Columbia Gas. of Kentucky

A NiSource Company

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

RECEIVED

MAR 31 2011

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,

March 31, 2011

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.

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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>2011</u> <u>Meter Sampling Annual Report,</u> <u>for program year 2010</u>

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

March 2011

· 1	2011 Meter Sample Annual Report
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
7	Exhibit F Cost Savings
0	Exhibit G Test Results of New Meters



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

COLUMBIA GAS OF KENTUCKY INC.

2010 METER SAMPLING ANNUAL REPORT

Columbia Gas of Kentucky completed the fifteenth year of their meter-sampling program in December 2010.

A total of 5413 meters making up 31 homogenous groups were sampled in 2010. One poor performing sub-group was also removed and retired. Details are listed in the Evaluation of Data and Corrective Actions below.

In 2010 Columbia Gas of Kentucky service personnel made 41,261 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 2010 resulted in overpressure being delivered to the customer's piping.

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

• 4/14/10 -- Call Before You Dig release

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.
- 1/10 The "For Your Safety & Comfort" insert sent to all residential and small commercial customers. Included information about carbon monoxide poisoning prevention and heating equipment maintenance.
- 1/10 "Your Service" customer newsletter included articles about heating equipment maintenance and preventing carbon monoxide poisoning.

- 2/10 and 10/10 Scratch-n-Sniff bill insert provides odor of gas awareness to all residential and small commercial customers. Insert also runs in initial customer bills.
- 4/10 "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.
- 6/10 "Maintenance of Customer-Owned Buried Gas Lines" insert to customer in meter locations 02, 10, 26, 68 and 70.
- 7/10 "Your Service" customer newsletter included article about gas connectors.
- 10/10 "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.

Web Site

- Safety tips (English and 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 Your Service customer newsletter and other bill inserts
- News releases

Community Outreach

- 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

Advertising

- Safety ad campaign focusing on Call Before You Dig was placed in print and online media in May and June. Print publication locations included: Lexington, Ashland, Floyd County, Maysville, Winchester, Paris, Frankfort, Mt. Sterling and Irvine. Online ads appeared on wkyt.com.
- Safety ad campaign focusing on recognition of gas leak and how to respond was placed in print and online media in October and November. Publication locations are same as listed above.

Excavator/Emergency Responder Training

• Sponsored natural gas safety training sessions for excavators and emergency responders May 11 - June 14 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 customer through the meter-sampling program. In 2010 we improved the overall performance of meters removed for meter sampling. We have seen a 2.4% 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 5206 domestic meters making up 26 homogenous Control Groups were sampled in 2010.
- Of the 5200 meters sampled 139 tested outside the required accuracy of +/- 2% and were classified a failed meter.
- 2.7% 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 207 Large Volume meters making up 5 homogenous Control Groups were sampled in 2010.
- Of the 207 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 5 Large Volume homogenous Control Groups passed the requirements of American National Standards Institute / American Society for Quality Control Z 1.4

Aggressive Group

• As a result of the 2009 Sampling Program, the sub-group KYRAMAG from Control Group KYRAM02, was identified as a group of poor performing meters. This group consisted of repaired American meters installed in 1988 and 1989, was removed and retired. The sub-group consisted of 583 domestic American meters, 40 or 6.9% failed the required accuracy of +/-2%.

Corrective Action

- Control group KYRAM02 consisting of poor performing, repaired American meters installed between 1988 & 1989 was removed and retired in 2010.
- 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 19 regulator failures in 2010. Due to full internal relief of the regulator, none resulted in an overpressure situation for the customer.
- 10 regulators had gas leakage from the vent.
- 9 regulators would not adjust or lock up correctly.

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

MER

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

2010 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.

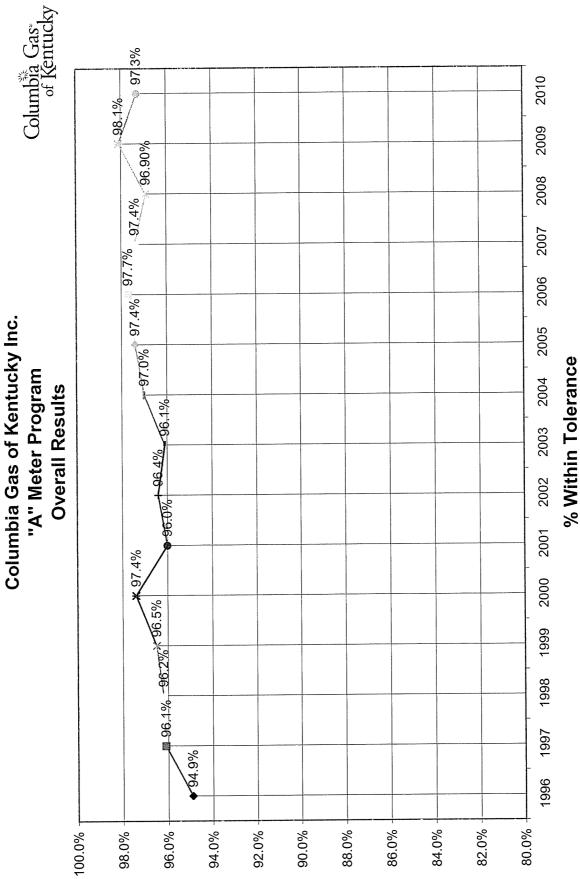
Page 4 shows the test results of the 2010 aggressive family.

Samples taken between 2010-01-01 and 2010-12-31

2010 COLUMBIA GAS OF KENTUCKY METER SAMPLING RESULTS

"A" Class M	"A" Class Meters 0-500 CFH	TOTAI		TOTAI	TOTAI	2010		NUMBER	NUMBER
FAMILY CODES	MTRS. IN FAMILY (a)	MTRS REQ'D IN PROGRAM (b)	TOTAL SAMPLED (c)	FAILED METERS (d)	REJECTS ALLOWABLE (e)	FAMILY STATUS (f)	RATIO FAILED (d/c=g)	FAILED FAST (h)	FAILED SLOW (I)
NAM01	1856	125	126	7	14	PASSED	1.6%	7	0
NAM02	4516	200	200	7 -	21	PASSED	0.5%	~	0
NAM03	3336	200	204	~	21	PASSED	0.5%		0
NAM04	2537	125	127	0	14	PASSED	%0.0	0	0
NAM05	633	80	88	0	10	PASSED	%0.0	0	0
NAM06	5741	200	201	~	21	PASSED	0.5%	0	~
NAM06A	2134	125	125	~~	14	PASSED	0.8%	~	0
NAM07	3913	200	203	Ŋ	21	PASSED	1.0%	~~~	~-
NAM08	8395	200	203	10	21	PASSED	4.9%	o	~
NAM09	3461	200	200	0	21	PASSED	%0.0	0	0
NAM10	4324	200	204	4	21	PASSED	0.5%	~~	0
NLA01	1130	80	81	7	10	PASSED	2.5%	4	
NLA02	5431	200	200	က	21	PASSED	1.5%	~~	2
NRO01	4555	200	203	7	21	PASSED	3.4%	9	ław
NRO02	797	200	200	ω	21	PASSED	4.0%	9	2

NSP01	211	32	35	7	N	PASSED	5.7%	7	0
amples take v" Class M u	Samples taken between 2010. "A" Class Meters 0-500 CFH	Samples taken between 2010-01-01 and 2010-12-31 "A" Class Meters 0-500 CFH	-31						
FAMILY CODES	TOTAL MTRS. IN FAMILY (a)	TOTAL MTRS REQ'D IN PROGRAM (b)	TOTAL SAMPLED (c)	TOTAL FAILED METERS (d)	TOTAL REJECTS ALLOWABLE (e)	2010 FAMILY STATUS (f)	RATIO FAILED (d/c=g)	NUMBER FAILED FAST (h)	NUMBER FAILED SLOW (I)
RAM02	613	80	88	0	10		10.2%	4	IJ
RAM03	1608	125	125	Q	14	PASSED	4.8%	4	N
RAM04	4942	200	201	ω	21	PASSED	4.0%	5	ю
RAM05	5563	200	200	ю	21	PASSED	1.5%	ю	0
RAM06	8288	200	201	ю	21	PASSED	1.5%	0	ю
RLA03	3482	200	203	£	21	PASSED	2.5%	0	5
RR001	4254	200	201	7	21	PASSED	3.5%	5	5
RRO02	4519	200	201	0	21	PASSED	4.5%	0	0
RRO03	3982	200	201	5	21	PASSED	2.5%	ю	7
RRO04	3962	200	202	0	21	PASSED	0.0%	0	0
RSP01	4877	200	200	ო	21	PASSED	1.5%	~	7
TOTAL	106060	4572	4623	66			2.1%	54	45



2010 COLUMBIA GAS OF KENTUCKY AGGRESIVE FAMILY RESULTS

Results of 2010 Aggresive family changed due to historical poor performance

FAMILY CODES	TOTAL MTRS. IN FAMILY	TOTAL REMOVED	TOTAL FAILED METERS	RATIO FAILED
KYRAMAG	583	583	40	6.9%
TOTAL	583	583	40	6.9%

EXHIBIT C

2010 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.

