Lexington, KY 40512-4241

March 31, 2010
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,


Director, Regulatory Policy

# Columblian Gas* of Kentucky 

A NiSource Company

## Columbia Gas of Kentucky, Inc.

## 2010 Meter Sampling Annual Report, for program year 2009

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

March 2010

# 2010 <br> Meter Sample Annual Report 

$\left.\begin{array}{c|c|}\hline \text { Exhibit A } \\ \text { Identification of Control } \\ \text { Groups }\end{array}\right]$

## COLUMBIA GAS OF KENTUCKY INC.

## 2009 METER SAMPLING ANNUAL REPORT

Columbia Gas of Kentucky completed the fourteenth year of their meter-sampling program in December 2009.

A total of 4823 meters making up 33 homogenous groups were sampled in 2009. One poor performing sub-group was also removed and retired. Details are listed in the Evaluation of Data and Corrective Actions below.

In 2009 Columbia Gas of Kentucky service personnel made 43,540 visits to our customers' premises working orders that involved inspecting house lines and / or appliances. Columbia inspected 47,955 meter set assemblies in conjunction with the Customer Service Line Survey program.

No regulator failure in 2009 resulted in overpressure being delivered to the customer's piping.

Columbia continues to promote safety through:
News Releases

- 4/15/09 - Call before you dig release


## 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.
- 1/09 - For Your Safety \& Comfort bill insert to all residential and small commercial customers included information about carbon monoxide poisoning prevention.
- 1/09 - Gaslines customer newsletter included articles about heating equipment maintenance and preventing carbon monoxide poisoning and the dangers associated with energy theft.
- $2 / 09$ - Scratch-n-sniff bill insert provides odor of gas awareness to all residential and small commercial customers. Insert also runs in initial customer bills.
- 4/09 - Gaslines 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.
- $6 / 09-$ Bill message to all residential and small commercial customers in meter locations $02,10,26,68$ and 70 regarding customer-owned gas lines.
- 7/09- Your Service customer newsletter included article about gas connectors.
- 10/09 - Your Service customer newsletter included articles about what to do in case of flooding and carbon monoxide.


## Web Site

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


## Community Outreach

- Customer letters, door hangers and neighborhood presentations associated with large pipeline replacement projects
- Sponsored Lexington Legends game with Kentucky 811 on 6/27/09 to promote Call Before You Dig
- Developed new safety video for speaking engagements
- Revised safety brochure developed and mailed to affected public as identified by RP1162 Public Awareness Plan
- Pipeline safety flyer developed and emailed to public officials in service area


## Message On Hold

- Customers waiting to speak with a customer service representative hear messages on a variety of topics, including Call Before You Dig, carbon monoxide, how to recognize a gas leak and what to do, meter tampering, appliance safety, etc.


## Advertising

Safety ad focusing on Call Before You Dig was placed in print and online publications in April-June. Print publication locations included: Lexington, Ashland, Floyd County, Maysville, Winchester, Paris, Frankfort, Mt. Sterling, and Irvine. Online banner ads appeared on wkyt.com and Kentucky.com.

## Excavator/Emergency Responder Training

Sponsored natural gas safety training sessions for excavators and first responders in May-June. Locations included: Mt. Sterling, Olive Hill, Prestonsburg, Hazard, Richmond, Lexington and Maysville.

Columbia Gas of Kentucky feels we are continuing to improve the quality of measurement provided to our customer through the meter-sampling program. In 2009 we improved the overall performance of meters removed for meter sampling. We have seen a $3.2 \%$ improvement of domestic meters that test within tolerance and a $7.1 \%$ improvement of large volume meters that test within tolerance since our meter sampling program began.

