



a PPL company

Mr. Jeff DeRouen
Executive Director
Kentucky Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602-0615

March 20, 2015

**RE: *The Application of Louisville Gas and Electric Company for Approval
of a Permanent Statistical Meter Sampling Plan***
Case No. 2000-00278
And
***The Application of Louisville Gas and Electric Company to Implement a
Gas Regulator Inspection Program***
Case No. 2012-00491

Dear Mr. DeRouen:

Enclosed please find Louisville Gas and Electric Company's 2014 Gas Meter Performance Control Plan and Residential Gas Regulator Performance Control Program pursuant to the Commission's Orders in the above mentioned proceedings.

Should you have any questions concerning the enclosed, please contact me at your convenience.

Sincerely,

Rick E. Lovekamp

Enclosure

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COMMISSION

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Company**
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LG&E

Gas Meter Sampling Plan Results

Louisville Gas & Electric Company (LG&E) Year 2014 Gas Meter Sampling Plan Results

I. Introduction

The 2014 LG&E Gas Meter Performance Control Program required 8,881 gas meters within 151 control groups be tested and their accuracy performance documented.

Any sampled meter which proof tested beyond +/- 2% (fast or slow) was considered to be a failed meter. Of the control groups sampled during 2014, three (3) control groups failed the sampling criteria. This report summarizes the results of the 2014 LG&E Gas Meter Sampling Program.

II. Meter Performance

The meter groups were separated into three capacity classifications. Meters with capacities up to and including 500 CFH, which consist of primarily residential meters, represented the largest group with one hundred three (103) control groups and 7,732 meters. Meters with capacities which range from 501 CFH to 1500 CFH (Commercial), made up the second largest group with forty-two (42) control groups and 1,072 meters. Meters with capacities 1501 CFH (Industrial) and above comprised the balance of the sampling with six (6) control groups and 77 meters.

A summary of each control group, along with statistical analysis data, is shown in appendix A. The definitions of selected statistical categories are included, and the sample groups are arranged from low to high capacity.

In the 2014 sampling program, all 145 of the 151 control groups passed the sampling criteria, while there were two (2) lots of 1 reported as missing, one (1) prior year failed meter lot, and three (3) 2014 failed meter lots.

A total of twelve (12) control groups had their remaining population removed through the sampling program in 2014.

Residential Class - Up to and including 500 cfh

Strong Performing Groups

The stronger performing meter groups in this capacity continue to be the American AL175, AC250, and the AL425 models. Of the 1,754 meters in the twenty-eight (28) control groups of AL175 meters, only nineteen (19) individual meters failed the sampling criteria, a 1.08% failure rate. The twenty-four (24) AC250 control groups had a total of two (2) individual meter failures out of the 1,614 meters tested, a 0.12 % failure rate. The fourteen (14) AL425 control groups totaling 448 meters experienced three (3) individual meter failures, a 0.67% failure rate.

The American Meter Company AC250 residential model was the primary type of residential gas meter LG&E purchased as additional stock, which continues to improve the overall accuracy of the installed meter population.

Residential Reduced Sampling Requirements

Test results from year 2014 were analyzed for the below groups to verify each model did not exceed the Limit Numbers For Reduced Inspection, Table VIII, under the American Standard – Sampling Procedures and Tables For Inspection By Attributes guidelines.

Model – American AL175 CFH – 033 and 33A
Oldest 10 Control Groups Tested = 794 Meters Tested
Limit Number For Reduced Testing - 25
Actual Deviate Meters - 11

Model – American AL425CFH
Oldest 10 Control Groups Tested = 320 Meters Tested
Limit Number For Reduced Testing - 14
Actual Deviate Meters - 2

Model – American AC250 CFH
Oldest 10 Control Groups Tested = 584 Meters Tested
Limit Number For Reduced Testing - 25
Actual Deviate Meters - 2

The below models will remain on Reduced Sampling in year 2015.

American Model AL175 Model Code 033 and 33A
American Model AL425 Model Code 015
American Model AC250 Model Code 078

Weaker Performing Residential Group

The Rockwell 175 CFH meters, size codes 024, 24T, and 24B, continue to be one of the weaker performing models. Of the twenty-four (24) Rockwell R175 control groups consisting of 2,678 meters sampled this year, 122 of the individual meters failed the sampling criteria for a 4.55% failure rate.

Beginning in 2010 the above 024 Rockwell R175 meters were divided into two sub-groups when remanufactured, becoming either size code 024T (top badge) or 024B (bottom badge). The 024T size code is the oldest vintage of the R175 models by original manufacturing year in the LG&E meter population and the 024B being the newer vintage. Due to the R175 model in general being a poorer performer in proof retention, this group of meters was sub-grouped to help LG&E determine at some future date if either sub-group should no longer be remanufactured and placed back into service.

