania Public Utility Commission
 P.O. Box 3265
 Harrisburg, Pennsylvania 17105-3265

Or, you may eFile your Answer using the Commission’s website at www.puc.pa.gov. The link to eFiling is located under the Filing & Resources tab on the homepage. 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 serve a copy on:

Stephanie M. Wimer, Senior Prosecutor
 Pennsylvania Public Utility Commission
 Bureau of Investigation and Enforcement
 P.O. Box 3265
 Harrisburg, PA 17105-3265
stwimer@pa.gov

B. If you fail to answer this Complaint within twenty (20) days, the Bureau of Investigation and Enforcement will request that the Commission issue an Order imposing the civil penalty and other requested relief.

C. You may elect not to contest this Complaint by paying the civil penalty within twenty (20) days and performing the corrective actions set forth in the requested relief. A certified check, cashier's check or money order should be payable to the "Commonwealth of Pennsylvania" and mailed to:

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
400 North Street
Harrisburg, PA 17120

Your payment is an admission that you committed the alleged violations and an agreement to cease and desist from committing further violations. Upon receipt of your payment, the Complaint proceeding shall be closed.

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 the Commission to issue an Order imposing the civil penalty and granting the requested relief as set forth in the Complaint.

E. If you file an Answer which contests the Complaint, the matter will proceed before the assigned presiding 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. 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-2018- |
| | : | |
| UGI Utilities, Inc., | : | |
| 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. (“UGI,” “Company” or “Respondent”) alleging violations of the Pennsylvania Code and Code of Federal Regulations in connection with a fatal natural gas explosion that occurred on July 2, 2017, in the Springdale Farms residential development in Millersville, Lancaster County, Pennsylvania. 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 P.O. Box 3265, Harrisburg, PA 17105-3265, 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:

Stephanie M. Wimer
Senior Prosecutor
stwimer@pa.gov

[REDACTED]

Timothy K. McHugh
Prosecutor
timchugh@pa.gov

[REDACTED]

Michael L. Swindler
Deputy Chief Prosecutor
mswindler@pa.gov

Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
P.O. Box 3265
Harrisburg, PA 17105-3265

4. Respondent is UGI Utilities, Inc., a natural gas utility with a main mailing address of 2525 North 12th Street, Suite 360, Reading, PA 19612, Attention: Robert F. Beard, President.

5. UGI 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.

6. 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.

7. 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.

8. 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

¹ At 66 Pa.C.S. § 102, “Public utility” is defined under that term at subsection (1)(i) 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.

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.

9. 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 most recent adjustment made by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration ("PHMSA") occurred in April of 2017 and revises the maximum civil penalty to Two Hundred Nine Thousand, Two Dollars (\$209,002) for each violation for each day the violation continues, with a maximum penalty not to exceed Two Million, Ninety Thousand, Twenty-Two Dollars (\$2,090,022) for a related series of violations. 82 Fed. Reg. 19325 (April 27, 2017).

10. Pursuant to Section 59.33(b) of the Commission's regulations, 52 Pa. Code § 59.33(b), I&E's 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 proscribe the minimum safety standards for all natural gas and hazardous liquid public utilities in the Commonwealth.

11. 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.

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

II. Background

13. On July 2, 2017, at 12:31 PM, a natural gas explosion occurred at 206 Springdale Lane, Millersville, PA 17551, a home in the Springdale Farms residential development. Three (3) UGI employees were on site at the time of the explosion. One UGI employee died and the other two (2) UGI employees sustained non-life threatening injuries, with one (1) requiring in-patient hospitalization. A Lancaster Area Sewer Authority (“LASA”) employee who was also on site was injured in the blast and hospitalized.

14. The explosion demolished the entire residential structure at 206 Springdale Lane and caused severe damage to neighboring homes, two (2) of which located at 201 and 202 Springdale Drive were condemned for demolition. Pursuant to the incident report submitted by UGI to PHMSA on August 1, 2017, the Company estimated property damages to be \$1,300,000.

15. Pipeline Safety Inspectors from I&E’s Safety Division responded to the

scene and conducted an investigation.² The following background consists of a summary of the findings of the I&E Safety Division's investigation.

A. The Distribution System

16. UGI's distribution system in Springdale Farms consists of a plastic main with plastic service lines. The main at the location of the explosion was two (2) inches in diameter and made of polyethylene. The service line was one-half (½) inch in diameter and also made of polyethylene. UGI installed the main on August 7, 1995, and installed the service line to 206 Springdale Lane on June 23, 1998.

17. UGI connected the main in front of 206 Springdale Lane to the service line using a mechanical tapping tee assembly, which had been in service for nineteen (19) years when the incident occurred. The tapping tee assembly consisted of an upper half and lower half that was joined together around the outside of the main by four (4) nylon bolts.

18. At the time of the explosion, the distribution system was operating at a pressure of 54 pounds per square inch gauge ("psig").

B. Chronology of Events on the Day of the Incident

19. At 10:26 AM on July 2, 2017, the UGI Call Center received an odor complaint from a resident of the Springdale Farms development who was walking along the sidewalk at 202 Springdale Lane, which was located next door to 206 Springdale Lane. The residences were located at the end of the Springdale Lane cul-de-sac.

² The National Transportation Safety Board ("NTSB") also conducted an investigation of this incident pursuant to its authority set forth in 49 U.S.C.A. § 1131(D).

20. UGI dispatched an emergency order to UGI's First Responder on-call at the time, [REDACTED] ("First Responder").³

21. At 11:00 AM, the First Responder arrived at 202 Springdale Lane and began an outside odor investigation utilizing leak detection equipment.

22. The First Responder detected gas from test holes in various locations along the curb and near the foundation in front of 206 Springdale Lane, as well as in the nearby sewer.

23. The First Responder classified the leak as a "C" leak, which is UGI's classification for a hazardous leak. The First Responder identified gas readings of 98% gas-in-air over the service line connection to the main (the tapping tee) and 80% gas-in-air in the sewer. These readings were twenty (20) times UGI's threshold of a hazardous leak.

24. At 11:18 AM, the First Responder contacted UGI Duty Supervisor [REDACTED] [REDACTED] ("Duty Supervisor") to advise the Duty Supervisor of the situation and to request additional personnel.

25. At 11:20 AM, the Duty Supervisor contacted UGI's dispatch and requested that an emergency locate request be made to the Pennsylvania One Call System, Inc. ("POCS"). Such request was made and POCS serial number 20171830054 was transmitted to POCS members at 11:27 AM indicating that the type of work to be performed was to "repair [a] gas leak."

³ The names of the UGI employees have been redacted in the Non-Proprietary Version, of the Complaint.

26. After speaking to UGI's dispatch, the Duty Supervisor attempted to contact UGI's Lancaster on-call crew, which included UGI Construction and Maintenance Mechanic ("CMM") [REDACTED] ("CMM1"), another mechanic and a backhoe operator. The other mechanic and backhoe operator did not immediately report to the scene and had to be contacted more than once, however, CMM1 responded to the Duty Supervisor's call.

27. After speaking to the Duty Supervisor, the First Responder knocked on the door to 206 Springdale Lane, but no one answered. The First Responder then proceeded to 202 Springdale Lane and was permitted inside by one of the residents. He checked the interior of the home at various places with leak detection equipment and detected "10 to 11." It is unclear what this reading measured, but it likely was a reading of the lower explosive level ("LEL"). The First Responder did not enter the basement to search for the gas leak. The First Responder advised the residents that it was safe to remain indoors.

28. At 11:31 AM, the First Responder contacted the UGI dispatcher to report that he could not gain entry to 206 Springdale Lane.

29. Around 11:43 AM, the First Responder and CMM [REDACTED] ("CMM2"), another UGI mechanic who was on-call, had a telephone conversation where the First Responder apprised CMM2 of the gas readings and indicated that he was in need of assistance.

30. Multiple phone calls took place around this time between the on-call UGI employees. At 11:50 AM, the Duty Supervisor contacted an on-call back-hoe operator and two (2) minutes later, he called CMM2. At 11:53 AM, the First Responder called

CMM2. Later that minute, the First Responder called the Duty Supervisor twice before speaking to him for two (2) minutes.

31. At 11:55 AM, the resident at 206 Springdale Lane allowed the First Responder inside of the home. The First Responder detected 11% gas-in-air inside the home on the first and second floors and instructed the resident to ventilate by opening windows and doors. The First Responder also instructed the resident to evacuate the premises.

32. At 12:04 PM, the Duty Supervisor and an engineer from UGI's Middletown office had a five (5) minute-long telephone conversation where they discussed the procedure for purging gas during a "squeeze off." A "squeeze off" is the use of a mechanical device to pinch the gas line, which shuts the main and reduces or stops the flow of gas. "Squeezing off" is a method used in lieu of shutting off the closest valve on a one-way feed to stop the flow of gas. In this instance, the closest valve was located at Burr Oak Drive and Springdale Lane, which was approximately 870 feet from 206 Springdale Lane. Shutting off this valve would have shut off gas to all of the customers on the block. Had the valve shut off procedure been used, the on-call UGI employees would have been required to turn the gas back on at each residence individually, after the leak was controlled and the closed valve had been reopened. This is a time-consuming process that would have kept the on-call UGI employees working for several hours during a holiday weekend.

33. At 12:05 PM, a minor child residing at 202 Springdale Lane asked the First Responder whether it was safe to remain inside the home. The First Responder reassured

him that it was safe to remain inside.

34. At 12:07 PM, a LASA employee arrived and reported being able to smell the odor of gas.

35. At 12:09 PM, the First Responder manually opened the garage door of 206 Springdale Lane. The resident of 206 Springdale Lane started her car and partially drove outside before parking her car in the garage again. She ran inside for something she had forgotten. Also at 12:09 PM, CMM1 spoke to another UGI mechanic who was on-call but not yet at the scene.

36. At 12:11 PM, the Duty Supervisor arrived. Around this time, the resident of 206 Springdale Lane re-entered her car, started it, drove out of the garage and left the area.

37. At 12:14 PM, the Duty Supervisor called UGI's dispatcher to request assistance from the fire department. The dispatcher called Lancaster County 911, which contacted the Manor Township Fire Department about a gas leak at 206 Springdale Lane.

38. Around this time, CMM1 arrived at the scene and assisted the Duty Supervisor by hand digging upstream of the service tee and over the distribution main to excavate a hole for the "squeeze off" tool.

39. Between approximately 12:14 PM and 12:20 PM, the First Responder disassembled the meter set at 206 Springdale Lane to prepare for the "squeeze off."

40. At 12:23 PM, the Manor Township dispatcher alarmed fire engines about a gas leak at 206 Springdale Lane.

41. At 12:27 PM, Manor Township Engine 905 arrived and parked in front of

187 Springdale Lane. The Duty Supervisor advised the fire chief that gas was inside of the residence at 206 Springdale Lane and that intrinsically safe fans were needed.

42. At approximately 12:28 PM, a neighbor photographed the activity in front of 206 Springdale Lane showing the positions of the UGI employees and emergency personnel. The First Responder appeared to be walking towards the residence's meter set. CMM1 was digging with a shovel in front of 206 Springdale Lane while the Duty Supervisor was located in front of CMM1's truck that was parked on the street. Two (2) firefighters were walking with fire hoses.

43. At 12:29 PM, the fire chief transmitted that the firefighters had stretched out the hoses and that UGI was hand digging, using a shovel and an air lance, on an active gas leak.

44. Two (2) minutes later, at 12:31 PM, a massive explosion destroyed 206 Springdale Lane, fatally injuring the First Responder, who was at or near the residence's meter set. The Duty Supervisor and CMM1 were injured and were discovered under debris near CMM1's UGI truck. The LASA employee, who had his back turned away from the explosion near the sewer's manhole, also sustained injuries.

