

Exhibit No.:  
Issues: Waste Disposal,  
Jefferson City Fire  
Suppression Issues,  
St. Joseph Excess Treatment  
Plant Capacity  
Witness: Frank Kartmann  
Exhibit Type: Rebuttal  
Sponsoring Party: Missouri-American Water Company  
  
Case No.: WR-2003-0500  
Date Filed: November 10, 2003

**MISSOURI PUBLIC SERVICE COMMISSION**

**CASE NO. WR-2003-0500**

**FILED**

**JAN 23 2004**

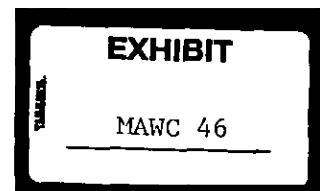
**REBUTTAL TESTIMONY  
OF  
FRANK KARTMANN**

**Missouri Public  
Service Commission**

**ON BEHALF OF  
MISSOURI-AMERICAN WATER COMPANY**

Exhibit No. 46  
Case No(s). WR-2003-0500  
Date 12/16/03 Rptr SKM

**JEFFERSON CITY, MISSOURI**



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

|                                                  |   |                       |
|--------------------------------------------------|---|-----------------------|
| In the Matter of the General Rate Increase for   | ) |                       |
| Water and Sewer Service provided by              | ) | Case No. WR-2003-0500 |
| Missouri-American Water Company                  | ) |                       |
|                                                  |   |                       |
| Staff of the Missouri Public Service Commission, | ) |                       |
|                                                  | ) |                       |
| Complainant,                                     | ) |                       |
| v.                                               | ) | Case No. WC-2004-0168 |
|                                                  | ) |                       |
| Missouri-American Water Company,                 | ) |                       |
|                                                  | ) |                       |
| Respondent                                       | ) |                       |

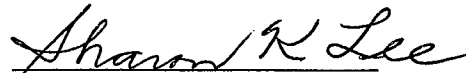
AFFIDAVIT OF Frank L. Kartmann

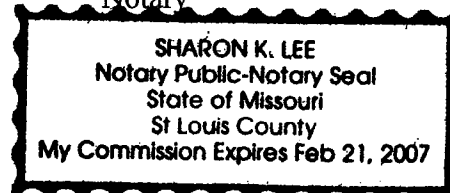
STATE OF Missouri     )  
                                      ) SS  
COUNTY OF St. Louis    )

On this 3rd day of November, 2003, before me appeared Frank L. Kartmann  
\_\_\_\_\_, to me personally known, and who being duly sworn upon his  
oath did state that the Rebuttal Testimony attached hereto consisting of \_\_\_\_ pages and  
\_\_\_\_\_ Schedules was prepared by him or under his direction and supervision, and that  
the answers to the questions posed therein are true to the best of his knowledge,  
information and belief.



Subscribed and sworn to before me on this 3rd day of November, 2003

  
Notary



REBUTTAL TESTIMONY  
FRANK KARTMANN  
MISSOURI-AMERICAN WATER COMPANY  
CASE NO. WR-2003-0500

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**WITNESS INTRODUCTION**

**Q. STATE YOUR NAME AND BUSINESS ADDRESS?**

A. Frank Kartmann, 535 N. New Ballas Rd., St. Louis, Missouri, 63141.

**Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

A. I am Vice President of Operations for Missouri-American Water Company.

**Q. STATE YOUR QUALIFICATIONS AND EXPERIENCE IN THE FIELD OF ENGINEERING?**

A. I obtained a BS Degree in Civil Engineering from the University of Missouri – Rolla, Missouri in 1989. I joined the St. Louis County Water Company in 1989 as a System Engineer designing and managing the construction of water main and mechanical piping projects. In 1994, I became the Plant Engineer for the St. Louis County Water Company’s Meramec Plant. In 1998, I became the Plant Superintendent for the St. Louis County Water Company’s Meramec and South County Plants. In 1999, I became the Director-Engineering for St. Louis County Water Company, Missouri-American Water Company, and 2000 for the Jefferson City Water Works Company. In 2000, I was elected Vice President-Engineering for the same three companies. In 2001, I was elected to my current position of Vice President-Operations.

These positions have provided me with design, project/construction management, and operational management qualifications in the areas of source of supply, treatment, and pumping/storage/distribution of potable water. While heading up Engineering I had direct responsibility for short and long term planning,

1 managing, and executing the companies' capital budgets. As Vice President-  
2 Operations it is my role, among other responsibilities, to direct the identification,  
3 planning, design and execution of engineering and capital improvement projects  
4 required by our ten systems in Missouri and integrate those improvements with  
5 the source of supply, treatment, and pumping/storage/distribution operations of  
6 these ten systems. These improvements span from projects required by  
7 environmental regulation to rehabilitation or replacement of existing facilities to  
8 relocations of facilities that physically conflict with proposed improvements  
9 desired by other entities to facility expansions required by growth.

10  
11 **WASTE DISPOSAL**  
12

13 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY ON THIS**  
14 **ISSUE?**

15  
16 **A.** My rebuttal testimony will address Staff witness Lisa K. Hanneken's Direct Testimony  
17 regarding Waste Disposal Expense.

18  
19 **Q. ON PAGE 12 OF THE DIRECT TESTIMONY OF LISA K. HANNEKEN, STAFF**  
20 **PROPOSES THAT THE WASTE DISPOSAL EXPENSE FOR ST. JOSEPH**  
21 **DISTRICT BE SET AT ZERO. IS THIS A REASONABLE EXPENSE FOR**  
22 **WASTE DISPOSAL?**

23  
24 **A.** No.

25  
26 **Q. WHAT WASTE DISPOSAL FACILITIES DOES MAWC OPERATE IN THE ST.**  
27 **JOSEPH DISTRICT?**  
28

1 A. The Company operates two residue collection ponds with associated piping and pumping  
2 equipment.

3  
4 **Q. WHY IS SETTING THE WASTE DISPOSAL EXPENSE FOR THE ST. JOSEPH**  
5 **DISTRICT TO ZERO NOT APPROPRIATE?**

6  
7 A. Setting the waste disposal expense to zero is not appropriate because the Company has  
8 known and measurable rates of residue generation and costs of removal. The ponds  
9 mentioned previously have been in service since fall 2001 and the accumulation of settled  
10 water treatment residue was surveyed and quantified at the end of summer 2003. On an  
11 annualized basis the St. Joseph operation generates 9,337 cu.yds. of residue.

12  
13 **Q. HOW OFTEN IS RESIDUE DEPOSITED IN THE PONDS?**

14  
15 A. Several times each day, day in and day out, year after year. It is a continuous process of  
16 residue generation resulting from the treatment of water, which is also a continuous  
17 process.

18  
19 **Q. WHY IS IT IMPORTANT TO KNOW THAT THE GENERATION OF RESIDUE**  
20 **IS A CONTINUOUS PROCESS?**

21  
22 A. Recognizing in rates the cost of waste disposal requires an understanding that residue  
23 generation is a continuous cost causing activity and as such it is only through the leveling  
24 of such an expense over time that it can be recognized in rates. Therefore, the appropriate  
25 manner in which to establish this leveling of expense is to recognize the expense in rates  
26 at the same rate the residue is being generated.

