

Exhibit No.:
Issues: Meter Installation Program
Valve Exercising
Water Losses
Witness: James A. Merciel, Jr.
Sponsoring Party: MO PSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: WR-2011-0337
Date Testimony Prepared: January 19, 2012

MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

REBUTTAL TESTIMONY

OF

JAMES A. MERCIEL, JR.

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2011-0337

*Jefferson City, Missouri
January 2012*

Staff Exhibit No. 14
Date 2-21-12 Reporter JK
File No WR-2011-0337

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

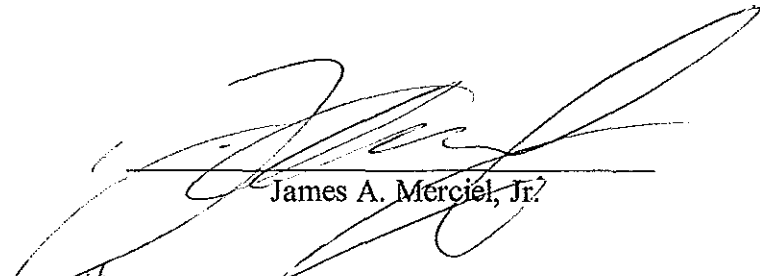
In the Matter of Missouri-American Water)
 Company's Request for Authority to)
 Implement A General Rate Increase for)
 Water and Sewer Service Provided in)
 Missouri Service Areas)

Case No. WR-2011-0337

AFFIDAVIT OF JAMES A. MERCIEL, JR.

STATE OF MISSOURI)
) ss
 COUNTY OF COLE)

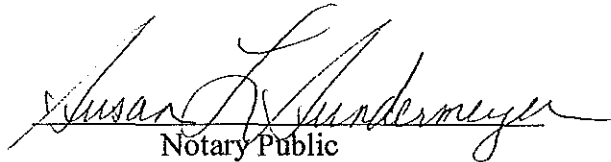
James A. Merciel, Jr., of lawful age, on his oath states: that he has participated in the preparation of the following Rebuttal Testimony in question and answer form, consisting of 8 pages of Rebuttal Testimony to be presented in the above case, that the answers in the following Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.



James A. Merciel, Jr.

Subscribed and sworn to before me this 19th day of January, 2012.

<p>SUSAN L. SUNDERMEYER Notary Public - Notary Seal State of Missouri Commissioned for Callaway County My Commission Expires: October 03, 2014 Commission Number: 10942086</p>
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Notary Public

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MISSOURI-AMERICAN WATER COMPANY

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REBUTTAL TESTIMONY

OF

JAMES A. MERCIEL, JR.

MISSOURI-AMERICAN WATER COMPANY

CASE NO. WR-2011-0337

Q. Please state your name and business address.

A. James A. Merciel, Jr., P. O. Box 360, Jefferson City, Missouri, 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission (Commission) as a Utility Regulatory Engineering Supervisor, in the Water and Sewer Unit.

Background of Witness

Q. Please describe your education and work experience.

A. I graduated from the University of Missouri at Rolla in 1976 with a Bachelor of Science degree in Civil Engineering. I am a Registered Professional Engineer in the State of Missouri. I worked for a construction company in 1976 as an engineer and surveyor, and have worked for the Commission in the Water and Sewer Unit since 1977.

Q. What are your work responsibilities at the Commission?

A. My duties include reviewing information and making recommendations with regard to certifications for new water and sewer utilities, sales of utility systems, formal complaint cases, and technical issues associated with water and sewer utility rate cases. In addition to formal case work, I handle informal customer complaints that are of a technical nature, conduct inspections and evaluations of water and sewer utility systems, and informally assist water and sewer utility companies with respect to day-to-day operations, planning, and

1 customer service issues. In the past, I have supervised engineers and technicians in the Water
2 and Sewer Unit working on the above-described type of case work and informal matters. In
3 the context of my position with Staff, I served on the American Water Works Association
4 Small Systems Committee for three years, and have served on the National Association of
5 Regulatory Utility Commissioners Staff Subcommittee on Water for approximately the past
6 sixteen (16) years.

