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May 30, 2014

VIA HAND DELIVERY

Rosemary Chiavetta, Secretary
Pennsylvania Public Utility Commission
Commonwealth Keystone Building
400 North Street, 2nd Floor North
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-2012-2308997

Dear Secretary Chiavetta:

Enclosed is the written report of the Leak Detection Pilot Program of UGI Utilities, Inc. – Gas Division. This report is being made in compliance with the Pennsylvania Public Utility Commission's Opinion and Order entered in the above-captioned matter on July 1, 2013.

Please do not hesitate to contact Kent Murphy or myself should you have any questions concerning this filing.

Respectfully submitted,

David B. MacGregor

DBM/skr
Enclosure

cc: Paul Metro, Manager (*via hand delivery*)
Adam D. Young, Prosecutor (*via hand delivery*)
Stephanie M. Wimer, Prosecutor (*via hand delivery*)

UGI UTILITIES, INC.

UGI Utilities, Inc Follow-up Report:
Enhanced Leak Detection Measures Pilot Program

May 30, 2014

Authored by: Jeremy Horning

Supervisor, Distribution Integrity & Leak Survey, UGI Utilities, Inc

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I. Executive Summary

In response to the Pennsylvania Public Utility Commission's (PUC) Final Order C-2012-2308997, UGI Utilities, Inc. – Gas Division completed an enhanced leak detection pilot in the City of Allentown. The pilot was conducted from November 6, 2013 to April 1, 2014 by Precision Pipeline Solutions (PPS) using SENSIT® VMD Mobile InfraRed leak survey equipment and SENSIT® PMD Portable InfraRed leak survey equipment provided by SENSIT Technologies. The survey covered cast iron main, high risk steel main and high risk services, as defined by UGI's Distribution Integrity Management Program, located within the City of Allentown.

During the eight cycles of the survey that were completed during the pilot, the enhanced leak detection pilot detected a total of 34 new "A" leaks (non-hazardous leaks requiring monitoring), 69 new or upgraded "B" leaks (non-hazardous leaks scheduled for repair) and 17 new or upgraded "C" leaks (hazardous leaks requiring immediate repair). Various differences in the approach over the period of this survey make comparison difficult, though data obtained from leak surveys indicate that leak discovery rates for the enhanced survey are similar to leak discovery rates on the standard winter time survey.

After review of the results of the enhanced leak detection pilot program, the pilot demonstrates that although alternative technologies do not contribute significantly to the number of leaks discovered, additional, focused surveying on certain facilities during the winter season may contribute to finding leaks sooner than through traditional winter patrols, without influencing the number of leaks discovered. Consequently, UGI Utilities – Gas Division proposes to consider additional risk based surveys on facilities such as mechanically coupled service curb valves during subsequent winter survey seasons.

II. Description of Project

In order to provide a scope for the enhanced leak detection pilot program that would allow ample area and facilities to evaluate the program's effectiveness, the City of Allentown was defined as the area of focus for the pilot. Within the City of Allentown, the leak detection pilot focused on certain higher-risk facilities as identified by UGI's Distribution Integrity Management Program (DIMP).

a. Leak Survey Area

For the enhanced leak detection pilot, the area surveyed was confined by the limits of the City of Allentown. Within this area the environment is mostly urban, including business districts and multilevel buildings and dwellings. The environment becomes more suburban as one travels towards the eastern, western and southern ends of the city limits.

b. Identified Facilities

The enhanced leak detection pilot focused on higher risk mains and services as determined by UGI's Distribution Integrity Management Program (DIMP). The set of facilities surveyed comprised cast iron main, bare steel main (both under Cathodic Protection (CP) and not under Cathodic Protection), coated steel main that is not under CP, those services containing certain mechanically coupled curb valves, mains suspected of containing mechanical plastic tees (MPT's), bare steel services (both under Cathodic Protection and not under Cathodic Protection) and coated steel services that are not under cathodic protection. These facilities and their respective quantities in the area of the enhanced leak survey are tabulated in Table 1, below.

Table 1. *Facilities Identified for Survey Under the Enhanced Leak Detection Pilot**

Item	Value	Units
Cast Iron Main	62.66	Miles
Non-CP Bare Steel Main	6.06	Miles
Non-CP Coated Steel Main	20.63	Miles
Under CP Bare Steel Main	1.48	Miles
Mechanically Coupled Curb Valves	148	Each
Mechanical Tees (Suspected)	741	Each
Steel Services - Bare Under CP	2	Each
Steel Services - Bare Not Under CP	1,792	Each
Steel Services-Coated Not Under CP	1077	Each

*Note: Totals represent value at the beginning of the survey. Throughout the pilot, main and services were replaced, reducing the mileage of main and number of services in each cycle.

III. Equipment Description

As directed in the PUC's Final Order of February 19, 2013, the enhanced leak detection pilot included alternative technologies in addition to those employed in UGI's regular leak survey activities.

a. Traditional Leak Survey Equipment - Flame Ionization

The gas detection technology traditionally used in leak survey applications at UGI Utilities – Gas Division is Flame Ionization. This technology utilizes an instrument that measures the rate at which ionized hydrocarbons are generated in a combustion process. The rate at which ions are produced is proportional to the gas concentration with the instrument capable of detecting less than 10 parts per million of methane in air. In UGI's traditional leak surveys, this flame ionization equipment is either carried portably to leak survey by walking or is mounted onto a survey vehicle to survey by driving.

b. SENSIT® VMD Mobile Infrared Survey Equipment

The first of the alternative technologies used by PPS in the Allentown Enhanced Leak Survey was the SENSIT® VMD (Vehicle Methane Detector) from SENSIT Technology. The VMD uses an infrared range optical beam mounted on the front of a leak survey vehicle. Methane molecules absorb the infrared radiation tuned to a specific frequency between two sensors and the instrument translates this signal into a methane indication. The instrument is sensitive to one part per million of methane at a survey speed of thirty miles per hour and communicates the readings to the surveyor in the vehicle through alarms and a visual operator interface.

c. SENSIT® PMD Leak Survey Equipment

The second of the alternative technologies used in the PPS Allentown Enhanced

Survey Pilot was the SENSIT® PMD (Portable Methane Detector) from SENSIT Technologies. The PMD, like the VMD, uses the optical properties of methane to detect gas in a portable, closed path instrument as opposed to the VMD. The PMD could be carried by the leak surveyor to complete the walking portions of the pilot survey program but was also employed in tandem with the VMD by connecting the unit to a cone collection system installed on the front of the leak survey vehicle that draws sample air through the cones and into the instrument inside the vehicle.

IV. Survey Methods

The survey technologies described above were employed in both a mobile, driving survey method and a portable, walking method depending on the facility being surveyed. The mobile combination of VMD and PMD technologies were used for surveying the main facilities covered in the survey, while the walking method with the PMD was used for service line leak surveys and any surveys that could not be safely completed by vehicle. During mobile surveys, the surveyor drove over the main at speeds up to 15 miles per hour, observing indications on the leak detection equipment. All indications of gas readings were classified using the PMD according to the applicable UGI Utilities Gas Operations Manual procedures. Walking surveys were completed on the service lines from the curb line to the building wall, using the PMD. As with the mobile survey, all indications of gas were classified according to UGI Gas Operations Manual Procedures.

V. Survey Results

The Allentown Enhanced survey completed eight (8) cycles of the facilities surveyed from November 6th, 2013 through April 1st, 2014. During this time period, conventional FI leaks surveys continued as usual. The detailed results of the eight (8) cycle

enhanced survey are shown in Table 2 below, where "SLIP" refers to Service Line Inspection Program and represents the service line leak surveys completed by walking method.

Table 2. Leak Survey Results for Allentown Enhanced Survey

First Cycle of Allentown Enhanced Survey 15mph with just VMD												
Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
11/6/2013		72	1	0	0	0	0	0	0	0	0	0
11/7/2013	5.82	246	0	0	0	0	0	0	0	0	0	2
11/8/2013	0.38	259	0	0	0	0	2	0	1	0	0	3
Week 1 Totals	6.36	577	1	0	0	0	2	0	1	0	0	5
11/11/2013	3.15	212	0	1	0	0	0	0	0	0	0	3
11/12/2013	10.63	320	0	0	0	0	0	0	0	0	0	2
11/13/2013	13.59	241	0	0	0	1	0	0	0	0	0	6
11/14/2013	7.54	295	0	0	0	1	2	0	0	0	0	8
11/15/2013	10.93	206	0	1	0	2	0	0	0	0	0	9
Week 2 Totals	45.84	1274	0	2	0	4	2	0	0	0	0	28
11/18/2013	13.18	301	0	0	0	0	1	0	0	0	0	9
11/19/2013	10.93	263	0	0	0	0	1	0	0	0	0	6
11/20/2013	12.6	183	0	0	0	0	0	0	0	0	0	3
11/21/2013	1.67	196	0	0	0	0	0	0	0	0	0	1
11/22/2013	4.72	219	0	0	0	0	0	0	0	0	0	1
Week 3 Totals	43.1	1162	0	0	0	0	2	0	0	0	0	20
First Cycle Totals	**95.3**	**3013**	**1**	**2**	**0**	**4**	**6**	**0**	**1**	**0**	**0**	**53**

Second Cycle of Allentown Enhanced Survey 15mph with VMD and PMD												
Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
11/25/2013	9.26	223	0	1	0	0	0	0	0	0	0	1
11/26/2013	11.98	300	0	0	0	0	2	0	0	0	0	11
11/27/2013	10.15	243	0	0	0	0	1	0	0	0	0	3
Week 1 Totals	31.39	766	0	1	0	0	3	0	0	0	0	15
12/2/2013	15.78	361	0	0	0	2	1	0	1	0	0	12
12/3/2013	9.18	322	0	0	0	1	1	0	0	0	0	5
12/4/2013	10.09	354	0	0	0	0	2	0	0	0	0	7
12/5/2013	11.87	399	0	0	1	3	0	0	0	0	0	8