27  
28 **Q. WHAT IS YOUR RECOMMENDATION REGARDING ST. JOSEPH WASTE**  
29 **DISPOSAL EXPENSE?**

1  
2 A. As Staff, in its same Direct Testimony, is recommending the residue disposal expense be  
3 annualized in St. Louis, Parkville, Mexico, Brunswick and Joplin, and has done so for  
4 quite some time, it would appear appropriate that St. Joseph's residue disposal also be  
5 annualized and collected in rates through a monthly accrual. By accruing the disposal  
6 expense, intergenerational equity will be preserved with the actual cost of residue  
7 disposal being charged to the ratepayers causing the cost of residue disposal resulting  
8 from the treatment of water consumed by them. In addition, by virtue of the rate making  
9 process, the only way to recognize this expense in rates is to establish an accrual for it.  
10

11 **Q. HOW DOES THE COMPANY BELIEVE ANNUALIZED DISPOSAL EXPENSE**  
12 **SHOULD BE CALCULATED FOR THE ST. JOSEPH OPERATION?**  
13

14 A. In the fall of this year the Company had 4,200 cu.yds. of residue removed from one of the  
15 ponds at the St. Joseph plant for a total cost of \$76,266.18. This cost included a  
16 mobilization/demobilization/General Condition (m/d/GC) cost of \$2,073.75. This leaves  
17 a direct unit cost paid per cu.yd. of residue removed of \$17.66. Applying this direct unit  
18 cost and the m/d/GC cost to a full pond of residue (the largest pond at 31, 552 cu.yds.)  
19 yields an all in cost per cu. yd. of residue removed from a full pond of \$17.72. At the  
20 annual residue generation rate described above of 9,337 cu.yds., this equates to an  
21 annualized expense level of approximately \$165,452. The Company requests that the  
22 average residue accumulation of 9,337 cubic yards and the commensurate annualized  
23 residue disposal expense of \$165,452 be approved in the rates resulting from this filing.  
24

25 **Q. WILL AGRICULTURAL UTILIZATION OF THE DISPOSED OF RESIDUE**  
26 **PRODUCE OFF SETTING REVENUES AS ALLEGED BY MS. HANNEKEN?**  
27

28 A. The Company has not to date located an agricultural facility willing to purchase water  
29 treatment residue. The Commission should not consider that Company will receive

1 payment for the material used in the agricultural disposal of water treatment waste, until  
2 such time as a source of such payments has been found .  
3

4 **Q. ARE THERE OTHER ISSUES THAT SHOULD BE CONSIDERED IN**  
5 **ALLOWING FOR AN ACCRUAL OF THE RESIDUE DISPOSAL COST?**  
6

7 A. Yes. The Company's decision to install the pebble lime softening system and reduce  
8 hardness levels below 270 mg/l was based not only on a savings in chemical cost, but also  
9 an increase in waste disposal expense. In the Company's rate filing for this rate case, it  
10 proposed a reduction in annual chemical expense at St. Joseph of approximately  
11 \$350,000, while it is requesting recovery of residue disposal expense in the amount stated  
12 above of \$165,452. Staff's proposal accepts the reduction in chemical expense, even  
13 though the savings are not known and measurable, but does not recognize the Company's  
14 request for recognition of the known and measurable waste disposal expense level. The  
15 Company believes that it is not appropriate for Staff to accept the cost savings in  
16 chemical expense without recognizing the commensurate residue expense level. If the  
17 residue expense is not allowed, then the chemical savings should not be accepted either.  
18 There is no logic for accepting the one without the other.  
19

20 **JEFFERSON CITY FIRE SUPPRESSION ISSUE**  
21

22 **Q. ON PAGE 3 OF HIS DIRECT TESTIMONY, CHIEF ROBERT F. RENNICK**  
23 **STATES THAT DURING A POWER OUTAGE ON SEPTEMBER 7, 2003, THE**  
24 **ON DUTY ASSISTANT FIRE CHIEF CALLED MISSOURI-AMERICAN'S**  
25 **OFFICES IN JEFFERSON CITY, BUT WAS CONNECTED TO AN EMPLOYEE**  
26 **IN ST. LOUIS, MO, WHO HAD NO KNOWLEDGE OF THE PUMPING**  
27 **SYSTEM AT JEFFERSON CITY AND HAD NO MEANS OF INVESTIGATING**  
28 **THE LOSS IN PRESSURE. DID THE ON DUTY ASSISTANT FIRE CHIEF USE**  
29 **THE MOST EFFICIENT AND EFFECTIVE MEANS MADE AVAILABLE BY**

1           **THE JEFFERSON CITY WATER SYSTEM FOR COMMUNICATING WITH**  
2           **THE WATER SYSTEM?**

3  
4    A.    No. The Jefferson City Fire Department, Police Department, LEPC, and other local  
5           public services possess phone numbers that will directly connect those public service  
6           agencies to the Manager of our Jefferson City Operation or the Plant Operator on duty at  
7           our water treatment facility, which is a 24 hour per day, 7 day per week, and 365 day per  
8           year attended facility. In fact, the Manager of our Jefferson City water system has been  
9           contacted on his home and cellular telephones by fire department officials previously.  
10          We have made these contact telephone numbers available for the very purpose of  
11          continually being accessible to the public service agencies with which we are  
12          inextricably linked in carrying out our on going public service responsibilities.

13  
14   Q.    **DOES IT SURPRISE YOU THAT THE EMPLOYEE IN ST. LOUIS, MO WITH**  
15           **WHOM THE ON DUTY ASSISTANT FIRE CHIEF WAS CONNECTED WHEN**  
16           **HE MADE THE DESCRIBED TELEPHONE CALL HAD NO KNOWLEDGE OF**  
17           **THE PUMPING SYSTEM AT JEFFERSON CITY AND HAD NO MEANS OF**  
18           **INVESTIGATING THE LOSS IN PRESSURE CHIEF RENNICK DESCRIBES**  
19           **IN HIS DIRECT TESTIMONY?**

20  
21   A.    No. If the on duty Assistant Fire Chief called our Jefferson City office after normal  
22           “office” working hours he would be routed, by design, to our St. Louis Dispatching  
23           Center for a situation such as that Chief Rennick describes in his Direct Testimony. The  
24           employees attending this dispatching center are not trained to have detailed knowledge of  
25           the physical operation of our water systems or the ability to trouble shoot physical  
26           operational issues in these systems. In circumstances such as those addressed in Chief  
27           Rennick’s Direct Testimony, these employees are trained to take information from the  
28           caller, including a call back number, and then contact the “On Call” employee of the  
29           subject water system. For whatever reasons, if the employee working in our St. Louis

1 Dispatching Center is unable to contact the "On Call" employee he/she has a series of  
2 other employee contacts within the subject water system he/she is to attempt calling until  
3 one such employee can be reached and that employee is then to address the physical  
4 operational issue that exists.  
5

6 It is our belief that it makes the best sense for our local employees in charge of and  
7 providing the day to day operation of our physical systems to address immediate water  
8 system specific physical operational issues, as they are our employees with the expert,  
9 most up to date, and immediate knowledge of the condition of the water systems they  
10 operate.  
11