		NUMBER FAILED SLOW	(;)						o
SULTS		NUMBER FAILED FAST	(u)	7					N
NG RE		RATIO FAILED	(n.c-g)	2.5%	0.0%	0.0%	0.0%	0.0%	1.0%
SAMPLII		2008 FAMILY STATUS		PASSED	PASSED	PASSED	PASSED	PASSED	
V METER		TOTAL REJECTS ALLOWABLE (a)		2	0	10	S	2	
ENTUCK		TOTAL FAILED METERS (d)) (4	0	0	0	0	5
AS OF KE	-12-31	TOTAL SAMPLED (c)	81	,)	~	80	32	13	207
2010 COLUMBIA GAS OF KENTUCKY METER SAMPLING RESULTS	Samples taken between 2010-01-01 and 2010-12-31 "B" Class Meters 500 - 1500 CFH	TOTAL MTRS REQ'D IN PROGRAM (b)	80		~~	80	32	13	206
2010 CC	Samples taken between 2010-01-01 "B" Class Meters 500 - 1500 CFH	TOTAL MTRS. IN FAMILY (a)	590		~~	967	268	56	1882
	Samples tak "B" Class M	FAMILY CODES	BNAM01		BNR001	BRAM01	BRR001	BRSP01	TOTAL

Page 1 of 1

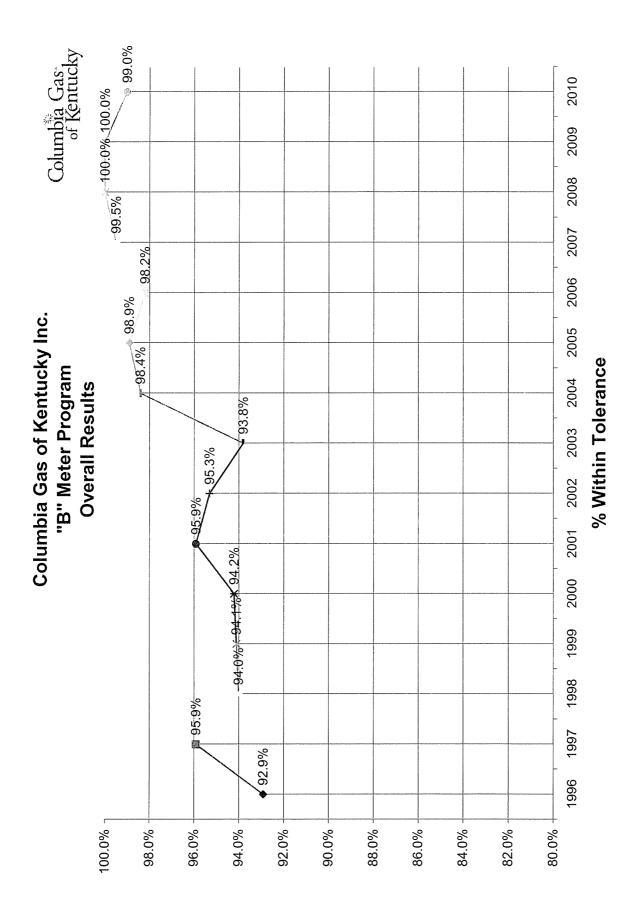


EXHIBIT D

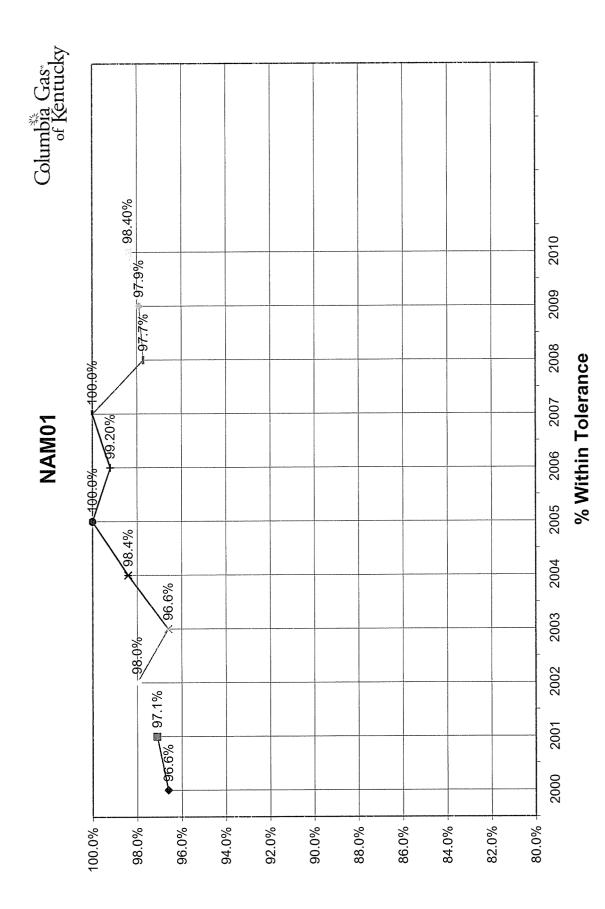
PERCENTAGE OF DOMESTIC METER ACCURACY BY FAMILY

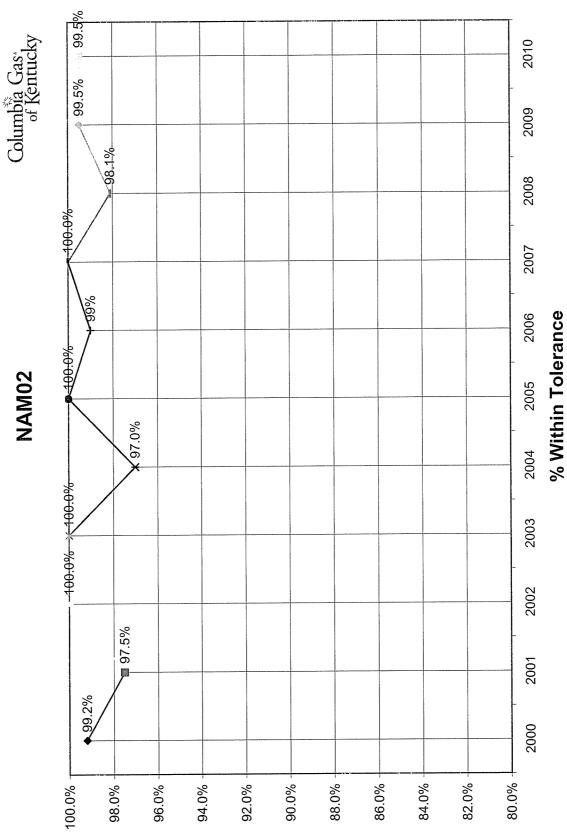
Exhibit D - represents the percentage of meters sampled in 2010 that were within the +/- 2% rate, identified by homogenous group. We also show previous results of meter families sampled in the past ten years.