Week 2 Totals	46.92	1436	0	0	1	6	4	0	1	0	0	32
12/9/2013	6.83	316	0	0	0	1	0	0	0	0	0	5
12/10/2013	4.92	252	0	0	0	0	0	0	0	0	0	5
12/11/2013	4.06	243	0	0	0	0	0	0	0	0	0	4
Week 3 Totals	15.36	811	0	0	0	1	0	0	0	0	0	14
Second Cycle Totals	**94.12**	**3013**	**0**	**1**	**1**	**7**	**8**	**0**	**1**	**0**	**0**	**61**

Third Cycle of Allentown Enhanced Survey 15mph with VMD and PMD

Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
12/12/2013	13.35	247	0	0	0	0	1	0	0	0	0	7
Week 1 Totals	13.35	247	0	0	0	0	1	0	0	0	0	7
12/16/2013	12.16	214	0	0	0	0	1	0	0	0	0	2
12/17/2013	13.7	262	0	0	0	0	0	0	0	0	0	3
12/18/2013	13.47	358	0	0	0	0	0	0	0	0	0	8
12/19/2013	2.8	345	0	1	0	0	1	0	2	0	0	8
Week 2 Totals	42.13	1179	0	1	0	0	2	0	2	0	0	21
12/23/2013												
12/30/2013	12.66	310	0	0	0	0	0	0	0	0	0	9
12/31/2013	10.79	370	0	0	0	0	1	0	0	0	0	7
Week 3 Totals	23.45	680	0	0	0	0	1	0	0	0	0	16
1/6/2014	2.5	204	0	0	0	1	0	1	0	0	0	1
1/7/2014	4.72	339	0	0	0	0	0	0	0	0	0	1
1/8/2014	5.7	364	0	0	0	0	0	0	0	0	0	5
Week 4 Totals	12.92	907	0	0	0	1	0	1	0	0	0	7
Third Cycle Totals	**91.85**	**3013**	**0**	**1**	**0**	**1**	**4**	**1**	**2**	**0**	**0**	**51**

Fourth Cycle of Allentown Enhanced Survey 15mph with VMD and PMD

Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
1/9/2014	4.49	182	0	0	0	0	0	0	0	0	0	2
Week 1 Totals	4.49	182	0	0	0	0	0	0	0	0	0	2
1/13/2014	1.31	303	1	1	0	0	2	0	1	0	0	2
1/14/2014	0.00	261	0	0	1	0	0	0	0	0	0	4

1/15/2014	2.67	211	0	1	0	0	0	0	0	0	0	3
1/16/2014	7.79	286	0	1	0	0	0	1	0	0	0	5
Week 2 Totals	11.77	1061	1	3	1	0	2	1	1	0	0	14
1/20/2014	11.37	212	0	0	0	0	0	1	0	0	0	4
1/21/2014	10.37	223	0	0	0	0	1	0	0	0	0	8
1/22/2014	11.64	314	0	0	0	1	0	0	0	0	0	6
1/23/2014	12.42	350	0	0	0	0	0	0	1	0	0	6
Week 3 Totals	45.8	1099	0	0	0	1	1	1	1	0	0	24
1/27/2014	11.88	261	0	0	0	0	0	0	0	0	0	4
1/28/2014	11.94	311	0	0	1	1	0	0	0	0	0	4
1/22/2014	2.63	99	0	0	0	0	0	0	1	0	0	1
Week 4 Totals	26.45	671	0	0	1	1	0	0	1	0	0	9
Fourth Cycle Totals	**88.51**	**3013**	**1**	**3**	**2**	**2**	**3**	**2**	**3**	**0**	**0**	**49**

Fifth Cycle of Allentown Enhanced Survey 15mph with VMD and PMD

Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
1/29/2014	8.25	77	0	0	0	1	0	0	0	0	0	7
1/30/2014	12.74	240	0	0	0	0	0	0	0	0	0	8
Week 1 Totals	20.99	317	0	0	0	1	0	0	0	0	0	15
2/3/2014	5.93	108	0	0	0	0	0	0	0	0	0	1
2/4/2014	7.84	343	0	0	0	0	0	0	0	0	0	7
2/5/2014			0	0	0	0	0	0	0	0	0	0
2/6/2014	11.51	309	0	0	0	0	0	0	0	0	0	6
Week 2 Totals	25.28	760	0	0	0	0	0	0	0	0	0	14
2/10/2014	11.22	367	0	0	0	0	0	0	0	0	0	3
2/11/2014	10.43	359	0	0	0	2	0	0	0	0	0	8
2/12/2014	13.53	395	0	0	0	1	0	0	0	0	0	6
Week 3 Totals	35.18	1121	0	0	0	3	0	0	0	0	0	17
2/17/2014	3.15	375	0	0	0	0	0	0	0	0	0	2
2/18/2014		398	0	0	0	0	0	0	0	0	0	0
2/19/2014		42	0	0	0	0	0	0	0	0	0	0
Week 4 Totals	3.15	815	0	0	0	0	0	0	0	0	0	2
Fifth Cycle Totals	**84.6**	**3013**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**48**

Sixth Cycle of Allentown Enhanced Survey 15mph with VMD and PMD

Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
2/17/2014	7.45		0	0	0	0	0	0	0	0	0	5
2/18/2014	10.59		0	0	0	0	1	1	0	0	0	3
2/19/2014	3.28	86	0	0	0	0	0	0	0	0	0	2
2/20/2014	9.35	325	0	0	0	0	0	2	0	0	0	5
2/21/2014	9.24	238	0	1	0	0	0	0	0	0	0	5
Week 1 Totals	39.91	649	0	1	0	0	1	3	0	0	0	20
2/24/2014	11.03	208	0	0	0	0	1	0	1	1	0	4
2/25/2014	11.83	325	0	1	0	2	0	0	2	0	0	15
2/26/2014	6.19	409	1	0	0	0	0	1	0	0	0	4
2/27/2014	10.86	376	0	0	0	0	1	0	0	0	0	5
Week 2 Totals	39.91	1318	1	1	0	2	2	1	3	1	0	28
3/3/2014	3.08	400	0	0	0	0	0	0	0	0	0	3
3/4/2014		451	0	0	0	0	0	0	0	0	0	1
3/5/2014		120	0	0	1	0	0	0	0	0	0	2
3/6/2014		75	0	0	0	0	0	0	0	0	0	0
Week 3 Totals	3.08	1046	0	0	1	0	0	0	0	0	0	6
Sixth Cycle Totals	**82.9**	**3013**	**1**	**2**	**1**	**2**	**3**	**4**	**3**	**1**	**0**	**54**

Seventh Cycle of Allentown Enhanced Survey 15mph with VMD and PMD

Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
3/3/2014	5.62	0	0	0	0	0	0	0	1	0	0	3
3/4/2015	12.75	0	0	0	0	0	1	0	0	0	0	5
3/5/2014	11.23	189	0	0	0	0	0	0	0	0	0	5
3/6/2014	13.85	283	0	1	0	0	0	0	0	0	1	10
Week 1 Totals	43.45	472	0	1	0	0	1	0	1	0	1	23
3/10/2014	9.44	356	0	1	0	2	1	1	2	0	0	6
3/11/2014	7.69	350	0	0	0	0	2	0	1	0	0	11
3/12/2014	8.75	345	1	0	0	3	2	0	0	0	0	4
3/13/2014	11.74	344	0	0	0	0	0	0	0	0	0	2
Week 2 Totals	37.62	1395	1	1	0	5	5	1	3	0	0	23
3/17/2014		673	0	0	0	0	0	0	0	0	0	1
3/18/2014		473	1	1	0	0	0	0	2	1	0	4

Week 3 Totals		1146	1	1	0	0	0	0	2	1	0	5
Seventh Cycle Totals	**81.07**	**3013**	**2**	**3**	**0**	**5**	**6**	**1**	**6**	**1**	**1**	**51**

Eighth Cycle of Allentown Enhanced Survey 15mph with VMD and PMD

Date	Miles of Main Inspected	Services Inspected	New Leaks SLIP/Walking			New Leaks Main/Mobile			Upgraded Leaks			Re-checks
			A	B	C	A	B	C	A-B	A-C	B-C	
3/19/2014	8.37	295	0	0	0	0	2	0	2	1	0	15
3/20/2014	3.32	367	0	0	0	0	0	0	0	0	0	3
Week 1 Totals	11.69	662	0	0	0	0	2	0	2	1	0	18
3/24/2014	13.54	398	0	0	0	1	0	0	1	0	0	7
3/25/2014	13.3	290	0	0	0	0	1	0	2	0	0	14
3/26/2014	19.01	431	1	0	0	0	0	0	1	0	0	9
3/27/2014	14.73	378	0	0	0	1	0	0	1	0	0	8
Week 2 Totals	60.58	1497	1	0	0	2	1	0	5	0	0	38
3/31/2014	9.95	356	0	0	1	0	0	0	0	0	0	2
4/1/2014		498	1	1	0	0	0	0	0	0	0	4
Week 3 Totals	9.95	854	1	1	1	0	0	0	0	0	0	6
Eighth Cycle Totals	**82.22**	**3013**	**2**	**1**	**1**	**2**	**3**	**0**	**7**	**1**	**0**	**62**
Enhanced Survey Totals	**701**	**24,104**	**7**	**13**	**5**	**27**	**33**	**8**	**23**	**3**	**1**	**429**
Average per Cycle	**87.6**	**3,013**	**0.9**	**1.6**	**0.6**	**3.4**	**4.1**	**1.0**	**2.9**	**0.4**	**0.1**	**53.6**

The Enhanced Leak Survey results are further illustrated in Figure 1 below by suspected facility and material, where available. It is noted that UGI Utilities does not currently identify a "suspected" material on suspected service line leaks, so the service line material is listed as "UNKNOWN" in this chart.

