

#### A NiSource Company

P.O. Box 14241 2001 Mercer Road Lexington, KY 40512-4241

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March 27, 2012

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PUBLIC SERVICE COMMISSION

Mr. Jeff Derouen Executive Director Kentucky Public Service Commission 211 Sower Boulevard P. O. Box 615 Frankfort, KY 40602

Dear Mr. Derouen,

Pursuant to the Commission's Order of February 26, 2001 in Case No. 2000-429, Columbia Gas of Kentucky, Inc. hereby files its annual report for the Statistical Meter Testing Plan. An original and three copies are enclosed.

If you have any questions, please call me at (859) 288-0242. Thank you.

Sincerely,

Judy M. Cooper

Judy M. Cooper Director, Regulatory Policy



A NiSource Company

## Columbia Gas of Kentucky, Inc.

## <u>2012</u> <u>Meter Sampling Annual Report,</u> <u>for program year 2011</u>

Columbia Gas of Kentucky, Inc. A NiSource Company P.O. Box 14241 2001 Mercer Road Lexington, KY 40512-4241

March 2012

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2	Exhibit A Identification of Control Groups
3	Exhibit B Domestic Meters Test Results
4	Exhibit C Large Volume Meters Test Results
5	Exhibit D Percentage of Domestic Meter Accuracy by Family
6	Exhibit E Percentage of Large Volume Meter Accuracy by Family
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## COLUMBIA GAS OF KENTUCKY INC.

## **2011 METER SAMPLING ANNUAL REPORT**

Columbia Gas of Kentucky completed the sixteenth year of their Meter Sampling program in December 2011.

A total of 4771 meters making up 30 homogenous groups were sampled in 2011. Details are listed in the Evaluation of Data and Corrective Actions below.

In 2011 Columbia Gas of Kentucky service personnel made 39,536 visits to our customers' premises working orders that involved inspecting house lines and / or appliances. Columbia inspected 45,647 meter set assemblies in conjunction with the Customer Service Line Survey program.

No regulator failure in 2011 resulted in overpressure being delivered to the customer's piping.

Columbia continues to promote safety through: <u>News Releases</u>

• 4/29/11 – "Call Before You Dig" release to all media in CKY service area

#### **Bills & Bill Inserts**

- Monthly -- The "Welcome to Columbia Gas of Kentucky" insert is sent to new customers and includes information about maintenance of customer-owned buried gas lines and Kentucky 811.
- 1/11 -- The "For Your Safety & Comfort" insert was sent to all residential and small commercial customers. Included information about carbon monoxide poisoning prevention and heating equipment maintenance.
- 4/11 -- "Your Service" customer newsletter included article about how to detect a natural gas leak and what to do if one is suspected. Also included article about Kentucky 811 and what to do in the event of a flood.
- 6/11 -- "Maintenance of Customer-Owned Buried Gas Lines" message on bills was sent to customers in meter locations 02, 10, 26, 68 and 70.

- 7/11 -- "Your Service" customer newsletter included article about gas connectors.
- 10/11 -- Scratch-n-sniff bill insert provided odor of gas awareness to all residential and small commercial customers. This insert also runs in initial customer bills.
- 10/11 -- "Your Service" customer newsletter included article about how to prevent exposure to carbon monoxide.
- Left column of monthly bill for residential and small commercial customers includes bill messages regarding odor of gas, call before you dig and employee identification.
- Billing envelope (back flap) has "Call 811 Before You Dig" message.

#### Web Site

- Safety tips (English & Spanish)
- Kentucky 811 information and link
- Contact Us form where customers can email safety-related inquiries and other questions to CKY staff
- Current and previous issues of "Your Service" customer newsletter and other bill inserts
- News releases

#### **Community Outreach**

- Pipeline safety flyer mailed to Mayors and Fire Chiefs in CKY service area
- Customer letters, door hangers and neighborhood presentations associated with large pipeline replacement projects
- Jobsite media interviews discussing "Call Before You Dig", how to detect a natural gas leak and what to do if a leak is suspected
- Pipeline safety brochure mailed to 10,987 key stakeholders as part of the Public Awareness Program

#### Advertising

- Safety ad campaign focusing on "Call Before You Dig" was placed in print and online media. Print publication locations included: Lexington, Ashland, Floyd County, Maysville, Winchester, Paris, Frankfort, Mt. Sterling, and Irvine. Online ads appeared on wkyt.com, dailyindependent.com, winchestersun.com, state-journal.com, maysvilleonline.com, msadvocate.com, and newsgraphic.com.
- Safety ad campaign focusing on recognition of gas leak and how to respond was placed in print and online media in the Fall of 2011. Publication locations are the same as listed above.
- Kentucky 811 billboard and print ads sponsored by CKY in Lexington in April 2011.