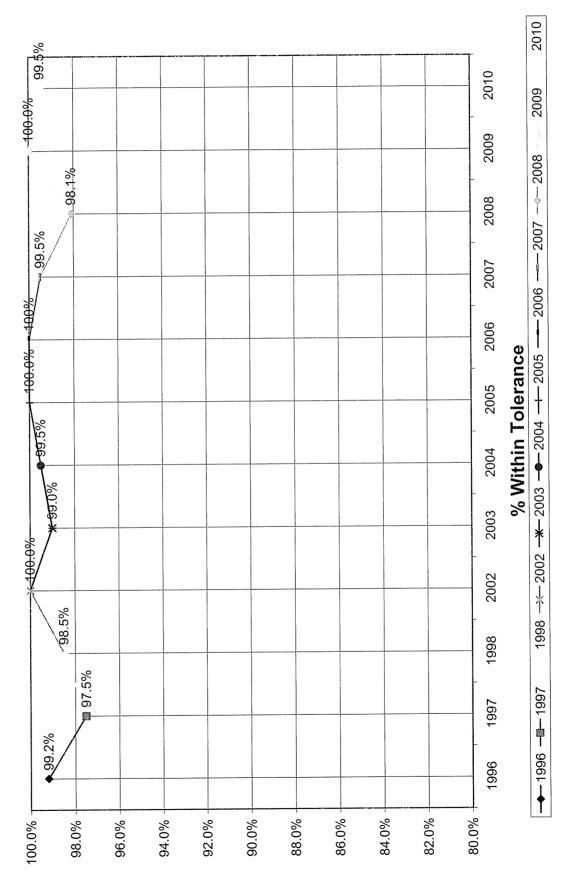
- NAM01 = New American meters purchased between 1981 & 1990
- NAM02 = New American meters purchased between 1991 & 1993
- NAM03 = New American meters purchased in 1994
- NAM04 = New American meters purchased in 1995
- NAM05 = New American meters purchased in 1996
- NAM06 = New American meters purchased in 1999 & 2000
- NAM06A= New American meters purchased in 2001
- NAM07 = New American meters purchased in 2002
- NAM08 = New American meters purchased in 2004
- NAM09 = New American meters purchased in 2006
- NAM10 = New American meters purchased in 2008
- 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
- **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, 2004, 2006, & 2008
- RLA03 = Repaired Lancaster meters installed between 1987 & 2006
- **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, 2004, 2006 & 2008,
- RSP01 = Repaired Sprague meters installed between 1983 & 2007

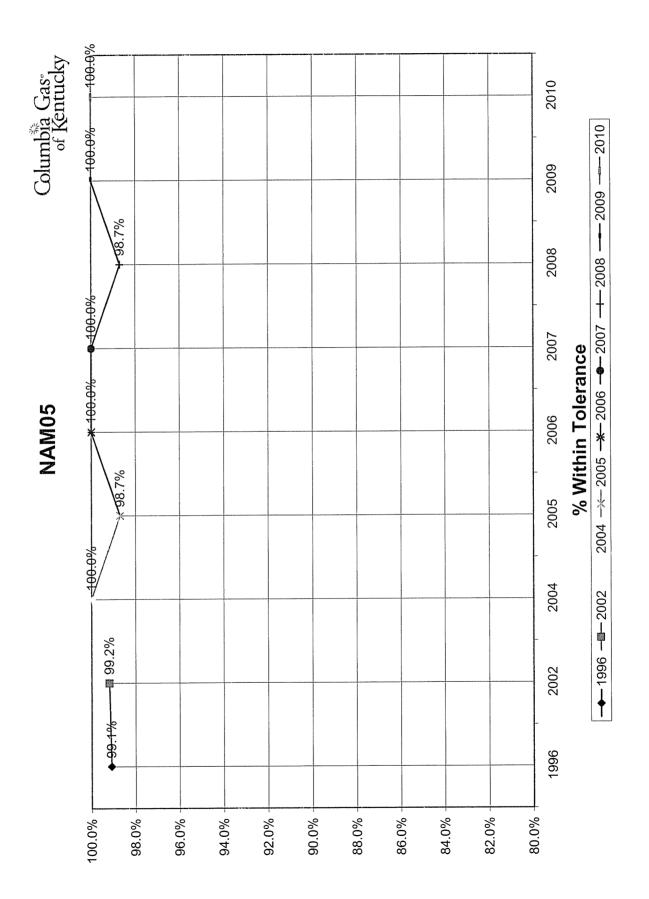


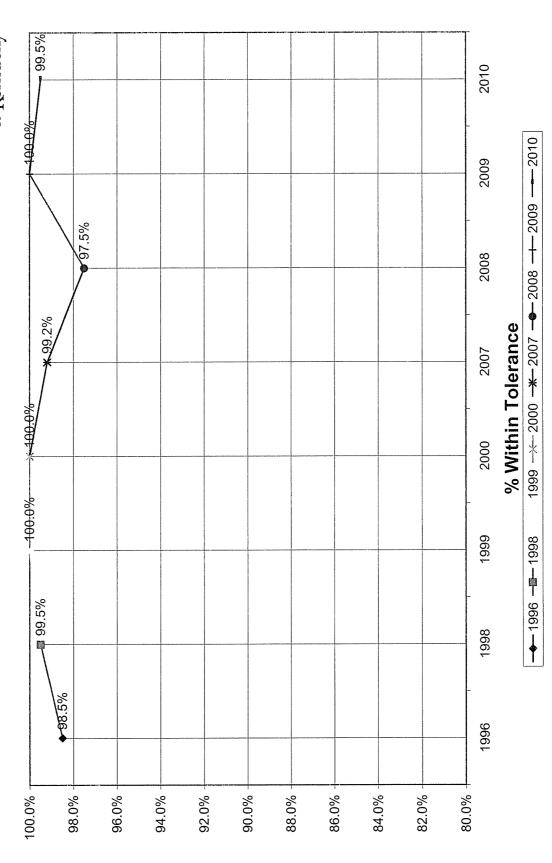




Columbia Gas^{*} of Kentucky

	99.5%	-99:5%-	× 99.5%	* 0 9.5%	2%		
98.0%					98.5%	9	
96.0%							
94.0%							
92.0%							
90.0%							
88.0%							
00 00/							
0/							
84.0%							
82.0%							
2003	2004	2005	2006	2007	2008	2009	2010
			% Within Tolerance	Toleranc	e		
			2005	-*-2007	2005	2009 2010	