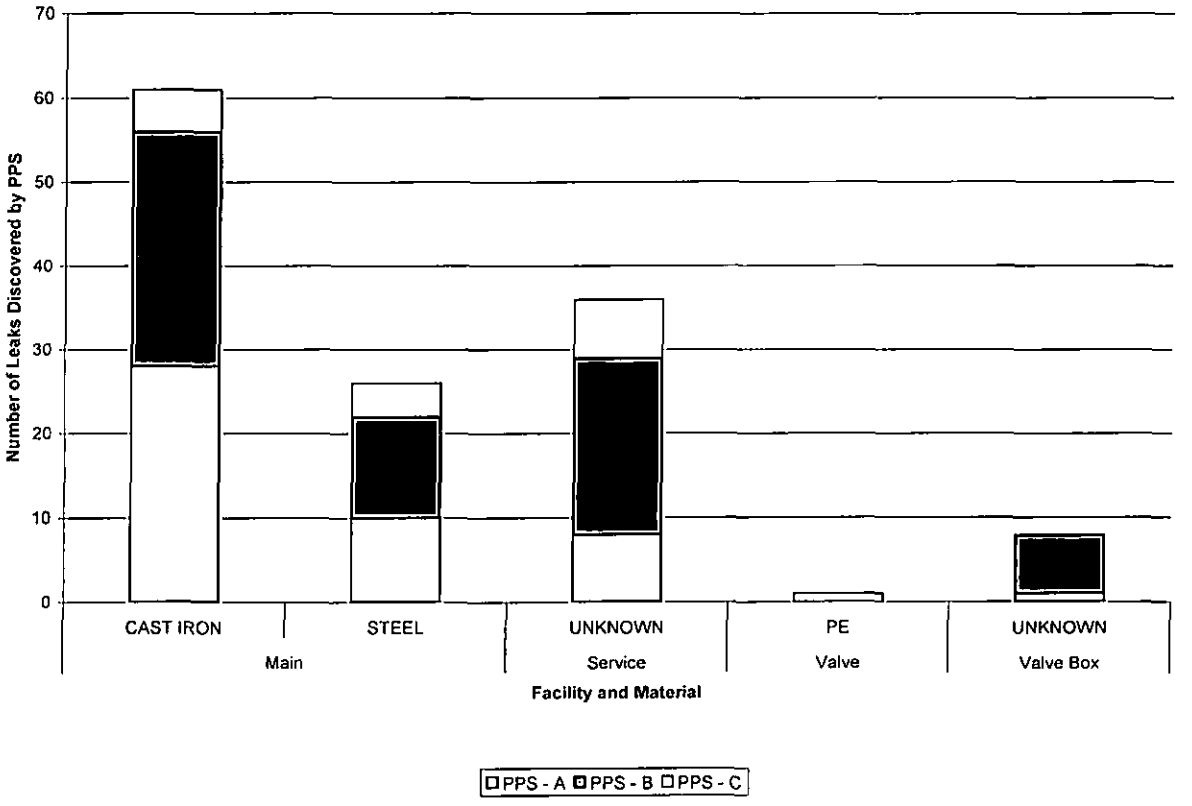

Figure 1. Number of Leaks Found by PPS in the City of Allentown by Facility and Material

Notable in the figure above is the number of leaks discovered on service lines during the period of the enhanced survey. Not only was the absolute number of leaks of all classes found on services second only to those found on cast iron, but the number of "C" leaks found on services was actually higher than the number of "C" leaks found on cast iron mains, with seven "C" leaks found on services and only five "C" leaks found on cast iron mains. Experience has shown that significant leakage rates on services are due to failures of certain mechanically coupled curb valves on plastic services, which were included in the Enhanced Leak Survey facilities.

In an attempt to compare the effectiveness of the Enhanced Leak Survey Pilot with the traditional winter-time leak survey projects at UGI Gas, the figures below illustrate the results of the regular winter leak survey, completed by an independent third party leak survey

contractor, with the results of the PPS Enhanced Leak Survey in the City of Allentown. Figure 2 shows *all* of the "C" leaks discovered and Figure 3 all of the Non-Hazardous leaks discovered by PPS from the months of January through March, compared with those "C" leaks found by traditional leak survey over the same time period, respectively.

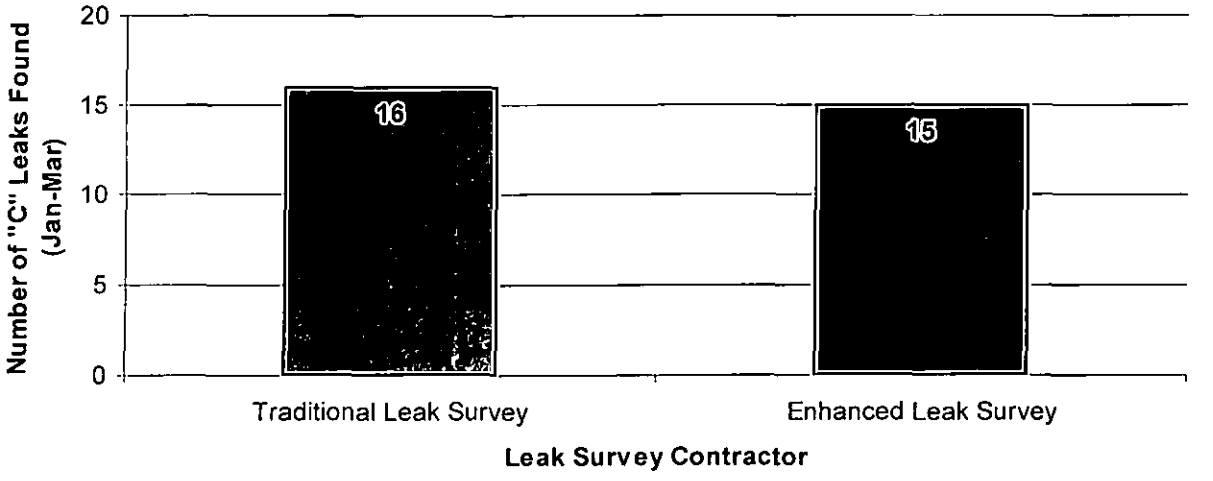

Figure 2. Number of "C" Leaks Found in the City of Allentown by Survey Contractors, January through March

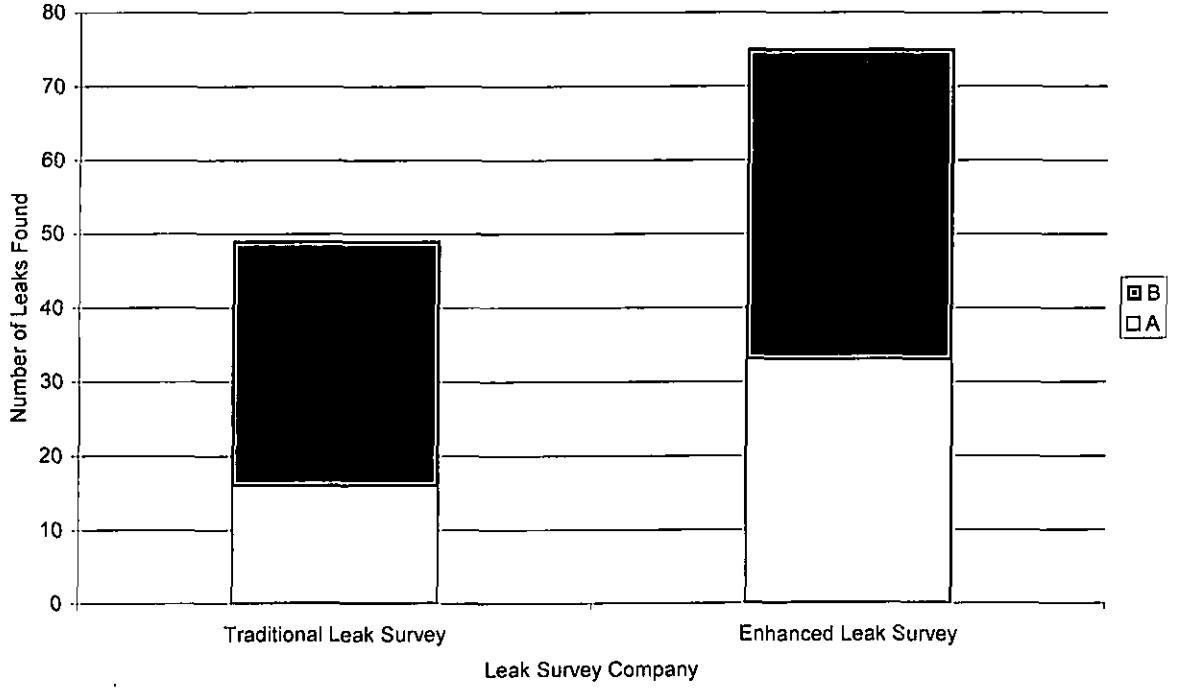

Figure 3. Number of Non-Hazardous Leaks Found in the City of Allentown by Survey Contractors, January through March

Unfortunately, the comparison between the existing leak survey and the enhanced leak survey is complicated by the fact that PPS's enhanced leak survey focused on a wider array of facilities than did the traditional leak survey while employing different technologies. The traditional leak survey contractor was focused almost exclusively on cast iron main during the period of January through March, while PPS surveyed other facilities as described in Section II.b, above. In an attempt to focus on the comparison of leak survey technologies while excluding the impact of the different facilities surveyed, Figures 4 and 5 illustrate the number of leaks found by each leak survey contractor on only cast iron mains in the City of Allentown over the period from January to March. The Figures show that both the traditional leak survey and the enhanced leak survey were equally as effective at leak detection on cast iron main, suggesting that the technologies are at least comparable in their effectiveness.