45. In addition to demolishing the residence at 206 Springdale Lane, the explosion damaged four (4) other homes, two (2) of which were condemned, including 202 Springdale Lane. Multiple vehicles also sustained damage, including UGI's truck, LASA's vehicle and other vehicles parked in the neighborhood.

46. At 12:34 PM, the fire chief notified Lancaster County 911 of the explosion and indicated that two (2) UGI employees were buried in the rubble while the fire chief

was trying to account for the third UGI employee. At 12:38 PM, the fire chief transmitted to his firefighters that, "I don't believe UGI has the gas secure, that's what they were attempting to do, so we still have an active gas leak." The fire chief established a hazard zone of approximately 200 feet from 206 Springdale Lane.

47. At 12:39 PM, CMM2, who was at or near Springdale Lane, witnessed the explosion and notified the UGI dispatcher. The UGI dispatcher began UGI's emergency notification process by contacting key management personnel.

48. At 12:44 PM, CMM2 and emergency medical service ("EMS") personnel removed the Duty Supervisor and CMM1 from the hazard zone.

49. At 12:57 PM, the First Responder, who had not survived the explosion, was discovered after CMM2 called his cell phone.

50. At 12:59 PM, UGI's dispatcher contacted PPL Electric Utilities ("PPL"), the electric distribution company ("EDC") serving Springdale Lane, to request that electricity be shut off in the area.

51. At 1:00 PM, UGI notified I&E's Safety Division of the explosion.

52. At 1:06 PM, UGI shut off the valve located on Burr Oak Drive and Springdale Lane and waited for the remaining pressurized gas to dissipate out of the line.

53. At 1:08 PM, PPL shut off the electricity to Springdale Lane.

54. At 1:21 PM, the fire chief notified Lancaster County 911 to indicate his belief that there was no free-flowing gas in the street, meaning that the pressure in the main had decreased to zero (0).

55. At 1:50 PM, approximately one (1) hour and nineteen (19) minutes after the

explosion, UGI notified the National Response Center (“NRC”) of the incident.

56. At approximately 2:40 PM, UGI performed leak surveys in the surrounding buildings and around the cul-de-sac of Springdale Lane. The surveys showed negative readings inside the structures.

57. Post incident, the main was pressure tested in three sections at the end of the cul-de-sac, near 198 Springdale Lane. The results of the on-site pressure testing indicated that the mechanical tapping tee assembly was leaking gas at the connection of the tee to the main in front of 206 Springdale Lane. Laboratory testing of the tapping tee took place on August 7, 2017 in Washington, D.C. Two (2) of the four (4) nylon bolts on the tapping tee assembly were fractured consistent with tensile stress. Gas escaped through the interface of the main and the fitting interface (where the tapping tee met the main), and entered the soil surrounding the main. Gas was detected throughout the soil and in the sewer in the immediate area of the leak.

C. UGI’s Procedures

58. UGI failed to follow its written, internal procedures on July 2, 2017, in that the actions taken by UGI employees were not prioritized to protect life and property and eliminate hazards. Additionally, UGI’s procedures in place at the time of the explosion were deficient, especially in recognizing and managing an underground blowing gas situation. With the discovery of 98% gas-in-air over the tapping tee and 80% gas-in-air in the sewer, UGI’s procedures should have directed immediate closure of the closest valve. Moreover, UGI’s procedures should have directed UGI’s dispatch to promptly contact 911 to notify the local fire department.

59. UGI's emergency procedures can be found in UGI's Gas Operations Manual ("GOM")⁴ at Sections [REDACTED] [REDACTED], [REDACTED] and [REDACTED]. These Sections are appended to the Proprietary Version of I&E's Complaint as Exhibit 1.

60. With regard to Section [REDACTED], related to [REDACTED] [REDACTED], UGI's procedures at Subsection [REDACTED], which pertain to [REDACTED] [REDACTED], contain no instructions on gathering information on the strength or persistence of outside odors. Likewise, in Subsection [REDACTED], which [REDACTED] [REDACTED], the strength or persistence of an outside odor is absent from such criteria.

61. Subsection [REDACTED] of UGI's GOM Section [REDACTED] contains only [REDACTED] [REDACTED]. In Subsection [REDACTED], there is [REDACTED]. This instruction is vague as there is no clear criteria provided to indicate when UGI employees should call for assistance. For example, Subsection [REDACTED] [REDACTED] [REDACTED]. This Subsection depends on the employees' ability to assess and recognize that a situation is beyond their control. In Subsection [REDACTED], [REDACTED]

⁴ UGI's GOM is proprietary material. Therefore, the relevant portions of UGI's GOM as well as specific references to UGI's GOM have been redacted.

[REDACTED]

[REDACTED], but there are no conditions mandated by UGI where shutting off power is required. Moreover, nowhere in Subsection [REDACTED] does UGI instruct employees responding to an emergency to report back to the dispatcher with information such as confirming a leak, the severity of the leak and whether the leak is hazardous so that the dispatcher may notify additional personnel and gather additional resources. Likewise, UGI's procedures fail to require dispatchers to document the disposition of emergency calls.

62. Subsection [REDACTED] of UGI's GOM Section [REDACTED] relates to [REDACTED].

Subsection [REDACTED]

[REDACTED] This Subsection [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

63. With regard to UGI's GOM Section [REDACTED], relating to [REDACTED]

[REDACTED], Subsection [REDACTED] is [REDACTED] Absent in this

Subsection are any instructions detailing how, when and where situations are to be made safe.

64. Subsection [REDACTED] of UGI's GOM Section [REDACTED] relates to [REDACTED].

Subsection [REDACTED], but fails to

provide any follow-up actions for the responder. Subsection [REDACTED]

[REDACTED]

[REDACTED] Subsection [REDACTED]

[REDACTED] Subsection [REDACTED]

[REDACTED] The [REDACTED]
[REDACTED] procedures do not account for high gas readings outside, such as that in a
sewer manhole that could easily migrate inside.

65. Subsection [REDACTED] of UGI's GOM Section [REDACTED] pertains to [REDACTED]

[REDACTED] Subsection [REDACTED]
[REDACTED] UGI's procedures at Subsections [REDACTED]

[REDACTED] However, blowing gas *below ground* is not mentioned. Underground blowing gas is generally harder to detect since it often cannot be heard, felt or seen. UGI's procedures fail to provide any guidance or criteria to identify the signs of underground blowing gas. Subsection [REDACTED]

[REDACTED]
[REDACTED] This Subsection also [REDACTED]

[REDACTED]
However, UGI's procedures do not strongly precaution against or prohibit a squeeze off

for an underground blowing gas situation. Subsection [REDACTED]
[REDACTED]

[REDACTED]

[REDACTED] This procedure increases the likelihood of the operating personnel electing to perform a “squeeze off.” Subsection

[REDACTED]

66. Subsection [REDACTED], related to [REDACTED], does not [REDACTED]

[REDACTED] Once it is established that a hazardous situation exists, UGI’s procedure should refer to the immediate steps necessary to protect life and property. Instead, some actions within this Subsection [REDACTED]

[REDACTED]

[REDACTED] Nevertheless, Subsection [REDACTED]

[REDACTED]

[REDACTED] With respect to this incident, UGI personnel on site failed to evacuate residences in the immediate area of the leak.

67. With regard to UGI's GOM Section [REDACTED], related to [REDACTED], Subsection [REDACTED], which concerns [REDACTED]
[REDACTED]
[REDACTED]. [REDACTED]
[REDACTED]
[REDACTED] UGI's procedure fails to direct that the situation be made safe [REDACTED]

III. Violations

Counts 1 – 11

68. All allegations in paragraphs 1-67 are incorporated as if fully set forth herein.
UGI failed to follow its own procedures or failed to maintain adequate procedures directed towards the prioritization of protecting life and property, and eliminating hazards in that:

- (a) The First Responder entered and remained in a structure, 206 Springdale Lane, even after determining that the atmosphere inside the structure had an explosive level of natural gas with a reading of 11% natural gas;
- (b) The resident of 206 Springdale Lane was permitted to remain inside the residence despite an explosive level of natural gas and while the First Responder conducted an inside leak investigation;
- (c) The residents of 202 Springdale Lane were permitted to remain inside their home despite dangerous natural gas readings resulting in a hazardous condition;

- (d) UGI failed to prevent accidental ignition of gas as the resident of 206 Springdale Lane was permitted to start her vehicle and drive out of her garage on two occasions;
- (e) UGI did not contact PPL to turn off the electricity on the Springdale Lane cul-de-sac until well after the explosion despite the determination having been made of dangerous natural gas readings resulting in a hazardous condition;
- (f) UGI did not contact the local fire department for assistance until shortly prior to the explosion even though UGI detected 98% gas over the top of the tapping tee and 80% gas in the sewer manhole, which is twenty (20) times UGI's threshold of a hazardous leak;
- (g) UGI's on-call employees made multiple phone calls to each other while at the scene rather than allowing UGI's dispatch to notify additional personnel and gather additional resources, delaying their efforts to react to a hazardous condition;
- (h) UGI's primary focus was to repair the leak instead of properly reacting to the hazardous condition and shutting off the gas supply by first closing the valve;
- (i) The First Responder disassembled the meter set prior to the elimination of hazardous conditions;
- (j) The communication timeframe between UGI's Duty Supervisor and on-call engineer was too lengthy given the emergent circumstances; and
- (k) Some of UGI's on-call personnel did not respond to phone calls requesting their assistance at the scene.

These are violations of 49 CFR §§ 192.605(a) (requiring adherence to an operation, maintenance and emergency manual), 192.615 (pertaining to the contents of an

emergency plan and requiring adherence to that plan), and 52 Pa. Code § 59.33(b) (adopting the Federal pipeline safety laws and regulations as the minimum safety standards for NGDCs).

Count 12

69. All allegations in paragraphs 1-67 are incorporated as if fully set forth herein.

UGI's emergency procedures at Section [REDACTED] are inadequate in that they do not specifically require or address searching for a gas leak in basements or crawl spaces.

This is a violation of 49 CFR § 192.605(a) (requiring adherence to emergency plans that incorporate the factors in 49 CFR § 192.615) and 52 Pa. Code § 59.33(b) (adopting the Federal pipeline safety laws and regulations as the minimum safety standards for NGDCs).

Counts 13-18

70. All allegations in paragraphs 1-67 are incorporated as if fully set forth herein. UGI's procedures are deficient in that:

- (a) Section [REDACTED] is fragmented in that it [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Section [REDACTED] should have prohibited entry into a structure with extremely high gas readings in a nearby sewer manhole, as gas could have migrated into any structure on the street;

- (b) Procedures that would allow UGI employees to identify and react to an underground blowing gas situation are absent;
- (c) UGI's procedures do not strongly precaution against or prohibit a "squeeze off" for an underground blowing gas situation;
- (d) UGI's procedures discourage closing valves due to [REDACTED]
[REDACTED]
[REDACTED];
- (e) UGI's procedures include [REDACTED]
[REDACTED] without a caveat that such actions should be taken only after the risks to life and property have been mitigated; and
- (f) Section [REDACTED]
[REDACTED] without first directing that a situation be made safe or indicating that purging should only occur in the absence of an emergency.

This is a violation of 49 CFR §§ 192.13(c) (requiring maintenance of plans, procedures and programs that must be established under Federal pipeline safety regulations), 192.615(a)(5) (mandating that actions must be directed toward protecting people first and then property) and 52 Pa. Code § 59.33(b) (adopting the Federal pipeline safety laws and regulations as the minimum safety standards for NGDCs).

Count 19

71. All allegations in paragraphs 1-67 are incorporated as if fully set forth herein.

UGI's dispatcher failed to notify the NRC of the explosion at the earliest practicable moment.

This is a violation of 49 CFR §§ 192.605(a) (requiring adherence to an operation, maintenance and emergency manual), 191.5 (pertaining to immediate notice of certain incidents) and 52 Pa. Code § 59.33(b) (adopting the Federal pipeline safety laws and regulations as the minimum safety standards for NGDCs).