## Evaluation of Data

- A total of 4622 domestic meters making up 27 homogenous Control Groups were sampled in 2009.
- Of the 4622 meters sampled 88 tested outside the required accuracy of $+/-$ $2 \%$ and were classified a failed meter.
- $1.9 \%$ of the domestic meters pulled for meter sampling failed
- All 27 homogenous Control Groups passed the requirements of American National Standards Institute / American Society for Quality Control Z 1.4
- A total of 212 Large Volume meters making up 6 homogenous Control Groups were sampled in 2009.
- Of the 212 Large Volume meters sampled, 0 tested outside the required accuracy of $+/-2 \%$ and were classified a failed meter
- $0.0 \%$ of Columbia Gas of Kentucky's Large Volume meters failed.
- All 6 Large Volume homogenous Control Groups passed the requirements of American National Standards Institute / American Society for Quality Control Z 1.4


## Failed Group

- In 2008, based on the requirements of American National Standards Institute / American Society for Quality Control Z 1.4, Control group NSP02 consisting of new Sprague Metris 760 meters purchased in 1997 failed. As stated in the evaluation data these meters were removed and retired prior to December 2009. RSP02 consisting of repaired Sprague Metris 760 meters repaired and installed between 2000 and 2004 passed the requirements of American National Standards Institute / American Society for Quality Control Z 1.4 by one meter. Columbia classified this group as failed due to the small number of meters tested in the group and removed and retired this group also in 2009. There now are no Sprague Metris 760 Meters in service in Kentucky.


## Aggressive Group

- As a result of the 2008 Sampling Program, the sub-group KYRAMAG from Control Group KYRAM01, was identified as a group of poor performing meters. This group consisted of repaired American meters installed in 1987, was removed and retired. The sub-group consisted of 286 domestic American meters, 17 or $5.9 \%$ failed the required accuracy of $+/-2 \%$.


## Aggressive Removal of Poor Performers

KYRAM02 continues to perform well within accepted tolerance but not as well as other families, Columbia has made a decision to remove and retire a sub-group of 583 meters by the end of 2010 . The sub-group will consist of repaired American 602 and 604 meters installed between $1988 \& 1989$ and be identified as KYRAMAG.

## Corrective Action

- Control Group KYRAM01 was removed from service and retired in 2009.
- Sub-group KYRAM02 from poor performing, repaired American meters installed between $1988 \& 1989$ will be removed and retired by the end of 2010.
- Group RSP02 was performing poorly and was classified as failed and therefore was removed and retired in 2009.
- 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 intesting and retiring all meters that are not temperature compensated. This eliminates a poor performing meters from being re- installed.


## Regulator Failures

- Columbia Gas of Kentucky had 30 regulator failures in 2009. Due to full internal relief of the regulator, none resulted in an overpressure situation for the customer.
- 12 regulators had gas leakage from the vent.
- 18 regulators would not adjust or lock up correctly.

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


Timothy McKune
Compliance Specialist
Columbia Gas of Kentucky

# 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

$$
\begin{aligned}
& \mathrm{N}=\mathrm{New} \\
& \mathrm{R}=\text { Repaired }
\end{aligned}
$$

2-3 Identifies Meter Manufacturer

$$
\begin{aligned}
& \text { AM = American } \\
& \text { RO }=\text { Rockwell } \\
& \text { LA }=\text { Lancaster } \\
& \text { SP }=\text { Sprague }
\end{aligned}
$$

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.

# 2009 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.

Page 4 shows the test results of the 2009 aggressive family.

## 2009 COLUMBIA GAS OF KENTUCKY METER SAMPLING RESULTS

| Samples taken between 2009-01-01 and 2009-12-31 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | TOTAL |  | TOTAL | TOTAL | 2009 |  | 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) | (I) |
| NAM01 | 2059 | 125 | 140 | 3 | 14 | PASSED | 2.1\% | 2 | 1 |
| NAM02 | 4816 | 200 | 211 | 1 | 21 | PASSED | 0.5\% | 1 | 0 |
| NAM03 | 3576 | 200 | 210 | 0 | 21 | PASSED | 0.0\% | 0 | 0 |
| NAM04 | 2710 | 125 | 132 | 0 | 14 | PASSED | 0.0\% | 0 | 0 |
| NAM05 | 724 | 80 | 83 | 0 | 10 | PASSED | 0.0\% | 0 | 0 |
| NAM06 | 6039 | 200 | 206 | 0 | 21 | PASSED | 0.0\% | 0 | 0 |
| NAM06A | 2298 | 125 | 129 | 2 | 14 | PASSED | 1.6\% | 1 | 1 |
| NAM07 | 6060 | 200 | 202 | 2 | 21 | PASSED | 1.0\% | 1 | 1 |
| NAM08 | 6902 | 200 | 200 | 3 | 21 | PASSED | 1.5\% | 3 | 0 |
| NAM09 | 3612 | 200 | 208 | 1 | 21 | PASSED | 0.5\% | 0 | 1 |
| NLA01 | 1303 | 125 | 135 | 5 | 14 | PASSED | 3.7\% | 1 | 4 |
| NLA02 | 5787 | 200 | 210 | 0 | 21 | PASSED | 0.0\% | 0 | 0 |
| NRO01 | 4845 | 200 | 202 | 3 | 21 | PASSED | 1.5\% | 3 | 0 |
| NRO02 | 8129 | 200 | 217 | 13 | 21 | PASSED | 6.0\% | 11 | 2 |
| NSP01 | 56 | 32 | 45 | 2 | 2 | PASSED | 4.4\% | 0 | 2 |

