BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

Roman Dzhurinskiy,	)	
	)	
Complainant,	)	
	)	Case No. WC-2010-0215
v.	)	
	)	
Missouri-American Water Company,	)	
	)	
Respondent.	)	

POST-HEARING BRIEF OF MISSOURI-AMERICAN WATER COMPANY

COMES NOW Respondent Missouri-American Water Company (MAWC) and for its Post-Hearing Brief in response to the Missouri Public Service Commission's Briefing Schedule order issued December 3, 2010, states as follows:

Introduction

Complainant Roman Dzhurinskiy has a high bill complaint. He says water is not being registered when the flow indicator on his water meter goes in reverse.

This is incorrect. The uncontradicted evidence is that usage is being removed from his meter when the flow indicator moves in reverse. In any event, Mr. Dzhurinskiy does not even cite any law or regulation that requires a water meter to register reverse flow. Finally, Missouri law puts the responsibility for installation of backflow prevention devices on the customer, not the water utility.

Mr. Dzhurinskiy bears the burden of proof on this claim. He has not carried his burden. He has not proved that MAWC has violated any tariff, law or Commission order or rule. His complaint should be dismissed, and judgment entered for Missouri-American Water Company.

Registration of Reverse Flow

Through the testimony of Peter Matschiner, MAWC established at hearing that if the flow indicator on Mr. Dzhurinskiy's meter is moving in a reverse direction, the reverse flow is being registered – that is, the usage is also being removed from his meter.

Mr. Matschiner is Operations Superintendent of MAWC's St. Louis District. (Transcript page 79, lines 5-6).[1] He has been employed by MAWC or its predecessor since 1996. (79, 13-15). He currently manages the meter change/length of service program, the systems records department, and the locating department. (79, 5-9). His experience includes about 10 years as a meter reader and supervisor of meter readers and meter issues. (79, 22-25; 80, 1-25; 81, 1-5).

During the hearing, Mr. Matschiner explained in detail how a water meter works, using a cut-away model of the meter installed at Mr. Dzhurinskiy's house. (81, 14-25; 82, 1-8). He noted that there are two dials on the meter register – a smaller flow indicator that indicates water is flowing through the meter, and a larger sweep hand that registers the usage. (82, 9-25; 83, 1-12).

When water is flowing from the water main into a customer's premises, the flow indicator moves in a counter-clockwise direction, and the sweep hand moves in a clockwise direction, since the two dials are connected in a gear train. (83, 13-25; 84, 1-5). If the water is going backwards through the meter from the customer's premises, the flow indicator moves in a clockwise direction, and the sweep hand moves in a counter-clockwise direction. (83, 13-24).

[1] Unless otherwise noted, all citations are to page and line numbers of the transcript of the November 15, 2010 hearing in this matter.

Importantly, Mr. Matschiner testified that if the flow indicator is moving, the sweep hand is necessarily moving. (84, 6-12). And if the flow indicator is moving in reverse, the sweep hand is necessarily moving in reverse – that is, the sweep hand is removing usage from the meter. (85, 4-10).

Mr. Matschiner also testified that Mr. Dzhurinskiy's meter was removed and tested after his complaint, and was found to meet all regulatory requirements. (85, 17-25; 86, 1-2). According to the applicable MAWC tariff, a meter is accurate when it is found to be not "more than five percent (5%) defective or incorrect to the prejudice of the customer or the Company" after it is "inspected and tested using the Company's intermediate and maximum flow rate testing procedure." MAWC Exhibit 05, Form No. 13, P.S.C.Mo. No. 6, Original Sheet No. R7.0. Furthermore, Commission regulations provide that "No water service meter shall be allowed in service which has an incorrect gear ratio or dial train or is mechanically defective or shows an error in measurement in excess of five percent (5%) when registering water at stream flow equivalent to approximately one-tenth (1/10) and full normal rating under the average service pressure." MAWC Exhibit 12, 4 CSR 240-10.030(37).