IV. Requested Relief

72. Due to the failure of UGI to properly react to the hazardous condition at hand, the resulting explosion and the loss of life, personal injury and damage to property, as set forth herein, I&E proposes that UGI pay a civil penalty of Two Hundred Nine Thousand, Two Dollars (\$209,002)⁵ for each of the nineteen (19) counts set forth in this Complaint for a total civil penalty of Three Million, Nine Hundred Seventy-One Thousand, Thirty-Eight Dollars (\$3,971,038). Given that this total civil penalty exceeds the statutory maximum set forth in 66 Pa.C.S. § 3301(c), I&E's requested total civil penalty for this incident is Two Million, Ninety Thousand, Twenty-Two Dollars (\$2,090,022).⁶

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

- (a) that UGI construct a training facility that permits the Company to qualify workers using the unified procedures followed by all UGI companies and contractors. The facility

⁵ This is the maximum "per violation" civil penalty as adjusted for inflation. *See* 82 Fed. Reg. 19325 (April 27, 2017).

⁶ This is the maximum civil penalty for a related series of violations. *Id.*

shall include a “leak city” and classrooms, and be designed for UGI personnel, contractors, emergency responders and the public;

- (b) that UGI provide and facilitate education programs with each fire department located in its service territory on the incident command system;
- (c) that UGI revise GOM [REDACTED] (pertaining to [REDACTED]) to incorporate the Manual of Standard Procedures – [REDACTED] based on Standard [REDACTED], which was issued on [REDACTED]. All UGI companies shall incorporate this procedure;
- (d) that UGI revise the procedure for [REDACTED] to require the immediate shut off of electricity by the applicable provider and the shutdown of gas supply by closing emergency or non-emergency valves;
- (e) that UGI revise its GOM procedures to indicate that if there is any percentage of LEL or gas concentrations in structures, UGI will perform the following: (i) evacuate all structures with detectable gas; (ii) shut off electricity; (iii) shut down the gas supply; and (iv) continue to monitor structures in the affected area until no gas is detected;
- (f) that UGI revise its GOM procedures to specify that gas meters should not be removed when leaking gas is detected until the situation is made safe;
- (g) that UGI revise its GOM procedures to include “make safe” requirements prior to placing emergency one call tickets;
- (h) that UGI revise its GOM procedures to maintain “on-call” personnel to be available at their designated shops twenty-four (24) hours a day, seven (7) days a week, year round;
- (i) that UGI revise its GOM procedures to have [REDACTED]


[REDACTED];

- (j) that UGI revise its GOM procedures to include valve identification with all grade “C” leaks in order to isolate gas flow;
- (k) that UGI prepare a detailed GOM procedure that establishes a safety perimeter during abnormal operating conditions;
- (l) that UGI train all of its employees on its new procedures;
- (m) within six (6) months of entry of a final Commission Order in this matter, that UGI provide a study, performed by an independent consultant, that evaluates plastic mechanical tapping tees used by UGI in its distribution system. The study should include: (i) torque requirements; (ii) cathodic protection requirements and life expectancy without cathodic protection; (iii) shell protection during fastening of the top and bottom shell; and (iv) proper installation techniques. The results of the study should be immediately reflected in UGI’s Distribution Integrity Management Plan (“DIMP”), incorporated into UGI’s GOM and provided to I&E’s Safety Division;
- (n) that UGI provide a plan to the I&E Safety Division to identify the locations of installed mechanical tapping tees; and
- (o) that UGI conduct quarterly leak surveys on all plastic mains that may contain plastic mechanical tapping tees and provide quarterly reports to the I&E Safety Division for a period of five (5) years.

74. I&E proposes that the Commission order such other remedy as the Commission may deem to be appropriate.

WHEREFORE, the Pennsylvania Public Utility Commission's Bureau of Investigation and Enforcement hereby requests that the Commission: (1) find Respondent to be in violation of the Pennsylvania Code and Code of Federal Regulations for each of the nineteen (19) counts set forth herein; (2) impose a cumulative civil penalty upon Respondent in the amount of Two Million, Ninety Thousand, Twenty-Two Dollars (\$2,090,022); (3) direct Respondent 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,


Stephanie M. Wimer
Senior Prosecutor
PA Attorney ID No. 207522

Timothy K. McHugh
Prosecutor
PA Attorney ID No. 317906

Michael L. Swindler
Deputy Chief Prosecutor
PA Attorney ID No. 43319

Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
P.O. Box 3265
Harrisburg, PA 17105-3265

Dated: October 4, 2018

EXHIBIT 1

(Redacted)

Pennsylvania Public Utility
Commission, Bureau of
Investigation and Enforcement,
Complainant

v.

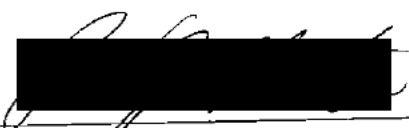
UGI Utilities, Inc.,
Respondent

Docket No. C-2018-

VERIFICATION

I, Paul J. Metro, Manager, Safety Division, Bureau of Investigation and Enforcement, 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: October 4, 2018



Paul J. Metro
Manager, Safety Division
Bureau of Investigation and Enforcement

Pennsylvania Public Utility :
Commission, Bureau of :
Investigation and Enforcement, :
Complainant :
 :
v. : Docket No. C-2018
 :
UGI Utilities, Inc., :
Respondent :


CERTIFICATE OF SERVICE

I hereby certify that I have this day served a true copy of the foregoing document upon the parties, listed below, in accordance with the requirements of 52 Pa. Code § 1.54 (relating to service by a party).

Service by First Class Mail and Email As Indicated:

Robert F. Beard, President
UGI Corporation
2525 North 12th Street
Suite 360
Reading, PA 19612-2677
(service by first class mail only)

Kent D. Murphy, Esq.
Senior Counsel
UGI Corporation
460 North Gulph Road
King of Prussia, PA 19406
murphyke@ugicorp.com


Stephanie M. Wimer
Senior Prosecutor
PA Attorney ID No. 207522

Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
P.O. Box 3265
Harrisburg, PA 17105-3265
(717) 772-8839
stwimer@pa.gov

Date: October 4, 2018

!

U.S. Department of Labor
Occupational Safety and Health Administration

Violation Worksheet

Print Date : 11/14/2017

| | |
|--------------------------|---------|
| Inspection Number | 1243884 |
| Opt. Insp. Number | |

| | | | | | |
|--------------------------------------|--|------------------------|---|--|------------------|
| Establishment Name | UGI Utilities, Inc. | | | | |
| DBA Name | | | | | |
| Type Of Violation | Serious | Citation Number | 1 | Item/Group | 1 / |
| Number Exposed | 3 | No. Instances | 1 | REC | FAT/CAT/Accident |
| Special Enforcement? | | | | Employer's Relationship to Hazard | All |
| Standard | OSH ACT of 1970 Section (5)(a)(1) | | | | |
| Substance Codes | | | | Photo/Video Number | |
| Alleged Violation Description | <p>OSH ACT of 1970 Section (5)(a)(1): The employer did not furnish employment and a place of employment which were free from recognized hazards that were causing or likely to cause death or serious physical harm to employees in that employees were exposed to fire and explosion hazards from natural gas:</p> <p>(a) 206 Springdale Lane, Millersville, PA: The employer's gas operation procedures in response to natural gas leaks were not adequate to prevent loss of life. The employers procedures failed to provide employees clear and concise methods to control and render a natural gas leak safe.</p> <p>Abatement certification required within 10 days after abatement date. The certification shall include a statement that abatement is complete, date and method of abatement, and states employees and their representatives were informed of this abatement.</p> | | | | |
| Recommended Abatement Action | <p>ABATEMENT NOTE: Among other feasible and acceptable methods to correct these hazards includes following:</p> <p>Revise the company Gas Operations Manual to comply with the following procedures in accordance with 49 CFR 192.615 and 52 PA Code 59.33 to include:</p> <ol style="list-style-type: none"> 1) pressurized subsurface gas leaks. 2) support to on scene responders with evacuation. 3) when to use shut-off valve versus alternate methods when isolating a gas leak or reducing gas volume. 4) when to request electrical service be disconnected to an area of an uncontrolled leak. 5) when to evacuate area when an explosive range is found and there are uncontrolled ignition sources. | | | | |

Penalty

| | |
|-----------------|------|
| Severity | High |
|-----------------|------|

| | | | |
|--|---|-------------------------|----------|
| Severity Justification | Working in and around explosive levels of natural gas can cause lead to fire and explosions resulting in death. | | |
| Probability | Greater | | |
| Probability Justification | An explosion occurred leading to the death of an employee | | |
| Gravity | High | Size | 0% |
| Gravity based Penalty | 12675.00 | Good Faith | 0% |
| Num Times Repeated | | History | 0% |
| Multiplier | 1 | Quick Fix | 0% |
| Calculated Penalty | 12675.00 | Proposed Penalty | 12675.00 |
| Proposed Penalty Justification: | | | |

Abatement Details

| | | | |
|--|-------------|-------------------------|--|
| Days to Abate | 30 Wkg Days | Abatement Status | |
| User-entered Abatement Due Date | | Date Abated | |
| Abatement Documentation Required? | Yes | Date Verified | |
| Abatement Completed Description: | | | |

MultiStep Abatement

| Type/Other Type | Days to abate | User entered Abatement Due Date | Completed(status) | Verify Date |
|-----------------|---------------|---------------------------------|-------------------|-------------|
| | | | | |

Employee Exposure

| Exposure Instance | No. Exposed | Employer | Name and Address Telephone Numbers | Duration | Frequency | Proximity |
|-------------------|-------------|---------------------|------------------------------------|----------|-----------|----------------------------|
| a | 2 | UGI Utilities, Inc. | (b) (7)(C) & (b) (7)(D) | | As needed | working at active gas leak |
| | | UGI Utilities, Inc. | | | | |
| a | 3 | UGI Utilities, Inc. | | | As needed | Working in close proximity |

J

**PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265**

Public Meeting held February 5, 2009

Commissioners Present:

James H. Cawley, Chairman
Tyrone J. Christy, Vice Chairman
Robert F. Powelson, Statement attached
Kim Pizzingrilli
Wayne E. Gardner

Pennsylvania Public Utility Commission
Law Bureau Prosecutory Staff

C-20066664

v.

UGI Utilities, Inc.

OPINION AND ORDER

BY THE COMMISSION:

Before the Commission for consideration and disposition is a Joint Settlement Agreement (Settlement) filed on September 4, 2008, by UGI Utilities, Inc. (UGI or the Company) and the Commission's Law Bureau Prosecutory Staff (Prosecutory Staff).

History of the Proceeding

On Friday, March 26, 2004, at approximately 7:48 PM, UGI received an emergency telephone call from a male resident at 403 South Queen Street in Lancaster, Pennsylvania reporting a gas leak in the basement. A UGI call center employee told the resident to evacuate the premises, forwarded the information to the UGI dispatcher who dispatched a UGI serviceman to the location. Consistent with its existing policy, UGI did not call a 911 center to report the call.

A UGI serviceman arrived at 403 South Queen Street at approximately 8:09 PM, told the resident to evacuate the premises and entered the house with his leak detection device, a combustible gas instrument, two flashlights, his cell phone and some other tools. After entering the home and taking gas readings the serviceman entered the basement to view the meter set. While the serviceman was in the basement a gas explosion occurred. Although the gas explosion did not cause a subsequent fire or injure any other parties, portions of the basement were scorched and the UGI serviceman sustained burns to his hands and face. The UGI serviceman was subsequently taken to the hospital for treatment and recovered from his injuries.