12 **Q. BEGINNING ON PAGE 3, LINE 7 OF CHIEF RENNICK'S DIRECT**  
13 **TESTIMONY, HE IMPLIES THE JEFFERSON CITY WATER SYSTEM'S**  
14 **PUMPING FACILITIES LOST ELECTRICAL POWER ON SEPTEMBER 7,**  
15 **2003. DO THE JEFFERSON CITY WATER SYSTEM'S RECORDS INDICATE**  
16 **ANY LOSS OF POWER TO THE WATER SYSTEM ON SEPTEMBER 7, 2003?**  
17

18 **A.** No. There are no records of any operational events or customer calls, on September 7,  
19 2003, or employee recollections that would indicate there was a power loss on that date.  
20 We are not aware of any such power loss occurring on this date.  
21

22 **Q. IN THE SAME SECTION OF CHIEF RENNICK'S DIRECT TESTIMONY,**  
23 **DESCRIBED ABOVE, CHIEF RENNICK STATES THAT AT SEVERAL**  
24 **JEFFERSON CITY FIRE STATIONS THERE WAS LITTLE OR NO WATER**  
25 **PRESSURE FOR A PERIOD ON THE EVENING OF SEPTEMBER 7, 2003 AND**  
26 **THAT IT TOOK NEARLY 2 HOURS TO BRING THE SYSTEM TO**  
27 **ADEQUATE OPERATING PRESSURE. DO THE JEFFERSON CITY WATER**  
28 **SYSTEM'S RECORDS INDICATE ANY PRESSURE ISSUES OCCURRING ON**  
29 **SEPTEMBER 7, 2003?**

1  
2 A. No. There were no operational events or customer calls on September 7, 2003 or  
3 employee recollections that would indicate there were any water pressure issues on that  
4 date. We are not aware of any such water pressure issues occurring on this date.  
5

6 **Q. DO ALL THE JEFFERSON CITY FIRE STATIONS RECEIVE WATER**  
7 **SERVICE FROM MAWC'S JEFFERSON CITY WATER SYSTEM?**  
8

9 A. No. To my knowledge there are 5 fire stations serving Jefferson City and the surrounding  
10 areas. Our customer records and knowledge of the geographic boundaries of our system  
11 indicate that three of these fire stations receive water service from the Jefferson City  
12 water system while the other two fire stations are served by one or another neighboring  
13 public water supply district.  
14

15 **Q. DO YOU BELIEVE IT IS POSSIBLE THAT THERE COULD BE SOME**  
16 **CONFUSION REGARDING WHICH FIRE STATIONS WERE EXPERIENCING**  
17 **LOSSES IN WATER PRESSURE?**  
18

19 A. Yes, I believe this is possible for two reasons. First, the fact that our operating records,  
20 records of customer inquiry, and recollections of our employees indicate there was no  
21 power or water pressure loss in the Jefferson City water system on September 7, 2003,  
22 could be explained by a power and water pressure loss that occurred in one or both of the  
23 neighboring water districts and it was actually those fire stations receiving water service  
24 from those water districts that experienced the loss of water pressure.  
25

26 Second, Chief Rennick specifically mentions by name Fire Station No.4, located at 820  
27 Ellis Boulevard as a station that experienced a loss in water pressure on the evening of  
28 September 7, 2003. This seems strange because Fire Station No.4 is very near our new  
29 1.5MG storage tank and tank pump station. Our personnel in the Jefferson City water

1 system know of no operational abnormalities having occurred on September 7, 2003, at or  
2 in the vicinity of the new tank and tank pump station. Furthermore, we have no record of  
3 pressure or flow related customer inquiries on this date. What is more, our operational  
4 records from this date indicate that operations were normal in the system generally, and at  
5 the new tank site specifically, on this date.  
6

7 **Q. WAS THERE ANY DATE NEAR SEPTEMBER 7, 2003, THAT FACILITIES OF**  
8 **THE JEFFERSON CITY WATER SYSTEM LOST ELECTRICAL POWER?**  
9

10 A. Yes. Our operational records indicate that at 8:25 p.m. on September 14, 2003, the  
11 treatment plant lost electrical power for a period of approximately 4 minutes.  
12

13 **Q. DO YOUR RECORDS INDICATE ANY CHANGES IN PRESSURE IN THE**  
14 **WATER SYSTEM DURING THE PERIOD OF THIS ELECTRICAL POWER**  
15 **OUTAGE?**  
16

17 A. Yes. There are three locations within the distribution system that we are able to monitor  
18 continuously during a power interruption at the treatment plant. Those locations are  
19 identified as follows:  
20

- 21 1. Southwest Suction;
- 22 2. Southwest Discharge;
- 23 3. Ellis Discharge (the new tank and tank pump station site).
- 24

25 **Q. DURING THE PERIOD OF TIME OF THE ELECTRICAL POWER OUTAGE**  
26 **ON SEPTEMBER 14, 2003, WHAT WERE THE PRESSURES AT THESE**  
27 **LOCATIONS AND WHAT ARE THE NORMAL OPERATING PRESSURES**  
28 **OBSERVED AT THESE LOCATIONS?**  
29

30 A. Below is a table indicating the pressures at these locations during the electrical power  
31 outage and the normal operating pressures at these locations.

| Pressure Monitoring Location | Recorded Pressure during Power Outage (psi) | Pressure Under Operating (psi) | Observed Normal Conditions |
|------------------------------|---------------------------------------------|--------------------------------|----------------------------|
| Southwest Suction            | 62.9                                        | 66                             |                            |
| Southwest Discharge          | 106.9                                       | 106                            |                            |
| Ellis Discharge              | 62.7                                        | 62                             |                            |

**Q. HOW WOULD YOU DESCRIBE THE PRESSURES RECORDED AT THESE LOCATIONS DURING THE DESCRIBED POWER OUTAGE?**

**A.** Not significantly different than normal, and certainly safe and adequate.

**Q. ON PAGE 3 OF HIS DIRECT TESTIMONY, CHIEF RENNICK STATES THAT THE BACK UP POWER SYSTEM IN PLACE IN THE JEFFERSON CITY WATER SYSTEM LACKS RELIABILITY. DOES THE COMPANY HAVE A RELIABLE BACK UP POWER SYSTEM IN PLACE?**

**A.** Yes. The Jefferson City water system's treatment plant has a reliable and redundant electrical power supply provided by the power company. There are two electrical feeds from the power company coming from two separate power company substations that serve our treatment plant. Only one of these feeds at a time is providing power to our plant, yet they are both energized up to their point of entry into our internal electrical distribution system. If the feed normally providing power to our equipment should be interrupted, the Jefferson City water system has a switching mechanism located at its treatment plant that automatically transfers our source of power supply from the interrupted power feed to the redundant power feed. This equipment is in place to minimize the duration of such a power interruption. During such a power feed switching event our treatment plant equipment stop operating and require restarting due to the momentary interruption of power. There are a few steps undertaken by our on duty

1 operator that involve the resetting of electrical distribution equipment within our facility  
2 that must occur before the redundant power feed from the power company can transmit  
3 power to our treatment plant equipment. As evidenced by the 4-minute typical duration  
4 of the September 14, 2003 power interruption event described previously in this  
5 testimony, such power interruptions are short lived.