#### **Excavator/Emergency Responder Training**

• Sponsored natural gas safety training sessions for excavators and emergency responders May 9-June 23 in Mt. Sterling, Hazard, Grayson, Prestonsburg, Richmond, Maysville, and Lexington.

Columbia Gas of Kentucky feels we are continuing to improve the quality of measurement provided to our customers through the Meter Sampling Program. In 2011 we improved the overall performance of meters removed for meter sampling. We have seen a 2.6% improvement of domestic meters that test within tolerance and a 6.1% improvement of large volume meters that test within tolerance since our meter sampling program began.

#### **Evaluation of Data**

- A total of 4570 domestic meters making up 26 homogenous Control Groups were sampled in 2011.
- Of the 4570 meters sampled 114 tested outside the required accuracy of +/- 2% and were classified a failed meter.
- 2.5% of the domestic meters pulled for meter sampling failed.
- All 26 homogenous Control Groups passed the requirements of American National Standards Institute / American Society for Quality Control Z 1.4.
- A total of 201 Large Volume meters making up 4 homogenous Control Groups were sampled in 2011.
- Of the 201 Large Volume meters sampled, 2 tested outside the required accuracy of +/- 2% and were classified a failed meter.
- 1.0% of Columbia Gas of Kentucky's Large Volume meters failed.
- All 4 Large Volume homogenous Control Groups passed the requirements of American National Standards Institute / American Society for Quality Control Z 1.4.

#### **Corrective Action**

• Columbia Gas of Kentucky will continue to in-test and retire, when pulled from service, meters that have established a poor performance record even though their group has not failed. In previous filings we have listed individual meters that are retired due to poor performance. We are now in-testing and retiring all meters that are not temperature compensated. This eliminates poor performing meters from being reinstalled.

#### **Regulator Failures**

- Columbia Gas of Kentucky had 28 regulator failures in 2011. Due to full internal relief of the regulator, none resulted in an overpressure situation for the customer.
- 15 regulators had gas leakage from the vent.
- 13 regulators would not adjust or lock up correctly.

Should you have any questions, contact Timothy McKune at (859) 288-0241.

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Timothy McKune Compliance Manager Columbia Gas of Kentucky

EXHIBIT A

#### **IDENTIFICATION OF EACH CONTROL GROUP**

#### **OR METER FAMILIES**

A five-character number identifies each Control Group or Family. 1-2-3-4-5

1 Identifies if Control Group or Family is new or repaired meters

N = New R = Repaired

2-3 Identifies Meter Manufacturer

AM = American RO = Rockwell LA = Lancaster SP = Sprague

4-5 Identifies the age of the Group or Family

Example – Identifier RAM01 indicates a Repaired American Meter. The 01 represents the oldest group of repaired American meters. A detail of the age of each group is found in Exhibit D & E.

Large Volume meters 500 – 1500 CFH follow the same format with a "B" in front of the identifier.

EXHIBIT B

## 2011 COLUMBIA GAS OF KENTUCKY DOMESTIC METER SAMPLING TEST RESULTS

Page 1 & 2 of Exhibit B gives a summary of each Domestic (0 - 500 CFH) Family. Listed on page 1 & 2 of exhibit are:

- 1. Name of the Family Codes
- 2. Total number of meters in that family on the customer's premises
- 3. Total number of meters in that family required to be sampled
- 4. Total number of meters sampled
- 5. Total number of meters in-testing outside the required +/-2%
- 6. Total number of meters allowed to fail
- 7. Passed/Failed Status of Meter Family
- 8. Percentage of meters failed per Family
- 9. Number of meters failed fast
- 10. Number of meters failed slow

Page 3 of Exhibit B identifies in graph form the percentages of meters within tolerance since Columbia Gas of Kentucky began sampling in 1996. This is a combined listing of all domestic meter groups.