At approximately 8:23 PM, a Lancaster 911 center dispatcher telephoned UGI's publicized emergency 800 number to report the explosion. After attempting to contact the UGI serviceman, UGI dispatched a second investigator to the location. The second serviceman arrived between 8:35 and 8:40 PM. After checking adjacent buildings for gas, the second serviceman located the bricked-over curb shut-off valve, removed the bricks and turned off the gas at approximately 8:55 PM. A full UGI work crew arrived at the scene shortly after the second UGI serviceman. Approximately one hour and twenty minutes after the explosion the UGI Claims Manager informed the UGI dispatcher that he was on his way to the location. Settlement at 3-5.

The Law Bureau Prosecutory Staff filed a Formal Complaint (Complaint) against UGI on August 7, 2006, pertaining to the explosion described above. On August 28, 2006, UGI filed an Answer admitting most of the factual allegations in the Complaint but contesting any violation of Federal or State gas safety rules or regulations had occurred.

By Opinion and Order adopted on December 4, 2008, the Commission issued the Settlement for comment. No comments were filed

Discussion

Prosecutory Staff initiated a Formal Investigation of the incident to review the Company's actions and business practices in relation to the incident. The Formal Investigation was conducted pursuant to Subsection 331(a) of the Public Utility Code (Code), 66 Pa. C.S. § 331(a), and Section 3.113 of the Commission's Rules of Practice and Procedure (Regulations), 52 Pa. Code § 3.113.

Had this matter been litigated, Prosecutory Staff may have alleged that UGI committed the following acts or omissions in its treatment of the incident:

(a) UGI failed to classify the emergency as one that would require a 911 center to be called immediately once the Company was notified that escaping gas was occurring inside a residence. If proven this is a violation of 49 C.F.R. § 192.605(a) with reference to §§ 192.615(a)(i), (a)(8), and 52 Pa. Code § 59.33.

(b) UGI failed to respond promptly and to immediately dispatch sufficient personnel once notified by the 911 center that there had been an explosion. If proven this is a violation of 49 C.F.R. § 192.605(a) with reference to §§ 192.615(a)(3)(iii), (a)(4), and 52 Pa. Code § 59.33.

(c) UGI failed to provide intrinsically safe equipment and protective clothing to properly protect the serviceman. If proven this is a violation of 52 Pa. Code § 59.33.

(d) UGI did not notify or plan responses with the 911 center as evidenced by the fact that the 911 center dispatcher had to call UGI's general emergency number rather than a direct line to the UGI dispatcher. If proven this is a violation of 49 C.F.R. § 192.605(a) with reference to §§ 192.615(a)(8) and (c) and 52 Pa. Code § 59.33.

(e) UGI's dispatching procedures during an emergency consisted of a list of contacts to call rather than detailed emergency response dispatching procedures as evidenced by the lack of regimented communication to essential personnel. Prosecutory Staff would have asserted that UGI's emergency procedures appear to be written for normal hours of operations and assuming personnel are always available. If proven this is a violation of 49 C.F.R. § 192.605(a) with reference to §§ 192.615 and 52 Pa. Code § 59.33.

Settlement at 5-7.

Following the Complaint and Answer to the Complaint, the Parties, in accordance with 52 Pa. Code § 3.113(b)(3), entered into discussions regarding settling the matter without the need for an on-the-record proceeding. Those discussions resulted in the proposed Settlement. The Parties aver that the proposed Settlement is in the public interest and request Commission approval of the Settlement. The proposed terms of the Settlement are set forth below. Pursuant to our Regulations at 52 Pa. Code § 5.231, it is the Commission's policy to promote settlements. However, the Commission must review proposed settlements to determine whether the terms are in the public interest. *Pa. PUC v. Philadelphia Gas Works*, M-00031768 (January 7, 2004).

Terms of the Settlement Agreement

The Settlement provides that:

(a) UGI has agreed to pay to the Commission, by certified check, a civil penalty in the amount of \$5,000.00 within twenty (20) days of the date of the Commission's order approving the agreement. In addition, UGI shall not claim or include any portion of this amount in any future rate proceeding.

(b) UGI will replace the existing cell phones used by non-supervisory emergency responders (approximately 300) with intrinsically safe cell phones over a three-year phase-in period in equal installments. In each year of the phase-in period UGI shall replace one-third of the cell phones used by non-supervisory emergency responders during the first ninety days of each year. The cost of the cell phones is approximately \$90,000 and the Company shall not claim or include any portion of the first \$90,000 it spends on intrinsically safe cell phones pursuant to this Agreement in any future rate proceeding.

(c) UGI will offer and provide gas safety education programs to fourth and fifth graders in elementary and middle schools in its service territory using material published by the National Energy Foundation or other comparable entity at an estimated cost of \$25,000. UGI will provide Commission personnel the opportunity to participate in these presentations.

(d) UGI will adopt the revised dispatching procedures for emergencies attached in Appendix D of the Agreement.

(e) UGI will continue to train all UGI emergency responders on an annual basis using Operator Qualification tests.

(f) UGI will continue to roll-out its Field Level Asset Management Environment (FLAME) system that,

among other things, provides UGI field employees with maps of valve locations.

(g) UGI will conduct a review of the equipment it issues to emergency responders for use in potential gas leak investigations to confirm the equipment is intrinsically safe, and will submit a report of its review to the Commission within 60 days of the signing of the Agreement.

(h) UGI will complete the distribution of a flyer it has developed addressing gas emergency response issues to all 911 centers within its service territory.

(i) UGI has scheduled meetings with all 911 centers in its service territory to discuss emergency procedures and has, and will, continue to notify Commission gas safety personnel of the dates of the scheduled meetings.

(j) UGI has recently submitted a pipeline awareness plan to the Commission that details the extensive gas safety awareness activities UGI conducts, and is willing to consider any staff recommendation concerning how those activities may be improved.

Settlement at 9-11.

The factors and standards for evaluating litigated and settled proceedings involving violations of the Code and the Commission's Regulations are delineated in the Policy Statement found at 52 Pa. Code § 69.1201. We are reminded that the Policy Statement is only a guide and that the parties in settled cases should be afforded flexibility in reaching amicable resolutions to complaints and other matters so long as the settlement is in the public interest. 52 Pa. Code § 69.1201(2). The factors and standards that will be considered include the following: (1) whether the conduct at issue was of a serious nature; (2) whether the regulated entity made efforts to modify internal practices and procedures to address the conduct at issue and prevent similar conduct in the future; (3) the number of customers affected and the duration of the violation; (4) the compliance

history of the regulated entity which committed the violation; (5) whether the regulated entity cooperated with the Commission's investigation; and, (6) other relevant factors.

Since the Settlement was primarily negotiated under the previous *Rosi* standards, we will discuss the facts of the Settlement as they pertain to the Policy Statement.

The first criteria are whether the conduct and the consequences of the conduct are serious. When the conduct is of a serious nature, such as willful fraud or misrepresentation, the conduct may warrant a higher penalty. When the conduct is less egregious, such as errors in administrative filings or other technical errors, it may warrant a lower penalty. The conduct at issue is of the most serious nature as it deals with public safety. While no lives were lost in this case the potential for catastrophic loss and injury was extremely high. The agreed upon corrective actions would result in a preliminary cost to UGI of \$120,000, of which the civil penalty of \$5,000 represents a minor part.

Next, we examine UGI's efforts to modify internal practices and procedures to address the conduct at issue and prevent similar conduct in the future. As a result of the March 26, 2004 explosion, UGI undertook gas safety education programs in local schools, revised its dispatching procedures for emergencies, reviewed the equipment it issues to emergency responders, addressed emergency response issues with all 911 centers, revised its awareness planning and reviewed its field mapping system in order to provide current valve locations to emergency responders. These actions, we feel, will greatly enhance UGI's future response emergency response capabilities.

The number of customers affected by this incident was only one, however, the potential for far greater damage was present.

UGI's compliance history and cooperation with the Commission's investigations is considered very favorable.

The size of UGI would warrant a considerable penalty in order to deter future violations. While \$5,000 is not considered substantial, coupled with the expense of the overall corrective actions to be accomplished of over \$120,000, the net effect of the Settlement is substantial. Not only does UGI bear the expense of these actions, but, the corresponding improvement in emergency response should greatly improve the overall gas safety environment in the communities it serves.

Conclusion

As noted, it is the Commission's policy to promote settlements. 52 Pa. Code § 5.231. The Parties herein have provided the Commission with sufficient information upon which to thoroughly consider the terms of the instant Settlement Agreement. We feel that the Settlement Agreement effectively addresses the issues which arose during the course of the investigation and avoids the expense of litigation and possibility of appeals. Accordingly, we find that the proposed Settlement Agreement is in the public interest and merits approval; **THEREFORE,**

IT IS ORDERED:

1. That the Joint Settlement Agreement entered into between UGI Utilities, Inc. and the Pennsylvania Public Utility Commission's Law Bureau Prosecutory Staff, filed on September 4, 2008, is approved.

2. That within twenty (20) days from the entry date of this Opinion and Order, UGI shall pay a civil penalty of \$5,000 by check or money order made payable to:

Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, Pa. 17120

3. That a copy of this Opinion and Order shall be served on the Office of Consumer Advocate, the Office of Small Business Advocate, and the Public Utility Commission's Bureau of Administrative Services Fiscal Division.

4. That upon payment of the civil penalty, the Secretary of the Commission shall mark this proceeding closed.

BY THE COMMISSION,

James J. McNulty
Secretary

(SEAL)

ORDER ADOPTED: February 5, 2009

ORDER ENTERED: February 6, 2009

K

**PENNSYLVANIA PUBLIC UTILITY COMMISSION
HARRISBURG, PENNSYLVANIA 17120**

Pennsylvania Public Utility Commission,
Bureau of Investigation and Enforcement v.
UGI Utilities, Inc.

Public Meeting January 24, 2013
2308997-OSA
Docket No. C-2012-2308997

**JOINT MOTION OF
CHAIRMAN ROBERT F. POWELSON
AND VICE CHAIRMAN JOHN F. COLEMAN, JR.**

Before the Commission today for disposition is a Formal Complaint filed by the Commission's Bureau of Investigation and Enforcement (I&E) against UGI Utilities, Inc. – Gas Division (UGI or Company) related to the tragic natural gas explosion that occurred February 9, 2011 in Allentown. Also pending before the Commission in this matter are the Exceptions, Petition for Remand and Request for Oral Argument filed by Manuel Cruz, an Intervenor.

By way of background, I&E filed a Complaint with the Commission on June 11, 2012, following an extensive investigation into the causes of the February 9, 2011 explosion. I&E and UGI subsequently entered into settlement discussions, which culminated in a Settlement being filed with the Commission on October 3, 2012. According to the terms of the Settlement, the parties agree that:

- A. UGI¹ shall retire or replace all in-service cast iron mains over a 14-year period²;
- B. UGI shall retire or replace all in-service bare steel mains over a 30-year period;
- C. UGI shall enhance its odorant testing program;
- D. UGI shall install, over a 24-month period, fixed odorant level monitoring equipment at all third-party points of delivery into the UGI pipeline system;
- E. UGI shall install, over a 24-month period, fixed odorizers at gate stations serving Allentown, Lancaster, Reading, Harrisburg and certain other major population centers throughout its service territory;
- F. UGI shall pay a civil penalty in the amount of \$386,000, which it will not recover through Commission-regulated rates;
- G. UGI shall be prohibited from seeking recovery of any costs through a distribution system improvement charge for a period of 24 months.

As an initial matter, we want to emphasize that UGI's compliance history related to gas safety issues is patently unacceptable. This is the eighth time in slightly more than four years

¹ It should be noted that two UGI-affiliated natural gas distribution utilities, UGI Central Penn Gas, Inc. and UGI Penn Natural Gas, Inc., agreed to be bound by the terms of the settlement. For purposes of the description of the settlement, the term "UGI" refers to all three UGI distribution companies.