Due to the performance record, starting with 2015 the R175 will no longer be refurbished and placed back in service.

The Actaris 250 Metris gas meter, size codes 018 and 18T, had six (6) control groups tested this year and experienced twenty-four (24) failures out of 705 meters tested, which was a 3.40% failure rate. These models are not being refurbished and placed back into service.

Commercial Class - 501 cfh up to and including 1500 cfh

In general, the commercial class control groups performed well in 2014. There were three failed lots, the 2005 American 1400, 2004 Rockwell #3 Emco, and 2012 Rockwell R800 meter. In the American 1400 2005 lot, there were nine (9) meters included in the lot, with a sample of two (2), and had one individual meter fail. The remaining seven (7) meters will be exhausted in 2015. In the Rockwell #3 Emco 2004 lot, there were a total of twenty-eight (28) meters, with a sample of eight (8), and had 3 individual meters fail. All 28 were removed from service in 2014 as an exhaust group. There was only one (1) meter in the Rockwell 2012 R800 lot. The meter was tested and removed from service.

The American AL800 gas meters within the eight (8) control groups tested had five (5) individual meter failure out of the 99 meters measured, for a 5.05% failure rate.

The 2014 Gas Meter Sample Plan contained the balance of a 2012 failed meter group of 2005 AL1000 gas meters. Of the eight (8) remaining groups tested, there were twenty-six (26) individual meter failures out of the 285 meters measured, for a 9.12% failure rate.

With the exception of the 2005 failed meter lot, the American AL1400 meters experienced zero (0) individual meter failures within the remaining seven (7) control groups tested.

With the exception of the 2004 failed meter/exhaust lot, the Rockwell #3 Emco control groups experienced five (5) individual meter failures within the six (6) remaining control groups of 52 meters tested for a 9.62% failure rate.

The eight (8) Rockwell R750 control groups demonstrated acceptable performance with ten (10) individual meter failures within the 298 meters tested for a 3.36% failure rate.

Beginning in the 2003 test year, all Commercial Class Control Groups, regardless of whether they meet the Limit Numbers For Reduced Inspection, Table VIII, under the American Standard – Sampling Procedures and Tables For Inspection By Attributes guidelines, have been placed on the Single Sampling Plan For Normal Inspection due to the small volume of meters in the Commercial Class Control Groups.

Industrial Class - Over 1500 cfh

The six (6) control groups in this capacity range performed extremely well and there were two (2) individual meter failures within the six (6) control groups tested.

Beginning in 2003 test year, all Industrial Class control groups, regardless of whether they meet the Limit Numbers For Reduced Inspection, Table VIII, under the American Standard – Sampling Procedures and Tables For Inspection By Attributes guidelines, have been placed on the Single Sampling Plan For Normal Inspection due to the small volume of meters in the Industrial Class control groups.

Failed Group From Sample Year 2012

During 2012's Gas Meter Sample Plan, the Gas Meter Lot D014_AL1000_2005 failed. The total lot contained 253 American AL1000's. LG&E removed all gas meters contained within the lot within the 18 month window, completed by June 30, 2014. In total meters tested, there were 59 individual meters fail of the 253 removed, a 23.32% failure rate. Of the failures, 98% (58 of the 59) were the result of slow accuracy tests.

Prior Meters

There were three (3) meters recorded as missing in 2014 and will not be reported in future years.

There are two (2) residential meters unable to gain access with install year of 1985.

There is one (1) commercial meter with an install year of 2004 that was not changed in 2014 due to customer request, meter is planned to be exchanged in 2015 as part of a meter location move from inside the customers premise to outside.

The above three (3) meters will be classified as "Prior Meters" in service year 2015, and multiple annual attempts will continue to be made to remove these meters from service.

III. Safety

As part of the LG&E Meter Sampling change-out activities, safety inspections were performed and “red-tags” were issued when deficiencies were found which resulted in a customer’s appliance being left off or the customer’s gas service partially or fully suspended until the deficiency was corrected by the customer. The results of these safety inspections directly associated with LG&E’s Meter Sampling Program are summarized in Table 2 below.

Table 2: Year 2014 Safety Inspection Results

Type of Problem/Appliance	# of "Red Tags"
BRASS FLEXLINE COOK STOVE	1
BRASS FLEXLINE FURNACE	6
BRASS FLEXLINE SPACE HEATER	1
BRASS FLEXLINE WATER HEATER	32
BRASS FLEXLINE WATER HEATER/DRYER	1
COOK STOVE LEAKING	4
DRYER LEAKING	2
FIREPLACE LEAKING	1
FLEXLINE THRU FURNACE WALL	72
FURNACE LEAKING	8
HOUSELINE LEAK	8
NOISY WATER HEATER	1
SPACE HEATER LEAKING	1
SPACE HEATER NOT VENTED	1
WATER HEATER CONTROL BROKEN	1
WATER HEATER LEAKING	3
WATER HEATER NO ISOLATION VALVE	1
WATER HEATER NOT VENTING	35
WATER HEATER VENT CORRODED AWAY FROM WALL	1
Grand Total	180

Additionally 2,004 Surveillance Notices were issued to correct outside deficiencies. Said deficiencies will be corrected by either the customer or by LG&E depending on ownership. The results of these surveillances directly associated with LG&E’s Meter Sampling Program are summarized in Table 3 below.