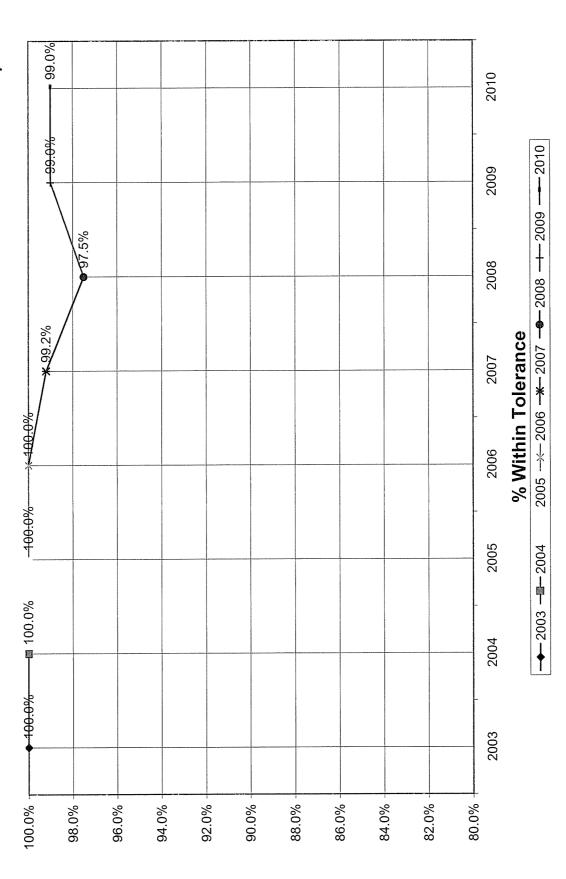


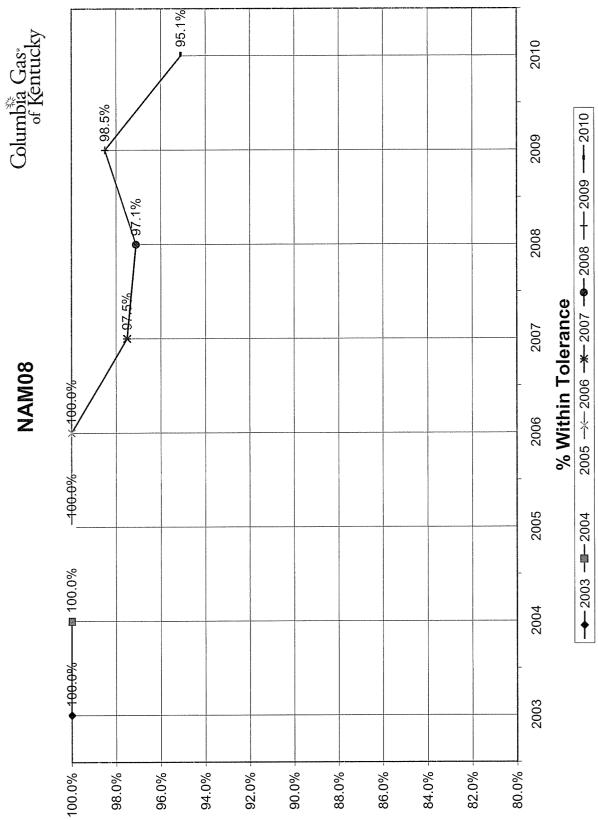
NAM06A

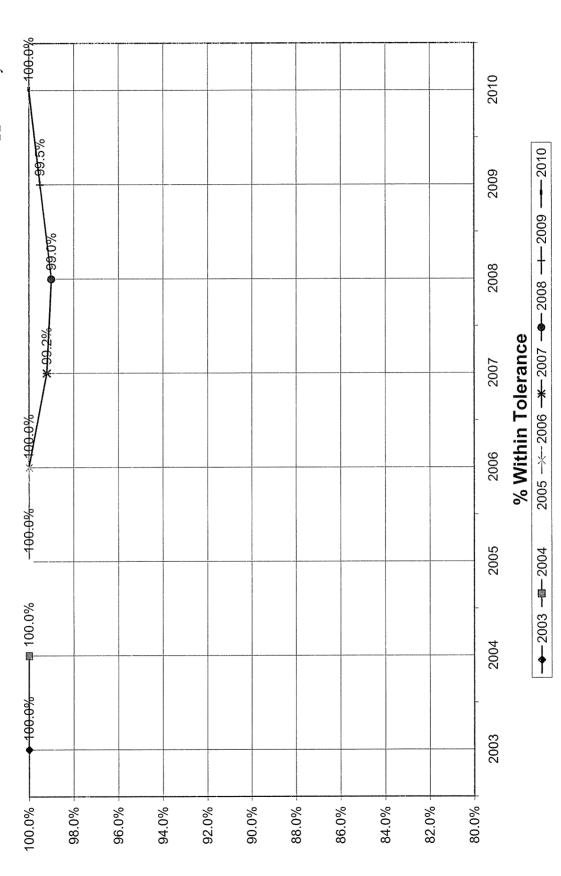
Columbia Gas^{*} of Kentucky

		99.2%
20	2009 20	2010

% Within Tolerance



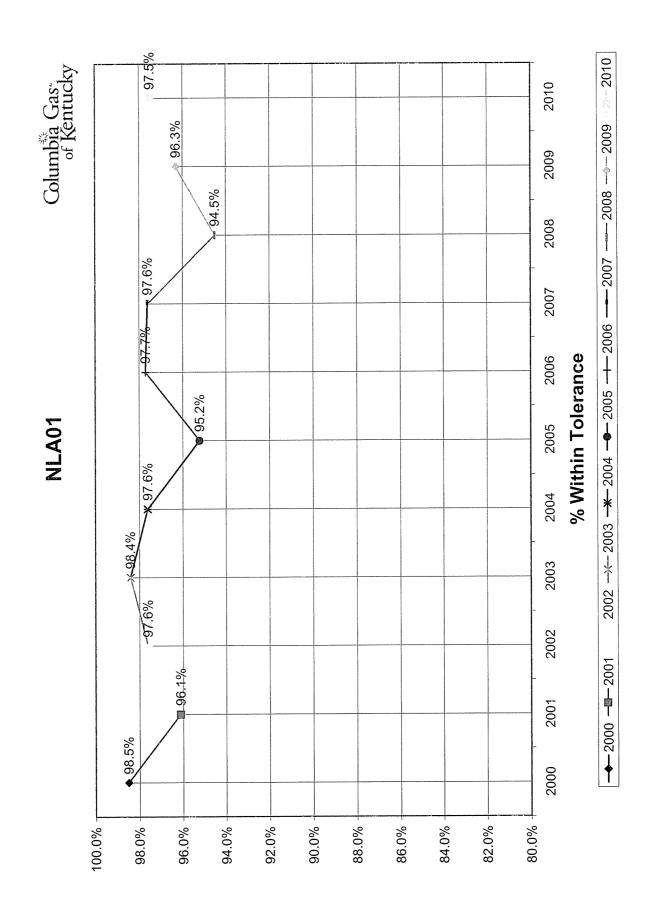




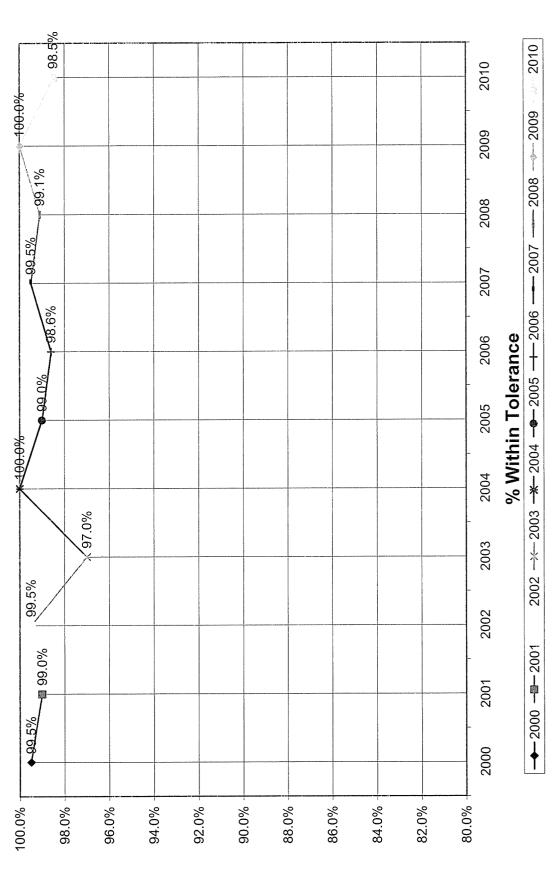
Columbia Gas^{*} of Kentucky

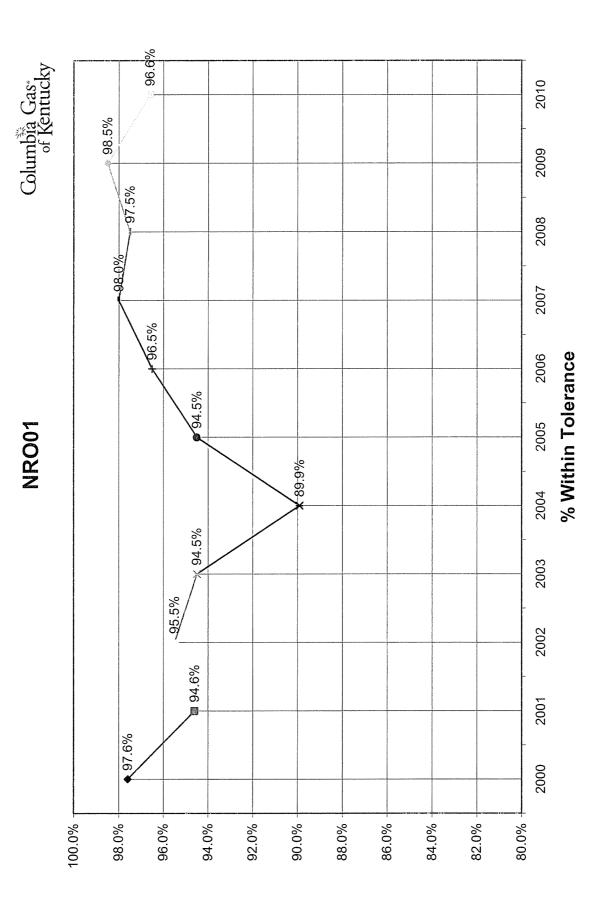
100 0% +	
	♦ 99.5%
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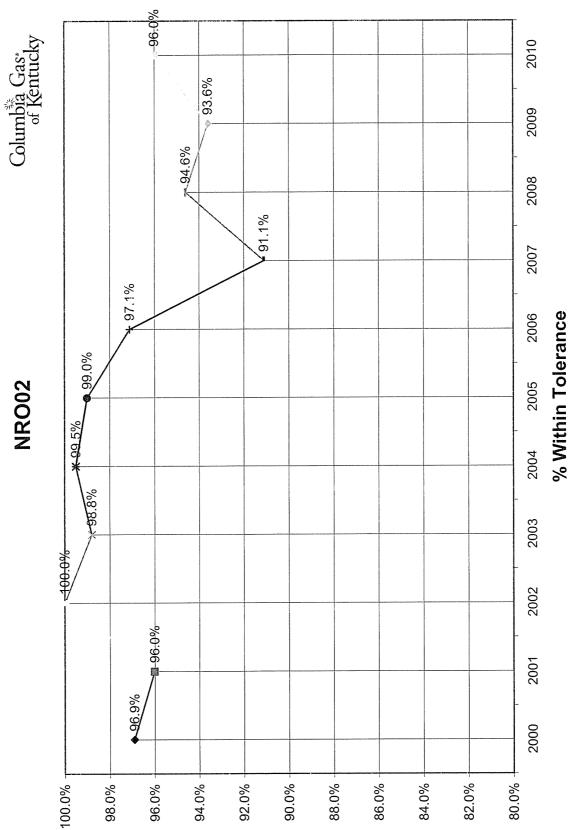
2010 **% Within Tolerance**