² This represents a 36-year, or 72%, increase over the current pace of replacement of cast iron mains.

that this Commission has adjudicated a matter containing allegations of gas safety violations by a UGI-owned gas distribution utility. This goes beyond cause for concern; it is downright alarming. This history leads to one inescapable conclusion: that UGI's management has failed to adequately focus on gas safety issues. These failures include not allocating an appropriate amount of capital to maintain its distribution systems in a safe and reliable manner and not providing an appropriate amount of training for, and oversight over, its employees and contractors. To be blunt, this cannot and shall not continue. Absent sweeping changes, the Commission will be forced to consider taking drastic steps if there is another catastrophic incident attributable to some failure on UGI's part. We acknowledge, however, that UGI has already made key management changes, and our expectation is that the corporate culture will be reformed with an emphasis on safety.

After reviewing the terms and conditions of the Settlement in the context of this compliance history, we grudgingly agree that the agreement struck by the parties is in the public interest, with the following modifications:

First, the \$386,000 civil penalty agreed to is not sufficient given the catastrophic losses caused by the explosion. While no amount of money could ever atone for the lives lost or property destroyed, UGI must pay the maximum penalty this Commission is allowed to levy under the Public Utility Code,³ \$500,000.⁴ Just as with the civil penalty amount included in the Settlement, UGI shall not recover this increased penalty through Commission-regulated rates.

Second, while UGI has agreed to undertake extensive steps to improve the physical integrity of its distribution system, these measures should be supplemented by enhanced leak detection processes to further minimize the risk of another catastrophic event. To that end, UGI shall explore enhanced leak detection measures and file a pilot program to utilize one or more of those enhanced leak detection measures throughout the City of Allentown. This filing shall be made within 45 days of a Final Order, after which interested parties shall be given the opportunity to provide comments. The Commission shall consider any comments and approve, modify or reject the pilot program within 60 days of its filing.

Third, UGI is directed to file an appropriate Distribution Integrity Management Program (DIMP) plan to account for any replacement reprioritization that needs to occur as a result of the accelerated replacement schedules approved today. This filing must be made within 30 days of a Final Order and will be subject to an audit by the Commission's Pipeline Safety Division.⁵

Fourth, we note that the staff recommendation imposed various reporting requirements to allow the Commission to effectively track UGI's progress in meeting the conditions agreed to in the Settlement. One of these reporting requirements includes the filing of a biennial report notifying the Commission of the Company's progress in meeting its main-replacement commitments. To allow for increased benchmarking, and as a supplement to this reporting

³ 66 Pa. C.S. § 3301(c).

⁴ We note that the Legislature recently increased the allowable civil penalties the Commission can impose under Section 3301(c), to \$2,000,000. However, the Commission is bound by the maximum allowed civil penalty in place at the time of the explosion, which is \$500,000. See *Costa v. Lair*, 363 A.2d 1313 (Pa. Super Ct. 1976).


⁵ This requirement shall also be applied to UGI Central Penn Gas, Inc. and UGI Penn Natural Gas, Inc.

requirement, UGI is directed to file a plan with the Commission within 60 days of a Final Order establishing an initial time schedule for meeting the main replacement requirements agreed to in the Settlement.⁶ Understanding that UGI needs to retain some measure of flexibility, the Company shall be permitted to amend this schedule for good cause but is cautioned that it should employ a reasonably continuous and steady construction schedule to meet its obligations.

Lastly, UGI is reminded that the Settlement approved today does not absolve it from compliance with any independent state or Federal pipeline safety requirements, such as those contained in its DIMP plan. Simply put, the replacement schedules approved today are the floor, not the ceiling.

THEREFORE, WE MOVE THAT:

1. UGI Utilities, Inc. – Gas Division pay a civil penalty of \$500,000;
2. UGI Utilities, Inc. – Gas Division file a pilot program designed to test enhanced leak detection measures in the City of Allentown within 45 days of entry of a Final Order, or of the Tentative Order becoming final by operation of law;
3. Interested parties file comments on the pilot leak detection program within 20 days of its filing and the Commission approve, modify or reject this pilot program within 60 days of its filing;
4. UGI Utilities, Inc. – Gas Division, UGI Central Penn Gas, Inc. and UGI Penn Natural Gas, Inc. file updated Distribution Integrity Management Program plans within 30 days of the entry of a Final Order, or of the Tentative Order becoming final by operation of law;
5. UGI Utilities, Inc. – Gas Division, UGI Central Penn Gas, Inc. and UGI Penn Natural Gas, Inc. file a plan establishing an initial time schedule for meeting the main replacement requirements agreed to in the settlement within 60 days of entry of a Final Order, or of the Tentative Order becoming final by operation of law;
6. The Parties to the Settlement notify the Commission within five business days whether they accept the additional terms imposed by this Motion;
7. The Tentative Order be considered a Final Order in the event that neither of the settling Parties objects to these modifications;
8. If either settling Party objects to the additional terms imposed herein, the Initial Decision be reversed and this matter be remanded to the Office of Administrative Law Judge for such further proceedings as may be necessary; and
9. The Office of Special Assistants prepare a Tentative Order consistent with this Motion.


ROBERT F. POWELSON
CHAIRMAN


JOHN F. COLEMAN, JR.
VICE CHAIRMAN

DATE: January 24, 2013

⁶ This requirement shall also be applied to UGI Central Penn Gas, Inc. and UGI Penn Natural Gas, Inc.

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**BEFORE THE
PENNSYLVANIA PUBLIC UTILITY COMMISSION**

Pennsylvania Public Utility Commission,
Bureau of Investigation and Enforcement

v.

UGI Utilities, Inc.

:
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:
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:
:

C-2012-2295974

INITIAL DECISION
APPROVING JOINT SETTLEMENT PETITION
RESOLVING ALL ISSUES AMONG ALL PARTIES

Before
Kandace F. Melillo
Administrative Law Judge

HISTORY OF THE PROCEEDINGS

On March 30, 2012, the Pennsylvania Public Utility Commission's (Commission's) Bureau of Investigation and Enforcement (I&E) filed a Formal Complaint with the Commission against UGI Utilities, Inc. (UGI). The Complaint concerns a natural gas explosion that occurred on October 31, 2011, in Millersville, PA, and caused property damage but no injuries or fatalities. The Complaint alleged that UGI supplied natural gas service to the area involved in the explosion.

According to the Complaint, the natural gas explosion occurred at approximately 1:30 p.m. and damaged a two-story brick house beyond repair. The front wall of the house was blown off leaving the inside rooms visible. A neighboring business at 10A Manor Avenue also sustained some damage but was still standing. Total property damage was estimated at \$425,000, with an additional \$30,000 in associated damages. The Complaint set forth a detailed chronology of events before and after the explosion occurred.

The Complaint asserted that the precipitating cause of the explosion was that a third-party contractor ruptured an eight-inch UGI plastic gas main operating at 42 (psig) at the intersection of Manor Avenue and Shertzer Lane in Millersville, PA. However, according to the Complaint, UGI failed to properly mark its underground facilities and to have procedures in place to locate lines, to have appropriate measures in place to address damage prevention, to timely inspect a shut-off valve, and to shut down the gas line in a timely manner, all of which either contributed to or caused the resultant explosion.

The Complaint alleged that UGI violated the Public Utility Code, Commission regulations and federal regulations multiple times as follows:

1. Count One - UGI did not follow its own Gas Operation Manual (GOM) procedures at GOM 60.40.30 "Response to One Call Requests," which states that "Locate requests for excavation activities should be done by either physical marking of facilities within 18 inches, by exposing facilities, or by making direct contact with the excavator to ensure a UGI employee is on site at the time of excavation" in that UGI mismarked the damaged eight inch plastic main by approximately forty (40) inches, violating 49 C.F.R §§192.605(a) and 52 Pa. Code §59.33.
2. Count Two - UGI's procedures are inadequate in that there are no procedures for locating lines when there are no facility maps or records; there is equipment/material failure; facility records/maps are incorrect; there is a loss of signal or inability to locate a facility; and/or there is a conflict between locate signal and mapping records; and UGI's Operator Qualification plan does not identify these situations as abnormal operating conditions, violating 49 C.F.R. §§192.605(a) and 52 Pa. Code §59.33.
3. Count Three - UGI's current Substructure Damage Plan does not adequately address damage prevention and response to damage in that UGI's Substructure Damage Plan is not prescriptive on the actions to take when, as in this case, horizontal directional drilling, which is a high threat to gas mains and needs to be treated as such, was being used for drilling at approximately the same depth as UGI's gas main, violating 49 C.F.R. §§192.614(c)(6)(i) and 52 Pa. Code §59.33.
4. Counts Four – Twenty - UGI failed to comply with its own "Manual Service Procedures" (section 6.2.3), in that the Company failed to inspect Valve 300816 on an annual basis and had not inspected this valve since May 2, 1994 even though this valve is an emergency valve. Valve 300816, was closed during the emergency and was not inspected since May 2, 1994. According to UGI MSP 6.2.3 (Manual of Service Procedures), it is an emergency valve based on

size and pressure. However, it was not on any inspection cycle and should have been inspected at least once each calendar year. Each separate failure to annually inspect, from January 1, 1995 to October 31, 2011, constitutes a separate count and a violation of 49 C.F.R. §192.747(a) and 52 Pa. Code §59.33.

5. Counts Twenty One – Twenty Four - UGI failed to follow their procedures of GOM 60.50.30 section 4.10.6 which states, “The flow of gas to the leak area shall be stopped when necessary. When necessary, appropriate in-line valves shall be identified by using mapping and valve reports and be physically located for prompt shutdown,” in that UGI did not complete its shut off of two separate valves for over three hours after it was notified of the leak. The failure to shut off each valve constitutes a separate count in violation of 49 C.F.R. §192.605(a) and 52 Pa. Code §59.33.

6. Count Twenty Five - UGI violated its procedure GOM 60.40.40 section 5.6, which states, “Additional inspection should be considered for one-way feeds, extraordinary excavation, cast iron exposure, and directional drilling activities. When visiting a job site, ensure that gas facilities are being spotted during directional drilling activities near company facilities,” in that UGI failed to adequately inspect the job site, relied on the contractor to follow proper protocols to protect its facilities, and did not ensure the contractor had “spotted” its facility according to UGI procedures, violating 49 C.F.R. §192.605(a) and 52 Pa. Code §59.33.

7. Count Twenty Six - UGI did not have emergency valves spaced close enough to reduce the time to facilitate an emergency shutdown in that the valves that were close enough to shut off were not emergency valves and there was not another valve in the immediate area that would isolate the damaged section, violating 49 C.F.R. §192.181(a) and 52 Pa. Code §59.33.

The Complaint requested that the Commission impose a civil penalty on UGI and direct UGI to take remedial actions as follows:

1. Direct UGI to pay a civil penalty of at least \$260,000.00.
2. Direct UGI to modify its procedures to include procedures for the locator to follow in situations where there is/are: (a) no facility maps or records; (b) equipment/material failure; (c) incorrect facility records/maps; (d) loss of signal or not being able to locate a facility; (e) conflict between locate signal and mapping records; and, (f) other situations the operator deems important.
3. Direct UGI to immediately retrain all personnel who are qualified to locate across all UGI locations on the new procedure.

4. Direct UGI to modify its damage prevention program to prescribe additional precautionary measures to take when there is a high likelihood of damage to its facilities such as from horizontal directional drilling. These measures shall include but not be limited to the following:

(a) Taking precautionary steps to identify shut off valves whenever horizontal directional drilling is performed near its facilities. Furthermore, UGI shall identify valves prior to third parties horizontal directional drilling near its facilities. UGI shall be on site and ensure their main is exposed when a third party is horizontal directional drilling near its facilities if UGI does not have valves to isolate a potential damage or if the use of valves would create too large a customer outage.

(b) Inspecting and maintaining documentation to show that all contractors directional drilling beneath their facilities were inspected for potholing before drilling occurred.

5. Direct UGI to modify it[s] procedures to minimize the risk posed to its workers monitoring for leaks near buildings with gas at or above the lower explosive limit, and to develop procedures to recognize and react to uncontrollable leak situations to protect people first then property.