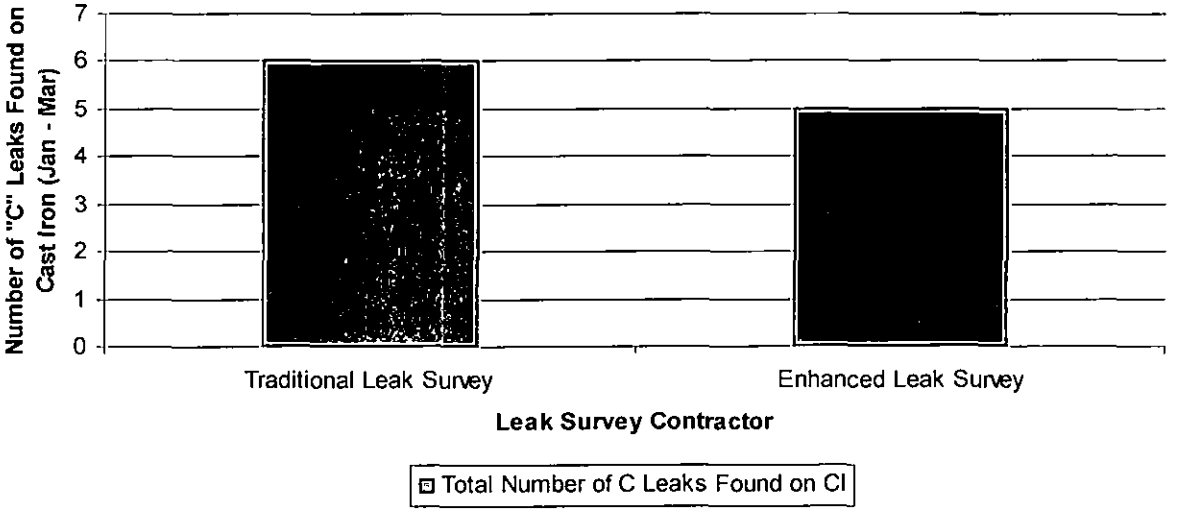

Figure 4. Number of "C" Leaks Found on Cast Iron Main in the City of Allentown by Survey Contractors, January through March

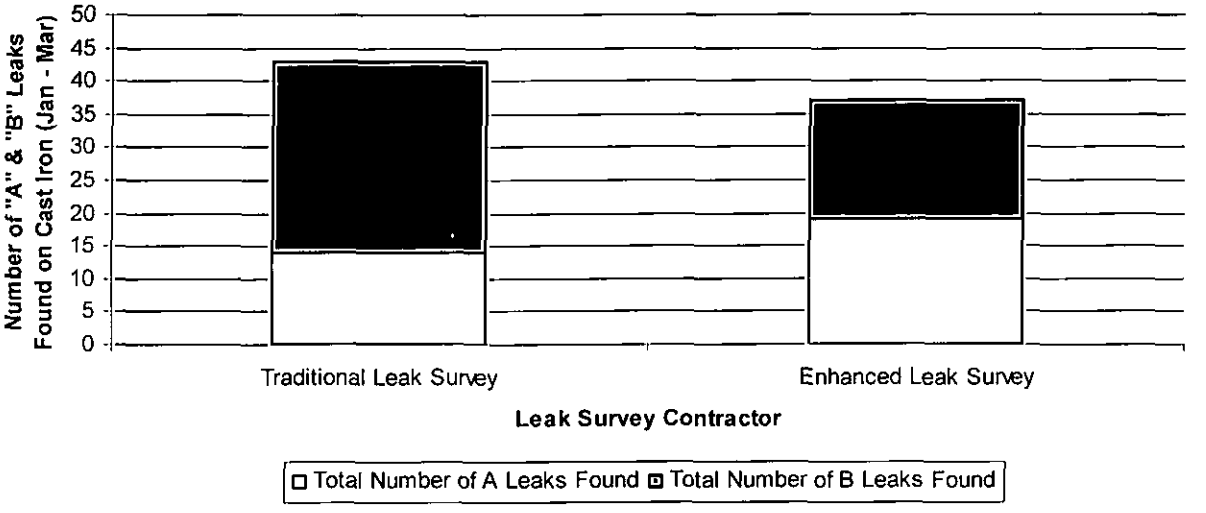

Figure 5. Number of Non-Hazardous Leaks Found on Cast Iron Main in the City of Allentown by Survey Contractors, January through March

Another measure used to illustrate the overall impact of the enhanced leak survey is the impact to the rate of "C" leaks found through survey relative to the rate of "C" leaks called in by customers. Figure 6 illustrates a baseline rate of "C" leak discovery by call-in for the entire UGI Utilities – Gas Division territory over the months of November through March. The figure illustrates a rolling two-week total of the total number of "C" leaks repaired during the time period, as well as a rolling two-week percentage of "C" leaks discovered through customer call-in. Figure 6 illustrates that the rate of customer call-in "C" leaks is on the order of 60-70% for all of UGI Utilities – Gas Division, with variations in the rate attributable to extreme weather and holiday schedules.

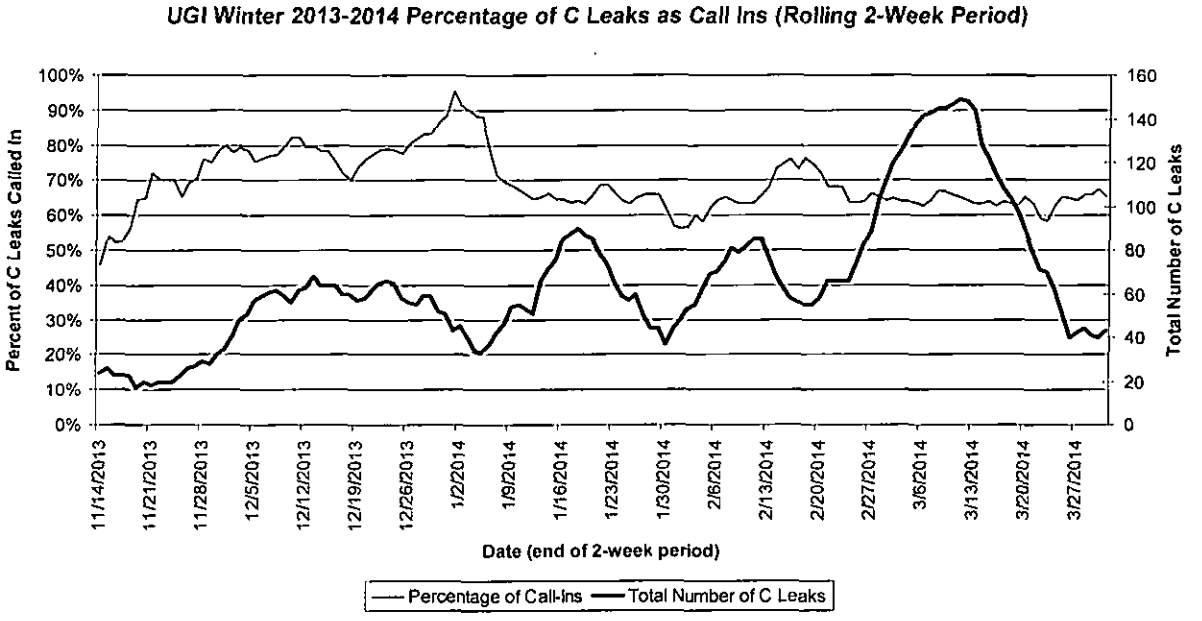

Figure 6. UGI Utilities – Gas Division Total Number of "C" Leaks and Percent Found Through Call-In for a Rolling Two-Week Period

In comparison to the rate of "C" leaks found through customer call-in for all of the UGI Utilities – Gas Division, the same rate for only the City of Allentown is shown in Figure 7, below. While the data set of "C" leaks is much smaller, giving the presentation a more volatile appearance, the results indicate an overall trend of 30-60% of "C" leaks discovered by customer call-in during the months of early 2014. For the sake of comparison, the two rates are plotted together in Figure 8. Call-in percentage and number of "C" leaks found are also shown for similar urban centers in the UGI Gas territories in Figure 9. Although the datasets for these cities are also small, the Figures illustrate a call-in percentage of "C" leaks that increases above the 30-60% exhibited in the City of Allentown.

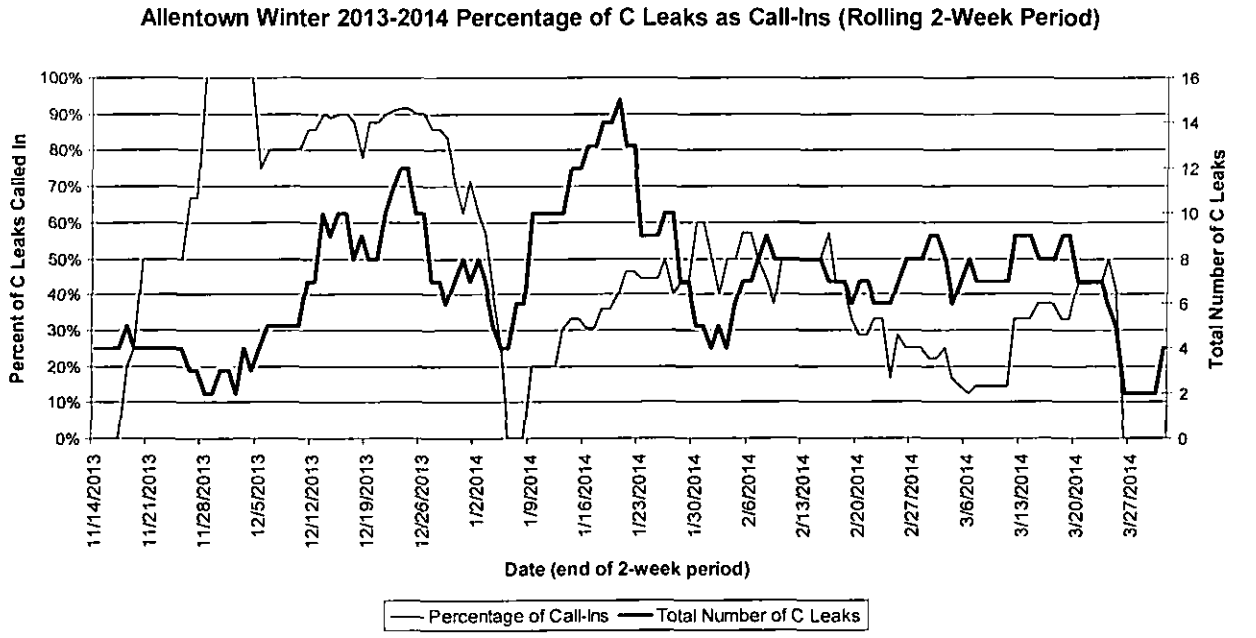

Figure 7. City of Allentown Total Number of "C" Leaks and Percent Found Through Call-In for a Rolling Two-Week Period