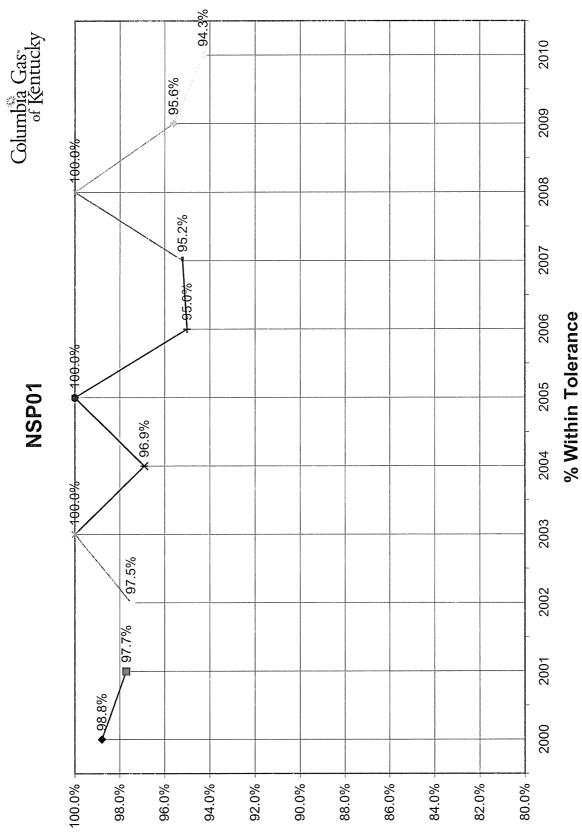


NLA02



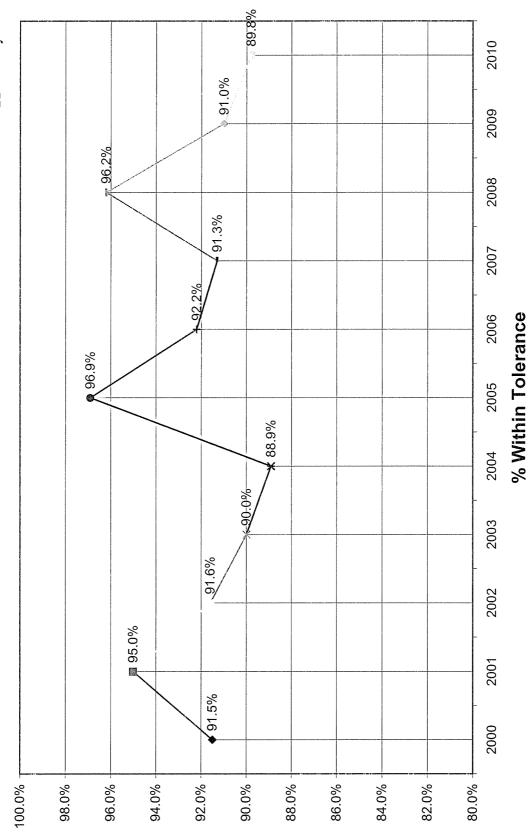






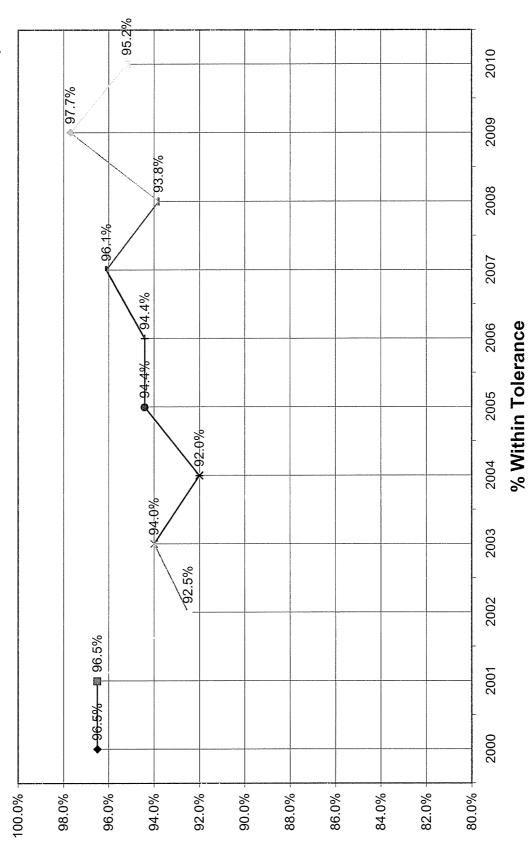


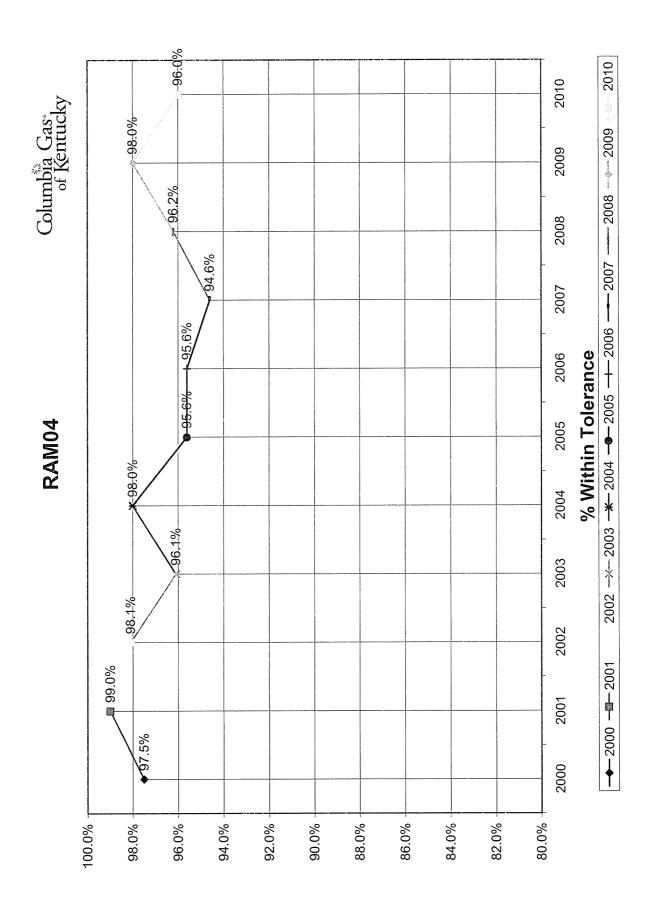
Columbia Gas^{*} of Kentucky

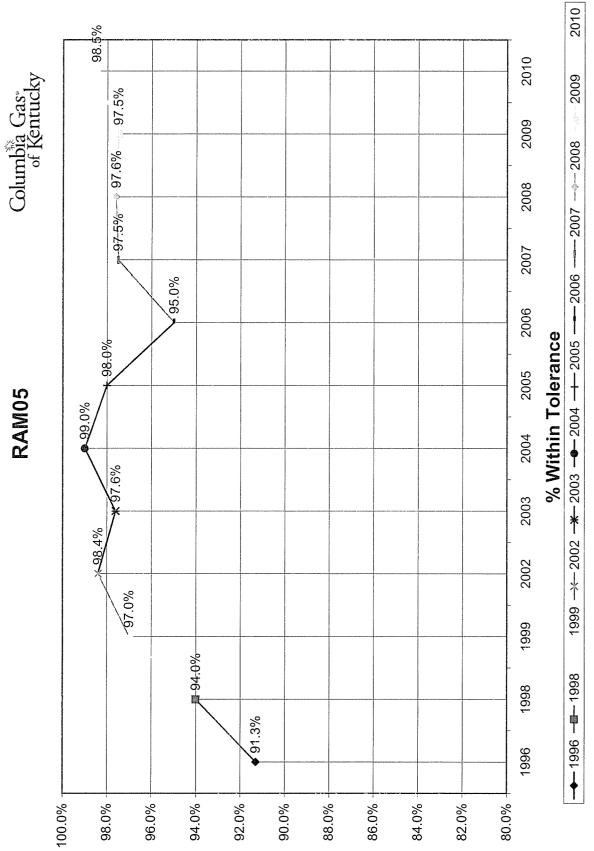


RAM03

Columbia Gas^{*} of Kentucky

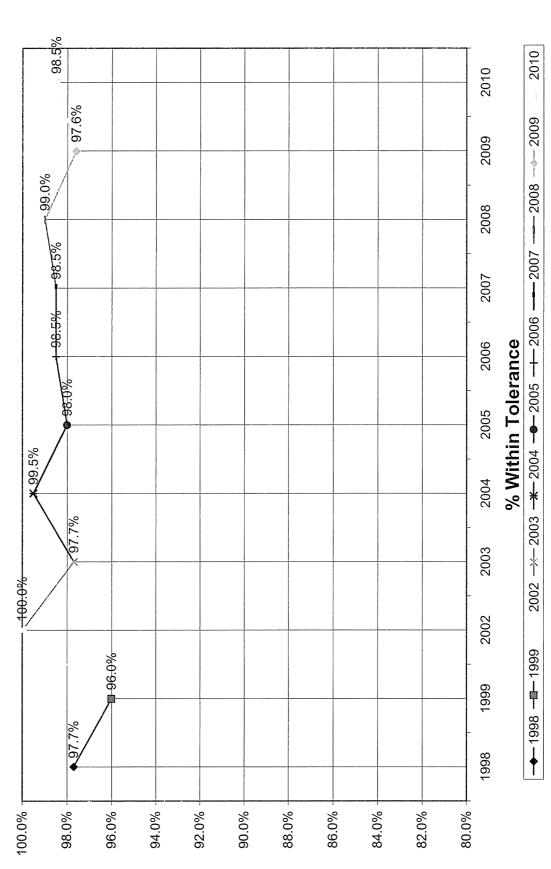


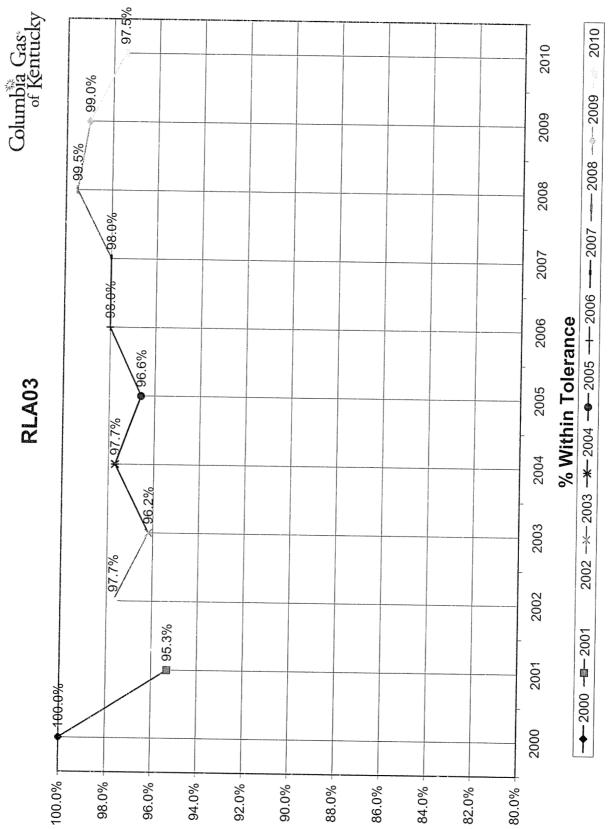


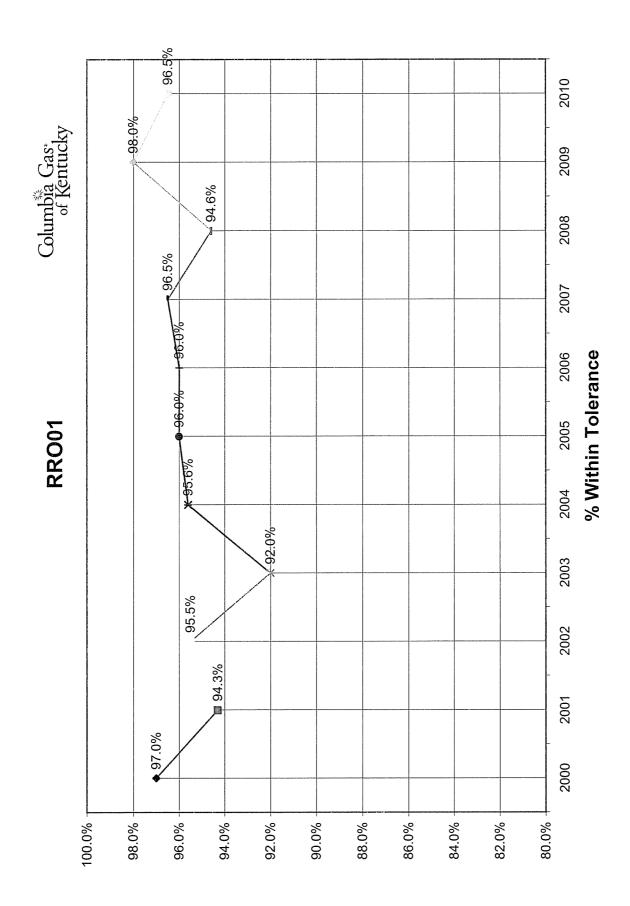


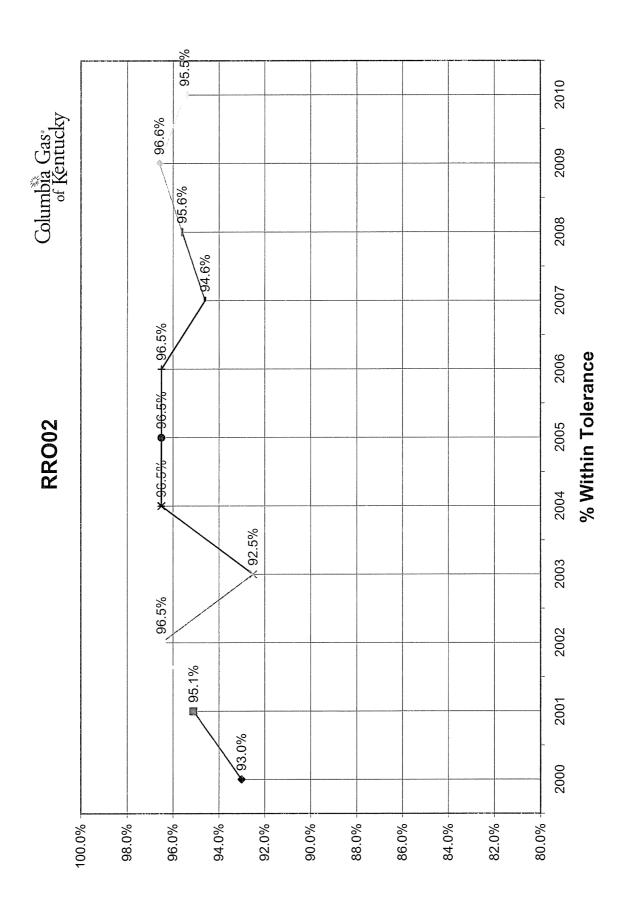


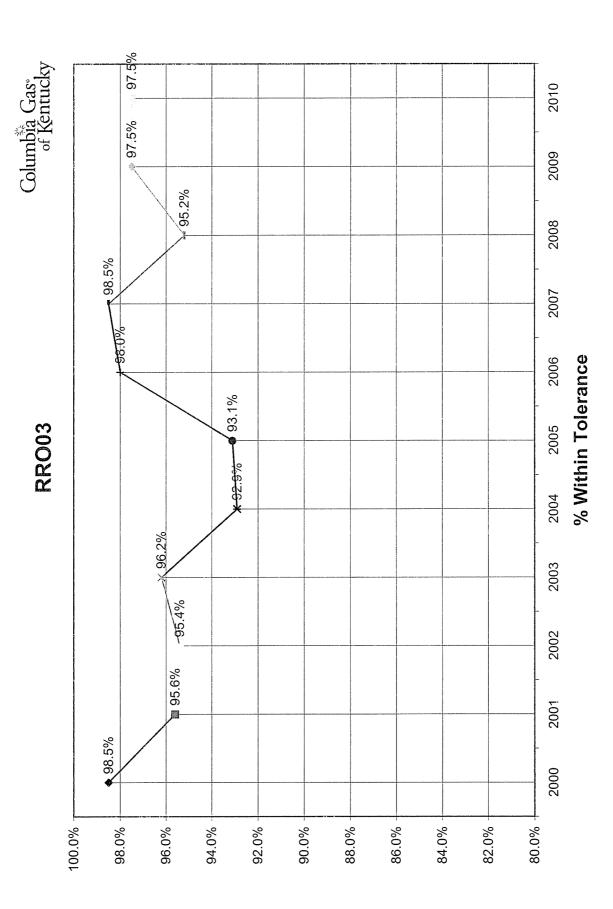


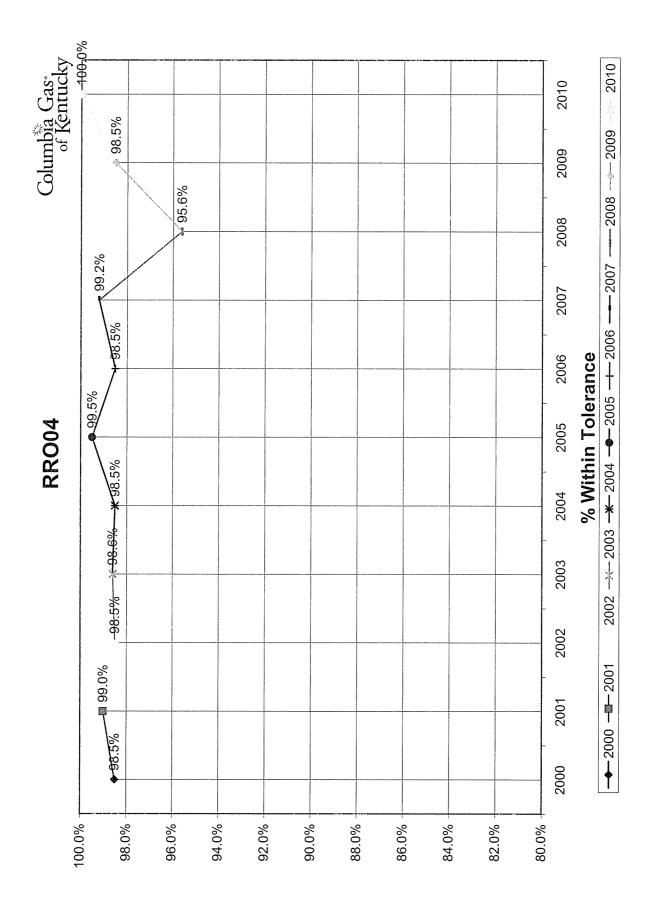