6. Direct UGI to modify its emergency plans to include guidelines for its engineers and front line supervisors to decide when valves, squeeze offs or a combination of these is the most preferred method to effectively shut down or isolate a section of pipeline.

7. Direct UGI to institute a backup form of communication for cell phones.

8. Direct UGI to meet with PPL representatives quarterly to ensure that the emergency contact information for PPL is correct.

9. Grant such further relief as is just and reasonable.

UGI filed an Answer on or about April 23, 2012. The Answer admitted or did not deny that a natural gas explosion occurred at 1:30 p.m. on October 31, 2011, at 10 Manor Avenue, in Millersville, PA, that a two-story brick house was damaged beyond repair, and that an adjacent building at 10A Manor Avenue was damaged. In addition, the Answer averred that the actions of a third party, Walker Directional Drilling (Walker), caused the explosion in that Walker, a subcontractor to Focus Fiber Solutions (FFS), operating without UGI's knowledge and in gross violation of applicable one-call statutory requirements and appropriate safety standards, struck UGI's facilities while directionally boring for installation of telecommunications facilities.

The Answer addressed the above-mentioned counts of I&E's Complaint, but asserted that none of the actions alleged to constitute violations and none of the suggested improvements sought by I&E in the prayer for relief would have prevented the explosion. It averred that the Company had cooperated fully with Commission personnel and other authorities in investigating this incident, and that it was unfair for I&E to seek large civil penalties for inadvertent, unrelated violations of gas safety standards discovered in the course of an investigation of a gas explosion caused by others. It asserted that new safety standards should be adopted on an industry-wide basis rather than in litigation involving only one natural gas distribution company (NGDC).

The Answer specifically addressed the counts in I&E's Complaint as follows:

1. As to Count One, UGI admitted that it had responded to FFS's earlier one-call locate requests by marking its facilities and that these markings were twenty-two inches beyond the tolerance zone established for valid one-call locates, but denied that these markings violated the provisions of the PA ONE CALL ACT or UGI's GOM procedures at 60.40.30. It further denied that a proper one-call request had been issued for the excavation performed by Walker on the day in question, thereby triggering UGI's responsibility to make one-call markings under 73 P.S. §177 and to comply with the related GOM obligations. It denied that UGI's markings had any effect on Walker's actions or contributed to the explosion. It denied that its actions in any way violated 49 C.F.R. §192.605(a).
2. As to Count Two, UGI admitted that its current Substructure Damage Plan does not address certain contingencies and that its Operator Qualification plan does not identify these situations as abnormal operating conditions. However, UGI denied that there is any federal or state requirement for such contingencies to be addressed in these documents, or that the Commission had previously requested that such language be added. In addition, the Company denied that the absence of such language violated 49 C.F.R. §192.605(a).
3. As to Count Three, UGI denied that its Substructure Damage Plan was deficient because it does not address specific prescriptive actions to be taken in advance of certain hazardous activities, such as directional drilling, or that such language would have been relevant to the situation since UGI was unaware of the directional drilling. UGI further denied that the absence of such language in any way violated 49 C.F.R. §192.614(c)(6)(i).

4. As to Counts Four – Twenty, UGI admitted that it inadvertently failed to return deadhead valve #300816 to its five-year inspection list when it was reconnected to UGI's distribution system, but only missed one five-year inspection cycle in 2003, which played no role in the explosion. It denied that there was any annual inspection requirement with respect to this valve, or that each valve on UGI's distribution system was required for safe operations.

5. As to Counts Twenty One – Twenty Four, UGI denied that its field supervisor's decision to isolate the flow of gas from the south by squeezing off the distribution line violated UGI GOM 60.50.30, section 4.10.6, or that it was otherwise required to only isolate gas leaks by turning valves. The Company further denied that it acted unreasonably in shutting off the flow of gas within three hours, or that the explosion would have been prevented by electing to restrict the gas flow by turning valves. It denied that its actions in any way violated 49 C.F.R. §192.605(a).

6. As to Count Twenty Five, UGI denied that it violated GOM 60.40.40, section 5.6, addressing the spotting of facilities when inspecting job sites, since UGI had no advance notice of and was unaware of Walker's directional drilling activities, and hence could not have performed inspections or verified the spotting of utility facilities. UGI further denied that it in any way violated 49 C.F.R. §192.605(a).

7. As to Count Twenty Six, UGI denied that it improperly spaced the valves on its system, that it was required to have "emergency" valves nearby in lieu of other operable valves to shut off the flow of gas, or that it was required to isolate the leak area only by using valves. UGI further denied that the placement of its valves violated 49 C.F.R. §192.181(a).

By Notice dated January 4, 2013, the Commission scheduled an Initial Prehearing Conference for this matter on Thursday, February 21, 2013, at 10:00 a.m. in Hearing Room 3, Commonwealth Keystone Building in Harrisburg and assigned the matter to me. I issued a Prehearing Conference Order on January 4, 2013, setting forth the procedural matters to be addressed at the Prehearing Conference.

The Prehearing Conference convened as scheduled on Thursday, February 21, 2013. Present were counsel for I&E and UGI. During the Prehearing Conference, I inquired as to whether any party was aware of any petitions to intervene as I had received no such petitions and did not find any in Commission records. No party was aware of any petitions to intervene, and I therefore concluded that no petitions had been filed. Tr. 4-5.

The parties also confirmed at the Prehearing Conference that a settlement had been achieved as to all issues. Upon inquiry, it was agreed that the settlement documents could be filed and provided to me no later than close of business on Wednesday, February 27, 2013. Accordingly, I issued an Order Providing For Settlement Procedures, dated February 22, 2013, which required the filing and serving of the settlement documents by that date.

On February 26, 2013, UGI filed a Joint Settlement Petition Resolving All Issues Among All Parties (Joint Petition or Settlement), with attachments, which was joined in by UGI and I&E. I had some questions about the Joint Petition and emailed these questions to the parties on February 28, 2013. On March 1, 2013, I received a response from UGI. The record closed on March 5, 2013, for decision writing.

For the reasons set forth below, I recommend that the Commission approve the Settlement as being in the public interest and consistent with the Commission's Statement of Policy for evaluating civil penalties in settled proceedings involving violations of the Public Utility Code (Code) at 52 Pa. Code §69.1201.

FINDINGS OF FACT

In the Joint Petition, the parties agreed to the following findings of fact as background information for the Settlement. While Paragraph 41 of the Settlement reserves UGI's right to dispute all issues of fact, UGI clarified in response to my inquiry that this reservation was with respect to a waiver of rights in other unrelated civil or administrative proceedings. I note that an identical Settlement provision to Paragraph 41 was approved in Pa. P.U.C., I&E v. UGI Utilities, Inc., Docket No. C-2012-2308997, Order entered February 19, 2013. In that case, the Commission noted that, because there was not an evidentiary hearing, neither the ALJ therein, nor the Commission, made any findings or conclusions regarding whether UGI violated the Code or Commission regulations or Orders. Similarly, in the instant case, there was no evidentiary hearing, and the factual findings below, agreed to by the parties, simply provide background information in lieu of an evidentiary record, and do not make findings or conclusions as to whether UGI committed violations.

1. At approximately 11:53 AM on October 31, 2011, Walker, a subcontractor of FFS, struck a UGI eight-inch plastic gas main operating at 42 (psig) at the intersection of Manor Avenue and Shertzer Lane in Millersville, Pennsylvania while performing directional drilling for an area fiber optic installation project (Millersville Project).

2. UGI used standard locating techniques to mark its lines, but a signal jump resulted in its marking of two telecommunications conduits twenty-two inches outside of the tolerance zone for its gas line. UGI also checked property records which seemed to confirm the location of its marks because a curb had been relocated.

3. Leaking gas from Walker's strike migrated through the ground and a storm drain allowing dangerous levels of gas to enter several nearby structures.

4. Walker called 911 to report the strike, and the Blue Rock Fire Department arrived on the scene and commenced the evacuation of approximately 20 buildings around noon.

5. At 12:08 p.m. UGI's gas control center noticed a drop in gas pressure in Millersville, and at approximately 12:24 UGI's first employee arrived at the scene.

6. At approximately 1:00 p.m. UGI's Construction Supervisor and a crew [from] a UGI contractor arrived at the scene.

7. Since gas had already migrated and evacuations were under way, UGI asked the fire chief to contact the local electric distribution company to have the power cut to reduce the risks of ignition; initially this request was refused, but after several calls power was eventually cut at approximately 1:38 p.m.

8. An explosion at 10 Manor Avenue occurred at approximately 1:30 p.m. damaging a two-story brick house beyond repair and [causing] less damage to an adjacent building at 10A Manor Avenue; no injuries or loss of life resulted from this explosion.

9. The damaged eight inch plastic main was part of a multiple feed distribution system.

10. To shut-off the flow of gas from the east UGI dispatched a crew that turned a six inch valve (“Valve #300816”) at approximately 1:18 p.m.

11. To shut-off the remaining flow of gas, UGI decided to excavate and squeeze-off the flow of gas through the main; excavation started shortly after UGI’s construction supervisor and contractor crew arrived at the scene around 1:00 p.m., the excavation was in progress at the time of the explosion at approximately 1:30 p.m. and the flow of gas was stemmed at approximately 3:08 p.m.

12. As a result of the decision to squeeze-off the main, the location of two valves that could have been turned to isolate the remaining flow of gas was not requested, and shortly after the explosion and the cut in power, cell phone service in the area was lost, preventing the easy communication of these valve locations.

13. Valve #300816 had been properly removed from UGI’s five-year inspection cycle (specified under Section 6.2.3 of UGI’s Manual of Service Procedures) in 1994 when the distribution system segment it was connected to was no longer serving customers (a so-called “deadhead valve”).

14. In 1998, the valve was reconnected to an active distribution system segment, but was not added back in to the list of valves subject to the five-year inspection cycle because of an administrative oversight.

15. In 1998 and 2007, however, UGI did turn and grease the valve when it reconnected the valve and while repairing a gas leak.

DISCUSSION

The Commission has the power, and the duty, to enforce the requirements of the Public Utility Code. 66 Pa. C.S. §501(a). The Commission delegated its authority with regard to enforcement of gas safety laws and regulations to I&E. Implementation of Act 129 of 2008; Organization of Bureaus and Offices, Docket No. M-2008-2071852, Order entered August 11, 2011.

As set forth above, I&E initiated this Formal Complaint against UGI for allegedly violating the Public Utility Code and Commission and federal regulations regarding the safety of UGI's natural gas distribution operations. UGI denied that it violated the Public Utility Code and Commission regulations and federal regulations.

After extensive investigation prior to any evidentiary hearings, I&E and UGI have reached a Settlement regarding the allegations set forth in I&E's Complaint. In brief, the Settlement, *inter alia*, provides for the payment by UGI of a \$200,000 civil penalty; modifications to UGI's GOM standard regarding One Call response procedures (shown in **APPENDIX A** to the Settlement) and additional training; Damage Prevention Plan revisions; One Call screening additions; deadhead valve reclassification audit and reminders; revisions to GOM involving notification to engineering staff about responding with valve location information (shown in **APPENDIX B** to the Settlement); additional training for first responders about flowing gas safety; meetings with PPL regarding communications; and modifications to GOM regarding risk reduction for emergency responders (shown in **APPENDIX C** to the Settlement).

The policy of the Commission is clearly to encourage settlements and the Commission has stated that the results achieved from settlements are often preferable to those achieved at the conclusion of a fully litigated proceeding. 52 Pa. Code §§5.231, 69.401. A full settlement of all the issues in a proceeding eliminates the time, effort and expense that would otherwise have been involved in litigating the proceeding, and can provide benefits and improvements which may not have been possible due to the uncertainty of litigation.