6  
7 **Q. BEYOND HAVING REDUNDANT POWER FEEDS, REDUNDANT**  
8 **ELECTRICAL SUBSTATIONS, AND AN AUTOMATIC TRANSFER SWITCH,**  
9 **WHAT OTHER ACTIONS HAS THE JEFFERSON CITY WATER SYSTEM**  
10 **TAKEN TO MITIGATE THE IMPACT OF ANY POWER INTERRUPTION**  
11 **EVENT?**

12  
13 A. There is additional treated water storage and pumping capability in the distribution  
14 system (outside the treatment plant) that is powered independently from the treatment  
15 plant. What is more, as part of the new water storage tank construction project recently  
16 completed in our Jefferson City system, a generator is being installed this year that will  
17 provide power to either the new tank site booster pumps or the Southwest Booster  
18 Station should the power supply be interrupted at either of those locations.

19  
20 **Q. WAS THERE ANY BENEFIT TO THE JEFFERSON CITY WATER SYSTEM**  
21 **FROM THE ABOVE DESCRIBED DISTRIBUTION SYSTEM WATER**  
22 **STORAGE AND PUMPING FACILITIES DURING THE SEPTEMBER 14, 2003**  
23 **POWER INTERRUPTION?**

24  
25 A. Yes. As evidenced in the table of water pressures referred to above. The pressures at the  
26 locations monitored varied little between condition normal and the power interruption  
27 because while the treatment plant was unable to pump water into the distribution system  
28 and thereby create pressure, the distribution water storage and pumping facilities were  
29 able to pump water into and throughout the distribution system.

1  
2 **Q. ARE THERE ANY OTHER ACTIONS THE JEFFERSON CITY WATER**  
3 **SYSTEM HAS TAKEN TO MITIGATE THE IMPACT OF ANY POWER**  
4 **INTERRUPTION EVENT?**

5  
6 A. Yes. The Jefferson City water system has distribution system interconnections with the  
7 adjacent water systems for utilization by one of our systems in the event either of the  
8 other of our systems has an emergency need. Like the distribution storage described  
9 above, these interconnections can be viewed analogously as alternative sources of supply.  
10

11 **Q. ON PAGES 3 AND 4 OF HIS DIRECT TESTIMONY, CHIEF RENNICK**  
12 **EXPRESSES CONCERN ABOUT POPULATION GROWTH AND BUILDING**  
13 **CONSTRUCTION IN JEFFERSON CITY. PLEASE DESCRIBE THE**  
14 **PLANNING PROCESS FOR ADDRESSING ADDITIONAL PRODUCTION**  
15 **CAPACITY AND DISTRIBUTION FACILITIES NEEDS AS IT RELATES TO**  
16 **GROWTH WITHIN THE BOUNDARIES OF THE COMPANY'S WATER**  
17 **SYSTEM.**

18  
19 A. The Company addresses the need for additional plant and distribution facilities in an  
20 incremental approach based on what can be identified as a future demand on the system.  
21 The Jefferson City water system works closely with Developers and the Missouri-  
22 American Engineering staff to identify specific needs, which allows the Company the  
23 ability to properly plan for future expansion. The system is modeled hydraulically and the  
24 model is used to assist in the determination of appropriate system upgrades. The  
25 Company reviews system records for water main break histories and customer concerns  
26 to determine candidates for main replacement and/or other system improvements. This  
27 information provides a source for determining priorities for future projects.  
28

1 **Q. IS IT TRUE, AS CHIEF RENNICK HAS STATED ON PAGE 4 HIS DIRECT**  
2 **TESTIMONY, THAT UPON THE EXPIRATION OF AN AGREEMENT THE**  
3 **JEFFERSON CITY WATER SYSTEM HAD WITH COLE COUNTY PUBLIC**  
4 **WATER SUPPLY DISTRICT NO.2 (CCPWSD NO.2), THE JEFFERSON CITY**  
5 **WATER SYSTEM LOST 3MG OF STORAGE CAPACITY?**

6  
7 A. No. While the tank lease agreement the Jefferson City water system had with CCPWSD  
8 No.2 required CCPWSD No.2 to share the use of its tanks with the Jefferson City water  
9 system, because of hydraulic limitations within the CCPWSD No.2 distribution system,  
10 there were only two CCPWSD No.2 tanks that could be utilized by the Jefferson City  
11 water system. These tanks are identified as Christy and Veath and they have a total  
12 combined storage capacity of 2MG.

13  
14 **Q. WAS THE CAPACITY OF THESE TANKS DEDICATED TO THE JEFFERSON**  
15 **CITY WATER SYSTEM?**

16  
17 A. No. As I stated previously CCPWSD No.2 shared these tanks with the Jefferson City  
18 water system. In other words, the 2MG of storage capacity contained by the Christy and  
19 Veath tanks was shared among the customers of both CCPWSD No.2 and the Jefferson  
20 City water system.

21  
22 **Q. REGARDING CUSTOMER DEMAND AND FIRE PROTECTION, DOES THE**  
23 **NEW TANK CONSTRUCTED BY MISSOURI-AMERICAN WATER COMPANY**  
24 **IN THE JEFFERSON CITY WATER SYSTEM PROVIDE ADVANTAGES FOR**  
25 **THE COMPANY'S CUSTOMERS?**

26  
27 A. Yes, the new tank constructed in the Jefferson City water system has a capacity of  
28 1.5MGD and is dedicated to only the customers of the Jefferson City water system. As I  
29 stated previously, the CCPWSD No.2 tank storage capacity of 2MG that was available to

1 the Jefferson City water system customers was not dedicated to their use only, but rather  
2 was shared with the customers of CCPWSD No.2.

3  
4 The decision to construct a 1.5MG capacity potable water storage tank resulted from a  
5 thorough engineering analysis of the potable water storage needs of the Jefferson City  
6 water system. This analysis was enabled by distribution system hydraulic analyses that  
7 modeled various operational scenarios as extreme as the simultaneous occurrence of fire  
8 fighting water demands with expected diurnal peak demands. Beyond the decision to  
9 construct a 1.5MG capacity storage tank these analyses resulted in decisions to construct  
10 a 16" water main joining the tank to the rest of the distribution system at various points of  
11 connection to better enable the filling and drawing of the tank at flow rates expected to be  
12 required by fire fighting and diurnal peak demands. What is more, these analyses also  
13 resulted in the proper sizing of a new booster station, tank pump station, and emergency  
14 generator, which were also constructed to facilitate the effective integration of the new  
15 tank into the distribution system.

16  
17 **Q. IS THERE ANY STORAGE IN THE JEFFERSON CITY WATER SYSTEM IN**  
18 **ADDITION TO THE NEWLY CONSTRUCTED 1.5MG TANK?**

19  
20 **A.** Yes, at the treatment facility there reside two potable water clear wells each with a  
21 capacity of 1MG. In total, the Jefferson City water system has three separate potable  
22 water storage vessels with a total storage volume of 3.5MG. The water contained in all  
23 three of these storage vessels is available for fire fighting and diurnal peak demands.

