

STATE OF ILLINOIS

ILLINOIS COMMERCE COMMISSION

AQUA ILLINOIS, INC. :
 :
Petition for 20-Year Variance For Meter : Docket No. 13-0412
Testing in Aqua Illinois' Vermilion Division :
 :

AGREED DRAFT ORDER

Dated: November 7, 2013

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Aqua Illinois, Inc. (“Aqua”) hereby submits this Agreed Draft Order to the Illinois Commerce Commission (“Commission”). Counsel for Aqua has circulated this document to counsel for the Commission Staff (“Staff”). Staff has no objection to the Commission’s entry of this Agreed Draft Order.

* * * * *

By the Commission:

I. PROCEDURAL HISTORY

On June 18, 2013, Aqua Illinois, Inc. (“Aqua” or the “Company”) filed with the Illinois Commerce Commission (“Commission”) a Verified Petition (“Petition”) seeking an Order granting Aqua a variance authorizing the Company to test 5/8” service water meters within its Vermilion Division every 20 years.

Pursuant to notice given in accordance with the law and the rules and regulations of the Commission, a status hearing was scheduled in this matter before a duly authorized Administrative Law Judge of the Commission, on August 22, 2013.

An evidentiary hearing was held on October 16, 2013. At the evidentiary hearing, Aqua and Staff of the Commission (“Staff”) each presented written testimony and exhibits (“Ex.” or “Exs.”) that were admitted into the evidentiary record. The record was marked “Heard and Taken” on October __, 2013.

Aqua submitted the direct testimony of Robert Ervin, Area Manager for the Company’s Vermilion Division.

Staff submitted the direct testimony of William H. Atwood, P.E., a Water Engineer in the Water Engineering Program of the Safety & Reliability Division of the Commission.

II. APPLICABLE AUTHORITY

Section 600.340 of the Commission's Rules ("Rules") provides, in pertinent part:

Unless otherwise approved by the Commission, each service water meter shall be periodically inspected and tested in accordance with the following schedule, or as often as the results may warrant, to insure that the meter accuracy is maintained within the limits set out in Section 600.310:

5/8 inch meter – 10 years or for each 100,000 cubic feet registered.

83 Ill. Adm. Code Section 600.340.

Section 600.60, "Modification or Exemption from Rules," provides as follows:

If hardship results from the application of any rule herein prescribed, or if unusual difficulty is involved in complying with any rule or otherwise upon good cause shown, a formal application or written request, as may be appropriate under the circumstances, may be made to the Commission for the modification of the particular rule or for an exemption from its provision. Upon good cause shown the Commission may then modify that rule or provide an exemption for that utility.

83 Ill. Adm. Code Section 600.60.

III. THE RECORD

A. Aqua Position

Aqua requests that the Commission issue an Order authorizing it to test 5/8" meters in its Vermilion Division on a 20-year schedule, rather than the 10-year schedule, as provided for in Section 600.340. Aqua additionally requests that it have the option to either replace 5/8" meters with 20 years of service with new meters; or test, recondition and return to service such meters. Aqua asserts that less frequent testing will benefit customers as testing costs will decrease and customers may experience fewer inconveniences associated with meter testing.

Aqua witness Ervin testified that the Company conducted random testing that demonstrates a 20-year meter testing period is reasonable and appropriate. The Company conducted a random test of 69 – 5/8" water meters that were 20 years or older and 55 – 5/8" meters that were 15-years or older in order to determine the meters' accuracy.

The tests were conducted consistent with Section 600.310 – Test and Allowable Error – of the Commission's Rules. Testing also was in accordance with the standards for testing Cold Water Meters as prescribed in the American Water Works Association ("AWWA") Manual M-6 ("AWWA M6"). The results were then analyzed against the

accuracy ranges for new meters, as set forth in Section 600.310 of the Commission's Rules. All meters tested were removed from service by an independent contractor and also sent to an independent contractor for testing.

The data from these tests shows that for meters that were 20-plus years old, the average minimum flow accuracy of all testable 20-plus year meters was 93.4%, and the average weighted accuracy of all testable 20-plus year meters was 99.2%.

Because the Commission's Rules do not address sample testing of water meters, the sample size was selected consistent with Section 500.215(b) and (c) of the Commission's Rules, which govern sample testing of gas meters. Aqua tested more than 50 meters in each age group. According to Mr. Ervin, these results are reliable because all meters were manufactured by the same company and the random test eliminated any geographic bias in the group of meters tested. Mr. Ervin further stated that Vermilion's high water quality was unlikely to negatively affect the accuracy of the meters tested.