7 Q. Have you testified before the Commission previously?

8 A. Yes. A list of cases in which I have provided testimony is included as
9 Attachment 1 to this Rebuttal Testimony.

10 **Executive Summary**

11 Q. What is the purpose of your Rebuttal Testimony?

12 A. The purpose of this Rebuttal Testimony is to: 1) address a meter installation
13 program in one of two unmetered systems that Aqua Missouri, Inc. had agreed to in the
14 disposition agreements in Cases WR-2008-0269 and WR-2010-0025, prior to Missouri-
15 American Water Company (MAWC) purchasing the systems from Aqua Missouri, Inc.; 2)
16 respond to the Direct Testimony of Alan Ratermann filed on behalf of Utility Workers Union
17 of America, Local 335 in regard to valve exercise programs; and 3) respond to the Direct
18 Testimony of Brian C. Collins filed on behalf of Missouri Industrial Energy Consumers
19 (MIEC) regarding water loss.

20 **Meter Installation Requirement at White Branch Resort and Rankin Acres**

21 Q. Should MAWC be required to undertake meter installation programs in either
22 or both of its two presently unmetered systems, White Branch Resort near Warsaw, Missouri
23 and Rankin Acres near Republic, Missouri, at this time?

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1 A. No. At this time, Staff does not recommend that MAWC be required to
2 undertake meter installation programs for either of these systems because it may not be cost-
3 effective for the operation of the systems, even though it generally is desirable to meter all
4 customers in order to promote conservation, allow customers who use very little water to pay
5 small bills, and so that the water utility can track system losses. In developing the position of
6 postponing meter installation, Staff considered the cost of such a program and the benefit of
7 metering customers. Ultimately, Staff decided that the cost of requiring meter installations is
8 not justified in this case because it would not significantly reduce any excessive water usage,
9 would cost more than energy savings created by water use reduction, and would eliminate the
10 need to construct new plant to meet customer demand. Staff's analysis included a comparison
11 of system delivery as reported by the previous owner of these systems with the capacities of
12 these systems. The cost of a meter installation program in this case would include not only
13 the cost of the meter, but also the cost of installing meter boxes and installation fittings, as
14 well as locating and excavating service lines. The cost to install this infrastructure could be
15 several hundred dollars for each customer, and perhaps thousands of dollars if substantial rock
16 excavation is necessary or other unusual situations exist, which is a distinct possibility
17 considering the location of these systems.

18 To the extent a meter installation program was agreed-upon in past cases with the
19 previous owner of Rankin Acres, Staff is willing to discuss modification of that program with
20 interested parties, given the current information regarding the cost of such a meter installation
21 program and the potential effect on customer rates in those areas.

1 **Valve Exercising in the St. Louis County Operation Area**

2 Q. Mr. Ratermann advocates that the Commission order MAWC to utilize a valve
3 exercise program in his Direct Testimony, page 5 line 21 through page 7 line 7. Does Staff
4 agree that it is valuable for MAWC to maintain a valve exercise program?

5 A. Yes. Staff agrees that valve exercise is valuable. The advantages of a valve
6 exercise program include: ongoing knowledge of locations and accessibility of valves because
7 they may get covered by landscaping and street repair or repaving, exercising moving parts to
8 reduce the negative effects of corrosion and aging, and identification of deteriorating problem
9 valves that might be candidates for replacement.

10 Q. Should the Commission require any program, or reporting, from MAWC
11 regarding valve exercising in this case as proposed by Mr. Ratermann in his Direct Testimony
12 on page 10 lines 1 through 11?

13 A. Staff does not have a recommendation regarding a need for any specific order
14 from the Commission on this matter at this time. Currently, MAWC is not violating any
15 Commission rule with regard to its valve exercising program, as there is no specific
16 Commission Rule on valve exercising.

17 MAWC and prior owners of its systems have had some type of valve exercise program
18 in the past, with some variation. There has never been a program in St. Louis County to
19 exercise all valves. It would take several additional crews to do so even if it was established
20 on a four or five year program. Staff is unaware of any widespread issues or problems with
21 MAWC's current program. Additionally, MAWC has typically worked well with the various
22 street and road departments regarding maintaining accessibility to the valves, which overlaps
23 some of the goals of a valve exercise program. Mr. Ratermann is understandably concerned

1 with the St. Louis County system since that is where he works, but the issue would expand
2 beyond that area.