24  
25 **Q. AS PART OF CHIEF RENNICK'S DIRECT TESTIMONY REGARDING HIS**  
26 **CONCERNS OF REDUCED POTABLE WATER STORAGE WITHIN THE**  
27 **JEFFERSON CITY WATER SYSTEM, BEGINNING ON PAGE 4, LINE 6 OF**  
28 **HIS DIRECT TESTIMONY, CHIEF RENNICK STATES THAT HE HAS BEEN**  
29 **ADVISED THAT THE JEFFERSON CITY WATER SYSTEM INTENDS TO**

1       **REMOVE A CLEAR WELL STORAGE TANK FROM ITS PLANT FACILITY**  
2       **AND THEREBY ALSO AFFECT ITS STORAGE CAPACITY. DOES MISSOURI-**  
3       **AMERICAN PLAN TO REMOVE SUCH A STORAGE TANK?**

4  
5       A.     No. What is more, the Jefferson City water system has no intention of reducing its  
6       potable water storage capacity.

7  
8       Q.     **BEGINNING ON PAGE 5, LINE 9 OF CHIEF RENNICK'S DIRECT**  
9       **TESTIMONY, HE STATES THAT ABOUT 20 OF THE 40 NEW HYDRANTS TO**  
10       **BE INSTALLED UNDER THE STIPULATION AND AGREEMENT IN CASE**  
11       **NO. WR-99-326, HAVE BEEN PLACED (INSTALLED). IS THIS AN**  
12       **ACCURATE APPROXIMATION OF THE CURRENT NUMBER OF NEW**  
13       **HYDRANTS THAT HAVE BEEN INSTALLED PURSUANT TO THE**  
14       **DESCRIBED STIPULATION AND AGREEMENT?**

15  
16       A.     No. To date the Jefferson City water system has installed 33 of the required 40 hydrants  
17       and the remaining 7 to be installed will be completed by mid November 2003.

18  
19       Q.     **ON PAGE 7 OF HIS DIRECT TESTIMONY, CHIEF RENNICK RECOMMENDS,**  
20       **"THE COMPANY UNDERTAKE AS SOON AS POSSIBLE A WATER MAIN**  
21       **REPLACEMENT PROGRAM IN CONJUNCTION [WITH THE FIRE**  
22       **DEPARTMENT] TO REMOVE THE THREE INCH AND FOUR INCH WATER**  
23       **LINES AND INSTALL LARGER DIAMETER LINES." HAS THE JEFFERSON**  
24       **CITY WATER SYSTEM RELOCATED ANY FIRE HYDRANTS FROM 4"**  
25       **MAINS TO 6"OR LARGER SIZE MAINS IN THE LAST FOUR YEARS IN AN**  
26       **EFFORT TO IMPROVE AVAILABLE FIRE FLOWS?**

1 A. Yes. There have been 6 hydrants relocated to larger mains as part of a larger project that  
2 the City of Jefferson undertook on High Street. Additionally, the Jefferson City water  
3 system has replaced 11 fire hydrants throughout the system that were considered obsolete.  
4

5 **Q. PLEASE DESCRIBE THE CRITERIA THAT IS UTILIZED WHEN**  
6 **DETERMINING WATER PRESSURE AND FIRE FLOW PROTECTION**  
7 **WITHIN THE DISTRIBUTION SYSTEMS OF MISSOURI-AMERICAN.**  
8

9 A. Missouri-American Water Company utilizes sound engineering practices, industry  
10 accepted design guidelines, and hydraulic modeling when designing improvements to its  
11 water systems. It is common practice for the Company to consult with local fire  
12 departments for input relating to fire protection needs.  
13

14 Replacement of existing facilities is reviewed on a case by case basis and in the last four  
15 years the company has upgraded approximately 2100 feet of water mains and has  
16 installed approximately 9000 ft of new transmission/distribution mains to augment the  
17 new storage tank discussed previously in this rebuttal testimony and reinforce existing  
18 facilities fire flows within the system.  
19

20 **Q. WHAT IS THE WATER COMPANY'S APPROACH REGARDING THE**  
21 **REPLACEMENT OF MAINS SMALLER IN DIAMETER THAN 6"?**  
22

23 A. Assuming pressure and volume are available, larger diameter mains are able to provide  
24 greater fire protection than smaller diameter mains. We support the replacement of the  
25 small diameter mains Chief Rennick describes in his Direct Testimony, however, there  
26 are many factors to consider in the balance such as rate impact, competition with other  
27 capital improvement projects and/or synergies with related projects that allow for cost  
28 minimization.  
29

1 **Q. PLEASE ELABORATE ON THE SYNERGIES WITH RELATED PROJECTS.**

2  
3 A. When it comes to replacing water mains, we like to time those projects to occur with city  
4 street improvement projects, if possible. This minimizes the rate impact on the customer  
5 because under these circumstances the pavement repair cost our main installation would  
6 otherwise require is covered in the cost of the street project.  
7

8 **Q. DO YOU HAVE ANY CURRENT EXAMPLES OF HOW YOU HAVE BEEN**  
9 **ABLE TO TIE IMPROVEMENTS IN FIRE PROTECTION WITH THE**  
10 **SYNERGY OF COMBINING MUNICIPAL PUBLIC WORKS PROJECTS WITH**  
11 **WATER MAIN IMPROVEMENT PROJECTS?**  
12

13 A. Yes. For example, the company upgraded a 1 1/4" diameter water main on Hart Street,  
14 between High and West Main with an 8" main to reinforce the area for fire flows. On  
15 Lachant Ct. approximately 1400 feet of 8" main was installed that allowed the company to  
16 loop the system (join dead ended mains) and reinforce fire flows and enhance system  
17 reliability.  
18

19 **Q. DO YOU HAVE ANY PENDING EXAMPLES?**  
20

21 A. Yes. On Hyde Street we will shortly begin installing 1,300 feet of 8" main prior to  
22 installation of storm drainage and streets that will reinforce fire flows and system  
23 reliability by looping this portion of the distribution system.  
24

25 **Q. DO YOU BELIEVE IT IS NECESSARY FOR THE COMMISSION TO ORDER A**  
26 **WATER MAIN REPLACEMENT PROGRAM FOR JEFFERSON CITY AS**  
27 **SUGGESTED BY CHIEF RENNICK?**  
28

29 A. No.

1  
2 **Q. BEGINNING ON PAGE 7, LINE 16 OF CHIEF RENNICK'S DIRECT**  
3 **TESTIMONY, HE DISCUSSES HIS CONCERNS REGARDING LOW FLOW**  
4 **CONDITIONS ON THE MISSOURI RIVER IN THE LAST WEEK OF AUGUST**  
5 **2003 RESULTING FROM A COURT BATTLE OVER THE MISSOURI RIVER**  
6 **OPERATING PLAN AND THE IMPACT OF THAT PLAN ON THE JEFFERSON**  
7 **CITY WATER SYSTEM'S SOURCE WATER PUMPING CAPABILITIES.**  
8 **DOES THE JEFFERSON CITY WATER SYSTEM HAVE PLANS AND**  
9 **PROCEDURES IN PLACE TO ADDRESS EXTREME LOW RIVER LEVELS**  
10 **AND THEIR IMPACT ON SOURCE WATER PUMPING CAPABILITIES?**  
11