In order to accept a settlement, the Commission must first determine that the proposed terms and conditions are in the public interest. Pa. P.U.C. v. York Water Co., Docket No. R-00049165, Order entered October 4, 2004; Pa. P.U.C. v. C S Water and Sewer Assoc., 74 Pa. PUC 767 (1991). For the following reasons, I find that the Settlement, which is unopposed by any party, is in the public interest.

Settlement Terms

The specific terms of the Settlement, reflected in Paragraph 31 of the document, are as follows:

- A. UGI shall pay a civil penalty in the amount of \$200,000 no later than the end of the first full calendar month after the date of a final order approving this Joint Settlement Petition, and shall not to seek to recover this amount through rates regulated by the Commission.
- B. UGI will conduct refresher training of its one call locators within ninety (90) days of a final order approving this Joint Settlement Petition.
- C. Within sixty (60) days of the date of a final order approving this Joint Settlement Petition, UGI will modify its Gas Operations Manual (“GOM”) 60.40.40 standard as shown in **Appendix A** to improve its one-call response procedures, and will train its locators in these new standards.
- D. UGI will revise its Damage Prevention Plan, to add language concerning preplanning activities UGI will conduct when it is aware directional drilling will occur, within sixty (60) days of the date of a final order approving this Joint Settlement Petition.
- E. UGI has added programming to its internal One Call Tickets screening system to be able to identify Tickets received where the “Type Construction Box” is designated as Directional Drilling, Drilling, Boring or Trenchless Technology. Within ninety (90) days of the date of a final order approving this Joint Settlement Petition, UGI will modify its screening system to generate an e-mail to a local office who in turn will make a “documented” contact to the entity making the one call request reminding it of its responsibilities under the Pennsylvania Underground Utility Line Protection Law of 2006, 73 P.S. §§176-182.4 (“PA ONE CALL ACT”) and inquiring as to its intent to spot the

gas facilities prior to crossing them. If a non-satisfactory response is received UGI will take additional action up to and including a field visit to stop the operation.

- F. Within ninety (90) days of a final order approving this Joint Settlement Petition, UGI will distribute a safety advisory reminding employees to reclassify deadhead valves when formerly disconnected segments of the distribution system are reconnected.
- G. Within ninety (90) days of a final order approving this Joint Settlement Petition, UGI will perform a system audit to identify deadhead valves and make sure they are properly classified.
- H. Within sixty (60) days of a final order approving this Joint Settlement Petition, UGI will modify its GOM 60.50.110, as shown in **Appendix B**, to require its dispatchers to notify engineering personnel in events where the Manager Area Engineering is required to be contacted due to damage resulting in the escape of natural gas so that the engineering staff can provide field personnel responding to the situation with more timely and readily usable information about the location of valves.
- I. As part of its annual emergency response training, UGI shall incorporate and provide additional training for its first responders about situational awareness when approaching a potential flowing gas site.
- J. UGI shall meet with PPL representatives to establish appropriate communications protocols, and shall communicate quarterly to ensure that emergency contact information is correct.
- K. Within sixty (60) days of a final order approving this Joint Settlement Petition, UGI will modify its GOM 60.50.20 as shown in **Appendix C** to reduce risks associated with the location and travel of employees responding to emergencies.

In addition, in Paragraph 32 of the Settlement, I&E agreed to forbear from further prosecuting any formal complaint relating to UGI's conduct as described in the Settlement or in the I&E Complaint, in consideration of the payment by UGI of the civil penalty and other Settlement terms. Nothing in the Joint Petition is to affect the Commission's authority to receive and resolve any formal or informal complaint filed by any party with respect to the October 31, 2011, incident, except that no further civil penalties are to be imposed by the Commission for any of the actions described in the Settlement or the I&E Complaint.

In response to my inquiry about the impact of Paragraph 32 on other persons affected by the explosion who are not parties to this case, UGI agreed with my interpretation that the Settlement language, which limits the Commission's remedies, must be strictly construed. It is only to apply to the actions identified in the Settlement, and cannot apply, and therefore limit the Commission's remedies, with respect to actions allegedly taken by UGI with respect to the incident that are not identified in the Settlement.

Public Interest

Having set forth the terms of the Joint Petition, I will now address why approving and adopting the Settlement is in the public interest.

Initially, I note that the Settlement provides for the payment of a substantial civil penalty by UGI of \$200,000, which will not be recoverable in rates. UGI noted in its Statement in Support (**Appendix E** to the Settlement) that \$160,000 of the original penalty amount (\$260,000) sought by I&E was based upon a failure to conduct sixteen (16) annual inspections on an eight-inch valve. Subsequently, it was confirmed and undisputed that the valve in question was a six-inch valve on a five-year inspection cycle since 1998, and that the valve had been turned and greased in 1998 and 2007 (see Findings of Fact 10, 13-15, *supra*). Therefore, the \$200,000 civil penalty is likely higher than would have been sought by I&E initially. Further discussion as to reasonableness of the penalty amount will be set forth in a subsequent section of this Initial Decision.

Second, as noted by UGI in its Statement in Support, the Settlement will provide substantial and important safety benefits by requiring operating procedure changes, personnel training, and communications enhancements, as well as other measures, to provide further backstops and safeguards for the public and UGI personnel in these situations. The inclusion of this substantial list of remedial measures indicates that UGI has been cooperative and has worked with Commission safety personnel to learn lessons from this incident and to develop and

implement pro-active measures to enhance safety and reduce future risks. As a further showing of good faith, UGI indicated in its Statement in Support that it has not waited for final approval of the Settlement to begin implementation of some of these measures.

Third, approving and adopting the Settlement is also in the public interest because, as pointed out by I&E in its Statement in Support (**Appendix D** to the Settlement), acceptance of the Settlement avoids the necessity of further administrative and potential appellate proceedings at what would have been a substantial cost to the parties.

Fourth, and perhaps most importantly, the Settlement avoids the time and uncertainty of litigation, and therefore provides for a timelier implementation of remedial measures that have been agreed upon to support and promote the safety of the public and Company personnel. Given the seriousness of the issue, the benefits of prompt implementation of these measures, some of which have already been started, cannot be overestimated.

Civil Penalty

Having explained why approving and adopting the Joint Petition is in the public interest, I will now address whether the civil penalty that UGI has agreed to pay is appropriate, reasonable and in the public interest. I conclude that the civil penalty is appropriate, reasonable and in the public interest.

The Settlement requires that UGI pay a civil penalty of \$200,000 which it has agreed not to recover through rates regulated by the Commission. The Commission, at 52 Pa. Code §69.1201, has adopted a Policy Statement setting forth the standards it will consider in evaluating litigated and settled proceedings before the Commission. See also, Joseph A. Rosi v. Bell Atlantic-Pennsylvania, Inc., Docket No. C-00992409, Order entered March 16, 2000. The Policy Statement is set forth below:

69.1201. Factors and standards for evaluating litigated and settled proceedings involving violations of the Public Utility Code and Commission regulations—statement of policy.

(a) The Commission will consider specific factors and standards in evaluating litigated and settled cases involving violations of 66 Pa. C.S. (relating to Public Utility Code) and this title. These factors and standards will be utilized by the Commission in determining if a fine for violating a Commission order, regulation or statute is appropriate, as well as if a proposed settlement for a violation is reasonable and approval of the settlement agreement is in the public interest.

(b) Many of the same factors and standards may be considered in the evaluation of both litigated and settled cases. When applied in settled cases, these factors and standards will not be applied in as strict a fashion as in a litigated proceeding. The parties in settled cases will be afforded flexibility in reaching amicable resolutions to complaints and other matters so long as the settlement is in the public interest. The parties to a settlement should include in the settlement agreement a statement in support of settlement explaining how and why the settlement is in the public interest. The statement may be filed jointly by the parties or separately by each individual party.

(c) The factors and standards that will be considered by the Commission include the following:

(1) Whether the conduct at issue was of a serious nature. When conduct of a serious nature is involved, such as willful fraud or misrepresentation, the conduct may warrant a higher penalty. When the conduct is less egregious, such as administrative filing or technical errors, it may warrant a lower penalty.

(2) Whether the resulting consequences of the conduct at issue were of a serious nature. When consequences of a serious nature are involved, such as personal injury or property damage, the consequences may warrant a higher penalty.

(3) Whether the conduct at issue was deemed intentional or negligent. This factor may only be considered in evaluating litigated cases. When conduct has been deemed intentional, the conduct may result in a higher penalty.

(4) Whether the regulated entity made efforts to modify internal practices and procedures to address the conduct at issue and prevent similar conduct in the future. These modifications may include activities such as training and improving company techniques and supervision. The amount of time it took the utility to correct the conduct once it was discovered and the involvement of top-level management in correcting the conduct may be considered.

(5) The number of customers affected and the duration of the violation.

(6) The compliance history of the regulated entity which committed the violation. An isolated incident from an otherwise compliant utility may result in a lower penalty, whereas frequent, recurrent violations by a utility may result in a higher penalty.

(7) Whether the regulated entity cooperated with the Commission's investigation. Facts establishing bad faith, active concealment of violations, or attempts to interfere with Commission investigations may result in a higher penalty.

(8) The amount of the civil penalty or fine necessary to deter future violations. The size of the utility may be considered to determine an appropriate penalty amount.

(9) Past Commission decisions in similar situations.

(10) Other relevant factors.

The Commission uses factors set forth in the Policy Statement to evaluate whether a settlement is reasonable and whether approval of the settlement is in the public interest. 52 Pa. Code §69.1201(a). In evaluating settlements, the Commission will not apply the factors in as strict a fashion as in a litigated proceeding. 52 Pa. Code §69.1201(b). In settled cases, the Commission will afford flexibility to parties so that the parties may reach an amicable resolution to a complaint or other matter as long as the settlement is in the public interest. 52 Pa. Code §69.1201(b).

I&E and UGI have addressed the factors set forth in 52 Pa. Code §69.1201 in their respective statements in support of the Settlement. I will address each of the factors in turn.

The first factor addresses whether the conduct at issue was of a serious nature. There is no indication that willful fraud or misrepresentation was involved in the October 31, 2011 incident. It is also apparent that more was involved than simply an administrative filing or technical error. The statements in support of the two parties reflect their respective views of the incident, with UGI focusing on the actions of third parties, and I&E focusing on the alleged actions of UGI, as alleged in the I&E Complaint. Neither of these views was agreed to by the other party. But, suffice it to say, both parties agree that the result was serious. As UGI noted,

gas safety is a significant issue that it takes seriously. Given the significance of gas safety, I conclude that UGI's alleged conduct is of a serious nature and the gravity of the incident was reflected in arriving at the \$200,000 civil penalty.

The second factor addresses the consequences of the alleged conduct at issue. In this case, the natural gas explosion damaged one residence beyond repair, and caused additional damage to an adjacent property. UGI does not deny the seriousness of the incident, but does question whether its alleged errors caused the explosion; therefore, it concluded that this factor would suggest a smaller penalty. I&E asserted that the seriousness of the incident is reflected in the penalty amount. I agree with I&E that the consequences of the alleged conduct were serious and that the seriousness of this matter was reflected in the penalty amount.

The third factor addresses whether the conduct was negligent or intentional. This factor does not apply because the proceeding was settled. Accordingly, I will not consider this factor.

The fourth factor addresses whether remedial actions were taken by the utility to modify internal practices and procedures in order to prevent similar conduct in the future. Both I&E and UGI refer to the modifications that the Company has made or has agreed to make in response to the October 31, 2011 incident. UGI highlighted the listed changes in procedure, training and coordination activities set forth in the Joint Petition. I&E specifically mentioned that UGI had performed the following:

UGI has added programming to its internal One Call Tickets screening system to be able to identify Tickets received where the "Type Construction Box" is designated as Directional Drilling, Drilling, Boring or Trenchless Technology. Within ninety (90) days of the date of a final order approving this Joint Settlement Petition, UGI will modify its screening system to generate an e-mail to a local office who in turn will make a "documented" contact to the entity making the one call request reminding it of its responsibilities under the Pennsylvania Underground Utility Line Protection Law of 2006, 73 P.S. §§176-182.4 ("PA ONE CALL ACT") and inquiring as to its intent to spot the gas facilities prior

to crossing them. If a non-satisfactory response is received UGI will take additional action up to and including a field visit to stop the operation.

