

| | |
|-------------------|--|
| Exhibit No.: | |
| Issues: | Back-Up Power Generation (Jefferson City), Storage (Jefferson City), Small Main Replacement (Jefferson City) Chemicals, Fuel & Power |
| Witness: | Greg A. Weeks |
| Exhibit Type: | Rebuttal |
| Sponsoring Party: | Missouri-American Water Company |
| Case No.: | WR-2007-0216, SR-2007-0217 |
| Date: | July 13, 2007 |

MISSOURI PUBLIC SERVICE COMMISSION

**CASE NO. WR-2007-0216
SR-2007-0217**

REBUTTAL TESTIMONY

OF

GREG A. WEEKS

ON BEHALF OF

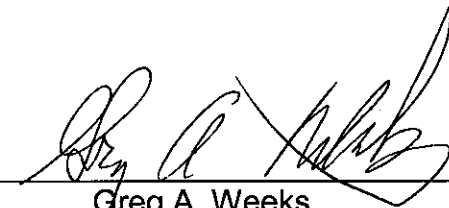
MISSOURI-AMERICAN WATER COMPANY

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

| | |
|---|------------------------------|
| IN THE MATTER OF MISSOURI-AMERICAN) | |
| WATER COMPANY FOR AUTHORITY TO) | |
| FILE TARIFFS REFLECTING INCREASED) | CASE NO. WR-2007-0216 |
| RATES FOR WATER AND SEWER) | CASE NO. SR-2007-0217 |
| SERVICE) | |

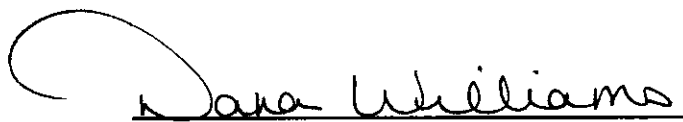
AFFIDAVIT OF GREG A. WEEKS

Greg A. Weeks, being first duly sworn, deposes and says that he is the witness who sponsors the accompanying testimony entitled "Rebuttal Testimony of Greg A. Weeks"; that said testimony were prepared by him and/or under his direction and supervision; that if inquiries were made as to the facts in said testimony, he would respond as therein set forth; and that the aforesaid testimony are true and correct to the best of his knowledge.



Greg A. Weeks

State of Missouri
County of Jasper
SUBSCRIBED and sworn to
Before me this 5th day of July 2007.



Notary Public

My commission expires: 9/12/08



**REBUTTAL TESTIMONY
GREG A. WEEKS
MISSOURI-AMERICAN WATER COMPANY
CASE NO. WR-2007-0216
SR-2007-0217**

TABLE OF CONTENTS

| | | |
|------|--|---|
| I. | Witness Introduction | 1 |
| II. | Back-Up Power Generation, Storage, Small Main Replacement..... | 1 |
| III. | Chemicals, Fuel and Power..... | 4 |

1 **Rebuttal Testimony**

2 **Greg A Weeks**

3
4 **Q: WHAT IS YOUR NAME, TITLE AND BUSINESS ADDRESS?**

5 A. My name is Greg A Weeks, and I am the General Manager of Operations for
6 Missouri American Water Company. My business address is 2650 E 32nd
7 Street. Suite 121, Joplin, MO 64804.
8

9 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A: My testimony as follows is to address and rebut the testimony of Chief
11 Rennick with the City of Jefferson.
12

13 The second part of my testimony is to respond to the Direct Testimony of
14 Staff witness Roberta Grissum with regard to fuel & power and chemical
15 expense. The Staff disallowed a portion of MAWC's fuel & power and
16 chemical expenses because Staff arbitrarily assigned a 15% loss factor cap in
17 its calculation of system delivery. In this testimony I will show that an
18 appropriate method would be to apply an averaging of historic losses over
19 several years.
20

21 **BACK-UP POWER GENERATION, STORAGE, SMALL MAIN REPLACEMENT**

22
23 **Q: WHAT CONCERNS DOES CHIEF RENNICK IDENTIFY IN HIS DIRECT**
24 **TESTIMONY?**

25 A: Chief Rennick identified three areas of concern. These are the need to install
26 permanent power generation, adequacy of storage and plant capacity, and
27 main sizes in the transmission network.
28