Mr. Dzhurinskiy's meter tested within the 5 percent limits, for both forward and reverse flow (MAWC Exhibit 04, 12/22/09 and 11/10/10). On forward flow, the meter tested at 99.7 percent accuracy at the full normal flow of 10 gallons per minute[2] (gpm), 100.6 percent at 2 gpm, and at 99 percent at 1/8 gpm. On reverse flow, on 12/22/09 it tested at 98 percent at 10 gpm and 99.7 percent at 2 gpm. It did not register at 1/8 gpm. A second reverse flow test on 11/10/11 produced the following results: 97.2 percent at 20

[2] 10 gpm is full normal flow for that meter (89, 3-5), and 1/10 flow is 1 gpm.

gpm, 98.6 percent at 10 gpm, 99 percent at 5 gpm, 99.5 percent at 2 gpm, 98 percent at 1 gpm, and 10 percent at 1/8 gpm.

As shown by the test results, Mr. Dzhurinskiy's meter tested accurately for both forward and reverse flow according to the requirements of tariff Sheet No. R7.0 and 4 CSR 240-10.030(37) for full normal, maximum, and 1/10 of full normal flows. (95, 8-15).

Accordingly, there can be no adjustment to his bills because Commission rules prohibit such adjustment: "Where, upon test, an error in measurement is found to be within the limits prescribed by commission rules, no billing adjustment will be made. …" MAWC Exhibit 12, 4 CSR 240-13.025(1)(C). Since there was no error of measurement outside the limits prescribed by commission rules, there can be no adjustment.

In addition, Mr. Dzhurinskiy cites to no tariff, rule or law requiring meters to register reverse flow. Meters are designed to register water entering a customer's premises, not leaving a customer's premises. (120, 24-25).

Backflow Prevention

If Mr. Dzhurinskiy wants to prevent any reverse flow, he needs to install a backflow preventor. While there is no specific tariff, Commission rule or law regarding installation of backflow preventers in typical residential settings, one can analogize to the requirements of Missouri law when cross-connection contamination is involved – the law clearly puts the burden on customers, both residential and commercial/industrial, to install backflow preventers at their own cost.

For example, Missouri Department of Natural Resources regulations provide in several instances that the "customer or the customer's authorized representative shall

construct a department-approved air-gap separation or install a reduced pressure principle backflow prevention assembly on the customer service line …" when there is a threat of cross-connection contamination. MAWC Exhibit 09, 10 CSR 60-11.010(3)(A)(1) and (B)(1).

MAWC tariffs also require the discontinuation of water service to a customer if a cross-connection exists, and provide that service "will not be restored until the appropriate backflow prevention control assembly has been installed." MAWC Exhibit 07, Form No. 13, P.S.C.Mo. No. 6 Second, Revised Sheet No. R2.0. In addition, MAWC tariffs affirm that "All Water Service Line installations, including … backflow preventors … are not the property of the Company and must be kept operational, maintained and repaired by the owner or customer as a condition of service." MAWC Exhibit 07, Form No. 13, P.S.C.Mo. No. 6 First, Revised Sheet No. R19.1.

Pressure

In order to deflect responsibility for prevention of any undesired backflow, Mr. Dzhurinskiy makes the incredible assertion that pressure throughout the 4,200 miles of main in MAWC's St. Louis distribution system must be exactly the same, in each and every foot of pipe. (66, 13-16). This statement shows his complete lack of understanding – and more importantly his lack of qualifications to give any opinions – regarding the science and operations of a water system.

MAWC engineer Derek Linam testified on behalf of MAWC regarding system pressure and operations. He is a licensed professional engineer with 19 years experience in the water industry, all with MAWC and St. Louis County Water. (123, 11-25). Mr. Linam is currently Engineering Manager. (123, 8-10). He had been Operations Engineer

for the St. Louis County District, which includes 4,200 miles of water main, enough main to stretch from LA to New York then to Miami. (123, 16-25; 124, 1-4).

Mr. Linam testified that there is only one rule or regulation regarding required pressure levels for water distribution systems in Missouri – the DNR regulation that says pressure in the system must be at least 20 psi. (126, 11-25; 127, 7). MAWC Exhibit 08, 10 CSR 60-4.080(9), Furthermore, there are no rules or regulations about maximum pressures, or rules or regulations saying pressure cannot fluctuate. (127, 8-10).