12 A. Yes. The Company has emergency procedures for such an event that consist of utilizing  
13 submersible pumping units to augment the capacity of the permanent source water  
14 pumping facility during periods of extreme low flow conditions on the Missouri River. In  
15 addition, emergency interconnects with two neighboring public water supply districts  
16 exist as back up sources of supply. Furthermore, as stated previously the Jefferson City  
17 water system has dedicated potable water storage capacity of 3.5 million gallons.  
18

19 **Q. IS MISSOURI-AMERICAN WATER COMPANY TAKING ANY OTHER**  
20 **ACTIONS REGARDING THIS MATTER?**  
21

22 A. Yes. Missouri-American Water Company continues to monitor the ongoing court cases  
23 concerning the Missouri River operating plan. Simultaneously, Missouri-American  
24 Water Company's Engineering Department is reviewing what permanent improvements  
25 to the Jefferson City water system's source water pumping facility would be prudent  
26 should the ultimate operating plan for the Missouri River be incompatible with the  
27 operating parameters of that source water pumping facility, as currently configured.  
28

1                                    **ST JOSPEH EXCESS TREATMENT CAPACITY**

2

3    **Q.     WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY ON THIS**  
4           **ISSUE?**

5

6    A.     I'm testifying with respect to the issue of the treatment capacity of the St. Joseph  
7           water treatment plant ("SJTP") that was the subject of Mr. Merceil's  
8           recommended disallowance at pages 4 through 6 of his Direct Testimony.

9

10   **Q.     WHAT IS MR. MERCEIL'S RECOMMENDED ADJUSTMENT?**

11

12   A.     His adjustment is based on his testimony in this case and in the Company's most  
13           recent rate case, WR-2000-281, that of the 30 million gallons per day ("MGD")  
14           treatment capacity at the SJTP, a capacity of 23 MGD "would have been  
15           adequate." He then recommended there, and again in this case, that \$2,271,756  
16           be deducted from the Company's rate base. He states that since "water production  
17           in St. Joseph on peak days has not increased" that the "disallowance should stand.

18

19   **Q.     DID THE COMMISSION ACCEPT HIS ADJUSTMENT IN CASE WR-**  
20           **2000-281?**

21

22   A.     Yes.

23

24   **Q.     WHY THEN DOES THE COMPANY WANT TO RE-LITIGATE THE**  
25           **ISSUE IN THIS CASE?**

26

27   A.     Four reasons: First, Commission's decision was not appropriate at the time in  
28           WR-2000-281; second, the punitive reduction in rate base has exhausted its  
29           purpose and is even less appropriate these four years later; third, the Company is

1       faced with planning decisions again in Joplin, and the Company does not  
2       understand the principles behind the disallowance as they should be applied to  
3       that planning; and fourth, it sets a dangerous and destructive precedent that this  
4       Company and others need to have Missouri policy confirmed or changed.  
5       Accordingly, I will discuss these reasons in the following order:

- 6               1. The adjustment was incorrect in WR-2000-281
- 7               2 The adjustment is even more inappropriate these four years later
- 8               3. The Company does not now know what to do in Joplin
- 9               4. The adjustment sets terrible precedent

10  
11   **Q.       WHY WAS THE ADJUSTMENT WRONG IN WR-2000-281?**

12  
13   **A.**       The Company explained all those reasons in that case, which were apparently not  
14       persuasive to the majority of the Commission. Those reasons were explained by  
15       Mr. Young, and I adopt his comments from that case here as my own:  
16

17   **Q.       ON PAGE 16, LINE 9, OF HIS REBUTTAL TESTIMONY, MR. MERCIEL**  
18       **STATES THAT HE BELIEVES THERE IS SOME EXCESS CAPACITY**  
19       **AT THE NEW PLANT. HOW DID MR. MERCIEL ARRIVE AT THIS**  
20       **CONCLUSION?**

21   **A.**       Mr. Merciel explains that he did not explicitly perform demand projections.  
22       Rather, his analysis was limited to a review of historical peak day demands. On  
23       page 17, line 17 he states “ However, since the filter capacity is not yet 30 MGD,  
24       and peak day demand has been relatively consistent for a number of years at  
25       approximately 23 MGD, I think it would have been reasonable to size certain  
26       other plant components similar to the filter limitation, where practical.”  
27

1   **Q.     DID YOUR OFFICE PERFORM THE ANALYSIS DIFFERENTLY?**

2

3   A.     Yes, we undertook a rigorous analysis of system demands to arrive at the decision  
4           that the treatment plant needed to have a 30 mgd capacity. One of the important  
5           functions of the Company's planning process is a detailed review of system  
6           demands. The analysis includes a breakdown of demands into six categories  
7           including residential, commercial, industrial, other, non-revenue, and unaccounted  
8           for water. Based on a historical analysis of system demands and usage trends,  
9           projections of future water demands are made. The analysis of demands for the  
10          St. Joseph system is provided in the Demand Projection chapter in the 1994  
11          Comprehensive Planning Study (CPS). The Demand Projection chapter was  
12          provided in my Rebuttal Testimony as Schedule JSY-16.

13

14   **Q.     IT SEEMS DIFFICULT TO ACCURATELY PROJECT A MAXIMUM**  
15       **DAY DEMAND SEVERAL YEARS INTO THE FUTURE. PLEASE**  
16       **BRIEFLY EXPLAIN HOW PEAK DAY PROJECTIONS ARE MADE.**

17

18   A.     Yes, it is difficult to project future peak day demands, but it is essential for proper  
19           planning of large capital projects like the St. Joseph Water Treatment Plant. The  
20           American Water System employs a methodology based on accepted water utility  
21           industry practice. First, average day demands are projected based on a number of  
22           factors including historical trends, population projections, input from large users,  
23           and local and regional trends. Then, a statistical analysis of historic peak day to  
24           average day demands is performed over a 20-year period. A maximum to  
25           average day ratio is selected using a 95% confidence level. Said another way, the  
26           selected maximum to average day ratio allows for a 5% chance of actually

1 exceeding the projected demand in any one year. The selected maximum to  
2 average day demand ratio is then multiplied by the average day demands to  
3 produce a "design" peak day demand.

4 In this way, the water system will be prepared to meet system demands during  
5 most hot, dry summers, which can occur in any year. The maximum day  
6 projection using this methodology must not be thought of as the prediction of  
7 maximum day demand in a given year. Rather, it represents the demand for  
8 which there is a 5% chance that it will be exceeded in that year. Therefore, a  
9 direct comparison of maximum day projections to actual maximum day demands  
10 in any year has little significance. This is a crucial concept because the  
11 Company's facilities must be adequate to meet customer's needs not only in the  
12 average year, but also in a hot, dry summer.

13  
14 **Q. WHAT MAXIMUM DAY TO AVERAGE DAY RATIO WAS DERIVED**  
15 **FOR THE ST. JOSEPH SYSTEM IN THE DEMAND PROJECTIONS?**

16  
17 **A.** A maximum day to average day ratio of 1.60 was determined for St. Joseph in the  
18 1994 CPS. This value is further validated by subsequent analysis of data through  
19 1998 which produces a 95% confidence level peak to average day value of 1.57.  
20 These values agree within two percent. External support for the 1.60 maximum to  
21 average day ratio is provided by Mr. Gary M. Lee's absolute agreement with the  
22 1.60 value in his review of the Company's demand projections in Case No. WA-  
23 97-46 and Case No. WF-97-241 (the Certificate Case ) in 1997 for the Office of  
24 Public Counsel. Mr. Lee also explicitly agreed with the Company's 2009 demand  
25 projection.