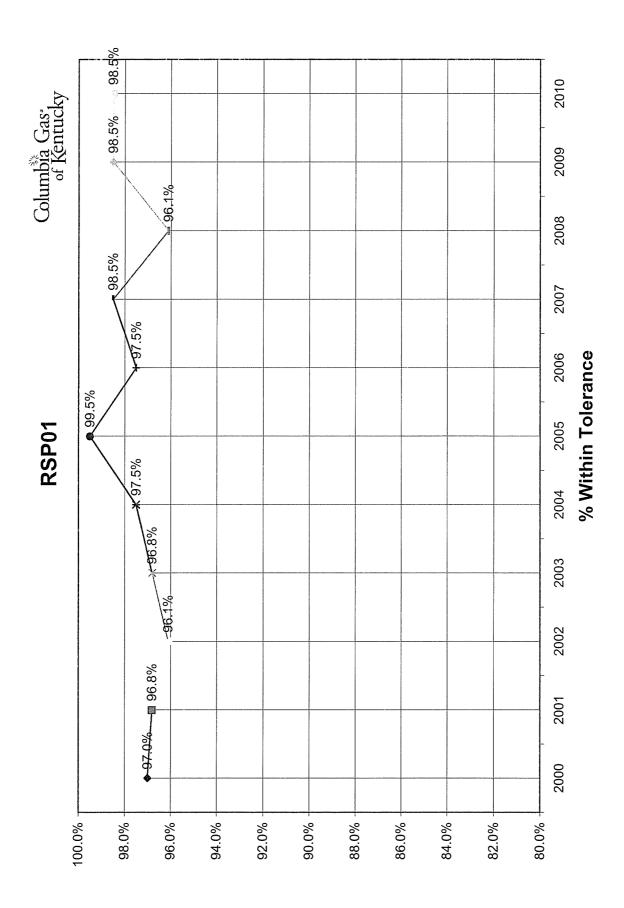


EXHIBIT E

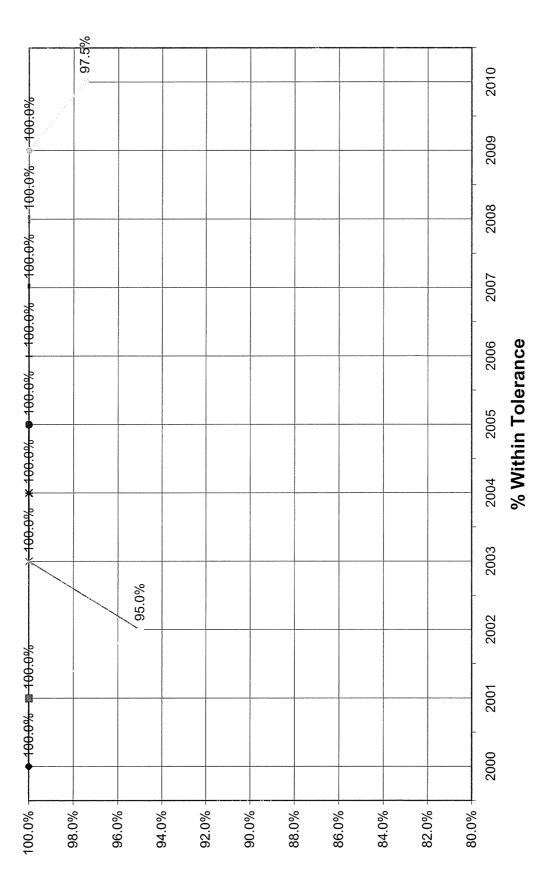
PERCENTAGE OF LARGE VOLUME METER ACCURACY BY FAMILY

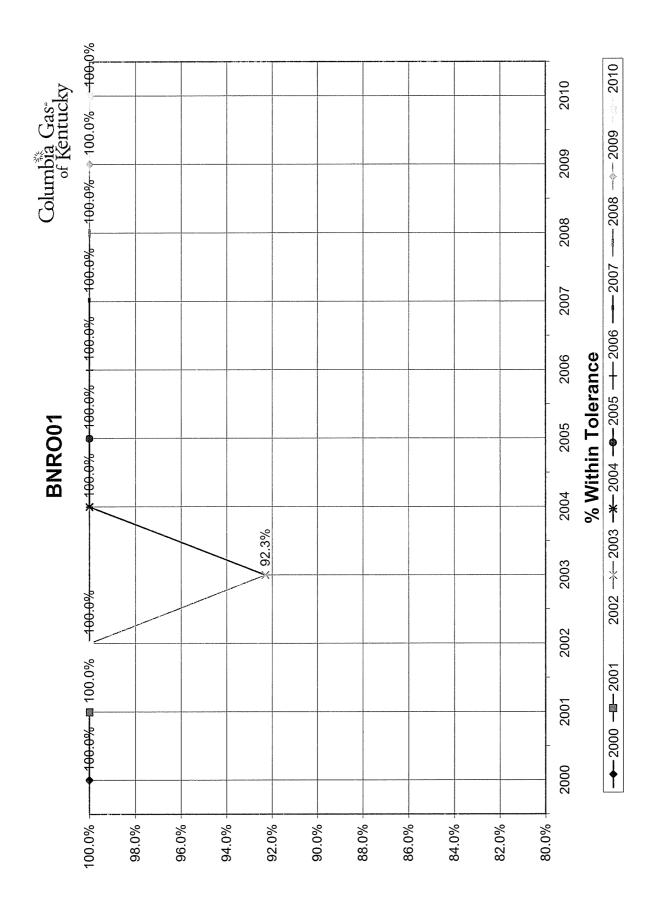
Exhibit E - represents the percentage of Large Volume meters sampled in 2010 that were within the +/- 2% rate, identified by homogenous group. We also show previous results of meter families sampled in prior years.

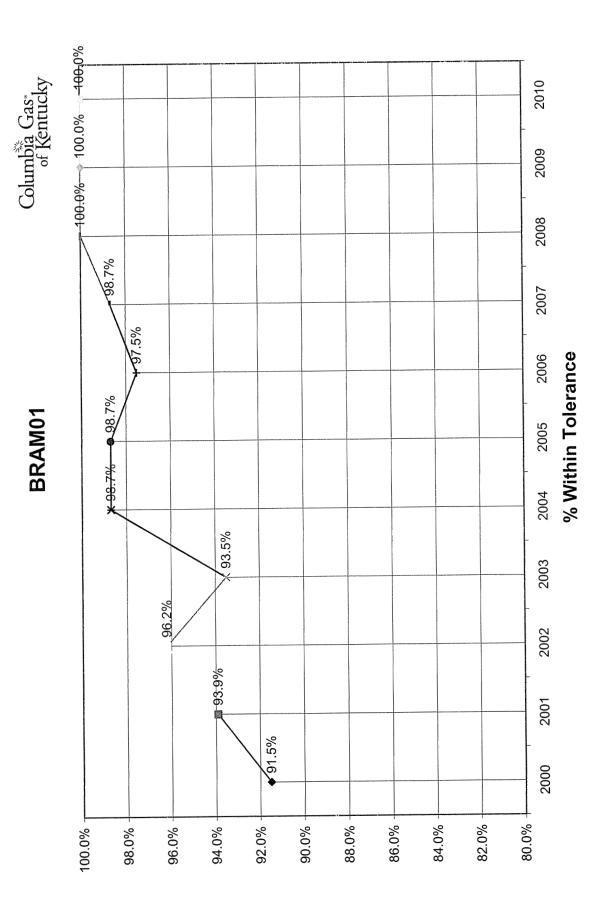
- **BRAM01 = Repaired American meters installed between 2000 & 2008**