In fact, Mr. Linam testified that in a water system, especially one the size of St. Louis County, pressure levels must necessarily fluctuate. (127, 11-14). There are differences in pressure in different geographic areas of the system, mainly due to changes in elevation (there is a 1 psi change for every 2.31 foot change in elevation). (127, 15-25; 128, 1-9). And there are differences in pressure at the same location at different times – due to factors such as system demand and usage, filling and backing up storage tanks, fire department use of hydrants, main breaks, etc. (128, 10-25; 129, 1-4).

Mr. Linam testified that MAWC monitors and maintains pressure through its Distribution Load Control Center, of which Mr. Linam was Senior Production Engineer at one point of his career. (125, 7-12). DLCC has electronic and manual controls, with the target of keeping the system at its highest elevations at least 30 psi, in order to ensure the entire system stays above the 20 psi requirement. (129, 5-13).

Mr. Linam said that the typical pressure inside customer homes is between 30 to 80 psi, depending also on whether the home has a pressure regulating valve and what pressure it is set to maintain. (129, 14-25; 130, 1-6). He also said that if pressure inside a customer's home rises above the pressure in the main serving the home, water can go

back through the meter if the home does not have a backflow preventer on its service line. (130, 7-21; 141, 14-25; 142, 1-18). And as Mr. Linam pointed out, when a water heater is on, it's more of a pressure equalization process (142, 4-14) as opposed to a reverse flow.

Abnormally Low Usage

It is ironic that Mr. Dzhurinskiy's complaint is based on a claim of high usage, because his average usage is less than 20 percent of the average usage of a typical St. Louis County customer. The average customer usage in St. Louis County is 22,500 gallons per quarter, while Mr. Dzhurinskiy's average usage since 2006 has been about 4,500 gallons per quarter (107, 11-20). (See also MAWC Exhibits 13 and 17).

So this proceeding makes clear that Mr. Dzhurinskiy does not in fact have high usage, but extremely low usage. And it's also clear that Mr. Dzhurinskiy noticed the flow indicator on his meter moving in the reverse direction only after he installed a new water heater in the fall of 2009. (Dzhurinskiy Complaint, paragraph 2). Mr. Dzhurinskiy is responsible for the functioning of his own appliances, and for the installation of backflow preventors if desired. MAWC Exhibit 07, Form No. 13, P.S.C.Mo. No. 6 First, Revised Sheet No. R19.1.

Mr. Dzhurinskiy's brief is filled with multiple allusions to matters not in the record, to hearsay statements, and to arguments never made in pleadings or at hearing. Accordingly, they will not be addressed in MAWC's brief. All these matter should be rejected.

The Complaint should be dismissed with prejudice and judgment entered for MAWC.

Proposed Findings of Fact

1. Missouri-American Water Company is a water corporation providing water service to a residence at 32 Crabapple Court, St. Louis, Missouri 63132. The residence is owned by Complainant Roman Dzhurinskiy. (Complaint).

2. Mr. Dzhurinskiy filed a formal complaint against MAWC on January 19, 2010. He claims that he is being overbilled because, he alleges, usage is not deducted from his water meter when the flow indicator on his meter indicates a reverse movement of water. (Complaint).

3. The Neptune residential T10 water meter type is the type of meter used at Mr. Dzhurinskiy's residence. (Transcript, page 81, line 20-25). There are two rotating indicators on the meter, a smaller flow indicator and a larger sweep hand; the flow indicator rotates when water is flowing through the meter, and the sweep hand rotates and registers a customer's water usage. (82, 20-25; 83, 1-12).

4. When water is flowing from a MAWC main into a customer's premises, the flow indicator on the meter moves in a counter-clockwise direction, and the sweep hand moves in a clockwise direction, since the two dials are connected in a gear train. (83, 13-25; 84, 1-5). If the water is going backwards through the meter from the customer's premises, the flow indicator moves in a clockwise direction, and the sweep hand moves in a counter-clockwise direction. (83, 13-24).

5. If the flow indicator is moving, the sweep hand is necessarily moving. (84, 6-12).And if the flow indicator is moving in reverse, the sweep hand is necessarily moving in reverse – that is, the sweep hand is removing usage from the meter. (85, 4-10).