In addition to seeking a variance, Aqua also requests that it be permitted to either replace 5/8" meters in the Vermilion Division removed with 20 years of service with new meters; or test, recondition and return to service such meters. Mr. Ervin testified that this request is based on Aqua's experience that it is currently more cost-effective to replace meters with new ones rather than test, recondition and return to service older meters. He asserts such option is in the best interests of Aqua and its customers as it will allow Aqua to select the most cost-effective option.

B. Staff Position

Staff witness William H. Atwood, Jr., P.E., presented testimony that, overall, supports Aqua's request, subject to two modifications.

With regard to Aqua's partial meter population sample size, Mr. Atwood agrees this is acceptable, so long as the sample sizes meet certain statistical sampling requirements. Neither the Public Utilities Act (the "Act") nor the Illinois Administrative Code (the "Administrative Code") provides guidelines or requirements on the issue. However, Mr. Atwood observes that the Administrative Code allows for statistical sampling of gas and electric meters, and such practice is also recommended by the AWWA M6. He also notes that the Commission has previously agreed that the use of statistical sampling of water meters was acceptable in Docket No. 08-0277.

With respect to sample size, Mr. Atwood agrees that the population sizes of 55 15-year old 5/8" water meters and 69 20-year old 5/8" meters are adequate based on the guidelines contained in Military Standard 105-D "Sample Procedures and Table for Inspection by Attributes" ("Mil Std 105"). The use of Mil Std 105 is required for sampling gas meters by Sections 500.215 (b) and (c) of Part 500, and is allowed for sampling of electric meters in Section 410.180(a)(4) of Part 400. Sections 500.215(b) and (c) of the Commission's Rules require the use of Inspection Level II of Mil Std 105. Inspection Level II is considered by Mil Std 105 to be the level normally used; the resulting sample

size required by a single sampling plan at Inspection Level II for meter populations ranging from 151 to 280 is only 32 meters.

As to water meter testing and test accuracy requirements, Mr. Atwood stated that the 5/8" water meters were tested in accordance with Section 600.310, which includes certain requirements for testing cold water meters related to AWWA standards. As required by Section 600.310, 5/8" water meters were tested at three different flow rates, a minimum flow rate of ¼ of a gallon per minute ("gpm"), an intermediate flow rate of 2 gpm, and a maximum flow rate of 15 gpm. The test accuracy limits in Section 600.130 are:

	<u>NEW METERS</u>	<u>REPAIRED METERS</u>
MINIMUM RANGE	95-101.5%	90-101.5%
INTERMEDIATE RANGE	98.5-101.5%	98.5-101.5%
MAXIMUM RANGE	98.5-101.5%	98.5-101.5%

Although the Administrative Code does not specify accuracy for in-service meters that are removed for periodic testing, AWWA M6 recommends the following accuracy limits for displacement meters: 96-102% for normal test flow, and 80-102% for minimum test flow.

Mr. Atwood evaluated the test results, indicating that in both the 15-year and 20-year group, all meters except the three untestable ones met the intermediate and maximum test flow rate accuracy limits for new or repaired meters in Section 600.310. The same meters also met the normal test flow rate accuracy limits in AWWA M6.

Regarding minimum test flow rate, in the 15-year group, eleven meters fell below the 95% accuracy limit for new meters in Section 600.310, four meters fell below the 90% accuracy limit for repaired meters in Section 600.310, and two fell below the 80% accuracy limit in AWWA M6. In the 20-year group, thirteen meters fell below the 95% accuracy limit for new meters in Section 600.310, five fell below the 90% accuracy limit for repaired meters in Section 600.310 and the 80% accuracy limit in AWWA M6 for minimum test flow rate.

80% of 15-year old meters passed all of the accuracy limits for new meters in Section 600.310; 92.7% of these passed all of the accuracy limits for repaired meters under Section 600.310; and 96.4% passed all of the accuracy limits for in-service meters in AWWA M6.

81.2% of the 20-year old meters passed all accuracy limits for new meters under Section 600.310, and 92.8% passed all accuracy limits for repaired or in service meters as required under Section 600.310 and the MWWA M6.

Regarding the meter testing pass rates for water meter testing, Mr. Atwood said there are no guidelines or requirements in the Act or the Administrative Code regarding an acceptable rate of passing for water meter testing. AWWA M6 suggests a water meter passing rate of 95% of the in-service accuracy limits for the minimum and intermediate test flow rates is acceptable. For gas meters, using Mil Std 105 as required by Section 500.215, the allowable number of defective meters for the 20-year sample size of 69 5/8" water meters used is twelve. In Aqua's case, once the two untestable meters are disregarded, 95.5% of 20-year old meters passed all accuracy limits for in-service meters in AWWA M6. Mr. Atwood states that the 20-year old meters tested easily meet the Administrative Code's Section 500.215 gas meter requirements, even when the two untestable meters are included.