Table 3: Year 2014 Customer Surveillance Notices Issued

Type Of Customer Notice Issued	Number Issued
Corrosion / Rust On Outside Meter Loop & Associated Piping	1,691
Tree / Shrubbery Growing Inside / Against Meter Loop	23
Gas Piping Not Properly Supported	164
Meter Loop Too Low - In Contact With Soil / Pavement	7
Meter Not Protected From Vehicular Damage	23
No Plastic Sleeve Around Riser Going Through Pavement	9
Other	87

IV. Year 2014 Residential Meter Sampling Savings

Table 4 highlights the estimated savings between a periodic change schedule and the LG&E Gas Meter Performance Control Program for the purchase of new/remanufactured residential class gas meters.

Table 4: 2014 Residential Class Meter Sampling Program Estimated Savings

Meter Purchase Savings: Residential Gas Meters	
Periodic Program Costs (10-year Program):	
Number of Meters under Periodic Program [1]	32,455
Unit Remanufacture Cost – Average Blended Cost	\$32.78
Residential Meter Costs Under Periodic Program	<u>\$1,063,875</u>
Sampling Program Costs:	
Number of Meters under Sampling Program	7,732
Number of poor performing meters scrapped	3,913
Number of Meters for Remanufacture	<u>3,819</u>
Remanufactured Meters	3,819
Average Unit Remanufacture Cost – All Models	\$32.78
Remanufactured Meter Costs	<u>\$125,187</u>
Replacement Meters for Meters Scrapped	3,913
Average Replacement Meter Cost (per unit)	\$47.86
Replacement Meter Costs	<u>\$187,276</u>
Total Residential Meter Costs Under 2014 Program	<u>\$312,463</u>
Meter Cost Savings From 2014 Program	\$751,412

[1] Based On Residential Meters On Line Beginning Year 2014

APPENDIX A

Control Group Data/Analysis

Statistical Definitions

MEAN

The mean is the average of all numbers.

STANDARD DEVIATION

The standard deviation is a measure of how widely values are dispersed from the average value (the mean).

SAMPLE MINIMUM AND MAXIMUM

The minimum and maximum are the values of the least and greatest elements a sample.

Notes and Acronyms Explanation

Prior

Prior indicates that a gas meter is out of compliance with its life expectancy.

Exhaust

Exhaust indicates that the gas meter lot has reached its life expectancy and all meters were removed.

Missing

Missing indicates that a gas meter in the lot cannot be found and will be excluded from future sample selections.

Exh/Miss (Exhaust/Missing)

Exh/Miss indicates that the gas meter group has reached its life expectancy and contained a meter that is missing.

Exh/CGI (Exhaust/Can't Get In)

Exh/CGI indicates that the gas meter group has reached its life expectancy and contained a gas meter with no access.

FM (Failed Meter Group)

FM indicates failed meter group followed in parenthesis by the date the meter group failed.