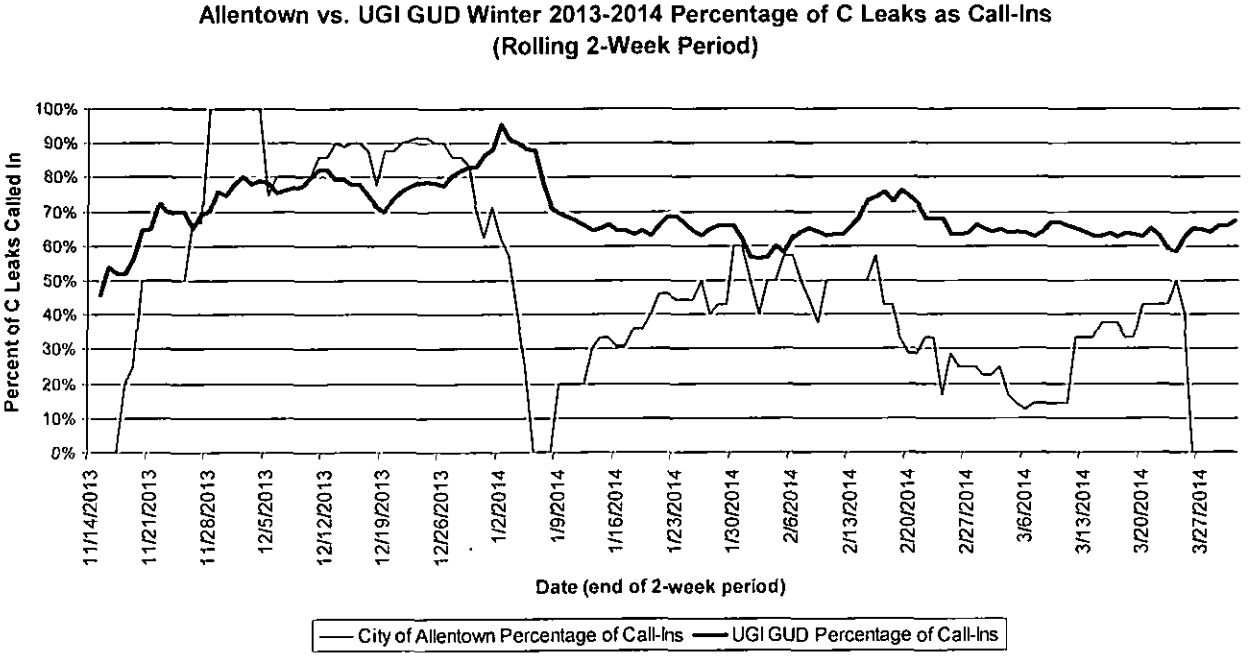

Figure 8. UGI Utilities – Gas Division vs. City of Allentown Percent of "C" Leaks Found Through Call-In for a Rolling Two-Week Period

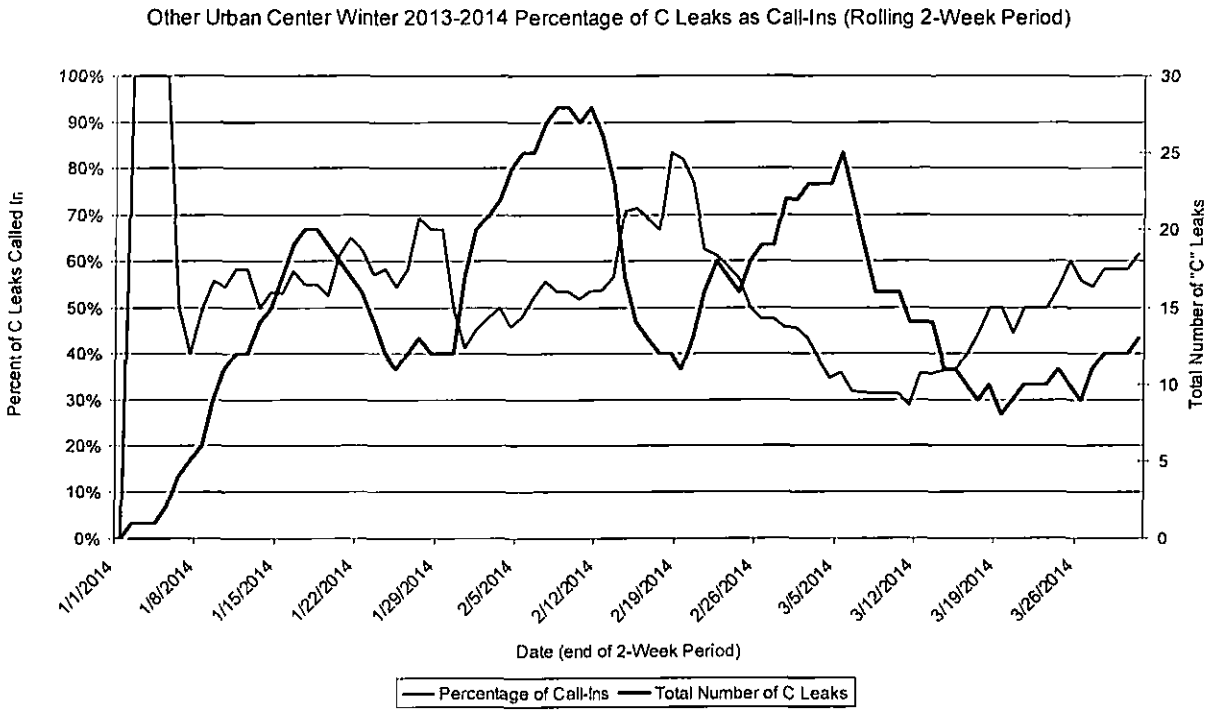

Figure 9. Other UGI Gas Urban Center Total Number of "C" Leaks and Percent Found Through Call-In for a Rolling Two-Week Period

VI. Conclusions

In consideration of the results described above, the Enhanced Leak Survey Pilot demonstrates that while the alternative technologies employed by the Pilot are comparable to existing leak survey technologies, the incorporation of additional facilities into the leak survey program may have an impact on the timing of leak discovery. Leak survey technologies employed are considered comparable based on the similar number of leaks discovered by traditional leak survey and PPS's enhanced leak survey on cast iron facilities during the time period of January through March, where both technologies were being employed. There appears to be a case for including additional gas facilities into the leak survey program based on the number of leaks discovered by PPS in the course of its Pilot survey and based on the number of "C" leaks discovered by PPS on service lines. Many of these service line leaks can be attributed to failure of certain mechanically coupled curb valves, which have been shown to fail more often in the winter season, as shown in Figure 10, below.

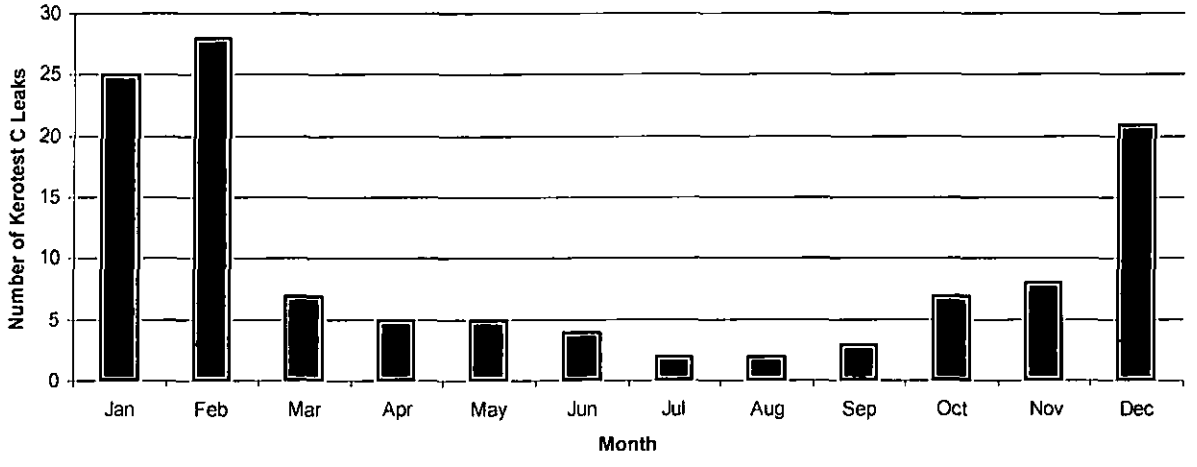

Figure 10. 2013 UGI Utilities – Gas Division Mechanically Coupled Curb Valve "C" Leaks

Also, the somewhat reduced rate of customer call-in "C" leaks in the City of Allentown compared with the overall UGI Utilities – Gas Division rate of customer call-in "C" leaks over the period of the enhanced survey implies that the additional, risk-based enhanced survey contributes to finding leaks sooner than previous winter leak survey programs which did not include such enhanced leak survey. These results in concert suggest that while there was no great technological or methodological advantage to the enhanced leak survey program piloted, the presence of additional surveyors deployed to risk-prioritized portions of the distribution system may have accelerated the rate of leak discovery.

VII. Proposed Future Survey Plans

In light of the suggestion that leaks may be discovered sooner by including additional, risk-based leak surveys, UGI Utilities – Gas Division proposes to continue the practice of surveying mechanically coupled curb valves in the winter season and expand the mechanically coupled curb valve survey to all operating areas in order to reduce the percentage of "C" leaks found through customer call-in. Certain mechanically coupled curb valves have traditionally demonstrated a high rate of discovery through customer call-in, as shown in Figure 11 and are ranked as a system risk through UGI's DIMP. Specific mechanically coupled curb valves of interest are installed on plastic services, which place them into the plastic service leak survey cycle done only every three years at UGI Gas. A pilot mechanically coupled curb valve survey is being conducted in late spring to early summer at UGI Gas with the intent of finding leaks on those curb valves when the leaks are non-hazardous and can be eliminated prior to the anticipated spike in hazardous leaks during the winter season.

