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COMMONWEALTH OF KENTUCKY  
BEFORE THE PUBLIC SERVICE COMMISSION

DEC 31 2008  
PUBLIC SERVICE  
COMMISSION

IN THE MATTER OF: )

KENTUCKY-AMERICAN WATER COMPANY'S )  
REQUEST FOR PERMISSION TO DEVIATE )  
FROM 807 KAR 5:066, SECTION 16(1) )

2009-00253  
CASE NO. 2007-00198

PETITION OF KENTUCKY-AMERICAN WATER COMPANY

Now comes Kentucky-American Water Company ("KAW"), pursuant to 807 KAR 5:066, Section 18, and requests a deviation from the requirements of 807 KAR 5:066, Section 16(1), regarding the frequency of testing 5/8 inch meters. In support of this request, KAW states:

1. KAW is a corporation organized and existing under the laws of the Commonwealth of Kentucky with its principal office and place of business located at 2300 Richmond Road, Lexington, Kentucky 40502.

2. KAW is a wholly-owned subsidiary of American Water Works Company, Inc. ("American Water") and is engaged in the distribution and sale of water in its Central Division, consisting of Bourbon, Clark, Fayette, Harrison, Jessamine, Scott and Woodford Counties and its Northern Division consisting of Gallatin, Owen and Grant Counties. The Company currently owns, operates and maintains potable water production, treatment, storage, transmission and distribution systems for the purpose of furnishing potable water for residential, commercial, industrial and governmental users in its service territory.

3. KAW also owns, operates and maintains collection, pumping and treatment systems for the purpose of furnishing wastewater service for residential, commercial, industrial and governmental users in its service territory.

4. A certified copy of the Articles of Incorporation of Kentucky American Water, together with all amendments, are incorporated by reference as authorized by 807 KAR 5:001, Section 8 (3), and were filed as Exhibit No. 4 in Case No. 95-554, *Notice of the Adjustment of the Rates of Kentucky-American Water Company effective on and after February 29, 1996.*

5. In Case No. 96-569, KAW originally requested a deviation from the requirements of 807 KAR 5:066, Section 16(1), citing a then-recent engineering study suggesting 5/8 inch meters could be used for longer than 10 years. This Commission authorized a 10-year pilot study to determine if meters used by KAW remain accurate for a longer period of time than the Commission's rules allow. The pilot was delayed for one year in the midst of the study, so KAW requested a one year extension by letter dated May 3, 2007. The Commission granted that request in an Order in this new docket, Case No. 2007-00198.

6. This Petition reports the final results of the study. As the attached report concludes, the 5/8 inch meters studied in the pilot remain accurate for 15 years. The current Commission rule, 807 KAR 5:006, Section 16(1), requires that all 5/8 inch meters be tested every 10 years. Based on the results of this extensive study, KAW requests that it be allowed a deviation from that requirement allowing KAW to test meters every 15 years. To efficiently and properly test a meter, it must be removed and tested at KAW's facilities. Therefore, in accordance with the existing regulation, KAW removes and tests

every meter when it has been in service for 10 years.<sup>1</sup> Of course, when a meter is removed, a new one is put in its place to avoid any interruption in service. Thus, no 5/8 inch meter is in service for longer than 10 years. However, the results of the pilot study indicate that the 5/8 inch meters are accurate to the 15-year mark. Therefore, KAW seeks permission from the Commission to remove and test the 5/8 meters every 15 years.

7. Under this requested deviation, KAW would remove and test all meters at their 15-year mark rather than at their 10-year mark. If the 15-year-old meters are testing well, then KAW will know that its meters are consistently lasting at least 15 years. If they are not testing well, then KAW will have identified a problem that needs to be addressed (based on the attached, KAW has no reason to believe that such problems will arise). The requested deviation will have no impact on KAW's current practice of randomly testing 200 meters every year (regardless of meter age) so that any developing meter problems are identified as early as possible.

8. The major benefits that will result from allowing this deviation are financial. By keeping meters in service for five years longer, KAW will save the time and expense of changing out meters that still have five years of remaining useful life. The extra five years of service from meters will also result in the purchase of fewer new meters. All these benefits will be passed along to customers in the form of reduced costs.

9. KAW states that it waives its right pursuant to KRS 278.380 to receive delivery of the Commission's orders in this proceeding through United States mail. KAW agrees to accept delivery of any orders by electronic transmission and states that it possesses the facilities to receive these orders by electronic transmission. Finally, KAW

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<sup>1</sup> Of course, if KAW receives a complaint or inquiry about a meter that may be inaccurate, that meter is removed and tested. A replacement meter is installed for continuity of service. If the removed meter tests accurately and still has sufficient useful life left, it may be reinstalled at a new location.