Samples taken between 2009-01-01 and 2009-12-31
"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 | $\begin{aligned} & 2009 \\ & \text { FAMILY } \\ & \text { STATUS } \end{aligned}$ | RATIO <br> FAILED | NUMBER FAILED FAST | NUMBER FAILED SLOW |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) | (d/c=g) | (h) | (I) |
| RAM01 | 40 | 8 | 9 | 0 | 1 | PASSED | 0.0\% | 0 | 0 |
| RAM02 | 1400 | 125 | 133 | 12 | 14 | PASSED | 9.0\% | 10 | 2 |
| RAM03 | 1876 | 125 | 127 | 3 | 14 | PASSED | 2.4\% | 3 | 0 |
| RAM04 | 5469 | 200 | 200 | 4 | 21 | PASSED | 2.0\% | 3 | 1 |
| RAM05 | 5961 | 200 | 200 | 5 | 21 | PASSED | 2.5\% | 2 | 3 |
| RAM06 | 6720 | 200 | 209 | 5 | 21 | PASSED | 2.4\% | 3 | 2 |
| RLA03 | 3401 | 200 | 205 | 2 | 21 | PASSED | 1.0\% | 1 | 1 |
| RRO01 | 4675 | 200 | 200 | 4 | 21 | PASSED | 2.0\% | 1 | 3 |
| RRO02 | 5019 | 200 | 203 | 7 | 21 | PASSED | 3.4\% | 1 | 6 |
| RRO03 | 4390 | 200 | 202 | 5 | 21 | PASSED | 2.5\% | 1 | 4 |
| RRO04 | 3349 | 200 | 202 | 3 | 21 | PASSED | 1.5\% | 2 | 1 |
| RSP01 | 5355 | 200 | 202 | 3 | 21 | PASSED | 1.5\% | 0 | 3 |
| TOTAL | 106571 | 4470 | 4622 | 88 |  |  | 1.9\% | 50 | 38 |

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


## 2009 COLUMBIA GAS OF KENTUCKY AGGRESIVE FAMILY RESULTS

Results of 2009 Aggresive family changed due to historical poor performance

| FAMILY | TOTAL |  | TOTAL |  |
| :---: | :---: | :---: | :---: | :---: |
|  | MTRS. IN | TOTAL | FAILED | RATIO |
| CODES | FAMILY | REMOVED | METERS | FAILED |
| KYRAMAG | 286 | 286 | 17 | 5.9\% |


| TOTAL | 286 | 286 | 17 | $5.9 \%$ |
| :--- | :--- | :--- | :--- | :--- |

# 2009 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 $\mathbf{C}$ 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.