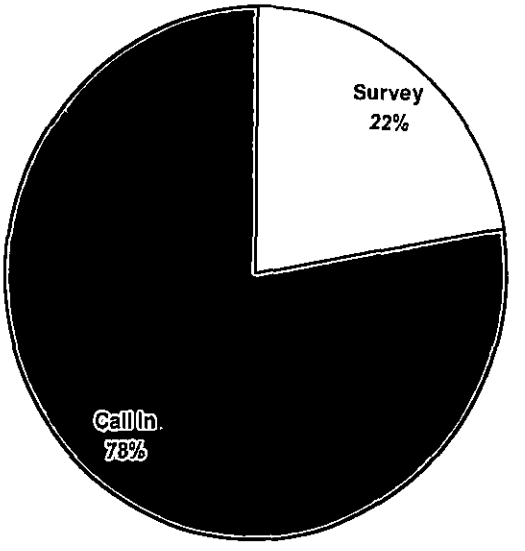

Figure 11. 2013 Percent of UGI Utilities – Gas Division Plastic Mechanically Coupled Curb Valve "C" Leaks by Leak Source

On an ongoing basis, as enhanced-risk winter surveys continue, UGI Gas will observe both the "C" leak call-in rate and the number of "C" leaks found to determine if the incorporation of additional facilities such as mechanically coupled plastic curb valves into an ongoing enhanced leak survey improves the metrics. UGI Gas will also continue to monitor leak rates on other facilities and especially those subject to winter season effects to evaluate the ongoing inclusion of additional facilities into an enhanced winter leak survey program.

Appendix A

PENNSYLVANIA
PUBLIC UTILITY COMMISSION
Harrisburg, PA 17105-3265

Public Meeting held June 13, 2013

Commissioners Present:

Robert F. Powelson, Chairman
John F. Coleman, Jr., Vice Chairman
Wayne E. Gardner
James H. Cawley
Pamela A. Witmer

Pennsylvania Public Utility Commission, Bureau of Investigation and Enforcement v. UGI Utilities – Gas Division Leak Detection Pilot Program for the City of Allentown, Pennsylvania

C-2012-2308997

FINAL ORDER

BY THE COMMISSION:

On February 19, 2013 the Pennsylvania Public Utility Commission (Commission) entered an Order (February 19 Order) approving and modifying a Joint Settlement Petition (Settlement) that was entered into by the Commission's Bureau of Investigation and Enforcement (I&E) and UGI Utilities, Inc. – Gas Division (UGI), UGI Penn Natural Gas, Inc. (UGI Penn Natural), and UGI Central Penn Gas, Inc. (UGI Central Penn) (collectively the 'UGI Companies') at the above-captioned proceeding. The Settlement resolved all issues raised in the Formal Complaint, which concerned a fatal natural gas explosion that occurred on February 9, 2011 at 542 and 544 North 13th

Street, Allentown, Pennsylvania. The UGI Companies and I&E accepted the Commission's modifications to the Settlement.

In the February 19 Order the Commission directed UGI to explore enhanced leak detection measures and file a pilot program to utilize one or more of these enhanced leak detection measures throughout the City of Allentown. The Commission ordered UGI to publish notice of the pilot program filing in the *Pennsylvania Bulletin*, so as to allow interested parties an opportunity to provide comments to the program. On April 12, 2013 UGI submitted its Leak Detection Pilot Program (LDPP). On April 27, 2013 notice of UGI's LDPP filing was published in the *Pennsylvania Bulletin*.[1] Interested parties were permitted to file comments by May 17, 2013.

I. LEAK DETECTION PILOT PROGRAM

UGI's proposed LDPP employs three approaches. First UGI proposes to initiate a request for proposal (RFP) to solicit alternative natural gas leak detection measures to be implemented in the City of Allentown during the 2013/2014 winter season. UGI submits that through the RFP process it will solicit bids from interested parties that include alternative approaches, services, surveys, patrols, processes, procedures, equipment, and/or technology that are designed to enhance or improve the existing natural gas leak detection surveys and patrols currently performed by UGI for its natural gas facilities located in the City of Allentown.

Second, UGI proposes, as an interim measure, to undertake additional quarterly leak detection surveys on all cast iron mains in the City of Allentown from

[1] 43 Pa.B. 2407 (April 27, 2013.)

April 1, 2013 through November 30, 2013 using traditional measures. Specifically, UGI proposes to employ an over-the-main mobile survey technique, using leak detection equipment set to an equivalent sensitivity of 10 parts per million and a low rate of driving speed. UGI submits that if a leak is detected, further testing will be performed at all significant indications of leakage. All Class C and B leaks will be reported on the standard report form. All buildings in the immediate area of any Class C leaks will be checked for presence of gas while the surveyor remains at the leak site until relieved by a qualified UGI representative.

Last, UGI proposes to provide a written report to the Commission on or before June 1, 2014 describing the results of the LDPP.

In conclusion, UGI avers that the proposed LDPP, together with UGI's existing leak detection procedures, provides a reasonable basis for exploring and implementing enhanced leak detection measures throughout the City of Allentown.

II. COMMENTS

a. BUREAU OF INVESTIGATION AND ENFORCEMENT

On May 17, 2012 the Commission's Bureau of Investigation and Enforcement (I&E) filed Comments in response to UGI's proposed LDPP.[2] In its comments I&E contends that UGI's filing is contrary to the Commission's directive in the February 19 Order in that it contains no new leak survey programs that can be implemented immediately after the Commission approves UGI's LDPP filing. Rather, I&E submits that UGI's LDPP filing consists of a mere recitation of its current leak

[2] On May 21, 2013 I&E filed corrected Comments. The May 21, 2013 Comments rectified an error in the Docket Number listed in the May 17, 2013 Comments.

detection programs and attaches a RFP to solicit a consultant to assist UGI with developing additional natural gas detection measures. Therefore, I&E urges the Commission to direct UGI to implement a pilot program that includes enhanced leak detection measures now. I&E recommends that the Commission direct UGI to immediately begin a continuous leak survey of high risk pipe in the City of Allentown until UGI develops and implements a pilot leak program. Further, I&E recommends that UGI be directed to submit monthly reports on the results of the continuous leak survey to the Gas Safety Division of I&E along with a plan and schedule to fix all Class B and Class C leaks discovered in the survey. In support, I&E states that a continuous leak survey program will provide for leak surveys during warmer months, since five of the seven UGI leak surveys operate only during colder months.

I&E also states that UGI's Distribution Integrity Management Program (DIMP), patrolling procedures, and leakage survey programs should be designed to function cohesively in order to best identify and monitor cast iron pipeline systems located in suspect areas, such as the City of Allentown. As such, I&E recommends that any enhanced leakage detection measures fully developed through this pilot program proceeding be included in UGI's DIMP and patrolling procedures.

As well, I&E submits that UGI's leakage surveys should pay particular attention to areas where soil or pavement have been disturbed by excavation activities and such surveys should be included in UGI's DIMP. Continuing, I&E states that it does not believe UGI presently coordinates with other entities, such as highway and water authorities, for areas where evidence of water leaks, sinkholes, or instability in the road exists. As such, I&E contends that UGI should coordinate with other entities, including highway and water authorities.

III. REPLY COMMENTS – UGI

On May 23, 2013 UGI filed Reply Comments in response to I&E's May 17 Comments. However, the February 19 Order includes no specific directive to allow for the filing of reply comments to any comments provided in relation to the LDPP. Rather, the February 19 Order only references comments. Specifically, Ordering paragraphs 8.b. and 8.c. state:

> 8.b. That notices of the pilot program filing shall be published in the *Pennsylvania Bulletin,* so that interested parties may provide comments to the pilot program. Such comments shall be filed within twenty days from the date of publication in the *Pennsylvania Bulletin.*
>
> 8.c. That the Commission shall consider any comments and approved, modify, or reject the pilot program.

Regardless, the Commission notes that it has taken the time to review UGI's Reply Comments and finds that the Reply Comments add no material or substantive issues worth discussing in this Order.

IV. DISPOSITION

After review of UGI's LDPP filing and the Comments filed by I&E, the Commission makes the following determinations. First, the Commission finds that UGI's LDPP substantially complies with our directives in the February 19 Order. UGI's LDPP will enhance its Allentown leak detection program in two ways. First, through the implementation of additional quarterly leak surveys from April 1, 2013 through November 30, 2013 and second, via the use of an enhanced wintertime survey from November 1, 2013 through March 31, 2014. Consequently, UGI's program will enhance its leak surveying in the Allentown area immediately and over a full one-year cycle.

Further, the use of an RFP process to solicit bids for an enhanced wintertime survey is prudent to determine what enhanced leak detection technologies exist in the marketplace and to ensure that a fair price is paid for the use of the winning technology.

The Commission disagrees with I&E's characterization that UGI's proposal merely recites UGI's current programs. We also do not believe it is necessary to direct UGI to develop a plan to fix all Class B and Class C leaks discovered as a result of the enhanced measures, as leak management is governed by UGI's DIMP. We do, however, agree with I&E that these additional leak surveys should be conducted on all high-risk pipe in Allentown, as defined using UGI's DIMP, rather than only on cast iron mains as proposed by UGI.

The Commission further believes that UGI's proposal to provide a written report on the results of the pilot program is prudent, as such a report will help assist in analyzing the success or failure of the LDPP.

Continuing, the Commission believes that I&E's recommendation to have UGI include enhanced leak detection measures flowing from the pilot in its DIMP is premature. While this recommendation may ultimately have merit, it is simply too early to know whether the enhanced leak detection technology deployed will be successful at finding more leaks or cost-effective on a system-wide basis.

Finally, we believes I&E's recommendation that UGI update its DIMP to increase coordination with other entities and concentrate on areas where soil or pavement have been disturbed may have merit and we encourage UGI to give them due consideration. We do not, however, believe this is the proper proceeding to impose such a requirement. Rather, this requirement should be addressed in the context of I&E's audit of UGI's DIMP.