3 Staff's position is that there is no need for the Commission to direct MAWC to
4 address this issue at this time. However, if the Commission determines in this case that a
5 valve exercising program should be required, along with some reporting of the program, then
6 the requirement should apply to all of MAWC's systems in the State and not be limited to a
7 specific region within Missouri. The reasons a valve exercising program or requirement
8 should apply to both larger metropolitan areas and smaller systems across the State is that
9 valve exercise programs could vary with the various systems. Staff recognizes that some of
10 the small systems recently acquired by MAWC may not have valves, or if there are valves,
11 the records may be poor, and MAWC likely would need to work on the matter with respect to
12 location or even valve installation in some cases. Therefore, those systems should also be
13 considered if the Commission determines that a valve exercising program is required in this
14 case.

15 **Water Losses**

16 Q. Does Staff agree with MIEC's witness Mr. Collins' adjustment of water loss
17 that is greater than 15% loss limit for the St. Louis Service Operations, as stated in his Direct
18 Testimony, page 11, lines 3 through 18?

19 A. No, Staff does not agree that a 15% loss limit is reasonable, at least not in the
20 manner as Mr. Collins proposes.

21 Q. Why does Staff disagree?

22 A. There are two primary reasons why Staff disagrees with Mr. Collins'
23 testimony. First, the majority of system water losses have little relationship to water usage or

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1 system production. Those losses not related to customer usage or system production include
2 such things as distribution system leaks and main breaks, system flushing and fire hydrant use
3 or flow testing. However, customer usage is quite variable from year to year on any system,
4 as is illustrated by usage normalizations in wet versus dry weather years. Customer usage is
5 also very different using system to system comparisons, for example, MAWC's Brunswick
6 customers use approximately 120 gallons per day, whereas St. Louis County customers use
7 approximately 260 gallons per day. When expressing fixed loss quantities from leaks and
8 main breaks as a percentage of this highly variable usage, the result does not accurately
9 indicate the condition of the water system.

10 Secondly, there is no established quantity to which the proposed 15% should be
11 applied. There are multiple ways it could be applied, but no specific method has been
12 established or presented by Mr. Collins in this case. Mr. Collins presents no indication as to
13 whether or not measured plant use such as filter backwash was included, or subtracted, from
14 the production volume. A water loss percentage could be applied to sales to customers,
15 instead of the percentage applied to total plant production. Mr. Collins did not take any
16 exported quantities into consideration. Staff would exclude sales to wholesale customers such
17 as water districts, since any such quantity exported has no relationship to the Company's
18 distribution system serving retail customers. There also is no indication by Mr. Collins as to
19 whether or not the same percentage limit should be applied whether or not a utility makes any
20 attempt to quantify leaks and flushing, etc., even though those quantifications would make a
21 difference in a percentage expressing losses. Additionally, similar to the Valve Exercise issue
22 above, if the water loss issue is addressed in this case, it should be addressed for any and all of

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1 the Company's systems, and not limited to one specific system such as the St. Louis County
2 District Operations.

3 Q. What is Staff's position regarding making adjustments for system losses in this
4 case?

5 A. Staff does not necessarily oppose arriving at some adjustment for the St. Louis
6 County District Operations for which Mr. Collins made his adjustment (See Direct
7 Testimony, page 11, lines 3 through 18), nor any other of MAWC's districts, in this case.
8 However, a standard could be established and used to evaluate water distribution systems and
9 used as a basis for adjusting expenses, but the method used to make any such adjustment
10 should reflect meaningful expectations of water system maintenance. Additionally, any
11 standard should strive to attain consistent results among water utilities regardless of customer
12 usage variations. Other utilities, state commissions and consultants working with the water
13 industry may use a simple percentage number for losses; however, Staff does not agree with
14 this overly simple method for the reasons stated above. As such, Staff does not assert that a
15 number such as that proposed by Mr. Collins would accomplish consistent and meaningful
16 results for MAWC's various water systems, nor generally in other rate cases.

17 Q. Does Staff have any recommendation regarding how the Commission should
18 handle evaluations of water system losses?