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 0-500CFH

SINGLE SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
Schlumberger	018	250	2000	771	80	Single	80	80	10	11	1	0	1	-0.09	0.79	-3.25	1.85	Pass	
Schlumberger	018	250	2001	403	50	Single	50	50	7	8	1	0	1	-0.27	0.77	-2.85	1.70	Pass	
Schlumberger	018	250	2002	3084	125	Single	125	125	14	15	6	0	6	-0.78	0.74	-2.65	1.55	Pass	
Schlumberger	018	250	2003	4279	200	Single	200	200	21	22	3	0	3	-0.76	0.67	-2.60	1.20	Pass	
Schlumberger	018	250	2004	4237	200	Single	200	200	21	22	9	1	10	-0.69	0.93	-3.50	2.80	Pass	
Schlumberger	018T	250	2002	339	50	Single	50	50	7	8	3	0	3	-0.71	0.76	-2.95	0.80	Pass	
Rockwell	024	R175	1983	1		Single	1		0	1								Missing	
Rockwell	024	R175	1986	2978	125	Single	125	125	14	15	5	6	11	0.12	1.30	-4.85	3.85	Pass	
Rockwell	024	R175	1987	2883	125	Single	125	125	14	15	4	2	6	0.00	1.29	-7.55	3.05	Pass	
Rockwell	024	R175	1988	2063	125	Single	125	125	14	15	6	3	9	-0.05	1.05	-4.35	2.85	Pass	
Rockwell	024	R175	1989	3005	125	Single	125	125	14	15	3	2	5	0.06	0.94	-2.75	2.75	Pass	
Rockwell	024	R175	1990	2597	125	Single	125	125	14	15	3	1	4	0.04	1.42	-11.40	3.40	Pass	
Rockwell	024	R175	1991	2881	125	Single	125	125	14	15	2	9	11	0.41	1.37	-2.70	9.00	Pass	
Rockwell	024	R175	1992	3261	200	Single	200	200	21	22	6	9	15	-0.07	1.13	-3.15	2.80	Pass	
Rockwell	024	R175	1993	3515	200	Single	200	200	21	22	9	1	10	-0.28	1.11	-5.25	2.70	Pass	
Rockwell	024	R175	1994	2548	125	Single	125	125	14	15	5	2	7	-0.06	1.13	-3.00	7.25	Pass	
Rockwell	024	R175	1995	2375	125	Single	125	125	14	15	2	2	4	0.03	1.08	-2.40	5.05	Pass	
Rockwell	024	R175	1996	933	80	Single	80	80	10	11	4	0	4	-0.24	1.04	-3.35	1.95	Pass	
Rockwell	024	R175	1997	333	50	Single	50	50	7	8	2	0	2	-0.14	0.90	-2.60	2.00	Pass	
Rockwell	024	R175	1998	692	80	Single	80	80	10	11	5	0	5	-0.49	1.04	-4.30	2.00	Pass	
Rockwell	024	R175	1999	1269	125	Single	125	125	14	15	6	2	8	0.04	1.90	-3.60	13.25	Pass	

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 0-500CFH

SINGLE SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Meters Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
Rockwell	024	R175	2000	752	80	Single	80	80	10	11	0	0	0	-0.05	0.72	-1.55	1.30	Pass	
Rockwell	024	R175	2001	823	80	Single	80	80	10	11	2	0	2	-0.32	0.94	-5.50	1.80	Pass	
Rockwell	024	R175	2002	1146	80	Single	80	80	10	11	1	2	3	-0.11	0.79	-2.15	2.35	Pass	
Rockwell	024	R175	2003	1863	125	Single	125	125	14	15	4	1	5	-0.08	0.80	-2.65	2.05	Pass	
Rockwell	024	R175	2004	2283	125	Single	125	125	14	15	2	0	2	-0.02	0.78	-2.25	1.95	Pass	
Rockwell	024	R175	2005	2941	125	Single	125	125	14	15	2	0	2	-0.07	0.80	-3.90	1.80	Pass	
Rockwell	024	R175	2006	3258	200	Single	200	200	21	22	2	1	3	0.08	0.81	-2.30	3.70	Pass	
Rockwell	024	R175	2008	2609	125	Single	125	125	14	15	2	2	4	0.00	0.95	-2.95	2.75	Pass	
Rockwell	024	R175	2012	3	3	Single	3	3	0	1	0	0	0	0.47	0.40	0.10	0.90	Pass	
Rockwell	024B	R175	2010	2701	125	Single	125	125	14	15	1	0	1	-0.11	0.79	-3.75	1.85	Pass	
Rockwell	024B	R175	2012	1888	125	Single	125	125	14	15	0	1	1	0.13	0.68	-1.80	2.20	Pass	
Rockwell	024T	R175	2010	1872	125	Single	125	125	14	15	1	0	1	0.05	0.84	-2.85	1.90	Pass	
Rockwell	024T	R175	2012	1663	125	Single	125	125	14	15	1	1	2	0.19	0.85	-3.30	2.50	Pass	
American	041	5B225	1996	4	4	Single	4	4	0	1	0	0	0	-1.26	0.31	-1.70	-1.00	Pass	
Rockwell	057	R250	1990	23	23	Single	23	23	1	2	1	0	1	-0.14	0.96	-2.60	1.05	Pass	
Rockwell	079	R200	1985	5	3	Single	5	3	0	1	0	0	0	0.48	0.75	-0.30	1.20	Pass	CGI
<500 CFH Totals				68281	3913		3916	3913			104	48	152						
37 Control Groups																			