V. CONCLUSION

In summary, the Commission's goal with this LDPP proceeding is to further minimize the risk of another catastrophic event by directing UGI to research and implement enhanced leak detection processes that go above and beyond the steps the Company has agreed to undertake to improve the physical integrity of its distribution system. The Commission finds that UGI's proposal substantially complies with our directives. Consequently, consistent with our discussion above, we shall approve and modify the various provisions of UGI's proposed LDPP; **THEREFORE,**

IT IS ORDERED:

1. That the request for proposal portion of UGI Utilities, Inc. – Gas Division's Leak Detection Pilot Program is approved.

2. That the interim measures portion of UGI Utilities, Inc. – Gas Division's Leak Detection Pilot Program is modified, consistent with the discussion and directive in this Order.

3. That UGI Utilities, Inc. – Gas Division's proposal to provide a written report to the Commission on or before June 1, 2014 describing the results of the Leak Detection Pilot Program is approved.

4. That any Commission directives included in the discussion of this Order but not reiterated in Ordering Paragraphs one through three shall have the full force of an Ordering Paragraph.

5. That a copy of this Final Order be served on all active Parties to the proceedings at Docket No. C-2012-2308997.

BY THE COMMISSION,

Rosemary Chiavetta
Secretary

(SEAL)

ORDER ADOPTED: June 13, 2013
ORDER ENTERED: July 1, 2013

Appendix B

UGI UTILITIES, INC. – GAS DIVISION

NATURAL GAS LEAK DETECTION PILOT PROGRAM FOR NATURAL GAS DISTRIBUTION FACILITIES LOCATED IN THE CITY OF ALLENTOWN

2013/2014 WINTER PERIOD

REQUEST FOR PROPOSALS

Issued:	**July 30, 2013**
Pre-Bid WebEx Conference:	**August 15, 2013**
Responses Due:	**August 30, 2013**

Table of Contents

Attachments

Notice of Disclaimer

The information contained in this Request for Proposals (this "RFP") has been prepared solely to assist prospective Respondents in making the decision of whether or not to submit a response to this RFP ("Response"). A "Respondent" shall mean any entity that (1) executes a Confidentiality Agreement in a form substantially similar to that set forth in Attachment G prior to submitting a Response; and (2) responds to this RFP by submitting a Response to the Company in accordance with the requirements herein. UGI Utilities, Inc. – Gas Division, referred to herein as the "Company," does not purport this information to be all-inclusive or to contain all of the information that a prospective Respondent may need to consider in order to submit a Response. Neither the Company nor its employees, officers, nor its consultants will make, or will be deemed to have made, any current or future representation, promise or warranty, express or implied, as to the accuracy, reliability, or completeness of the information contained herein, or in any document or information made available to a Respondent, whether or not the aforementioned parties know or should have known of any errors or omissions, or were responsible for its inclusion in, or omission from, this RFP.

The Company reserves the right to modify or supplement this RFP at any time. No part of this RFP and no part of any subsequent correspondence by the Company, its members, customers, employees, officers, or the Company' consultants shall be taken as providing legal, financial, or other advice, nor as establishing a contract or contractual obligation. Contractual obligations on the part of the Company will arise only if and when definitive agreements have been approved and executed by the appropriate parties having the authority to approve and enter into such agreements.

The Company reserves the right to reject any, all, or portions of any Response received for failure to meet any criteria set forth in this RFP or otherwise. The Company also may decline to enter into an agreement with any Respondent, terminate discussions with any Respondent, or to abandon the RFP process in its entirety at any time and without notice thereof. Respondents who submit Responses agree to do so without legal recourse against the Company, and its directors, officers, employees and agents for rejection of its Response(s) or for failure to execute an agreement for any reason. The Company shall not be liable to any Respondent or party in law or equity for any reason whatsoever for any acts or omissions arising out of or in connection with this RFP. By submitting its Response, each Respondent waives any right to challenge any valuation by the Company of any Response of any Respondent or any determination of the Company

to select or reject any Response of any Respondent or any other decision of the Company or any resulting agreement related to a selected Response. Each Respondent, in submitting its Response, irrevocably agrees and acknowledges that it is making its Response subject to and in agreement with the terms of this RFP and agrees that the Company shall be entitled to specific performance of its rights hereunder and injunctive relief.

Each Respondent shall be liable for all of its costs incurred to prepare, submit, respond or negotiate its Response and any resulting agreement and for any other activity related thereto, and the Company shall not be responsible for any of the Respondent's costs. The Company will, in its sole discretion and without limitation, evaluate Responses and proceed in any manner the Company deems appropriate, which may include deviations from the Company's expected evaluation process, the waiver of any requirements, and the request for additional information. Rejected Respondents will have no claim whatsoever against the Company, or its members, customers, employees, officers, or the Company' consultants. The submission of a Response to the Company shall constitute Respondent's acknowledgement and acceptance of all terms, requirements and conditions of this RFP.

1.0 Overview

The Company is comprised of two regulated divisions encompassing a natural gas distribution operation ("Gas Division") and an electric distribution operation. The Gas Division is a public utility and natural gas distribution company subject to regulation by the Pennsylvania Public Utility Commission that serves approximately 350,000 customers in fourteen counties in eastern and central Pennsylvania.

The purpose of this RFP is to seek proposals from interested parties for alternative natural gas leak detection measures that are designed to enhance or improve the natural gas leak detection surveys and patrols currently performed by the Company for its natural gas distribution and transmission facilities located in the City of Allentown. A summary of the natural gas leak detection surveys and patrols currently conducted by the Company, along with a description of the equipment currently utilized to perform such surveys, for the Company's natural gas distribution and transmission facilities ("Facilities") located in the City of Allentown is set forth in Attachment A. A description of the Company's Facilities located in the City of Allentown is set forth in Attachment B, which contains confidential information. Prior to receiving such confidential information, Respondent must execute and return to Company a copy of the Confidentiality Agreement set forth in Attachment G. A Respondent's proposal may include alternative approaches, services, surveys, patrols, processes, procedures, equipment and/or technology that are designed to enhance the Company's existing leak detection program for its Facilities located in the City of Allentown. A Respondent's proposal must include a statement of how the proposed alternative approaches, services, surveys, patrols, processes, procedures, equipment and/or technology would enhance the Company's existing leak detection surveys and patrols for its Facilities located in the City of Allentown and a statement on how Respondent proposes the Company measure the effectiveness of Respondent's proposed enhancements. If a proposal entails the sale, lease or license of leak detection equipment or technology designed to improve the Company's existing natural gas leak detection program, a description of how such equipment or technology will both "pinpoint" and "classify" a leak.

The Company is issuing this RFP to interested parties with the intent of entering into, as appropriate, a master pipeline support services agreement, equipment supply purchase/lease agreement, a technology license agreement or other appropriate agreement with successful Respondents pursuant to which the Company will test the Respondent's proposed enhanced leak detection measures on certain Facilities located in the City of

Allentown during the 2013/2014 winter period. Respondents are required to provide Responses for the supply of such enhanced leak detection measures to the Company pursuant to the instructions provided herein.

If a Respondent's proposal involves offers of services, surveys, patrols, processes or procedures designed to improve the Company's existing leak detection surveys and patrols, such Respondent must be qualified in providing such natural gas distribution facility leak detection services, as determined by the Company. If a Respondent's proposal entails the sale, lease or license of leak detection equipment or technology designed to improve the Company's natural gas leak detection program, Respondents must be a qualified dealer of natural gas distribution facility leak detection equipment.

This RFP is structured to provide prospective Respondents with sufficient information on which to prepare a Response and is organized in the following manner:

- **Section 2.0** provides general information to the Respondent including the RFP schedule established by the Company.
- **Section 3.0** discusses the submittal preparation instructions.
- **Section 4.0** lists the RFP evaluation procedures and criteria.
- **Attachment A** contains the Description of Company's Existing Leak Detection Program.
- **Attachment B** contains the Description of Company's Facilities Located in City of Allentown.
- **Attachment C** contains the Safety and OQ Pre-Qualification Package.
- **Attachment D** contains the Master Pipeline Support Services Agreement.
- **Attachment E** contains the Products Purchase/Lease Agreement.
- **Attachment F** contains the Technology License Standard Provisions.
- **Attachment G** contains the Confidentiality Agreement.

2.0 General Information on the RFP

2.1 General Information

All Responses submitted to the Company pursuant to this RFP shall become the exclusive property of the Company and may be used by the Company, as the Company deems appropriate, for the purpose of determining the most appropriate means of acquiring enhanced natural gas leak detection measures. The Company shall only consider as confidential, those portions of the Respondent's Response clearly marked "*Proprietary and Confidential.*" *A Response may be subject to discovery and disclosure* in regulatory or judicial proceedings, including those initiated by a party other than the Company. Respondents may be required to justify the requested confidential treatment under the provisions of a protective order issued in such a proceeding. If required by the order of any government agency or court, the Company may provide the subject material without prior consultation with or notice to the Respondents. Such information may, also be made available under applicable state or federal law to regulatory commission(s), their staff(s), and other governmental agencies having an interest or jurisdiction in these matters. The Company also reserves the right to release such information to its agents or contractors for the purpose of evaluating the Responses. Under no circumstances will the Company or its directors, officers, employees, agents or contractors, be held liable for any damages resulting from any disclosure of Respondent's claimed confidential information during or after the RFP process.

2.2 RFP Schedule

The Company has established the schedule for the RFP as shown in Table 2-1. The Company reserves the right to amend the RFP schedule at any time.

Table 2-1
RFP Schedule

Item	Date
Issuance of RFP	July 30, 2013
Pre-Bidders' Conference	August 15, 2013
Latest Date for Questions to be Submitted	August 23, 2013
Response Due Date	August 30, 2013
Target Date: Executed contracts	October 11, 2013

2.3 Registration and Pre-Bidders' WebEx Conference

The Pre-Bidders' WebEx Conference ("Pre-Bidders' WebEx") will be held on August 15, 2013. In order to participate in the Pre-Bidders' WebEx, prospective Respondents must submit an executed Confidentiality Agreement on or before this date and must identify the individual designated by a prospective Respondent as the contact person who shall receive correspondence issued during the RFP process. The Company will send the time of the Pre-Bidders' WebEx along with instructions on how to access the WebEx to such individuals via e-mail.

