

Exhibit No.:  
Issues: Plant Capacity  
Witness: James A. Merciel, Jr.  
Sponsoring Party: MO PSC Staff  
Type of Exhibit: Surrebuttal Testimony  
Case No.: WR-2006-0425  
Date Testimony Prepared: January 12, 2007

**MISSOURI PUBLIC SERVICE COMMISSION**

**UTILITY OPERATIONS DIVISION**

**SURREBUTTAL TESTIMONY**

**OF**

**JAMES A. MERCIEL, JR.**

**ALGONQUIN WATER RESOURCES OF MISSOURI, LLC**

**CASE NO. WR-2006-0425**

Jefferson City, Missouri  
January 2007

**FILED<sup>2</sup>**

FEB 08 2007

Missouri Public  
Service Commission

~~Staff~~ Exhibit No. 19  
Case No(s) WR-2006-0425  
Date 1-22-07 Rptr KF

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

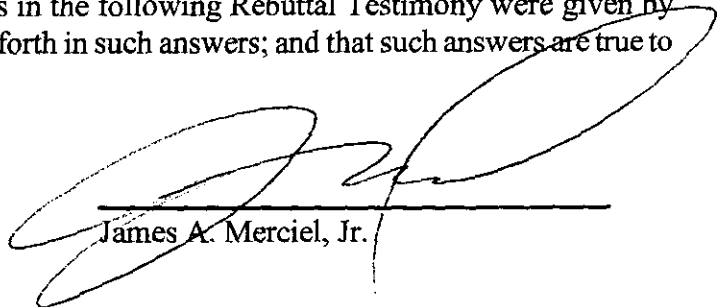
In the Matter of the tariff filing of Algonquin )  
Water Resources of Missouri, LLC to implement )  
a general rate increase for water and sewer )  
service provided to customers in its Missouri )  
service areas. )

Case No. WR-2006-0425

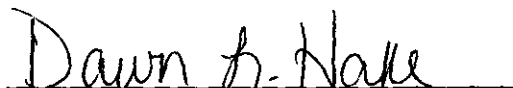
**AFFIDAVIT OF JAMES A. MERCIEL, JR.**

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, 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 answers are true to the best of his knowledge and belief.

  
\_\_\_\_\_  
James A. Merciel, Jr.

Subscribed and sworn to before me this 11<sup>th</sup> day of January 2007.

  
\_\_\_\_\_  
Notary Public

My commission expires March 16, 2009



DAWN L. HAKE  
My Commission Expires  
March 16, 2009  
Cole County  
Commission #05407643

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**SURREBUTTAL TESTIMONY**

**OF**

**JAMES A. MERCIEL, JR.**

**ALGONQUIN WATER RESOURCES OF MISSOURI, LLC**

**CASE NO. WR-2006-0425**

Q. Please state your name and business address.

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

Q. Are you the same James A. Merciel, Jr. who submitted Direct Testimony and Rebuttal Testimony in this case?

A. Yes.

**EXECUTIVE SUMMARY**

Q. What is the purpose of your Surrebuttal Testimony?

A. The purpose of this Surrebuttal Testimony is to respond to Rebuttal Testimony of Mr. Brian A. Hamrick and Mr. Larry W. Loos with regard to customer water demand, the portion of well and storage capacity that should be included as "used and useful" considering customer demand and fire flow, and the capital cost of the "used and useful" portion of plant as compared to the entire plant that actually exists. All of this pertains to the water systems owned and operated by Algonquin Water Resources of Missouri, LLC (Algonquin) in its three (3) Missouri service areas.

**CUSTOMER DEMAND**

Q. Do you agree with Mr. Hamrick's remarks pertaining to a need to study at least two (2) years' of water use to determine average day and peak day customer demand?

A. Yes, I do agree that this is necessary. The only problem with Mr. Hamrick's testimony is that he states I did not do this. To save paper and workload, and without the

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1 opportunity to review the Company's records on-site, I requested that Company provide me  
2 the daily water pump records only for August 2005 and August 2006. The reason for this is  
3 that, based on experience, I expected those months to be the highest use. But, part of the  
4 request also was that if the highest peak day usage for the year occurred during a month other  
5 than August, to provide data for that month. In its response, the Company did provide data  
6 for July 2006 for one of the service areas. As a result, I consider my review of this matter to  
7 be for a two year period.

8 In addition to this data that includes the most recent two years, I had reviewed water  
9 use data for 2003 and 2004 to study plant capacities for Case No. WO-2005-0206 (the Sale  
10 Case), in which case Algonquin obtained approval to acquire these facilities from Silverleaf  
11 Resorts, Inc. In the Sale Case, the Staff presented its position regarding excess capacity  
12 among other issues. I also discussed the Sale Case and included testimony from the Sale Case  
13 in my Direct and Rebuttal Testimony in this case. So, although it may not necessarily be  
14 obvious to someone reviewing Staff testimony and work papers, I in fact have reviewed four  
15 years of water use data for this case. Further, Mr. Hamrick does not state that the peak day  
16 customer demand used in my testimony for the Staff's position is incorrect or improper, nor  
17 does he attempt to support a different number.