## 2009 COLUMBIA GAS OF KENTUCKY METER SAMPLING RESULTS

Samples taken between 2009-01-01 and 2009-12-31

| $\begin{aligned} & \text { FAMILY } \\ & \text { CODES } \end{aligned}$ | TOTAL MTRS. IN FAMILY | total <br> MTRS REQ'D IN PROGRAM | TOTAL SAMPLED | TOTAL FAILED METERS | TOTAL REJECTS ALLOWABLE | 2009 <br> FAMILY <br> status | $\begin{aligned} & \text { RATIO } \\ & \text { FAILED } \end{aligned}$ | NUMBER <br> FAILED FAST | NUMBER <br> FAILED <br> SLOW |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (a) | (b) | (c) | (d) | (e) | (f) | ( $\mathrm{d} / \mathrm{c}=\mathrm{g}$ ) | (h) | (1) |
| NAM01 | 2059 | 125 | 140 | 3 | 14 | PASSED | 2.1\% | 2 | 1 |
| NAM02 | 4816 | 200 | 211 | 1 | 21 | PASSED | 0.5\% | 1 | 0 |
| NAM03 | 3576 | 200 | 210 | 0 | 21 | PASSED | 0.0\% | 0 | 0 |
| NAM04 | 2710 | 125 | 132 | 0 | 14 | PASSED | 0.0\% | 0 | 0 |
| NAM05 | 724 | 80 | 83 | 0 | 10 | PASSED | 0.0\% | 0 | 0 |
| NAM06 | 6039 | 200 | 206 | 0 | 21 | PASSED | 0.0\% | 0 | 0 |
| NAM06A | 2298 | 125 | 129 | 2 | 14 | PASSED | 1.6\% | 1 | 1 |
| NAM07 | 6060 | 200 | 202 | 2 | 21 | PASSED | 1.0\% | 1 | 1 |
| NAM08 | 6902 | 200 | 200 | 3 | 21 | PASSED | 1.5\% | 3 | 0 |
| NAM09 | 3612 | 200 | 209 | 1 | 21 | PASSED | 0.5\% | 0 | 1 |
| NLA01 | 1303 | 125 | 135 | 5 | 14 | PASSED | 3.7\% | 1 | 4 |
| NLA02 | 5787 | 200 | 210 | 0 | 21 | PASSED | 0.0\% | 0 | 0 |
| NRO01 | 4845 | 200 | 202 | 3 | 21 | PASSED | 1.5\% | 3 | 0 |
| NRO02 | 8129 | 200 | 202 | 13 | 21 | PASSED | 6.4\% | 11 | 2 |
| NSP01 | 56 | 32 | 45 | 2 | 2 | PASSED | 4.4\% | 0 | 2 |

Samples taken between 2009-01-01 and 2009-12-31
"A" Class Meters 0-500 CFH

|  | TOTAL | TOTAL |  |  | TOTAL | TOTAL | 2009 |  | NUMBER | NUMBER |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FAMILY | MTRS. $\mathcal{N}$ | MTRSREQ'D | TOTAL | FAILED | REJECTS | FAMILY | RATIO | FAILED | FAILED |  |
| CODES | FAMILY | INPROGRAM | SAMPLED | METERS | ALLOWABLE | STATUS | FAILED | FAST | SLOW |  |


| RAM01 | 40 | 8 | 9 | 0 |  | 1 | PASSED | 0.0\% | 0 | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| RAM02 | 1400 | 125 | 133 | 12 |  | 14 | PASSED | 9.0\% | 10 | 2 |
| RAM03 | 1876 | 125 | 129 | 3 |  | 14 | PASSED | 2.3\% | 3 | 0 |
| RAM04 | 5469 | 200 | 200 | 4 |  | 21 | PASSED | 2.0\% | 3 | 1 |
| RAM05 | 5961 | 200 | 200 | 5 |  | 21 | PASSED | 2.5\% | 2 | 3 |
| RAM06 | 6720 | 200 | 209 | 5 |  | 21 | PASSED | 2.4\% | 3 | 2 |
| RLA03 | 3401 | 200 | 205 | 2 |  | 21 | PASSED | 1.0\% | 1 | 1 |
| RRO01 | 4675 | 200 | 200 | 4 |  | 21 | PASSED | 2.0\% | 1 | 3 |
| RRO02 | 5019 | 200 | 203 | 7 |  | 21 | PASSED | 3.4\% | 1 | 6 |
| RRO03 | 4390 | 200 | 203 | 5 | $\cdots$ | 21 | PASSED | 2.5\% | 1 | 4 |
| RRO04 | 3349 | 200 | 202 | 3 |  | 21 | PASSED | 1.5\% | 2 | 1 |
| RSP01 | 5355 | 200 | 202 | 3 |  | 21 | PASSED | 1.5\% | 0 | 3 |
| TOTAL | 106571 | 4470 | 4611 | 88 |  |  |  | 1.9\% | 50 | 38 |