6. Mr. Dzhurinskiy's meter was removed and tested by MAWC for the accuracy of its registration. (85, 17-25; 86, 1-2).

7. According to the applicable MAWC tariff, a meter is accurate when it is found to be not "more than five percent (5%) defective or incorrect to the prejudice of the customer or the Company" after it is "inspected and tested using the Company's intermediate and maximum flow rate testing procedure." MAWC Exhibit 05, Form No. 13, P.S.C.Mo. No. 6, Original Sheet No. R7.0. Furthermore, Commission regulations provide that "No water service meter shall be allowed in service which has an incorrect gear ratio or dial train or is mechanically defective or shows an error in measurement in excess of five percent (5%) when registering water at stream flow equivalent to approximately one-tenth (1/10) and full normal rating under the average service pressure." MAWC Exhibit 12, 4 CSR 240-10.030(37).

8. The test results for Mr. Dzhurinskiy's meter are as follows. On forward flow, on 12/22/09 the meter tested at 99.7 percent accuracy at the full normal flow of 10 gallons per minute[3] (gpm), 100.6 percent at 2 gpm, and at 99 percent at 1/8 gpm. On reverse flow, on 12/22/09 it tested at 98 percent at 10 gpm and 99.7 percent at 2 gpm. It did not register at 1/8 gpm. A second reverse flow test on 11/10/11 produced the following results: 97.2 percent at 20 gpm, 98.6 percent at 10 gpm, 99 percent at 5 gpm, 99.5 percent at 2 gpm, 98 percent at 1 gpm, and 10 percent at 1/8 gpm. (MAWC Exhibit 04, 12/22/09 and 11/10/10).

9. A backflow prevention device could be installed at Mr. Dzhurinskiy's residence in order to prevent any undesired backflow. (67, 20-25).

[3] 10 gpm is full normal flow for that meter (89, 3-5), and 1/10 of that flow is 1 gpm.

10. There is only one rule or regulation regarding required pressure levels for water distribution systems in Missouri – the Department of Natural Resources regulation that requires pressure in the system to be at least 20 psi. (10 CSR 60-4.080(9)). There are no rules or regulations about maximum pressures, or rules or regulations saying pressure cannot fluctuate. (127, 8-10).

11. In a public water distribution system, especially one the size of St. Louis County, pressure levels must necessarily fluctuate. (127, 11-14). There are differences in pressure in different geographic areas of the system, mainly due to changes in elevation (there is a 1 psi change for every 2.31 foot change in elevation). (127, 15-25; 128, 1-9). And there are differences in pressure at the same location at different times – due to factors such as system demand and usage, filling and backing up storage tanks, fire department use of hydrants, main breaks, etc. (128, 10-25; 129, 1-4).

12. MAWC monitors and maintains system pressure through its Distribution Load Control Center. (125, 7-12). DLCC has electronic and manual controls, with the target of keeping the system at its highest elevations at least 30 psi, in order to ensure the entire system stays above the 20 psi requirement. (129, 5-13).

13. The typical pressure inside customer homes is between 30 to 80 psi, depending also on whether the home has a pressure regulating valve and what pressure it is set to maintain. (129, 14-25; 130, 1-6). If pressure inside a customer's home rises above the pressure in the main serving the home, water can go back through the meter if the home does not have a backflow preventer on its service line. (130, 7-21; 141, 14-25; 142, 1-18). When a water heater is on, it's more of a pressure equalization process (142, 4-14) as opposed to a reverse flow.

14. Mr. Dzhurinskiy's average water usage is less than 20 percent of the average usage of a typical St. Louis County customer. The average customer usage in St. Louis County is 22,500 gallons per quarter, while Mr. Dzhurinskiy's average usage since 2006 has been about 4,500 gallons per quarter (107, 11-20). (See also MAWC Exhibits 13 and 17).

15. Mr. Dzhurinskiy noticed the flow indicator on his meter moving in the reverse direction only after he installed a new water heater in the fall of 2009. (Dzhurinskiy Complaint, paragraph 2).

Conclusions of Law

Jurisdiction

1. MAWC is a "water corporation" and a "public utility" as those terms are defined in Missouri Public Service Commission law. Section 386.020(59) and (43), RSMo . The Missouri Public Service Commission, therefore, has jurisdiction over the services, activities, and rates of MAWC. Sections 386.020(43) and 386.250(3).