1 **Q. IN YOUR OPINION, IS IT APPROPRIATE TO USE ONLY RECENT**  
2 **DEMAND DATA TO CRITIQUE THE COMPANY'S DEMAND**  
3 **PROJECTIONS, AS MR. MERCIEL HAS DONE?**

4  
5 A. No, it is not, for several reasons.

6  
7 **Q. PLEASE ELABORATE ON THOSE REASONS.**

8  
9 A. First, it should be understood that data after the year 1994 was not available when the  
10 Company made the decision to initiate design of the project in December, 1995. But  
11 more importantly, using only the past few years of data is not an adequate representation  
12 of key variables, especially weather. For instance, in several years during the 1980's, in  
13 particular 1988, the summer weather pattern was hot and dry. In such a weather pattern,  
14 peak water usage generally increases. Since 1994, a different, more moderate weather  
15 pattern has predominated. Obviously, at some point, which we cannot predict with  
16 certainty, a hot, dry pattern will occur again. The 1994 CPS demand projections  
17 recognize this issue, stating that although average conditions are appropriate to estimate  
18 annual operational parameters, "these values are not adequate to base long term capital  
19 planning decisions on" (page 2-22). As I have stated previously, the Company facilities  
20 must be adequate to meet the customer's needs not only under moderate conditions, such  
21 as the last few years have been, but also under hot, dry conditions such as 1988.

22  
23 **Q. YOUR OBJECTIONS ASIDE, HOW HAVE RECENT DEMANDS**  
24 **COMPARED TO THE COMPANY'S 1994 PROJECTIONS?**

25  
26 A. A comparison of the 1999 average day demand to the Company's 1999 demand  
27 projection from the 1994 CPS is provided as Schedule JSY-21. The 1994 CPS projected  
28 an average day demand of 16.13 mgd for 1999. The actual average day demand for 1999

1 was 16.05 mgd. These values agree within one-half percent, which serves to validate the  
2 Company's projections.

3 Ironically, to the extent that recent demands have been below the 1994  
4 projections, by far the most significant deviation has been that unaccounted-for  
5 water (leakage, meter error, theft, etc.) and non-revenue usage have been  
6 successfully reduced by the Company, even beyond projections. The Water  
7 Company has been able to achieve an unaccounted-for water percentage of below  
8 9 percent for the last several years. This is exceptional, especially for a water  
9 distribution system the age of St. Joseph's. To penalize the Company for having  
10 excess capacity would effectively penalize the Company for its outstanding  
11 progress in controlling unaccounted-for water (UAF).

12 Without the reduction in UAF, the actual average day demands in 1999 would  
13 have been approximately 16.7 mgd which is well above the Company's  
14 projections.

15  
16 **Q. HOW DOES THE TREATMENT PLANT CAPACITY COMPARE WITH**  
17 **THE DEMAND PROJECTION FOR 2009 ?**

18  
19 A. A peak day demand of 27.74 mgd was forecast for 2009 using the 95% confidence  
20 level methodology. This value agrees well with the 28.5 MGD effluent capacity  
21 of the treatment plant. The treatment plant has a filtered water treatment capacity  
22 of 30 mgd but with internal water use has a net system delivery capacity of 28.5  
23 mgd. Mr. Merciel did not account for in-plant usage in his analysis of plant  
24 capacity.

25 The establishment of 2009 as a "design year" with the completion of construction

1 in 2000 is a reasonable criteria. Where unpredictable growth is occurring, it is  
2 important to stage the expansion of the water system, including the treatment  
3 plant, to avoid excessive reserve capacity. However, for a system like St. Joseph,  
4 where demands are relatively stable and predictable, it is reasonable to use a  
5 longer timeframe for the next stage of expansion.  
6

7 **Q. BUT WERE NOT THESE ARGUMENTS REJECTED BY THE**  
8 **COMMISSION IN WR-2000-281?**  
9

10 A. We don't know? All we know is that the Commission adopted the Staff  
11 recommendation for the reduction  
12

13 **Q. WHAT DISTINCTION ARE YOU DRAWING?**  
14

15 A. The Commission doesn't have to reject evidence in order to make a finding that is  
16 inconsistent with that evidence. All they need do is have some competent and  
17 substantial evidence that is consistent with their decision. It is the Company's  
18 belief, and frankly its hope, that the decision that was reached in that case to  
19 accept this rate base reduction was the result of an attempt of the Commission to  
20 balance the concerns of all parties in the case, at a time when it was faced with the  
21 delicate issue of the suitability of the rest of the plant.  
22

23 **Q. WHAT FACTORS LEAD YOU TO THAT BELIEF?**  
24

25 A. It is primarily the fact that the decision flies in the face of the accepted theories  
26 and realities of treatment plant planning, and puts the Company in an impossible  
27 position in the future, which I will discuss later herein.  
28

29 It essentially endorses the principle that a Company should build plant for its

1 present maximum day only, and that it should assume that water needed for the  
2 internal treatment plant processes should be considered available for distribution  
3 on that maximum day. It makes no provision for reasonable growth and the  
4 practical economies of scale that arise in a major construction project comprised  
5 of huge increments.

6  
7 But also, it is significant that two Commissioners wrote well reasoned dissents,  
8 that illustrate the problems with the majority conclusion.

9  
10 Commissioner Murray, in her dissenting opinion in WR-2000-281, stated the following:  
11 “The Company was not imprudent in designing and sizing the St. Joseph plant to meet  
12 anticipated needs of the district until the year 2009. To the contrary, it would seem  
13 imprudent *not* to design and size a new plant to meet the needs of the district beyond the  
14 immediate time period.”

15  
16 Commissioner Drainer, in her dissenting opinion in WR-2000-281, stated the following:  
17 “The evidence in the record clearly showed that MAWC management has built in  
18 less than a 10 percent growth rate for the new plant and that it will reach full  
19 capacity in fewer than 10 years. MAWC management would have been imprudent  
20 had they not built in some minimum level of growth. It would indeed have been  
21 both imprudent and economically inefficient to construct two 750,000-gallon-  
22 clearwell units only to replace them in fewer than ten years with two 1,000,000-  
23 gallon-clearwell units as suggested by Staff.”

24  
25 It may well be that the conclusion was based on the difficulty that the  
26 Commission had to face with the highly contested issue of costs associated with  
27 the new plant as compared to costs of rebuilding the old river water treatment  
28 facility, and this led the majority to find a way to balance the concerns of the very  
29 vocal and well-represented detractors.