29 **Q: WHAT IS MISSOURI AMERICAN WATER COMPANY'S PLAN FOR**
30 **PROVIDING EMERGENCY POWER SUPPLY AT THE PLANT IN**
31 **JEFFERSON CITY?**

1 A. Missouri American Water is currently in the design phase to provide a
2 permanently installed generator at our plant in Jefferson City, which will be
3 designed to meet the average day load to keep the plant in operation in case
4 of a power outage. It is anticipated this generator will be designed, installed,
5 and online by year end 2007. This installation is in addition to the work done
6 previously which involved protection of the dual feeds from the electric utility,
7 and adjusting electrical gear to limit tripping of plant pumps during brief
8 voltage drops.
9

10 **Q: IS MISSOURI AMERICAN WATER DOING ANYTHING TO ADDRESS**
11 **PLANT CAPACITY ISSUES?**

12 A. Yes, Missouri American Water is currently in the process of studying
13 forecasted consumer loads for the Jefferson City operation and plant
14 improvements that may be prudent to provide peak day coverage for those
15 loads. It is anticipated that this study will be completed in the third quarter of
16 2007, with capital being allocated in the budget beginning in 2008 to start
17 work on design and construction of any improvements that the Company
18 decides would be prudent to improve the reliability and the treatment facilities.
19

20 **Q: IS PART OF THE STUDY REGARDING PLANT CAPACITY GOING TO**
21 **ADDRESS STORAGE VOLUMES?**

22 A: Yes, storage in the system is being addressed as part of the study to
23 determine if existing storage at the plant and remote tank site is adequate to
24 meet our projected needs.
25

26 **Q: IS THERE ANY REPLACEMENT PROGRAM FOR WATER MAINS THE**
27 **JEFFERSON CITY OPERATION?**

28 A: Yes, Missouri American Water has committed to investing over \$100,000.00
29 per year in replacement of mains in Jefferson City. While the major focus of
30 this is to replace obsolete mains; we are also upgrading the size of mains to
31 provide better fire flow in parts of the system. This program to replace mains

1 is being reviewed with Chief Rennick and the City of Jefferson City annually.
2 In addition, as part of the above described planning study, a hydraulic model
3 of the system has been developed and any weak points in the system will be
4 addressed.

5
6 **Q: IN THE WATER TRANSMISSION SYSTEM ARE THERE SMALLER MAINS**
7 **THAT FEED THE LARGER MAINS?**

8 A: Yes, there are. The system developed over time and main sizing
9 considerations changed through history. There are mains that have been
10 increased in size to provide increased flow to specific areas. These
11 sometimes are connected to mains that have not been increased in size.
12 However, one can not look at an individual main to determine the hydraulic
13 capacity, they must also look at the grid established by the entire system.
14 Looping of mains and providing multiple feeds into an area is what is critical
15 to providing the necessary flow to meet the demand and fire flows.

16
17 **Q: IN RESPONSE TO THE CITY OF JEFFERSON'S CONCERN REGARDING**
18 **BACK UP POWER SUPPLY, DO YOU BELIEVE THAT MISSOURI**
19 **AMERICAN WATER'S CURRENT GENERAL PROJECT WILL MEET**
20 **THOSE CONCERNS?**

21 A: Yes, I do.

22
23 **Q: DO YOU BELIEVE THE STUDY THAT MISSOURI AMERICAN IS**
24 **UNDERTAKING REGARDING OF THE PLANT RELIABILITY AND**
25 **CAPACITY WILL MEET THE CITY OF JEFFERSON'S CONCERN**
26 **REGARDING PEAK DAY RESTRICTIONS?**

27 A: Yes, I do.

28
29 **Q: DO YOU BELIEVE THE HYDRAULIC MODELING DONE AS PART OF**
30 **THAT STUDY WILL DETERMINE ANY POTENTIAL WEAKNESSES IN**
31 **THE TRANSMISSION GRID AND PROVIDE APPROPRIATE AND**