- **BRRO01** = Repaired Rockwell meters installed between 2000 & 2008
- **BRSP01** = Repaired Sprague meters installed between 2000 & 2008
- BNAM01 = New American meters purchased between 2000 & 2008
- BNRO01 = New Rockwell meters purchased in 2000 & 2003

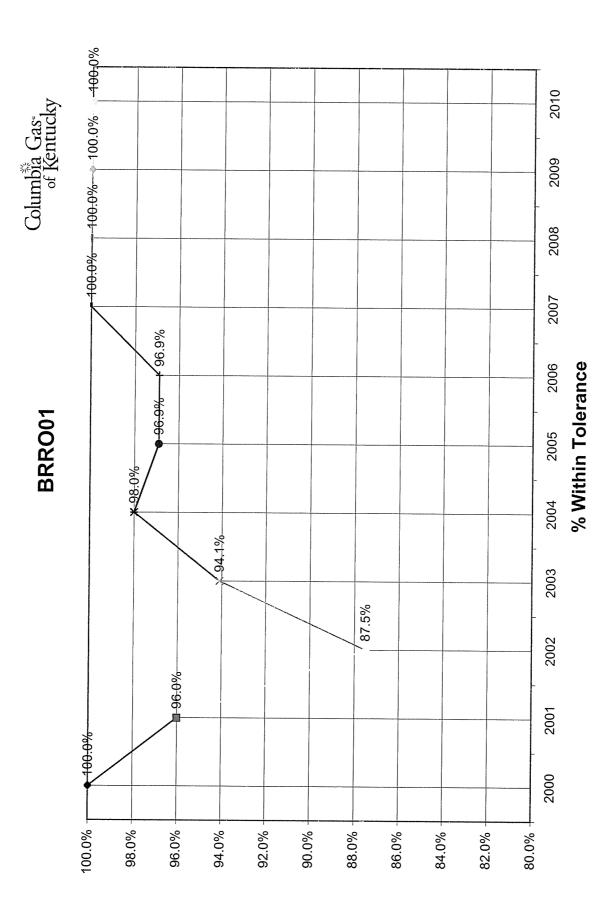
BNAM01

Columbia Gas' of Kentucky









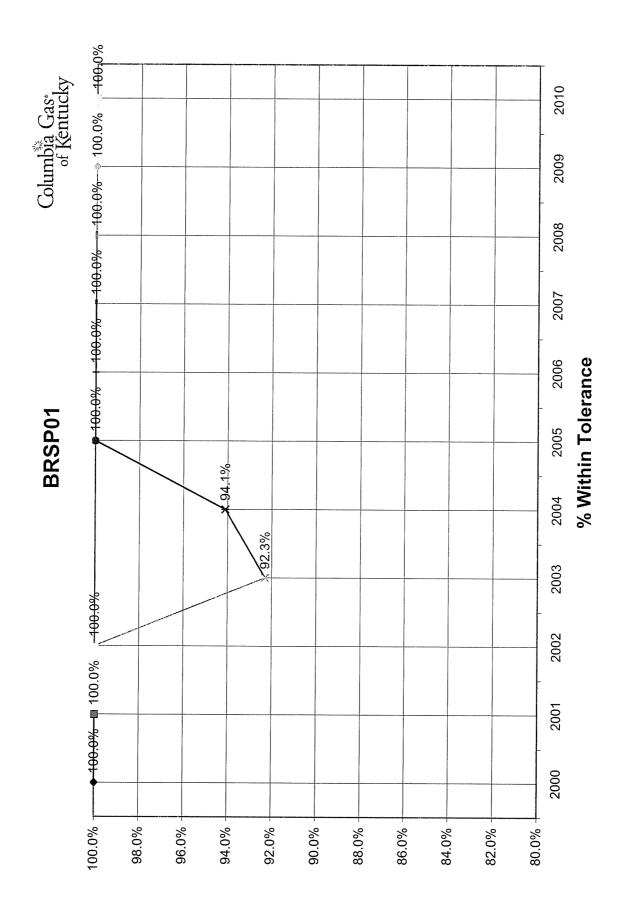


EXHIBIT F

COST SAVINGS

The 2010 sampling program resulted in changing 5154 fewer meters than would have been changed under the 14-year plan Columbia Gas of Kentucky was following prior to meter sampling and changing 9,231 fewer meters than would have been required under a 10-year change-out program.

This represents yearly savings of \$1,255,416 compared to a 10-year plan

This represents yearly savings of \$700,944 compared to a 14-year plan

EXHIBIT G

TEST RESULTS OF NEW METERS

Columbia Gas of Kentucky purchased 3720 new meters in 2010. The factory test sheets for the new meters purchased in 2010 are on file in the Lexington office.

No problems were found in the new 2010 purchases.