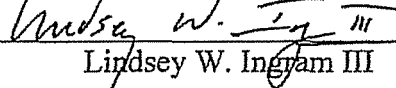
states that service of Commission orders upon it via electronic mail and/or electronic mail notice that Commission orders have been uploaded to the Commission's website are acceptable forms of notice of Commission orders to KAW in this matter.

THEREFORE, KAW requests that the Commission approve its request for a deviation from the requirements of Section 16(1) of 807 KAR 5:006 such that 5/8 inch meters may be tested upon being in service for 15 years.

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**CERTIFICATE**

This is to certify that an original and 10 copies of the foregoing will be hand-delivered to the Commission and a copy mailed to the following on this 31<sup>st</sup> day of December, 2008:

David Edward Spenard  
Office of the Attorney General  
1024 Capital Center Drive, Suite 200  
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STOLL KEENON OGDEN PLLC

By *Lindsay W. [Signature]*  
Attorneys for Kentucky American Water

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## **Executive Summary**

On September 30, 1997, the Public Service Commission (PSC) issued an Order in Case No. 96-569 with respect to a Kentucky American Water Company (KAW) pilot sampling plan for 5/8 inch water meters older than 10 years. KAW had requested to deviate from 807 KAR 5:066 Section 16(1) of the Commission rules so as to extend meter life. At issue was whether meters older than 10 years are accurate.

To determine if meters that were kept in place over 10 years were accurate; KAWC proposed that older meters would be tested for accuracy by a sample pilot program. Once their accuracy was established, the program for determining the accuracy could then be discontinued. The Order granted KAW a deviation until December 31, 2007, so that it could conduct the study. That date was extended to December 31, 2008, by an Order in Case No. 2007-00198 dated July 31, 2007.

The sample pilot program was completed in 2008 and the findings of this study conclude:

- 5/8 inch meters older than ten years accurately register usage beyond this age.
- 5/8 inch meters of the age of 15 years and less can be expected to accurately register usage.
- Savings realized by extending the life of meters set in the field can be passed along to our customers.

## Test Procedures

The test procedures as proposed by the June 1997 plan were as follows:

Currently, functioning meters are tested for low, medium and high flow rates. Meters that are stuck are reported outside of this testing procedure because they represent non-functioning meters. The current testing procedure for low, medium, and high flow rates as required by the normal accuracy testing by the Commission is performed for the meters older than 10 years.

The actual type of analysis performed to establish accuracy, as established in the June 1997 report, is a means analysis test. Meter accuracy for various flow levels will be measured by a means analysis that will be compared to the established acceptable accuracy rates for each type of test. The mean of a set of data is the same as the average.

The **average** for the sample for a particular age by flow test will be calculated. An average that under-registers by 1.5% or over-registers by 1.5% for the medium and the high test will be considered an indication of inaccurate meters. An average of the low test that under-registers by below 10% or over-registers by 1% will be considered an indicator of inaccuracy.

If a meter age tests accurate for 5 years of testing without inaccuracy, the meter age is considered accurate overall with no further testing needed.

As the June 1997 sampling plan proposed, over 200 meters would be tested as to their accuracy for a particular age of meter.

## Test Schedule and Results

Following is an annual report of the meter tests under the pilot study.

### Testing in 1999

The sampling plan was initially implemented in 1999. That year one set of meters was tested by the sampling plan:

- 11-year old meters installed in 1988

The one set of meters passed by the standard described in the Testing Procedures section of this Report. .

### Testing in 2000

In 2000, two sets of meters were tested by the sampling plan:

- 11-year old meters installed in 1989
- 12-year old meters installed in 1988

Both sets of meters passed by the standard described in the Testing Procedures section of this Report.

### Testing in 2001

Three sets of meters were tested by the sampling plan for 2001:

- 11-year old meters installed in 1990
- 12-year old meters installed in 1989
- 13-year old meters installed in 1988.

All three sets of meters passed by the standard described in the Testing Procedures section of this Report.

### Testing in 2002

Four sets of meters were tested by the sampling plan in 2002:

- 11-year old meters installed in 1991
- 12-year old meters installed in 1990
- 13-year old meters installed in 1989
- 14-year old meters installed in 1988

All four sets of meters passed by the standard described in the Testing Procedures section of this Report.



## **Testing in 2003**

Meter testing was not performed in 2003 due to unforeseen personnel problems and other circumstances. A concentrated effort was undertaken for 2004.