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 501-1500CFH

SINGLE SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
American	014	AL1000	2003	1	1	Single	1	1	0	1	0	0	0	-1.95		-1.95	-1.95	Pass	Prior
American	014	AL1000	2004	136	136	Single	20	20	3	4	3	0	3	-1.00	0.99	-2.95	0.50	Pass	Exhaust
American	014	AL1000	2005	52	52	Single													FM (2012)
American	014	AL1000	2006	151	32	Single	32	32	5	6	3	0	3	-0.47	1.14	-4.35	1.00	Pass	
American	014	AL1000	2007	201	32	Single	32	32	5	6	1	0	1	-0.38	0.74	-2.20	1.30	Pass	
American	014	AL1000	2008	290	50	Single	50	50	7	8	5	0	5	-0.59	1.21	-4.75	1.25	Pass	
American	014	AL1000	2009	338	50	Single	50	50	7	8	6	0	6	-0.75	1.14	-4.65	0.80	Pass	
American	014	AL1000	2010	403	50	Single	50	50	7	8	7	0	7	-0.84	1.22	-4.00	1.05	Pass	
American	014	AL1000	2012	427	50	Single	50	50	7	8	1	0	1	-0.52	0.74	-3.00	1.75	Pass	
Actaris	016T	800A	2002	1		Single	1		0	1									Missing
American	019	AL1400	2004	7	7	Single	2	2	0	1	0	0	0	-0.48	1.59	-1.60	0.65	Pass	Exhaust
American	019	AL1400	2005	9	2	Single	2	2	0	1	1	0	1	-2.18	3.01	-4.30	-0.05	Fail	
American	019	AL1400	2006	6	2	Single	2	2	0	1	0	0	0	-0.60	0.85	-1.20	0.00	Pass	
American	019	AL1400	2007	10	2	Single	2	2	0	1	0	0	0	-1.15	0.64	-1.60	-0.70	Pass	
American	019	AL1400	2008	16	8	Single	8	8	1	2	0	0	0	-0.49	0.37	-0.95	0.25	Pass	
American	019	AL1400	2009	2	2	Single	2	2	0	1	0	0	0	-0.43	1.38	-1.40	0.55	Pass	
American	019	AL1400	2010	5	2	Single	2	2	0	1	0	0	0	-0.68	1.87	-2.00	0.65	Pass	
American	019	AL1400	2012	37	8	Single	8	8	1	2	0	0	0	-1.04	0.93	-2.00	0.55	Pass	
Rockwell	053	R800	2012	1	1	Single	1	1	0	1	0	1	1	3.15		3.15	3.15	Fail	
Rockwell	056	3XEMCO	2004	28	28	Single	8	8	1	2	3	0	3	-3.31	4.52	-12.20	0.60	Fail	Exhaust
Rockwell	056	3XEMCO	2005	16	8	Single	8	8	1	2	1	0	1	-0.56	1.51	-3.65	1.35	Pass	

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 501-1500CFH

SINGLE SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
Rockwell	056	3XEMCO	2006	11	2	Single	2	2	0	1	0	0	0	-1.05	0.00	-1.05	-1.05	Pass	
Rockwell	056	3XEMCO	2007	30	8	Single	8	8	1	2	1	0	1	-0.24	1.50	-2.80	1.80	Pass	
Rockwell	056	3XEMCO	2008	31	8	Single	8	8	1	2	0	0	0	-0.54	0.69	-1.25	0.90	Pass	
Rockwell	056	3XEMCO	2010	60	13	Single	13	13	2	3	0	2	2	0.11	1.32	-1.65	2.80	Pass	
Rockwell	056	3XEMCO	2012	68	13	Single	13	13	2	3	1	0	1	-0.19	1.21	-2.40	1.95	Pass	
Rockwell	058	R750	2004	97	96	Single	20	20	3	4	0	0	0	-0.18	0.83	-1.70	1.50	Pass	Exh/Miss
Rockwell	058	R750	2005	189	32	Single	32	32	5	6	0	0	0	-0.35	0.83	-1.85	1.75	Pass	
Rockwell	058	R750	2006	201	32	Single	32	32	5	6	1	2	3	0.45	1.45	-4.05	4.90	Pass	
Rockwell	058	R750	2007	235	32	Single	32	32	5	6	0	0	0	0.18	0.66	-1.25	1.95	Pass	
Rockwell	058	R750	2008	257	32	Single	32	32	5	6	1	0	1	-0.01	0.79	-2.40	1.15	Pass	
Rockwell	058	R750	2009	289	50	Single	50	50	7	8	3	1	4	-0.56	1.67	-9.75	2.05	Pass	
Rockwell	058	R750	2010	303	50	Single	50	50	7	8	0	1	1	-0.13	1.07	-2.00	3.40	Pass	
Rockwell	058	R750	2012	313	50	Single	50	50	7	8	0	1	1	0.00	0.75	-1.40	2.65	Pass	
American	076	AL800	2004	38	37	Single	8	8	1	2	1	0	1	-1.07	1.22	-3.40	0.75	Pass	Exh/CGI
American	076	AL800	2005	11	2	Single	2	2	0	1	0	0	0	-0.83	0.67	-1.30	-0.35	Pass	
American	076	AL800	2006	26	8	Single	8	8	1	2	0	0	0	-0.64	0.67	-1.95	0.25	Pass	
American	076	AL800	2007	31	8	Single	8	8	1	2	0	0	0	-0.31	0.84	-1.95	0.75	Pass	
American	076	AL800	2008	46	8	Single	8	8	1	2	1	0	1	-0.56	0.90	-2.50	0.30	Pass	
American	076	AL800	2009	81	13	Single	13	13	2	3	1	0	1	-0.33	0.80	-2.25	0.85	Pass	
American	076	AL800	2010	107	20	Single	20	20	3	4	1	0	1	-0.39	0.78	-2.15	1.35	Pass	
American	076	AL800	2012	177	32	Single	32	32	5	6	1	0	1	-0.50	0.73	-2.65	0.80	Pass	