1 **NECESSARY RECOMMENDATIONS FOR IMPROVEMENTS IN THAT**
2 **GRID TO BETTER MEET THE HYDRAULIC NEEDS OF THE OPERATION?**

3 A: Yes, I do.
4

5 **CHEMICALS, FUEL AND POWER**
6

7 **Q: WHAT IS THE PURPOSE OF THIS PART OF YOUR TESTIMONY?**

8 A: The purpose of this section of my testimony is to respond to the Direct
9 Testimony of Staff witness Roberta Grissum with regard to fuel & power and
10 chemical expense. The Staff disallowed a portion of MAWC's fuel & power
11 and chemical expenses because Staff arbitrarily assigned a 15% loss factor
12 cap in its calculation of system delivery. In this testimony I will show that an
13 appropriate method would be to apply an averaging of historic losses over
14 several years.
15

16 **Q. HOW DID STAFF DETERMINE THE LEVEL OF SYSTEM DELIVERY TO**
17 **BE USED IN THE CALCULATION OF FUEL & POWER AND CHEMICALS**
18 **EXPENSE?**

19 A. Staff calculated its normalized and annualized water sales by district and then
20 increased this amount by the lower of either the loss factor exhibited during
21 the test year of said district or 15%.
22

23 **Q. WHAT STANDARD DID STAFF USE AS ITS BASIS FOR ALLEGING THAT**
24 **A 15% LOSS FACTOR IS APPROPRIATE?**

25 A. No standard was referenced or described in Staff Witness Grissum's direct
26 testimony. Grissum simply indicated in direct testimony that based on
27 discussions with Commission's Water and Sewer Department, Staff is not
28 recognizing a loss factor in excess of 15% for the purpose of calculating
29 system delivery and fuel & power and chemical expense levels.
30
31

1
2 **Q: IS IT REASONABLE TO ASSUME A 15% LOSS FACTOR FOR ALL**
3 **WATER SYSTEMS?**

4 A: No, The American Waterworks Association's (AWWA) 'Water Conservation
5 Programs – A Planning Manual' states "Unbilled water can be less than 10%
6 in a relatively new, well-managed system. It is not uncommon to find unbilled
7 water to be over 20 percent in an older system." To arbitrarily select a 15%
8 ratio does not take into consideration the many factors that account for the
9 difference between system delivery and sales. These factors include leakage
10 of the system (based on age, material type, length of main, number of
11 connections, length of service lines prior to metering, system operating
12 pressure(s),etc.), limitations of the accuracy of metering, authorized usage
13 (fire usage, system maintenance, distribution system monitors, system
14 flushing etc.), and theft to name a few.

15
16 **Q, WHAT DO YOU BELIEVE IS AN APPROPRIATE METHOD FOR**
17 **DETERMINING THE LOSS FACTOR FOR THE SYSTEM DELIVERY**
18 **CALCULATION?**

19 A. A five year average of actual loss factors should be applied to normalized
20 sales to calculate normalized system delivery. The attached schedule of 5-
21 year average loss factors clearly indicates that the loss factor for each
22 Missouri American district is consistent with the AWWA reference stated
23 above. For example, the St. Charles District is a relatively new system with a
24 5-year average loss factor of 3.8% while the St. Louis County District is a
25 relatively old system with a 5-year average loss factor of 19.1%. Therefore,
26 the 5-year average approach to the application of appropriate loss factors in
27 the calculation of normalized system delivery values and projected fuel &
28 power and chemical expense levels is well reasoned and supported by
29 AWWA findings. Furthermore the application of 5-year average loss factors is
30 a normalizing influence on the calculation of projected fuel & power and

1 chemical expense levels that on average should more closely approximate
2 actual expense levels going forward than Staff's proposal.
3

4 **Q: WHAT IS YOUR RECOMMENDATION CONCERNING THE PROPOSED**
5 **NORMALIZED SYSTEM DELIVERY VALUES TO BE USED TO**
6 **CALCULATE EXPENSES FOR FUEL & POWER AND CHEMICALS FOR**
7 **MISSOURI AMERICAN WATER?**

8 A: The 5-year average loss factor should be applied to Normalized Sales to
9 arrive at Normalized System Delivery values and expense levels for fuel &
10 power and chemicals.
11

12 **Q: DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

13 A: Yes.
14