*Conservatively, because no meters were fully tested as per the Sampling Plan procedures, the year 2003 was treated as a year without a test for either pass or fail for any test year.*

## **Testing in 2004**

Five sets of meters were tested by the sampling plan in 2004:

- 11-year old meters installed in 1993
- 12-year old meters installed in 1992
- 13-year old meters installed in 1991
- 14-year old meters installed in 1990
- 15-year old meters installed in 1989

All five sets of meters passed by the standard described in the Testing Procedures section of this Report. The 11-year old meters were found to be accurate overall given accurate testing for five years ending in 2004 per the Order. No further testing of the 11-year old meters was thereafter required.

## **Testing in 2005**

Five sets of meters were tested by the sampling plan in 2005:

- 12-year old meters installed in 1993
- 13-year old meters installed in 1992
- 14-year old meters installed in 1991
- 15-year old meters installed in 1990

All four sets of meters passed by the standard described in the Testing Procedures section of this Report. The 12-year-old meters were found to be accurate overall given accurate testing for five years ending in 2005 per the Order. No further testing of the 12-year old meters was thereafter required.

## **Testing in 2006**

Four sets of meters were tested by the sampling plan in 2006.

- 13-year old meters installed in 1993
- 14-year old meters installed in 1992
- 15-year old meters installed in 1991
- 16-year old meters installed in 1990

All four sets of meters passed by the standard described in the Testing Procedures section of this Report. The 13-year-old meters were found to be accurate overall given accurate testing for five years ending in 2005 as per the above Order. No further testing of the 13-year-old meters would be required in the future.

## **Testing in 2007**

Four sets of meters were tested by the sampling plan in 2007.

- 14-year old meters installed in 1993
- 15-year old meters installed in 1992
- 16-year old meters installed in 1991
- 17-year old meters installed in 1990

The 14-year old, 15-year old and 16-year old meters passed by the standard described in the Testing Procedures section of this Report. No further testing of the 14-year-old meters would be required in the future. The 17-year-old meters were found to be inaccurate and to have failed by the standard described in the Testing Procedures section of this Report. Given that the pilot program was scheduled to end in 2007 and that the 17-years-old meters were inaccurate, KAWC decided to apply for a one year extension of the pilot to test the 15-year-old meters. The 15-year-old meters had tested favorably with four years of passing the standard, so only one year of testing was required for the 15-year-old meters. This extension for a final year of testing in 2008 was approved by the PSC.

## **Testing in 2008**

One set of meters was tested by the sampling plan in 2008, the 15-year old meters installed in 1993.

Exhibit I provides the detailed test for the 15-year old meters tested in 2008. Note that stuck and broken meters are treated outside the analysis. For the means test to be undertaken, meters were selected in a random fashion from a meter report for those meters of that age.

After testing, all 200 meters were discarded. To perform the means test, any stuck meters were excluded from the test as specified in the June 1997 sampling plan proposal. The results of the means test are as follows:

Table 1 K-A Sample Testing Program 2008 Sample Summary Table Mean Analysis							
	Low Flow Test		Medium Flow Test		High Flow Test		Means
Year of Meter	Mean	Below 10% or Above 1%	Mean	Below 1.5% or Above 1.5%	Mean	Below 1.5% or Above 1.5%	Test Accurate?
15-Year	92.46%	No	100.00%	No	99.68%	No	Yes

### 15-year Old Meter Accuracy

The above results show that the means tests for the three flow tests were accurate where 100% represents full accuracy for the 15-year old meters. Because all three tests were accurate, the test for the 15-year old meters was considered accurate for 2008. Because the initial sample of over 200 sample meters tested accurately, there is no need for additional sampling. Because the 15-year old meters have tested five years accurate with the 2008 testing, they are considered accurate overall and no additional years testing is needed.

## Summary of Final Pilot Program Testing Results

The following table summarizes the final Pilot Sampling Plan results.

	11-year old	12-year old	13-year old	14-year old	15-year old
1999	Pass				
2000	Pass	Pass			
2001	Pass	Pass	Pass		
2002	Pass	Pass	Pass	Pass	
2004	Pass	Pass	Pass	Pass	Pass
2005	Done	Pass	Pass	Pass	Pass
2006	Done	Done	Pass	Pass	Pass
2007	Done	Done	Done	Pass	Pass
2008*	Done	Done	Done	Done	Pass
Passes	5	5	5	5	5
Testing	Accurate	Accurate	Accurate	Accurate	Accurate

Meters up to 15 years old have tested accurate for five years and will be used in normal service.

### Conclusion

The results of the pilot study demonstrate that 5/8 inch meters up to 15 years old remain accurate and should remain in service. Allowing these meters to continue in use for five years beyond what current rules allow will result in savings to KAW and its customers.