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 501-1500CFH

SINGLE SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Meters Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
500-1500 CFH Totals				4738	1069		772	771			43	8	51						
42	Control Groups																		

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 0-500CFH

REDUCED SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
American	015	AL425	1996	280	32	Reduced	32	32	2	5	0	0	0	-0.55	0.54	-1.45	1.00	Pass	
American	015	AL425	1997	201	32	Reduced	32	32	2	5	1	0	1	-0.60	0.69	-2.45	0.50	Pass	
American	015	AL425	1998	293	32	Reduced	32	32	3	6	0	0	0	-0.34	0.65	-1.75	1.85	Pass	
American	015	AL425	1999	189	32	Reduced	32	32	2	5	0	0	0	-0.24	0.62	-1.25	1.15	Pass	
American	015	AL425	2000	228	32	Reduced	32	32	2	5	1	0	1	-0.42	1.41	-7.70	0.85	Pass	
American	015	AL425	2001	340	32	Reduced	32	32	3	6	0	0	0	-0.27	0.44	-1.20	0.45	Pass	
American	015	AL425	2002	154	32	Reduced	32	32	2	5	0	0	0	-0.21	0.55	-1.75	0.75	Pass	
American	015	AL425	2003	180	32	Reduced	32	32	2	5	0	0	0	-0.56	0.40	-1.45	0.55	Pass	
American	015	AL425	2004	243	32	Reduced	32	32	2	5	0	0	0	-0.11	0.58	-1.20	1.30	Pass	
American	015	AL425	2005	376	32	Reduced	32	32	3	6	0	0	0	-0.05	0.63	-1.45	1.10	Pass	
American	015	AL425	2006	457	32	Reduced	32	32	3	6	0	0	0	-0.26	0.65	-1.30	1.20	Pass	
American	015	AL425	2008	409	32	Reduced	32	32	3	6	0	1	1	-0.09	0.70	-1.05	2.20	Pass	
American	015	AL425	2010	555	32	Reduced	32	32	5	8	0	0	0	-0.21	0.60	-1.65	1.15	Pass	
American	015	AL425	2012	660	32	Reduced	32	32	5	8	0	0	0	-0.08	0.62	-1.05	1.30	Pass	
American	033	AL175	1985	985	32	Reduced	32	32	5	8	0	0	0	0.20	0.58	-1.00	1.20	Pass	
American	033	AL175	1986	1528	50	Reduced	50	50	7	10	1	0	1	-0.15	0.73	-2.20	1.40	Pass	
American	033	AL175	1987	681	32	Reduced	32	32	5	8	1	0	1	-0.15	0.73	-2.10	1.70	Pass	
American	033	AL175	1988	3177	50	Reduced	50	50	7	10	0	1	1	0.10	0.70	-0.95	3.15	Pass	
American	033	AL175	1989	1896	50	Reduced	50	50	7	10	0	1	1	0.15	0.73	-1.40	2.35	Pass	
American	033	AL175	1990	5933	80	Reduced	80	80	10	13	0	0	0	0.12	0.68	-1.90	1.80	Pass	
American	033	AL175	1991	7307	80	Reduced	80	80	10	13	0	0	0	0.42	0.47	-0.65	1.75	Pass	