18 Q. Do you agree with Mr. Hamrick's remarks pertaining to the accuracy of the  
19 water meters measuring water pumped to the system when studying water use?

20 A. Yes, I agree with this as well, but I do not believe that this is an issue or a  
21 factor in this case. First, the meters are owned and maintained by the Company, and it is thus  
22 the Company's responsibility to maintain them for good operations. The Staff deserves no  
23 criticism for using data from the Company that it uses itself, and that the Company represents  
24 as being accurate. Second, these particular water systems have meters that measure water

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1 pumped from each of the wells, and additional meters that measure water flowing from each  
2 of the storage tanks into the distribution systems. So when reviewing the Company's pump  
3 records it is possible to compare the meter readings, which I did during my review. While  
4 such a comparison of meter readings is not completely accurate due to the time of day each  
5 particular meter was read, differing tank levels as meters are read, and normal minor meter  
6 inaccuracies, it did not appear to me that any of the meters are substantially inaccurate.

7 Q. Do you believe that the Staff and the Company have a difference of opinion  
8 with regard to customer demand?

9 A. No, I really do not think the Company and the Staff disagree on this matter, nor  
10 do I believe that the Staff position should change.

11 **FIRE FLOW**

12 Q. Do you agree with Mr. Hamrick's testimony with regard to the level of fire  
13 protection that is available, and the effect on plant in service?

14 A. I believe that Mr. Hamrick makes some good points with regard to fire  
15 protection, it is prudent for the Staff to re-visit the issue, and I along with the Staff may very  
16 well modify our position. I will point out that the Staff stated its position on plant in service,  
17 of which fire flow was a factor, in June 2005 in the Sale Case, and that the Staff has  
18 maintained its position since then. However, fire protection was never raised as an issue in  
19 the Sale Case, and was not raised as an issue in this case until Mr. Hamrick filed his Rebuttal  
20 Testimony two weeks ago. As a result, I have not had sufficient time to thoroughly study the  
21 situation and work with the Company to study system performance.

22 Q. What available information have you studied during the past two weeks?

23 A. After having initially made an assumption that a minimal level of fire  
24 protection was available because the service areas are, for the most part, resorts in rural-type

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1 areas, I looked at available system components and specification information; this includes  
2 pipe sizes, the power of the high-service pumps that pump from the ground storage tanks into  
3 the distribution system, and the fire hydrants that exist and are available for use. Since I do  
4 not, at this time, have good information with regard to several variables that include hydrant  
5 location relative to structures, pump efficiency, elevation differences, and friction loss in  
6 pipelines during fire flows, I have requested hydrant flow test data from the Company but do  
7 not have it yet.

8 Q. Do you have a preliminary opinion with regard to the level of fire protection  
9 available?

10 A. Yes. I do agree with Mr. Hamrick that 1,500 gallons per minute (gpm) for two  
11 hours is a reasonable desired fire protection level, based on information currently available,  
12 for condominium buildings. Without the benefit observing actual system performance, I  
13 believe that the Holiday Hills Resort (HHR) system could be capable of providing this level  
14 of fire protection. If it is, then I also agree that 91% of the storage tank capacity is used and  
15 useful, rather than the 27% stated in my Direct Testimony. I do not, however, agree that this  
16 level of fire protection is available in the Ozark Mountain Resort (OMR) or Timber Creek  
17 Resort (TCR) service areas.

18 Q. Why do you believe that the OMR and TCR systems are not capable of this  
19 level of fire protection?

20 A. I believe that the OMR system has neither the storage capacity nor the high-  
21 service pump horsepower needed to provide the necessary flow. In fact, if the tank volume is  
22 expected to provide a one-day supply of water in the event that the single well fails, as is  
23 customary and was discussed in previous testimony, then there is no reserve water available  
24 for fire protection. If the one-day criterion is ignored, then the fire protection volume is likely

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1 approximately 800 to 900 gpm. I also believe that there may not be an adequate number of  
2 hydrants throughout the service area.

3 I believe the TCR system has sufficient storage volume for a fire reserve to provide  
4 1,500 gpm, but may not have sufficient high-service pumping horsepower for this flow.

5 Q. Can you summarize your revised position stated for this testimony, and do you  
6 believe that there is still a difference of opinion between the Company and the Staff with  
7 regard to the fire protection issue, and its impact upon used and useful plant?