In light of these results, Mr. Atwood concludes that the Company should be allowed to use a 20-year frequency of testing for the 5/8" water meters in the Vermilion Division.

Mr. Atwood also addressed and agreed with the Company's proposal that it have the option of replacing 5/8" water meters with 20 years of service with new meters, without testing the meters being replaced. However, he recommends that any 20-year old 5/8" water meters that are tested, reconditioned and returned to service in the Vermilion Division either be replaced with new meters; or tested, reconditioned and returned to service after an additional ten years of service or an additional 100,000 CF registered volume of water.

Mr. Atwood raised one additional point. He states that Administrative Code Section 600.340 also contains requirements based on the volume of water passed through a meter. The age and volume requirement for 5/8" water meters is ten years or 100,000 Cubic Feet ("CF"). In Aqua's case, the corresponding volumes registered for 15-year old meters is 150,000 CF and for 20-year old meters is 200,000 CF. He states that several meters in Aqua's study registered volumes in excess of the corresponding ages; therefore, he additionally recommends Aqua actively track water meter registration volumes and replace or test meters once they reach 200,000 CF.

C. Aqua Response

At the evidentiary hearing held on October 16, 2013, Aqua stated that it did not object to Staff's recommendations.

IV. COMMISSION ANALYSIS AND CONCLUSION

Having reviewed the record, the Commission agrees that Aqua's statistical sampling testing methodology was acceptable, and that the test results support the use of a 20-year maximum testing intervals for 5/8" water meters in the Vermilion Division rather than the 10-year intervals provided in Section 600.340 of Part 600.

The Commission also agrees that Aqua should be permitted to have the option of replacing 5/8" water meters with 20 years of service with new meters, without testing the meters being replaced. The Commission agrees with Staff's recommendation that any

20-year old 5/8" water meters that are tested, reconditioned and returned to service in the Vermilion Division should either be replaced with new meters; or tested, reconditioned and returned to service after an additional ten years of service or an additional 100,000 CF registered volume of water.

Finally, the Commission agrees with Staff that Aqua should actively track water meter registration volumes, and replace or test meters once they reach 200,000 CF.

Accordingly, Aqua should be granted a variance from Illinois Administrative Code Section 600.340, as set forth herein.

V. FINDINGS AND ORDERINGS PARAGRAPH

The Commission, having considered the entire record herein and being fully advised in the premises, is of the opinion and finds that:

(1) Aqua Illinois, Inc. provides water and sewer public utility service to the public in certain areas of Kankakee, Vermilion, Champaign, Cook, Will, Boone, Knox, DeKalb, Kane, and Lake Counties in the State of Illinois, and is a public utility within the meaning of the Public Utilities Act, 220 ILCS 5/3-105;

(2) The Commission has jurisdiction over the parties and the subject matter herein;

(3) The recitals of fact and conclusions of law reached in the prefatory portion of this Order are supported by the evidence of record and are hereby adopted as findings of fact and conclusions of law;

(4) Aqua has shown that a 20-year testing period for 5/8" water meters is appropriate for the Vermilion Division;

(5) Aqua is to track the volume of water registered by its 5/8" water meters in its Vermilion Division and either replace or test any meters that have reached 200,000 CF prior to their 20-year service life;

(6) For 5/8" water meters that have reached a 20-year service life or registered a volume of 200,000 CF in the Vermilion Division, Aqua has the option of either replacing them with new meters; or testing, reconditioning and returning them to service, unless otherwise requested by the customer;

(7) 20-year old 5/8" water meters that are tested, reconditioned and returned to service in the Vermilion Division shall either be replaced with new meters; or tested, reconditioned and returned to service after an additional 10-years of service or an additional 100,000 CF registered volume of water;

IT IS THEREFORE ORDERED by the Illinois Commerce Commission that Aqua Illinois, Inc.'s Petition is granted, subject to the conclusions and findings set forth above.

IT IS FURTHER ORDERED by the Commission that therefore the request by Aqua Illinois, Inc. for a variance from certain requirements of 83 Ill. Adm. Code 600.340 should be granted as set forth herein.

IT IS FURTHER ORDERED that, subject to the provisions of Section 10-113 of the Public Utilities Act and 83 Ill. Adm. Code 200.880, this Order is final; it is not subject to the Administrative Review Law.

By Order of the Commission this ___ day of _____, 2013.

* * * * *

Dated: November 7, 2013

Respectfully submitted,

AQUA ILLINOIS, INC.

By: /s/ John E. Rooney
One of its Attorneys

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