I conclude that the remedial actions undertaken by UGI, as noted by the parties, should result in a lesser penalty.

The fifth factor addresses the number of customers affected and the duration of the violation. UGI indicated in its Statement in Support that citizens were evacuated from twenty (20) buildings as a precaution resulting from the incident. I&E noted that one building was damaged beyond repair and an adjacent building was damaged. No party contended that this factor warranted a higher penalty and I conclude as well that the suggested penalty adequately reflects this factor.

The sixth factor looks at the compliance history of the regulated entity. UGI indicated its awareness that in other cases, the Commission has stated that UGI has been involved in too many proceedings involving violations of gas safety rules. UGI did not list these proceedings in its Statement in Support.

In contrast to UGI, I&E listed a number of these proceedings in its Statement in Support as follows:

UGI has recently entered into settlements with the Commission's I&E, or prosecutory staff, regarding gas safety violations in which they agreed to pay civil penalties. In Pa. PUC v. UGI Utilities, Inc., Docket No. M-2009-2031571, Order entered January 14, 2010, the settlement arose from a natural gas explosion in Allentown that occurred on December 9, 2006, and resulted in a minor injury and destroyed one residence and three adjacent row homes. The explosion occurred when a contractor attempted to remove a gas meter. The allegations of gas safety violations involved inadequate training and improper documentation of procedures regarding removal of inactive gas meters. The Commission approved the settlement's \$80,000 civil penalty and modified the settlement to add an \$80,000 payment to the

Low-Income Usage Reduction Program. The settlement also called for remedial measures such as changes to the company's procedures, training, and operator qualifications regarding meter replacement.

In Pa. PUC v. UGI Utilities, Inc., Docket No. M-2008-2036549, Order entered November 6, 2008, the Commission directed that a \$40,000 settlement amount be applied to the Company's Operation Share Hardship Fund. In that case, a natural gas explosion, resulting from a leak in the gas line, destroyed a residence. The allegations included the following gas safety violations: that UGI's emergency response procedures did not include steps for bar holing to check the ground for gas; that UGI took more than five hours to perform bar holing after the incident; and that UGI failed to determine where the pipe failure occurred and turn off the gas supply before allowing utility workers, emergency responders, inspectors, and residents to access the incident site.

Other recent cases involving UGI include: Pa. PUC v. UGI Utilities, Inc., Docket No. M-2012-2141712, Order entered June 13, 2012 (rejected settlement due to serious nature of the incident and endangerment of lives of the company's crew and the public); Pa. PUC v. UGI Utilities, Inc., Docket No. M-2010-2037411, Order entered May 10, 2010 (approving a settlement to resolve allegations concerning UGI's failure to properly mark its pipelines); Pa. PUC v. UGI Utilities Inc., Docket No. C-2009-2120601, Order entered November 19, 2010 (approving a settlement to resolve various federal and state gas safety violations); and Pa. PUC v. UGI Utilities, Inc., Docket No. C-20066664, February 6, 2009 (approving a settlement to resolve gas safety allegations, including a failure to classify a leak as an emergency and a failure to properly respond to an explosion once notified by 911).

In addition, at about the time the Joint Petition in this matter was filed, the Company agreed to pay a \$500,000 civil penalty and perform other remedial and reporting measures in Pa. PUC v. UGI Utilities, Inc., Docket No. C-2012-2308997, Order entered February 19, 2013. In that case, involving a natural gas explosion in Allentown, PA, five (5) people lost their lives.

Based on the forgoing, I conclude that a higher penalty for UGI is warranted than would otherwise be the case. However, I note, to UGI's credit, that it has been pro-active and cooperative as to remedial actions taken and agreed to be taken, and it is primarily this fourth factor, discussed above, which mitigates what would otherwise be a higher civil penalty than set forth in the Settlement.

The seventh factor asks whether the regulated entity cooperated with the Commission. According to I&E, UGI has cooperated with the Commission's staff throughout its investigation, as well as the complaint and settlement process. I&E concluded that this cooperation demonstrates a commitment consistent with the Commission's public safety goals and objectives. I conclude that UGI's cooperation with the Commission in this matter should result in a lesser penalty than would otherwise be the case.

The eighth factor requires that the amount of the civil penalty be enough to deter future violations. I&E stated that the civil penalty in the amount of \$200,000, which may not be recovered through Commission-regulated rates, together with the modifications to UGI's internal policies with additional training of personnel, represents a pecuniary concession that will deter similar actions in the future. Given the circumstances of this proceeding, I conclude that a civil penalty larger than that agreed to by the parties is unnecessary to deter future violations.

The ninth factor looks at past Commission decisions in similar situations. I&E stated that, in consideration of relevant factors comparable to other incidents, such as incident response, post-incident action, Commission cooperation, regulatory violations, and remedial actions taken, the Settlement is consistent with past Commission actions, and represents a fair and reasonable outcome. UGI stated that the amount of the civil penalty is well above comparable fines in other cases.

In my view, the most comparable case mentioned in the UGI compliance history provided by I&E appears to be the 2008 case wherein a natural gas explosion from a leak destroyed a residence. See, Pa. PUC v. UGI Utilities, Inc., Docket No. M-2008-2036549, Order entered November 6, 2008. In that case, the Commission directed that a \$40,000 settlement

amount be applied to the Company's Operation Share Hardship Fund. The allegations involved failures in UGI's safety procedures, similar to the instant case. Another similar but more serious case was the Allentown explosion in 2006. In that case, where four homes were damaged or destroyed and there was one minor injury, the settlement approved by the Commission provided for a total civil penalty of \$160,000, and remedial measures. Pa. PUC v. UGI Utilities, Inc., Docket No. M-2009-2031571, Order entered January 14, 2010.

Given the above-cited Commission decisions, but in view of UGI's compliance history since those cases, I agree with I&E that the Settlement amount of \$200,000 represents a fair and reasonable outcome.

The tenth factor looks at other relevant factors. As to this factor, I&E emphasized the pivotal importance of a settlement to this case in that the prosecuting agency did not need to then prove the elements of each allegation. In return for the settlement, the opposing party, in the course of negotiations, agreed to a lesser fine or penalty, or other remedial action. UGI asserted that harshly penalizing NGDCs for largely technical or incidental alleged violations resulting from damages directly caused by third parties could send an improper signal that excavators will not bear the brunt of their responsibility. UGI also noted that conflicting administrative interpretations could result if the Commission indirectly attempted to enforce the PA ONE CALL ACT, now enforced by the Pa. Department of Labor and Industry, in the instant proceeding against UGI.

I conclude that these additional factors should result in a lesser penalty than would otherwise be the case based on UGI's compliance history.

Based on a review of the factors set forth above, I conclude that a civil penalty in the amount of \$200,000 is appropriate in this matter.

Conditions of the Settlement

Having reviewed the terms of the Settlement, the public interest in approving and adopting the Joint Petition and the reasonableness of the civil penalty, I will summarize the conditions of the Settlement set forth in the Joint Petition. The Settlement is conditioned upon the Administrative Law Judge's and Commission's approval of the terms and conditions contained in the Joint Petition without modification. If the Administrative Law Judge or Commission modifies the Joint Petition, any party may elect to withdraw from the Settlement and may proceed with litigation and, in such event, the Settlement shall be void and of no effect. Such election to withdraw must be made in writing, filed with the Secretary of the Commission and served upon all parties within five (5) business days after the entry of an Order modifying the Settlement.

In the event that the presiding Administrative Law Judge issues an initial decision or recommended decision approving the Joint Petition without modification, the parties agree to waive the exception period and not to file exceptions.

The parties agree that the underlying allegations were not the subject of any hearing or formal procedure and that there has been no order, findings of fact or conclusions of law rendered in this matter. It is the intent of the parties that the Joint Petition not be admitted as evidence in any potential civil proceeding involving this matter. It is further understood that, by entering into the Settlement, UGI has made no concession or admission of fact or law and may dispute all issues of fact and law for all purposes in all proceedings, including but not limited to any civil proceedings that may arise as a result of the circumstances described in this Joint Petition.

The parties acknowledge that the Joint Petition reflects a compromise of competing positions and does not necessarily reflect any party's position with respect to any issues raised in this proceeding. The Joint Petition may not be cited as precedent in any future proceeding, except to the extent required to implement its provisions.

The Joint Petition is being presented only in the context of this proceeding in an effort to resolve the proceeding in a manner that is fair and reasonable. The Joint Petition is presented without prejudice to any position that any of the parties may have advanced and without prejudice to the position any of the parties may advance in the future on the merits of the issues in future proceedings, except to the extent necessary to effectuate the terms and conditions of the Joint Petition. The Joint Petition does not preclude the parties from taking other positions in any other proceeding.

The parties arrived at the Settlement after engaging in discussions over several months. The terms and conditions of the Joint Petition constitute a carefully crafted package representing reasonable negotiated compromises on the issues addressed therein. The Settlement is consistent with the Commission's rules and practices encouraging negotiated settlements set forth in 52 Pa. Code §§69.391, 69.401.

CONCLUSION

For the reasons set forth above, I find that the proposed Settlement is in the public interest and consistent with the Public Utility Code and Commission regulations. Accordingly, I conclude that the Joint Petition should be approved without modification.

CONCLUSIONS OF LAW

1. The Commission has jurisdiction over the subject matter of and the parties to this proceeding. 66 Pa. C.S. §§102, 501(b).
2. The Commission has the power and the duty to enforce the requirements of the Public Utility Code. 66 Pa. C.S. §501(a).
3. The Commission delegated its authority with regard to enforcement of gas safety laws and regulations to I&E. Implementation of Act 129 of 2008; Organization of Bureaus and Offices, Docket No. M-2008-2071852, Order entered August 11, 2011.

4. Commission policy promotes settlements. 52 Pa. Code §5.231.

5. The Settlement submitted by I&E and UGI in this matter is reasonable and in the public interest and should be approved by the Commission.

ORDER

THEREFORE,

IT IS ORDERED:

1. That the Formal Complaint filed on March 30, 2012, by the Pennsylvania Public Utility Commission's Bureau of Investigation and Enforcement against UGI Utilities, Inc. at Docket No. C-2012-2295974 is sustained.

2. That the Joint Settlement Petition Resolving All Issues Among All Parties, filed on February 26, 2013, between the Pennsylvania Public Utility Commission's Bureau of Investigation and Enforcement and UGI Utilities, Inc. at Docket No. C-2012-2295974 is hereby approved and adopted.

3. That UGI Utilities, Inc. shall pay a civil penalty of \$200,000 as provided for in the Public Utility Code, 66 Pa. Code §3301, by certified check or money order, within twenty (20) days after the service of the Pennsylvania Public Utility Commission's Final Order to:

Pennsylvania Public Utility Commission
P.O. Box 3265
Harrisburg, Pa. 17105-3265

CERTIFICATE OF SERVICE

I hereby certify that on the 3rd day of October, 2019, a true and accurate copy of the foregoing Petition for Reconsideration filed by Elster Perfection was sent via U.S. certified mail, postage prepaid, return receipt requested, to:

Robert Krieger
UGI Utilities, Inc.
225 Morgantown Road
Reading, PA 19611

Robert S. Biggard
Fixed Utility Valuation Supervisor, Gas Safety Division
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120

Wayne Chan
General Engineer – Pipeline Inspector
PHMSA Pipeline Safety Eastern Region Office
840 Bear Tavern Road, Suite 300
West Trenton, NJ 08628

Keith Eshleman
Fire Chief
Blue Rock Fire Rescue Station 905
26 E Charlotte Street
Millersville, PA 17551



Morgan W. Campbell
Counsel for Petitioner