## 2009 COLUMBIA GAS OF KENTUCKY METER SAMPLING RESULTS

| Samples taken between 2009-01-01 and 2009-12-31 "B" Class Meters 500-1500 CFH |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTAL | TOTAL |  | TOTAL | TOTAL | 2008 |  | 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) | (I) |
| BNAM01 | 540 | 80 | 81 | 0 | 10 | PASSED | 0.0\% |  |  |
| BNRO01 | 13 | 5 | 5 | 0 | 0 | PASSED | 0.0\% |  |  |
| BNSP01 | 7 | 2 | 2 | 0 | 0 | PASSED | 0.0\% |  |  |
| BRAM01 | 687 | 80 | 82 | 0 | 10 | PASSED | 0.0\% |  |  |
| BRRO01 | 174 | 32 | 33 | 0 | 5 | PASSED | 0.0\% |  |  |
| BRSP01 | 52 | 8 | 9 | 0 | 0 | PASSED | 0.0\% |  |  |
| TOTAL | 1473 | 207 | 212 | 0 |  |  | 0.0\% | 0 | 0 |

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


# PERCENTAGE OF DOMESTIC METER ACCURACY BY FAMILY 

Exhibit D - represents the percentage of meters sampled in 2009 that were within the $+/-2 \%$ rate, identified by homogenous group. We also show previous results of meter families sampled in prior 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
NAM07 = New American meters purchased in 2003
NAM08 $=$ New American meters purchased in 2005
NAM09 $=$ New American meters purchased in 2007
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 \& 1997
RAM01 = Repaired American meters installed in 1987
RAM02 $=$ Repaired American meters installed in 1988 \& 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, 2003, 2005, \& 2007
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, 2003, 2005, \& 2007,
RSP01 $=$ Repaired Sprague meters installed between 1983 \& 2007



NAM03
Columbina Gas of Kentucky


NAM04
Columbita Gas of Kentucky


NAM05
Columbiat Gas
of Kentucky


## NAM06

Columbiaia Gas of Kentucky


## NAM06A

Columbiat Gas ${ }^{\text {™ }}$ of Kentucky

\% Within Tolerance

NAM07


NAM08
Columbia Gas of Kentucky


NAM09
Columbia Gas of Kentucky


NLA01
Columbia Gas of Kentucky




NROO2
Columbilia Gas of Kentucky


NSP01
Columbia Gas of Kentucky


RAM01
Columbiaia Gas of Kentucky


RAM02
Columbian Gas of Kentucky


RAM03
Columbial Gas of Kentucky



RAM05
Columbia Gas of Kentucky



RLA03
Columbia Gas of Kentucky




RRO03
Columbiata Gas of Kentucky




## EXHIBIT E

## PERCENTAGE OF LARGE VOLUME METER ACCURACY BY FAMILY

Exhibit E-represents the percentage of Large Volume meters sampled in 2009 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 1999 \& 2007
BRRO01 = Repaired Rockwell meters installed between 1999 \& 2006
BRSP01 = Repaired Sprague meters installed between 1999 \& 2007
BNAM01 $=$ New American meters purchased between $1999 \& 2007$
BNRO01 = New Rockwell meters purchased in 1999 \& 2003
BNSP01 $=$ New Sprague meters purchased in 1999

BNAM01
Columbina Gas ${ }^{\text {畨 }}$
of Kentucky






BRSP01


## COST SAVINGS

The 2009 sampling program resulted in changing 5227 fewer meters than would have been changed under the 14 -year plan Columbia Gas of Kentucky was following prior to meter sampling and changing 9,336 fewer meters than would have been required under a 10-year change-out program.

This represents yearly savings of $\mathbf{\$ 1 , 2 6 9 , 6 9 6}$ compared to a 10 -year plan
This represents yearly savings of $\$ 710,872$ compared to a 14 -year plan

## TEST RESULTS OF NEW METERS

Columbia Gas of Kentucky purchased 6288 new meters in 2009. The factory test sheets for the new meters purchased in 2009 are on file in the Lexington office.

No problems were found in the new 2009 purchases.

