

Exhibit No.:
Issue: *Quality of Service
Safety*
Witness: *David A Spratt*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Rebuttal Testimony*
Case No.: *WC-2016-0252*
Date Testimony Prepared: *November 18, 2016*

MISSOURI PUBLIC SERVICE COMMISSION

COMMISSION STAFF DIVISION

WATER AND SEWER DEPARTMENT

REBUTTAL TESTIMONY

OF

DAVID A. SPRATT

MOORE BEND WATER UTILITY, LLC

CASE NO. WC-2016-0252

Jefferson City, Missouri
November 2016

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REBUTTAL TESTIMONY OF

DAVID A. SPRATT

MOORE BEND WATER UTILITY, LLC

CASE NO. SR-2016-0202

Q. Please state your name and business address.

A. David A. Spratt, P.O. Box 360, Jefferson City, Missouri 65102.

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

A. I am a Utility Technical Specialist with the Missouri Public Service Commission ("PSC").

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to support the Water & Sewer Department memo I drafted in response to the complaint filed by the Office of Public Counsel ("OPC") regarding Moore Bend Utility Company, LLC ("Company").

BACKGROUND OF WITNESS

Q. What are your education and work experience backgrounds?

A. Please refer to Schedule DS-r1 attached to this testimony for a summary of my education and work experience backgrounds.

Q. Have you previously filed testimony before this Commission?

A. No. However, I have provided live testimony in Case No. WC-2011-0409.

STAFF'S MEMO

Q. Did Staff submit a Staff Report in this case?

1 A. Yes. On July 27, 2016, Staff filed its Report regarding its investigation into
2 the issues brought up by OPC in its original complaint, attached as Schedule DS-r2 to this
3 testimony.

4 **Q. Did you write the Report?**

5 A. I was the principle author of the report although it was a collaborative effort by
6 the Water and Sewer Department.

7 **Q. Does Staff have any corrections or changes to make to its Report?**

8 A. Yes. On page 1 of my memo, I stated that Well #2 did not test positive for E.
9 coli but new information I have seen indicates that it did. The Report has been attached to my
10 testimony as ScheduleDS-r2.

11 **CURRENT SITUATION**

12 **Q. OPC claims in its Amended Complaint filed on September 6, 2016, that**
13 **the system owned by Moore Bend Utility Company, LLC is under a boil order. Is the**
14 **system still under a boil order?**

15 A. Yes it is.

16 **Q. OPC claims in its Amended Complaint, that the Company has not hired a**
17 **Certified Operator. Does the System have a Certified Operator?**

18 A. Mr. Brower had been the Certified Operator until his certificate was revoked
19 on April 19, 2016. The Company hired a certified operator on June 14, 2016, to meet the
20 requirement but that operator left the company on August 4, 2016. Another employee is a
21 Certified Operator and possesses a DS I certification from Department of Natural Resources
22 (“DNR”); however, the certification that employee received is not sufficient for this system
23 according to DNR’s rules and regulations as this system requires an operator to have a DS II.

1 **Q. OPC claims in its Amended Complaint, that the Company isn't providing**
2 **physical chlorination data to DNR. Has the Company started providing data to DNR?**

3 A. Yes it has.

4 **Q. How do you know this?**

5 A. Mr. Brower stated that he had been submitting the data to DNR in an e mail
6 sent to me on September 28 which also included pictures of readings taken over 60 days from
7 the Company's chlorine monitoring device next to the readings taken from a Hach pocket
8 colorimeter. Also, Brent Weis references on page 3 of his direct testimony that DNR has
9 received compliance monitoring data from Well #1.

10 **Q. Does this conclude your testimony?**

11 A. Yes it does.

DAVID A. SPRATT

I am a Utility Operations Technical Specialist II in the Water & Sewer Department, in the Commission Staff Division of the Missouri Public Service Commission (PSC). I have been employed by the PSC since April of 2008. My primary duties include, but are not limited to, utility operation inspections of water and sewer facilities that are regulated by the PSC.

EDUCATIONAL BACKGROUND AND WORK EXPERIENCE

I earned a Bachelor of Arts in History and a minor in Political Science in 1995 from Lincoln University in Jefferson City, Missouri. I went on to earn my Master of Public Administration degree from the University of Missouri – Columbia in 1999. During my time with the PSC, I have worked with other inspectors and numerous operators as well as attended various courses on water and wastewater facilities. I have worked on numerous complaint cases between customers and companies and provided information for others. I testified as an expert witness in case WC-2011-0409.