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 0-500CFH

REDUCED SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
American	033	AL175	1992	7089	80	Reduced	80	80	10	13	2	0	2	0.07	0.80	-2.35	1.80	Pass	
American	033	AL175	1993	7105	80	Reduced	80	80	10	13	2	0	2	0.04	0.93	-4.75	1.30	Pass	
American	033	AL175	1994	7412	80	Reduced	80	80	10	13	1	0	1	-0.04	0.69	-2.40	1.50	Pass	
American	033	AL175	1995	7384	80	Reduced	80	80	10	13	2	0	2	-0.29	0.83	-4.45	1.60	Pass	
American	033	AL175	1996	4612	80	Reduced	80	80	10	13	0	0	0	-0.28	0.62	-1.95	1.45	Pass	
American	033	AL175	1997	8661	80	Reduced	80	80	10	13	0	0	0	-0.24	0.75	-1.95	1.90	Pass	
American	033	AL175	1998	5184	80	Reduced	80	80	10	13	0	0	0	-0.46	0.54	-1.90	0.75	Pass	
American	033	AL175	1999	7860	80	Reduced	80	80	10	13	0	0	0	-0.18	0.59	-1.45	1.90	Pass	
American	033	AL175	2000	7176	80	Reduced	80	80	10	13	0	2	2	0.17	0.84	-1.00	4.35	Pass	
American	033	AL175	2001	4033	80	Reduced	80	80	10	13	0	0	0	-0.23	0.53	-1.80	1.20	Pass	
American	033	AL175	2002	2460	50	Reduced	50	50	7	10	0	0	0	-0.39	0.53	-1.80	0.70	Pass	
American	033	AL175	2003	2514	50	Reduced	50	50	7	10	1	1	2	-0.22	1.27	-2.50	7.50	Pass	
American	033	AL175	2004	1937	50	Reduced	50	50	7	10	1	0	1	-0.43	0.67	-2.45	0.95	Pass	
American	033	AL175	2005	2074	50	Reduced	50	50	7	10	1	0	1	-0.80	0.73	-2.80	1.55	Pass	
American	033	AL175	2006	1323	50	Reduced	50	50	7	10	0	0	0	-0.22	0.46	-1.65	0.65	Pass	
American	033	AL175	2008	1892	50	Reduced	50	50	7	10	0	0	0	-0.11	0.54	-1.85	1.40	Pass	
American	033	AL175	2010	1693	50	Reduced	50	50	7	10	0	0	0	-0.55	0.60	-1.95	0.90	Pass	
American	033	AL175	2012	2160	50	Reduced	50	50	7	10	0	0	0	-0.34	0.37	-1.35	0.40	Pass	
American	033A	AL175	1992	4510	80	Reduced	80	80	10	13	0	0	0	0.04	0.60	-1.30	1.35	Pass	
American	033A	AL175	1993	1727	50	Reduced	50	50	7	10	0	0	0	0.00	0.55	-1.40	1.15	Pass	
American	033A	AL175	1994	2317	50	Reduced	50	50	7	10	1	1	2	0.00	1.17	-2.05	6.10	Pass	

LOUISVILLE GAS AND ELECTRIC COMPANY

GAS METER SAMPLING PLAN - 2014

CAPACITY 0-500CFH

REDUCED SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Meters Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
American	078	AC250	1985	735	32	Reduced	32	32	5	8	0	0	0	0.20	0.55	-1.15	1.30	Pass	
American	078	AC250	1986	3528	80	Reduced	80	80	10	13	0	0	0	0.00	0.66	-1.70	1.80	Pass	
American	078	AC250	1987	3101	50	Reduced	50	50	7	10	0	1	1	-0.56	0.90	-1.80	3.90	Pass	
American	078	AC250	1988	3625	80	Reduced	80	80	10	13	0	0	0	-0.51	0.52	-1.85	0.75	Pass	
American	078	AC250	1989	2797	50	Reduced	50	50	7	10	0	0	0	-0.75	0.48	-1.90	0.40	Pass	
American	078	AC250	1990	3879	80	Reduced	80	80	10	13	0	0	0	-0.33	0.57	-1.90	1.50	Pass	
American	078	AC250	1991	2364	50	Reduced	50	50	7	10	1	0	1	-0.92	0.56	-2.40	0.35	Pass	
American	078	AC250	1993	459	32	Reduced	32	32	3	6	0	0	0	0.02	0.49	-0.90	1.50	Pass	
American	078	AC250	1994	2050	50	Reduced	50	50	7	10	0	0	0	-0.06	0.61	-1.60	1.35	Pass	
American	078	AC250	1995	3930	80	Reduced	80	80	10	13	0	0	0	0.06	0.58	-1.20	1.80	Pass	
American	078	AC250	1996	8781	80	Reduced	80	80	10	13	0	0	0	-0.31	0.52	-1.85	0.95	Pass	
American	078	AC250	1997	8079	80	Reduced	80	80	10	13	0	0	0	0.12	0.51	-0.90	2.00	Pass	
American	078	AC250	1998	6041	80	Reduced	80	80	10	13	0	0	0	-0.08	0.49	-1.40	1.25	Pass	
American	078	AC250	1999	4292	80	Reduced	80	80	10	13	0	0	0	0.00	0.53	-1.15	1.15	Pass	
American	078	AC250	2000	5178	80	Reduced	80	80	10	13	0	0	0	0.00	0.52	-1.25	1.60	Pass	
American	078	AC250	2001	4944	80	Reduced	80	80	10	13	0	0	0	0.04	0.52	-1.05	1.85	Pass	
American	078	AC250	2002	2167	50	Reduced	50	50	7	10	0	0	0	-0.06	0.60	-1.70	1.25	Pass	
American	078	AC250	2003	1908	50	Reduced	50	50	7	10	0	0	0	-0.14	0.54	-1.35	1.50	Pass	
American	078	AC250	2004	3587	80	Reduced	80	80	10	13	0	0	0	0.43	0.72	-1.30	1.95	Pass	
American	078	AC250	2005	7032	80	Reduced	80	80	10	13	0	0	0	0.27	0.62	-1.70	1.65	Pass	
American	078	AC250	2006	6105	80	Reduced	80	80	10	13	0	0	0	0.15	0.55	-1.45	1.90	Pass	