2. The Commission is authorized to hear and determine complaints made by "any corporation or person" concerning "any act or thing done or omitted to be done by any corporation, person or public utility. Section 386.390.1.

Burden of Proof

1. The Complainant, Mr. Dzhurinskiy, bears the burden of proof in a case, such as this one, in which the Complainant alleges that a regulated utility has engaged in unjust or unreasonable actions. *David A. Turner and Michele R. Turner, Complainants, v. Warren County Water and Sewer Company, Respondent*, 9 Mo. P.S.C. 3d 548 (Mo. PSC

2001), *citing to, Margolis v. Union Electric Company*, 30 Mo. P.S.C. (N.S.) 517, 523 (1991*)*; *Michaelson v. Wolf*, 261 S.W.2d 918, 924 (Mo. 1953); *Farnham v. Boone*,431 S.W.2d 154 (Mo. 1968). Thus, Mr. Dzhurinskiy must establish all facts necessary to support the relief he seeks by a preponderance of credible evidence. Mr. Dzhurinskiy has failed to meet his burden.

Decision

1. The question before the Commission is whether MAWC, under the provisions of its tariff, lawfully charged Mr. Dzhurinskiy for water service.

2. The results of the meter tests performed show that Mr. Dzhurinskiy's meter tested accurately for both forward and reverse flow, for full normal, maximum, and 1/10 of full normal flow, according to the requirements of tariff Sheet No. R7.0 and 4 CSR 240-10.030(37).

3. As a result, there can be no adjustment to his bills because Commission rules prohibit such adjustment: "Where, upon test, an error in measurement is found to be within the limits prescribed by commission rules, no billing adjustment will be made. …" 4 CSR 240-13.025(1)(C).

4. In addition, Mr. Dzhurinskiy cites to no tariff, rule or law requiring meters to register reverse flow. Meters are designed to register water entering a customer's premises, not leaving a customer's premises.

5. If Mr. Dzhurinskiy wants to prevent any reverse flow, a backflow preventer must be installed. While there is no specific tariff, Commission rule or law regarding installation of backflow preventers in typical residential settings, in other situations – such as cross-connection contamination – the law clearly puts the burden on

customers, both residential and commercial/industrial, to install backflow preventers at their own cost. 10 CSR 60-11.010(3)(A)(1) and (B)(1). Furthermore, MAWC tariffs also require the discontinuation of water service to a customer if a cross-connection exists, and provide that service "will not be restored until the appropriate backflow prevention control assembly has been installed." Form No. 13, P.S.C.Mo. No. 6 Second, Revised Sheet No. R2.0. In addition, MAWC tariffs affirm that "All Water Service Line installations, including … backflow preventors … are not the property of the Company and must be kept operational, maintained and repaired by the owner or customer as a condition of service." Form No. 13, P.S.C.Mo. No. 6 First, Revised Sheet No. R19.1.

6. Mr. Dzhurinskiy is responsible for the functioning of his own appliances. Form No. 13, P.S.C.Mo. No. 6 First, Revised Sheet No. R19.1. He did not become aware of any issue regarding reverse movement on his water meter until he installed a new water heater. If his water heater is causing the issue with his meter, he is responsible for remedying that issue.

7. While Mr. Dzhurinskiy genuinely believes that he is being overbilled for his water usage, there is no evidence in the record to support his position. Mr. Dzhurinskiy's complaint is not supported by the evidence and he has not met his burden of proof. The relief sought must be denied.

IT IS ORDERED THAT:

1. The Missouri Public Service Commission finds in favor Missouri-American Water Company and denies Mr. Dzhurinskiy's requested relief.

2. The complaint filed by Mr. Dzhurinskiy on January 19, 2010 against Missouri-American Water Company is dismissed with prejudice.

3. This order shall become effective on _____, 2011.

4. This case shall be closed on _____, 2011.

_____

Respectfully submitted,

MISSOURI-AMERICAN WATER COMPANY

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true and correct copy of the foregoing was filed electronically and mailed postage prepaid the 2nd day of February, 2011, to:

Roman Dzhurinskiy
32 Crabapple Ct.
St. Louis, MO 63132

___Kenneth C. Jones_____