OPERATOR CERTIFICATES FROM DNR

D level certificate in drinking water treatment

D level certificate in wastewater treatment

DS I level certificate in water distribution

STAFF REPORT

TO: Missouri Public Service Commission Official Case File
Case No. WC-2016-0252
Office of Public Counsel, Complainant
v.
Moore Bend Water Utility, LLC

FROM: David Spratt – Water & Sewer Department

Jonathan Dallas – Water & Sewer Department

/s/ Jim Merciel July 27, 2016
Water and Sewer Department - Lead Staff Date

/s/ Jacob Westen July 27, 2016
Staff Counsel's Office Date

SUBJECT: Staff's Report of Investigation

DATE: July 27, 2016

Overview and System Background

Moore Bend Water Utility, LLC (Company) currently has 91 customers in the Moore Bend subdivision near Cedar Creek, in Taney County. Moore Bend is a recreational usage area on the south side of Bull Shoals Lake with very few full-time customers. This is an older water system that consists of two wells and over 15,000 feet of distribution mains. Well #1 was drilled around 1961 and well #2 was drilled around 1969. Well #1 is located on Cox Rd. and sits at a higher elevation than well #2 located on Creed Rd. The distribution system consists of approximately 2,785 feet of galvanized pipe and 12,530 feet of PVC pipe.

The Office of the Public Counsel (OPC) has filed a formal complaint (WC-2016-0252) against Moore Bend Water Utility, LLC (Company), which is owned by Ozark International, Inc. for “bacterial contamination of water, failure to provide safe and adequate drinking water to its consumers, and failure to take remedial efforts of monitoring of lead pipe corrosion.”¹

Ozark International, Inc. purchased the water utility assets from a previously regulated utility in case WM-2012-0335. The Commission's order in this case became effective on October 19, 2014. As more specifically described below, prior to the transfer of assets, the water system was placed under a boil order from the Missouri Department of Natural Resources (DNR) due to a sample taken at Well #1 testing positive for bacterial contamination, specifically E. coli, on at least two (2) occasions. Well #2 did not test positive for E. coli.

¹ EFIS Item 1, OPC Complaint, paragraph #1

Chlorine Disinfection and Monitoring

To comply with a Bilateral Compliance Agreement (BCA) between DNR and the previous utility, dated August 12, 2013, the Company provided additional storage to allow for longer detention for chlorine contact time to provide more thorough disinfection. By the terms of DNR's BCA, the Company is required to provide what is referred to as 4-log treatment, which means removal of 99.99% of viruses. The reason for the 4-log removal is due to the E. coli positive samples.

DNR requires daily monitoring of the chlorine levels of the water system. The Company installed a remote monitoring system on each of the wells so chlorine levels can be monitored remotely. DNR has specified that the chlorine levels should be manually checked by a person daily. Since the Company has not manually taken readings, the DNR boil order has remained in effect. According to the Company, with remote monitoring the wells can be checked anytime and from anywhere, and an alert can be sent to the operator if the chlorine level becomes too high or too low at any given time. The Company states that the continuous monitoring is an alternative to manual monitoring because of the time and cost savings it offers to the Company. DNR has not accepted the Company's remote chlorine monitoring and reporting procedure.

OPC states in its complaint that the Company is not "providing physical chlorination monitoring as required by DNR regulations..."² As noted above, the Company has installed a remote chlorine monitor on its wells to ensure that chlorine is correctly dosed to the system at all times. The Company reports that it checks the machine once a week and takes a physical reading of the chlorine level to ensure the accuracy of the monitoring device. However, as noted above, DNR has not accepted the Company's monitoring and reporting procedures. Therefore, Staff recommends that the Company visit the well house daily and report the daily readings to DNR.

Alleged Lead and Copper Rule Violations

The complaint from OPC alleges that the Company has "cast-iron" pipes in its systems which are causing a "dis-colorization" to the water.³ OPC has further alleged that there is a "potential for lead infiltration into the water supply due to the cast iron pipes."⁴ Staff has reviewed the Company's annual report and spoken to the Company to verify that this water system is comprised of approximately 12,530 feet of two-inch PVC pipe and 2,785 feet of one and a half-inch galvanized iron pipe. During its investigation on May 20, 2016, Staff did not see any discolored water at the homes it visited. Staff's opinion is that due to a number of main breaks

² EFIS Item 1, OPC Complaint, paragraph # 13

³ *Id.*, paragraph # 14

⁴ *Id.*, paragraph # 14

the Company has experienced with its galvanized pipes, and its inability to flush the system due to the lack of flush hydrants, that the water could become discolored due to iron corrosion and could contain sediment at times. Without flush valves, there is no way to purge the system of possible sediment therefore customers could have sediment reach their homes. Staff has recommended to the Company that it install flush valves on all of the dead-end mains to allow for sediment to be flushed out of the system.