8 A. There may still be some difference of opinion. As a summary of my position  
9 at present, based on the limited information I now have and have reviewed, I substantially  
10 agree with the Company's position with regard to HHR, which includes a change of from  
11 27% to 91% plant in service level for the storage tank facilities, meaning a decrease in the  
12 Staff's disallowance amount for the tanks of from 73% to 9%. I maintain my previously  
13 stated position with regard to OMR. I agree that a change of the Staff's position with regard  
14 to TCR would be appropriate. My best estimate is that the TCR system can provide 850 gpm  
15 fire flow, which would change the Staff's 18% plant in service level applying to the storage  
16 tank to 88%, meaning a decrease in the Staff's disallowance amount for the tank of from 82%  
17 to 12%. These percentages would be applied to the value of the plant items, which values for  
18 the Staff's position are being sponsored by Graham Veseley. All of this, however, is subject  
19 to further review of actual system performance, and a check of the availability of adequate  
20 hydrants in proximity to customers' structures.

21 Q. Do you believe that Algonquin should upgrade its systems, as may be  
22 necessary, to be able to provide 1,500 gpm fire flow throughout all of its service areas?

23 A. No, I am not advocating that Algonquin quickly start a capital improvement  
24 program. But I do believe that if reliability and a good level of fire protection are important



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1 issues to Algonquin, which they should be, then it needs to consider upgrading its systems by  
2 installing additional hydrants, additional high service pumps where necessary, and  
3 specifically at OMR a second well and additional storage. There would need to be planning,  
4 consideration of the impact upon rates, and possibly input from customers and the involved  
5 fire districts with regard to what is necessary, desirable and worth the cost.

6 RESERVE CAPACITY LEVEL

7 Q. Do you agree with Mr. Loos' testimony with regard to holding a "reserve"  
8 amount of capacity for growth and abnormal events?

9 A. Yes, I generally agree with what Mr. Loos stated in his testimony. Since it is  
10 not practical to add small increments for small number of customers, large components such  
11 as an additional well or tank must be added from time to time. In such cases, the planning and  
12 construction for new facilities must begin substantially before usage of current components  
13 reaches capacity. For this reason, allowing a capacity reserve is very important for utilities  
14 serving a growing service area; otherwise the utility would never realize sufficient revenue to  
15 be able to recover all of its investment. On the other hand, for subdivision developments that  
16 are limited in size, the ultimate growth is often known, and the growth reserve is not always  
17 necessary. I consider each of Algonquin's service areas to be limited-size subdivisions, with  
18 developer risks involved, although they are large enough subdivisions that the utility systems  
19 have some characteristics of multi-component municipal-size utilities. Specifically in my  
20 calculations for Algonquin's systems, I built in a reserve capacity for the wells that is based  
21 on running time of no more than 20 hours per day to meet the peak day. But for the single-  
22 well OMR system, instead of considering peak day for which a calculation would result in a  
23 used and useful portion of 24%, my capacity calculation was based on the well pump  
24 production meeting estimated peak hour, which results in a used and useful portion of 32%. I

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1 did not include a specific reserve for storage tanks for any of the service areas because I do  
2 not believe it is necessary at this time due to the lack of customer growth.

3 Q. Do you believe that the Company and the Staff have a disagreement with  
4 regard to the growth reserve?

5 A. I don't believe that there is a substantial difference, and there is no need to  
6 modify the Staff's position.

7 **CAPITAL COST RELATIVE TO CAPACITY**

8 Q. Both Mr. Hamrick and Mr. Loos state in their testimony that the capital cost of  
9 water systems is not linear relative to the size or capacity. Do you agree with this?

10 A. Yes, I do. There are indeed a substantial number of components in a water  
11 system upon which system capacity has little or no direct impact. A real estate tract for a  
12 facility, labor and equipment to drill a hole for a well, a pump house structure, or electric  
13 control panel are among many examples. However, in my Direct Testimony I spent  
14 considerable time describing ratemaking for utilities for which a developer, and not the utility,  
15 should bear the risk of growth or the lack of growth. At the extreme, as I stated in testimony,  
16 it is not possible for only a few customers to pay for the cost of a utility system that is  
17 designed for a substantial number of customers. Because of this, it is common for the Staff to  
18 recommend used and useful levels as a percentage of capacity used by customers, and in fact I  
19 believe this is the best and most practical way to deal with many small utilities. As was also  
20 stated in my Direct Testimony, the Staff clearly stated in the Sale Case its position regarding  
21 the over-capacity issue that results from unfulfilled development plans, and that it would  
22 recommend an adjustment similar to those made for other development-specific utilities. The  
23 idea was that Algonquin was, at that time, in a position to further negotiate its contract with

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1 Silverleaf by proposing a reduced sale price or a payment plan related to additional  
2 customers/development, or it could have withdrawn from the sale.

3 Q. Do you believe that there is a substantial difference between the Company's  
4 position on this matter and the Staff's position?

5 A. Yes, there is a clear and substantial difference. Although Algonquin takes a  
6 position that most utilities would take when growing, municipal-size systems are involved, I  
7 believe the Staff has a realistic position that is applicable to development-specific systems,  
8 which may or may not experience additional growth. The Staff timely stated its position to  
9 Algonquin and the Commission, and it is fair to the customers who are expected to pay for  
10 capacity.

11 Q. Does this conclude your Surrebuttal Testimony?

12 A. Yes.