At the Pre-Bidders' WebEx, participants will be required to sign in and confirm the individual designated by a prospective Respondent as the contact person for the purpose of this RFP who shall receive correspondence issued during the RFP process.

At the Pre-Bidders' WebEx, representatives from the Company will summarize the basis for this RFP and the RFP process, and will be available to answer questions regarding this RFP. The Company may provide additional information at the Pre-Bidders' WebEx.

2.4 RFP Questions and Answers

All questions concerning this RFP must be submitted to Kevin Frederick, Project Engineer, Capital Planning Department on or before August 23, 2013, via e-mail at KFrederick@ugi.com. Questions submitted after this date may not be answered. The Company will endeavor to answer all questions by no later than August 27, 2013. All questions and answers will be e-mailed to all Respondents without identifying the name of the party who submitted the question.

2.5 Submittal Instructions

Submitted Responses must be organized in the manner described in Section 3.0 of this RFP and signed by a representative of the Respondent who is duly authorized to submit the offer contained in the Response on behalf of the Respondent and to bind the Respondent to any contract resulting from the Company's acceptance of the offer.

For a Response to be considered by the Company, either one hard copy of the Response or an electronic version of the Response, on a Compact Disc or USB flash drive, shall be delivered to Company via overnight carrier in a sealed package, clearly marked as "Response to Leak Detection Pilot Program RFP." Electronic versions delivered by e-mail will not be accepted.

Responses must be delivered to the Company' Representative (at the address listed below) no later than 5:00 p.m. (ET) on August 30, 2013. Responses received later than this date and time may be returned to the Respondent. A Response submitted prior to this date and time may be withdrawn or modified by a Respondent at any time. After such date and time, all Responses will be considered final and binding.

The Company' Representative and Response Mailing Address

UGI Utilities, Inc. – Gas Division
Attention: Kevin L. Frederick, Project Engineer
2121 City Line Road
Bethlehem, Pennsylvania 18017

2.6 Response Opening and Evaluation

Opening of the Responses will not be done in public. Responses will be screened and offers that do not meet the content and organizational requirements specified in this RFP may be eliminated from further consideration. Evaluation of Responses will follow the process discussed in Section 4.0 of the RFP. The Company may elect to engage certain Respondents in further discussions and/or negotiations.

2.7 Safety & OQ Pre-Qualification Requirements

If a Respondent's proposal involves offers of services, surveys, patrols, processes or procedures designed to improve the Company's existing leak detection surveys and patrols for its Facilities located in the City of Allentown, the Respondent must represent and warrant that it will comply with all applicable portions of the Safety & OQ Pre-Qualification Requirements (provided as Attachment C), in accordance with the instructions outlined therein, and ***Response pricing must reflect compliance with all Safety & OQ Pre-Qualification Requirements.***

2.8 Master Pipeline Support Services Agreement

Any Response made for provision of natural gas leak detection services must be made by the Respondent with the understanding that the Master Pipeline Support Services Agreement (see Attachment D) will be the basis for any definitive agreement between the Respondent and the Company. ***The Response pricing must reflect acceptance of all of the terms and conditions, without exception, set forth in the Master Pipeline Support Services Agreement.*** The Company reserves the right to update, modify, or revise the terms and conditions contained in the Master Pipeline Support Services Agreement.

2.9 Equipment Purchase/Lease Agreement

Any Response made for the sale or lease of natural gas leak detection equipment must be made by the Respondent with the understanding that the Products Purchase/Lease Agreement (see Attachment E) will be the basis for any definitive agreement between the Respondent and the Company. ***The Response pricing must reflect acceptance of all of the terms and conditions, without exception, set forth in the Equipment Purchase/Lease Agreement.*** The Company reserves the right to update, modify, or revise the terms and conditions contained in the Products Purchase/Lease Agreement.

2.10 Technology License Standard Provisions

Any Response made for the license of or access to natural gas leak detection software or other technology must be made by the Respondent with the understanding that the standard provisions set forth in Attachment F will be incorporated in any definitive agreement between the Respondent and the Company. ***The Response pricing must reflect acceptance of all of the terms and conditions, without exception, set forth in the Attachment F.*** The Company invites Respondents proposing a technology license to submit Respondent's standard technology license agreement that incorporates the standard provisions set forth in Attachment F. The Company reserves the right to update, modify, or revise the terms and conditions contained in the standard provisions.

3.0 Submittal Preparation Instructions

3.1 General Information

All Responses must comply with the requirements specified in this Section 3.0. Specifically, Respondents must organize their Response according to the format specified in Section 3.2 of this RFP and provide all applicable information required in Section 3.2. All Responses must be submitted to the Company in accordance with the requirements set forth in Section 2.5 of this RFP.

3.2 Required Organization of the Response

All Responses should be concise and clearly organized in the six sections outlined below. If a section does not apply, Respondent shall still include the section in the Response and indicate that it does not apply by stating "Not Applicable." All Responses must contain the following information without exception and must be organized as follows:

1. Cover Letter

- The cover letter must include all signatures necessary to approve and submit the Respondent's Response by a representative having the authority to contractually commit the Respondent for Respondent's offer provided in the Response. Additionally, the cover letter should also include the following declaration:
- "[Insert legal name of Respondent] (the "Contractor") hereby acknowledges receipt of the Leak Detection Pilot Program – Request for Proposals issued by UGI Utilities, Inc. – Gas Division on July 30, 2013 (the "RFP"). Contractor acknowledges and agrees that it has read and agrees to be fully bound by, all of the terms, conditions and other provisions set forth in the RFP. Additionally, Contractor hereby makes the following representations to UGI Utilities, Inc. with respect to this response (the "Response"):
  - all of the statements and representations made in the Response are true to the best of the Contractor's knowledge and belief;
  - the Contractor has obtained all necessary authorizations, approvals and waivers that will enable the Contractor to commit to the terms provided in the Response;
  - the Response reflects the Contractor's acceptance of all of the terms and conditions, without exception, set forth in the applicable agreement contained in the RFP; [***if exceptions are taken by Respondent or additional contract terms and conditions are proposed, there must be an indication of such in the Cover Letter***] and

- The Response is a firm and binding offer made by the Contractor for a period of 120 days from the date hereof that can be accepted by the Company at any time within such period."

2. Company Information

- In this section the Respondent is to provide the following details about the company:
  - Profile of the Respondent's company and its parent company, if any;
  - Relationship structure with the parent company (can be in the form of a diagram);
  - Description of Respondent's natural gas leak detection experience, including experience in Pennsylvania and any adjacent states; and
  - Any current litigation that the Respondent or any of its subsidiaries is involved in regarding any pipeline natural gas leak detection services, equipment or technology it has provided.

3. Completed Bid Sheet

- The Respondent must submit a completed bid sheet that contains:
  - a description of the alternative approaches, services, processes, procedures, equipment and/or technology that are designed to enhance the Company's existing leak detection surveys and patrols;
  - a statement of how the proposed alternative approaches, services, surveys, patrols, processes, procedures, equipment and/or technology would enhance the Company's existing leak detection surveys and patrols;
  - a statement or description of how Respondent proposes the Company measure the effectiveness of Respondent's proposed enhancements;
  - if a proposal entails the sale, lease or license of leak detection equipment or technology designed to improve the Company's existing natural gas leak detection program, a description of how such equipment or technology will both "pinpoint" and "classify" a leak; and
  - Response pricing that adheres to the requirements set forth in Sections 2.8 through 2.10.

4. Safety & OQ Pre-Qualification Requirements, if applicable

- If a Response involves offers of services, surveys, patrols, processes or procedures designed to improve the Company's existing leak detection surveys and patrols for its Facilities located in the City of Allentown, the

Respondent must provide a representation and warranty that it will comply with all applicable portions of the Safety & OQ Pre-Qualification Requirements (provided as Attachment C), in accordance with the instructions outlined therein.

5. **Additional Contract Terms and Conditions, if applicable**
   - The pricing included in the Response should be based upon acceptance of all of the terms and conditions, without exception, set forth in the applicable agreements attached to this RFP. ***If Respondent takes exception to any term and condition and/or proposes additional contract terms and conditions, it must set forth each exception or addition and indicate how it impacts Respondent's pricing. Additionally, Respondent must submit a blacklined agreement showing the proposed changes to the terms and conditions.***

6. **Other Information**
   - Respondents may provide any additional information that the Respondent feels will assist the Company in its evaluation of the Respondent's Response.

4.0 Evaluation Procedures

The procedures to be used in the evaluation of Responses are described in this Section 4.0. These procedures will be used to determine whether Responses are responsive.

4.1 Evaluation of Responses

All Responses received will be evaluated to ensure that the submittal is responsive. The Company will perform an initial screening evaluation to identify and eliminate any Responses that (a) are non-conforming to this RFP, (b) do not meet the minimum requirements set forth in this RFP, (c) are clearly not economically competitive with other Responses or (d) are submitted by Respondents that lack appropriate qualifications to provide a dependable and reliable source of pipeline construction services. Responses meeting all of the requirements set forth in the foregoing clauses (a) through (d) will be eligible for further evaluation by the Company. The Company reserves the right, without qualification and in its sole discretion, to accept or reject any or all Responses or portions of a Response for any reason without explanation or notice to the Respondents, or to make the award to those Respondents, that, in the opinion of the Company, will provide the most value to the Company.

Attachment A - Description of Company's Existing Leak Detection Program

Attachment B – Description of Company Facilities Located in City of Allentown *CONFIDENTIAL*

Attachment C – Safety & OQ Pre-Qualification Package

Attachment D – Master Pipeline Support Services Agreement

Attachment E – Equipment Purchase/Lease Agreement

The attached form of Master Agreement for Purchase of Products will be the basis for the definitive agreement between the Respondent and the Company for any arrangements involving the sale and purchase of natural gas leak detection equipment. In the event that the Response involves the lease of natural gas leak detection equipment, the Company will provide the underlying terms and conditions for the lease of such equipment.

Attachment F – Technology License Standard Provisions

Attachment G – Confidentiality Agreement