## 2011 COLUMBIA GAS OF KENTUCKY METER SAMPLING RESULTS

Samples taken between 2011-01-01 and 2011-12-31

"A" Clas	s Meters	0-500	CFH
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FAMILY CODES	TOTAL MTRS. IN FAMILY	TOTAL MTRS REQ'D IN PROGRAM	TOTAL SAMPLED	TOTAL FAILED METERS	TOTAL REJECTS ALLOWABLE	2011 FAMILY STATUS	RATIO FAILED	NUMBER FAILED FAST	NUMBER FAILED SLOW
	(a)	(b)	(с)	(d)	(e)	(f)	(d/c=g)	(h)	(I)
NAM01	1686	125	127	2	14	PASSED	1.6%	2	0
NAM02	4244	200	200	2	21	PASSED	1.0%	0	2
NAM03	3080	125	125	1	21	PASSED	0.8%	1	0
NAM04	2358	125	125	0	14	PASSED	0.0%	0	0
NAM05	537	80	80	0	10	PASSED	0.0%	0	0
NAM06	5453	200	200	0	21	PASSED	0.0%	0	0
NAM06A	5615	200	201	1	14	PASSED	0.5%	1	0
NAM07	5650	200	203	5	21	PASSED	2.5%	4	1
NAM08	6422	200	201	6	21	PASSED	3.0%	6	0
NAM09	5531	200	202	1	21	PASSED	0.5%	0	1
NAM10	5487	200	200	0	21	PASSED	0.0%	0	0
NLA01	1026	80	80	2	10	PASSED	2.5%	0	2
NLA02	5088	200	200	3	21	PASSED	1.5%	0	3
NRO01	4273	200	203	11	21	PASSED	5.4%	7	4
NRO02	7454	200	198	4	21	PASSED	2.0%	3	1

NSP01	172	32	32	0	2	PASSED	0.0%	0	0
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#### Samples taken between 2011-01-01 and 2011-12-31 "A" Class Meters 0-500 CFH

FAMILY CODES	TOTAL MTRS. IN FAMILY	TOTAL MTRS REQ'D IN PROGRAM	TOTAL SAMPLED	TOTAL FAILED METERS	TOTAL REJECTS ALLOWABLE	2011 FAMILY STATUS	RATIO FAILED	NUMBER FAILED FAST	NUMBER FAILED SLOW
	(a)	(b)	( C )	(d)	(e)	(†)	(d/c=g)	(h)	(1)
RAM02	500	50	51	2	7	PASSED	3.9%	1	1
RAM03	1385	125	124	8	14	PASSED	6.5%	1	7
RAM04	4513	200	200	5	21	PASSED	2.5%	2	3
RAM05	5217	200	205	7	21	PASSED	3.4%	3	4
RAM06	9404	200	200	2	21	PASSED	1.0%	1	1
RLA03	3309	200	203	5	21	PASSED	2.5%	0	5
RRO01	3913	200	202	14	21	PASSED	6.9%	4	10
RRO02	4128	200	202	10	21	PASSED	5.0%	2	8
RRO03	3654	200	205	11	21	PASSED	5.4%	2	9
RRO04	3971	200	201	7	21	PASSED	3.5%	5	2
RSP01	4877	200	200	5	21	PASSED	2.5%	0	5
TOTAL	108947	4542	4570	114			2.5%	45	69

Columbia Gas of Kentucky Inc. "A" Meter Program Overall Results





EXHIBIT C

## 2011 COLUMBIA GAS OF KENTUCKY LARGE VOLUME METER SAMPLING TEST RESULTS

Page 1 of Exhibit C gives a summary of each Large Volume (500 - 1500 CFH) Family. Listed on page 1 of exhibit are:

- 1. Name of the Family Codes
- 2. Total number of meters in that family on the customer's premises
- 3. Total number of meters in that family required to be sampled
- 4. Total number of meters sampled
- 5. Total number of meters in-testing outside the required +/- 2%
- 6. Total number of meters allowed to fail
- 7. Passed/Failed Status of Meter Family
- 8. Percentage of meters failed per Family
- 9. Number of meters failed fast
- 10. Number of meters failed slow

Page 2 of Exhibit C identifies in graph form the percentages of meters within tolerance since Columbia Gas of Kentucky began sampling in 1996. This is a combined listing of all large volume groups.