19 A. Not at this time. Before applying any adjustment, Staff asserts that this issue,
20 and any methods to use, are things that Staff and stakeholders should first address informally,
21 possibly in a Water and Sewer workshop. Staff is not aware of any one method available
22 today that is workable for Missouri. The American Water Works Association has a Water
23 Loss Control Committee which has studied the issue of detecting and controlling losses. A

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1 | few years ago that Committee developed a water loss evaluation method that distinguishes
2 | types of losses, and results in a number that is called an Infrastructure Leakage Index (ILI).
3 | This method could be used as a basis for an ongoing discussion with the stakeholders in
4 | Missouri. Staff has attempted to use this method for a number of regulated water systems,
5 | including those owned by MAWC, but it does not seem to result in conclusions that appear to
6 | be consistent among various water systems to Staff's satisfaction. Still, Staff finds that some
7 | of the approaches used in this method are logical, and could be used to develop a customized
8 | method that would be workable for regulated water utilities in Missouri, both large and small.
9 | The water loss issue is complex and stakeholders in Missouri should become involved in an
10 | adequate solution which perhaps concludes with a roadmap for the Commission to address the
11 | matter in the future.

12 | Q. Does this conclude your Rebuttal Testimony?

13 | A. Yes.

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Cases with Testimony by James A. Merciel, Jr. (not all inclusive)

January 2012

Algonquin Water Resources

WR-2006-0425

Aqua Missouri, Inc.

SC-2007-0044

Big Island – Folsom Ridge

WO-2007-0277

Blue Lagoon, LLC

SO-2008-0358

Camelot Utility Co.

WA-89-1

Capital City Water Co.

WR-94-297

WR-90-118

WO-89-76

WR-88-215

WR-83-165.

Davis Water Company

WC-87-125 and WC-88-288 (including proceeding in the Circuit Court in Wayne County)

Finley Valley Water Company / Public Funding Corporation, City of Ozark

WM-95-423

Gascony Water Company, Inc.

WA-97-510

House Springs Sewer Co.

SC-2008-0409

Lake Region Water and Sewer Co.

SR-2010-0110 and WR-2010-0111

Lake Saint Louis Sewer Co.

SC-78-257

Proceeding in Circuit Court in St. Charles County, approx 1980 or 1981

Merriam Woods Water Company

WC-91-18 and/or WC-91-268

Mill Creek Sewer System, Inc.

Proceeding by MO Attorney General in Circuit court in St. Louis County, Cause No. 611261, 1998

Missouri American Water Company

WR-2008-0311 and SR-2008-0312

WR-2007-0216

WC-2006-0345

WR-2003-0500

WR-2000-281

WR-97-237

WT-97-227 / WA-97-45 / WC-96-441 consolidated cases

WR-95-205

WR-2011-0337

Cases with Testimony by James A. Merciel, Jr. (not all inclusive)

January 2012

WR-95-174

WR-93-212

WR-91-211

WR-89-265

WR-87-177

WR-85-16

Missouri Cities Water Company

WR-95-172

WR-92-207

Proceeding in Circuit Court in Audrain County, CV192-40SCC approx 1992

WR-91-172

WR-90-236

WR-89-178

WC-88-280

WR-86-111

WC-86-20

WR-85-157

WR-84-51

WR-83-15

North Oak Sewer District, Inc.

SR-2004-0306

Raytown Water Company

WR-92-85 / WR-92-88

Southwest Village Water Company

WO-89-187

WC-89-138 (included testimony in Circuit Court in Greene County)

St. Louis County Water Company

WR-97-382

WR-96-263

WR-95-145

WR-94-166

WR-93-204

WR-91-361

WR-88-5

WR-87-2

WR-85-243

WC-84-29

WR-83-264

WR-82-249

WC-79-251

Stoddard County Sewer Co.

SO-2008-0289

Suburban Water and Sewer Co.

WC-84-19

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Cases with Testimony by James A. Merciel, Jr. (not all inclusive)

January 2012

Injunction hearing, Circuit Court in Boone County 07BA-CV02632, June 2007

WC-2007-0452

United Water Missouri

WR-99-326

Villa Park Heights Water Co.

WA-86-58

Warren County Water and Sewer Co.

Circuit court case in Warren County CV597-134CC, September 1997

West Elm Place Corporation

Circuit court lawsuit case in Jefferson County, approx 1988