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CAPACITY 0-500CFH

REDUCED SAMPLING PLAN

Manufacture	Type	Model	Install Year	Original Population	Meters Removed	Sampling	Sample Size	Meters Tested	Accept Level	Reject Level	Test Results			Statistics				Lot Status	Notes
											Slow Failures	Fast Failures	Total Failures	Mean Avg	Standard Deviation	Minimum	Maximum		
American	078	AC250	2008	6690	80	Reduced	80	80	10	13	0	0	0	0.25	0.47	-0.75	1.50	Pass	
American	078	AC250	2010	3022	50	Reduced	50	50	7	10	0	0	0	-0.26	0.50	-1.90	0.75	Pass	
American	078	AC250	2012	3733	80	Reduced	80	80	10	13	0	0	0	-0.09	0.46	-1.50	0.80	Pass	
<500 CFH Totals				215222	3816		3816	3816			16	8	24						
66 Control Groups																			

LG&E

Residential Gas Regulator Performance
Control Report

LOUISVILLE GAS AND ELECTRIC COMPANY 2014 RESIDENTIAL GAS REGULATOR PERFORMANCE CONTROL PROGRAM REPORT

Introduction

Louisville Gas and Electric Company's Residential Gas Regulator Performance Control Program is a procedure designed to provide a continuous high level of performance of gas regulators while controlling inspection and replacement costs. A summary of the program results are being submitted pursuant to Case No. 2000-00278 and Case No. 2012-00491.

General Description of Program

LG&E's Residential Gas Regulator Performance Control Program leverages LG&E's Gas Meter Performance Control Program to test the protective capability of all classes of residential regulators. Under performance control, LG&E's residential gas regulator population will be classified into homogeneous control groups representing like regulators. A control group would be subject to random sample testing during LG&E's Gas Meter Performance Control Program activities. Specifically, when a meter serving a residential account is tested under the Gas Meter Performance Control Program, the associated regulator will also be tested if one is present.

2014 Sampling Criteria and Results

7,093 residential regulators were tested as part of the Residential Gas Regulator Performance Control Program. There were no regulators tested as part of the program that were excluded from the sample. There were no control groups rejected as a result of the program.

One (1) regulator was removed from service as a result of failing the test criteria at the time of the meter change. The reject level for that particular control group is 113, therefore the control group passed.

Table 1 summarizes key program data broken out by control group. The rows in the table listed in red are the control groups where the actual number of sampled regulators did not meet or exceed the required number. Per the Residential Gas Regulator Performance Control Program, the test period for those groups will be extended annually up to a maximum of 10 years until an adequate sample size is gathered. If an adequate sample has not been tested within 10 years, action will be taken the following year to acquire an adequate sampling. The control groups for which an adequate sample size was obtained last year represent approximately 99% of the regulators covered by the Residential Gas Regulator Performance Control Program.

Table 1 – Key Program Data by Control Group

Control Groups		Installed Residential Regulators as of Dec. 31, 2014	Minimum Sample Size	Actual Sample Size	Number Passing Inspection	Number Failing Inspection/ Removed from Service	Reject Failure Level
NATIONAL (or predecessor company)	61	29	8	0	NA	NA	NA
NATIONAL (or predecessor company)	496	41,439	200	1,029	1,028	1	113
AMERICAN METER CO.	1803	4	2	0	NA	NA	NA
AMERICAN METER CO.	1883	158	32	8	8	0	1
AMERICAN METER CO.	1213B	58,621	200	1,277	1,277	0	140
AMERICAN METER CO.	1813B	177	32	4	4	0	5
ITRON (or predecessor company)	B31	54	13	2	2	0	2
ITRON (or predecessor company)	B32	3	2	0	NA	NA	NA
ITRON (or predecessor company)	B34	3,118	125	164	164	0	18
ITRON (or predecessor company)	B35	1	1	0	NA	NA	NA
ITRON (or predecessor company)	B42	195,346	200	4,485	4,485	0	493
MOONEY	MOONEY	2	2	0	NA	NA	NA
FISHER	627	2	2	1	1	0	1
FISHER	730	1	1	0	NA	NA	NA
FISHER	HSR	2,415	125	65	65	0	15
FISHER	S102	8	2	0	NA	NA	NA
FISHER	S252	43	8	1	1	0	1
FISHER	S302	265	32	10	10	0	5
OVERALL RESULTS		301,903		7,093	7,092	1	