1  
2 **Q. IF THAT, OR SOME OTHER REASON, WAS PERSUASIVE TO THE**  
3 **MAJORITY DESPITE EVIDENCE TO THE CONTRARY THEN, WHY**  
4 **DOES IT NOT STILL APPLY TODAY?**  
5

6 A. First of all, the Company has paid a significant penalty by forfeiting a return on,  
7 and of, this plant for what will be nearly four years when rates become effective in  
8 this case. It has paid a serious price for not being able to foresee that Staff would  
9 endorse a design criteria for plant capacity that is unprecedented. No one builds a  
10 plant for the present maximum day experience and does not make an allowance  
11 for water needed for internal treatment purposes such as the 1.5 MGD in the  
12 SJTP. Furthermore, the St. Joseph area economy is not in good condition, and  
13 absent the capacity that the Company did, in fact, build into the plant, that being  
14 the disallowed capacity, it would be difficult to attract any economic development  
15 to the area.  
16

17 **Q. IS THERE ANY REASON TO BELIEVE THAT ST. JOSEPH HAS**  
18 **POTENTIAL ECONOMIC GROWTH THAT WOULD BE DEPENDENT**  
19 **ON THIS PLANT CAPACITY BEING IN EXISTENCE?**  
20

21 A. Yes, Premium Pork, LLC has made commitments to open operations in St. Joseph  
22 pending PSC approval of a contract for the retail sale and delivery of potable  
23 water between Missouri-American Water Company and Premium Pork, LLC that  
24 incorporates an economic development rider tariff. Premium Pork, LLC is  
25 planning to begin construction of its facilities this fall. As provided in Schedule 1  
26 attached hereto, Premium Pork Processing indicates it will use 2.7MGD in 2005.  
27 In addition, Premium Pork Processing plans to employ approximately 1000  
28 people at its St. Joseph operation. So the "availability" of this capacity has been a  
29 benefit to the customers in the St. Joseph area to the same extent that those

1 customers will benefit from new industry in the area, and the money that such an  
2 enterprise will generate.

3  
4 **Q. YOU SAID THAT THE PRECEDENT IN THIS ADJUSTMENT IS**  
5 **PROBLEMATICAL, AND THAT IT WAS OF IMMEDIATE CONCERN**  
6 **DUE TO THE COMPANY'S PLANNING NEEDS IN JOPLIN. CAN YOU**  
7 **EXPLAIN THIS?**

8  
9 **A.** In Joplin, the Company is faced with the urgent need to expand its production  
10 capacity to meet the high population growth rates that have been and continue to  
11 be experienced in Joplin and the southwest region of the state generally. Joplin  
12 resides in parts of Jasper and Newton Counties. Between 1990 and 2000 Jasper  
13 County's population increased 15.7% from 90,481 to 104,686. During this same  
14 time period Newton County's population increased 18.4% from 44,456 to 52,636.  
15 The Joplin Metropolitan Statistical Area increased 16.6% from 1990 to 2000.  
16 What is more, Joplin has and continues to annex areas adjacent to its boundaries.  
17 This further increases demands on the water system that we are obligated to serve.

18  
19 In 2001 the Joplin system set a new historical peak day record of 18.7MGD. In 8  
20 of 12 months in 2002 new historical peak days for those months were  
21 experienced. In 2003 a new historical peak day was set again at 19.7MGD (or a  
22 5.3% increase over the 2001 peak day of record). In fact, there were four days in  
23 the week containing this new peak day that exceeded the previous historical peak  
24 day. Our recently completed growth study indicates we should expect, at the 95%  
25 confidence interval, a peak day of 28MGD in 2015. Potential interruptible  
26 obligations now under discussion could change this to some extent. Existing  
27 system capacity is 20.6MGD.

28  
29 **Q. HOW DOES THIS PROBLEM RELATE TO THE PRECEDENT FROM**

1       **THE COMMISSION'S PREVIOUS DISALLOWANCE OF SJTP**  
2       **CAPACITY?**

3  
4       A.     We are told in this adjustment, that we must design for the present maximum day,  
5             and make no allowance for internal water usage, or investors will suffer. When  
6             applied to the situation in Joplin, this means that we would be making plant  
7             capacity expansions every year from now through 2015. And with each of these  
8             expansions there would be no available capacity for the community to count on in  
9             attracting industry such as is the case currently in St. Joseph, Missouri with its  
10            proven ability to attract and serve Premium Pork, LLC. An annual expansion  
11            approach to managing growth would essentially require continuous expansion  
12            projects from now through 2015. This hardly seems efficient from a construction  
13            economy of scale perspective, or is it practical for that matter.

14           With the depleting of ground water availability, that is so heavily relied on by all  
15           except one other community outside of Joplin in the southwest region of  
16           Missouri, combined with the MoDNR's concerns regarding increasing numbers of  
17           wells in the area running out of water, it is believed that increasing dependence of  
18           these communities on Missouri-American's Joplin system is likely. Without  
19           adequate planning horizons it will not be possible for these communities to count  
20           on our Joplin system for service as their wells fail. Eventualities such as these  
21           combined with a "build it for today only" mentality not only eliminates the  
22           possibility for lower rates for all in the area through greater economy of scale, but  
23           also limited if not eliminated economic growth in Joplin and the region. It is  
24           critical here to realize that the ground water supply is being depleted, and the  
25           incremental addition of wells in order to keep up with demand is not a responsible  
26           solution to the water needs of the area.

27  
28       **Q.     IF THIS ADJUSTMENT IS NOT REVERSED, DOES IT SEND A**

1           **MESSAGE IN MISSOURI?**

2

3    A.     Of course. Such messages are clearly heard not only by the investors in this  
4           Company, but by investors in all regulated utilities in Missouri. The Company is  
5           not aware of any similar principle espoused by any other regulatory commission  
6           in the Country. If investment is punished when that investment is well-  
7           intentioned, well researched and planned, consistent with accepted engineering  
8           and industry practices, and intended to encourage growth and economic  
9           development, it will obviously change investment policy.

10

11   Q.     **DOES THAT CONCLUDE YOUR REBUTTAL TESTIMONY?**

12

13   A.     Yes

Schedule 1

 FACILITY ENGINEERS, INC.

October 16, 2003

Mr. Robert A. Amman  
Manager  
Missouri American Water  
3901 Beck Road  
St Joseph, Missouri 64506

RE: New Water Service  
New Pork Processing Facility  
Premium Pork. L.L.C.  
Project #03032

Dear Mr. Amman,

We are currently working on the preliminary planning for the above facility to be located at 5302 Stockyards Expressway, St Joseph, Missouri 64504.

Based on preliminary "planning" loads, we estimate the service requirements as follows:

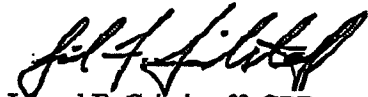
|                                   |   |                           |           |
|-----------------------------------|---|---------------------------|-----------|
| Peak Momentary Demand             | = | 3,000 gpm                 | (Planned) |
| Peak Momentary Demand             | = | 3,400 gpm                 | (Future)  |
| Average Daily Usage               | = | 2.7 Million Gallons       |           |
| 1 <sup>st</sup> Peak and Duration | = | 5:00 PM to 9:00 PM        |           |
| 2 <sup>nd</sup> Peak and Duration | = | 12:00 Midnight to 4:00 AM |           |
| Fire Protection Requirements      | = | 2,000 gpm                 |           |

We respectfully request that this service be approved. Should this flow rate not be available, would you please advise the maximum peak water flow rate which will be available from the municipal water main at the site.

Thank you for your consideration and assistance.

Respectfully Submitted,

FACILITY ENGINEERS INC.



Lionel F. Grindstaff, CPD  
Senior Designer

CC: Paul Grupe  
Mike Davies  
03032-5.4