## 2011 COLUMBIA GAS OF KENTUCKY METER SAMPLING RESULTS

Samples	taken	between	201	1-01-01	and 2011-12-31
			4		

"B" Class Me	B" Class Meters 500 - 1500 CFH										
	TOTAL	TOTAL		TOTAL	TOTAL	2011		NUMBER	NUMBER		
FAMILY	MTRS. IN	MTRS REQ'D	TOTAL	FAILED	REJECTS	FAMILY	RATIO	FAILED	FAILED		
CODES	FAMILY	IN PROGRAM	SAMPLED	METERS	ALLOWABLE	STATUS	FAILED	FAST	SLOW		
	(a)	(b)	( c )	(d)	(e)	(f)	(d/c=g)	(h)	(1)		
BNAM01	676	80	81	0	10	PASSED	0.0%				
BRAM01	1062	80	80	1	10	PASSED	1.3%		1		
BRRO01	213	32	32	0	5	PASSED	0.0%				
BRSP01	42	8	8	1	1	PASSED	12.5%		1		

TOTAL	1993	200	201	2	1.0%	0	2



#### EXHIBIT D

## PERCENTAGE OF DOMESTIC METER ACCURACY BY FAMILY

# Exhibit D - represents the percentage of meters sampled in 2011 that were within the +/- 2% rate, identified by homogenous group. We also show previous results of meter families sampled in the past ten years.

- NAM01 = New American meters purchased between 1981 & 1990
- NAM02 = New American meters purchased between 1991 & 1993
- NAM03 = New American meters purchased in 1994
- NAM04 = New American meters purchased in 1995
- NAM05 = New American meters purchased in 1996
- NAM06 = New American meters purchased in 1999 & 2000
- NAM06A= New American meters purchased in 2001 & 2002
- NAM07 = New American meters purchased in 2003
- NAM08 = New American meters purchased in 2005
- NAM09 = New American meters purchased in 2007
- NAM10 = New American meters purchased in 2009
- NLA01 = New Lancaster meters purchased in 1987

#### NLA02 = New Lancaster meters purchased between 1989, 1990, & 1992

NRO01 = New Rockwell meters purchased between 1983 & 1996

NRO02 = New Rockwell meters purchased between 1997 & 1999

NSP01 = New Sprague meters purchased between 1982 & 1996

RAM02 = Repaired American meters installed in 1987 & 1989

**RAM03** = Repaired American meters installed in 1990 & 1991

RAM04 = Repaired American meters installed between 1992 & 1994

RAM05 = Repaired American meters installed between 1995 & 1999

RAM06 = Repaired American meters installed in 2000, 2001, 2002, 2003, 2005, 2007, & 2009

RLA03 = Repaired Lancaster meters installed between 1987 & 2003

**RRO01 = Repaired Rockwell meters installed between 1981 & 1989** 

**RRO02** = Repaired Rockwell meters installed between 1990 & 1993

RRO03 = Repaired Rockwell meters installed in 1994 & 1999

RRO04 = Repaired Rockwell meters installed in 2000, 2001, 2002, 2003, 2005, 2007, & 2009,

RSP01 = Repaired Sprague meters installed between 1983 & 2007













NAM06A







Columbia Gas of Kentucky





NLA01



NLA02



NRO01



NRO02











Columbia Gas-of Kentucky



Columbia Gas of Kentucky





RLA03





RRO02



RRO03









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EXHIBIT E

## PERCENTAGE OF LARGE VOLUME METER ACCURACY BY FAMILY

# Exhibit E - represents the percentage of Large Volume meters sampled in 2011 that were within the +/- 2% rate, identified by homogenous group. We also show previous results of meter families sampled in prior years.

BRAM01 = Repaired American meters installed between 2000 & 2009 BRRO01 = Repaired Rockwell meters installed between 2000 & 2009 BRSP01 = Repaired Sprague meters installed between 2000 & 2009 BNAM01 = New American meters purchased between 2000 & 2009 BNAM01



BRAM01

Columbia Gas of Kentucky



BRRO01

Columbia Gas of Kentucky



EXHIBIT F

#### **COST SAVINGS**

The 2011 sampling program resulted in changing 5215 fewer meters than would have been changed under the 14-year plan Columbia Gas of Kentucky was following prior to meter sampling and changing 9294 fewer meters than would have been required under a 10-year change-out program.

This represents yearly savings of \$1,263,984 compared to a 10-year plan

This represents yearly savings of \$709,924 compared to a 14-year plan

EXHIBIT G

## **TEST RESULTS OF NEW METERS**

Columbia Gas of Kentucky purchased 3888 new meters in 2011. The factory test sheets for the new meters purchased in 2011 are on file in the Lexington office.

No problems were found in the new 2011 purchases.