In a system with very few full-time customers and long stretches of main, the water stays in the pipes for a longer period of time, which could allow the water to become stagnant before it makes it to the customer's tap. Flushing helps maintain fresh water and a constant chlorine residual throughout the system. The recommendation to install flush valves was discussed during the Company's most recent rate case, WR-2015-0192; but due to economic reasons, Staff chose to not pursue installation of flush valves at that time.

Staff has studied available information from DNR's Census of Public Water Supplies and Consumer Confidence Reports, both posted on DNR's website, about the characteristics of the water the Company supplies to its customers, and concludes that the ground water being delivered to customers is not exceedingly corrosive. Non-corrosive water means that the materials the pipes are made of, both in the distribution system and inside the customer's home, will tend to not corrode and be absorbed into the water. Staff also contacted DNR to research and discuss the lead monitoring reports, and found that the Company has not experienced an exceedance of lead levels in its drinking water that have caused any concern, and is in compliance with DNR's Lead and Copper Rule, found at 10 CSR 60-15. DNR commented in a Technical Assistance Visit report that the level of total dissolved solids (TDS) and the pH of greater than 7.2 helps to line the inside of the pipes to protect lead from being leached into the water system. Therefore, Staff concludes there is no evidence that "lead corrosion" or "lead infiltration" is present.

Inspection Results

On May 20, 2016, Staff conducted a site visit as part of its investigation. Staff visually inspected the contents of both well houses, and evaluated the water at four locations, spoke with Mr. Brower, and spoke with customers. When evaluating the water, Staff examined water clarity, color and odor, and took chlorine readings. At Well #1, where chlorine is injected into the system, the chlorine reading showed 1.60 mg/l. The water appeared clear and did not have an odor. Staff evaluated a frost-free hydrant at the end of Dallas Rd. Staff opened the hydrant for inspection. The water appeared clear and did not have any odor to it. Staff checked the water for chlorine residual and obtained a reading of 0.16 mg/l. The hydrant was left open for a few minutes to allow water to flow and chlorine to flow through the mains. Staff sampled the water

again and found a chlorine residual of 0.19 mg/l. At 247 Cox Rd. Staff spoke with the residents and evaluated the water from an outside faucet. The water appeared clear and did not have any odor to it. The chlorine residual at this location was 0.29 mg/l. The last location was 336 Dallas Rd. Staff spoke with a resident and evaluated the water from a frost-free hydrant located in the front yard by the road. The water appeared clear and did not have an odor. No chlorine residual was present.

Acceptable chlorine residual within the distribution system should be at least 0.2 mg/l in 5% of samples each month for two consecutive months, as per 10 CSR 60-4.055(4). At the time of the inspection, the chlorine injection port at Well #1 was being replaced because, according to the Company, it had become clogged which could explain sporadic chlorine residual readings found by Staff throughout the system.

Staff is aware that DNR later took some chlorine and bacteriological samples during a site visit on June 7, 2016, and found the water to be "safe."

Conclusion

In conclusion, Staff's investigation did not find that any of the water at Moore Bend had any sort of color or odor. In Staff's opinion, the Company has complied with the requirements of DNR except for the chlorine being monitored by a person daily and properly reported. Staff recommends that the Company manually check the chlorine levels daily until such time that DNR determines the Company's remote monitoring procedure complies with the regulations or an acceptable alternative procedure is adopted. Staff recommends that the Company install flush valves on the dead-end lines of the water mains to allow for adequate flushing of the system to remove sediment from the mains, or find a way to use yard hydrants in the system to flush periodically in such a way that customers are not charged for the amount of water used.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

The Office of the Public Counsel v.)
Moore Bend Water Utility, LLC,)
Respondent)


Case No. WC-2016-0252

AFFIDAVIT OF DAVID A. SPRATT

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

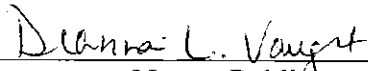
COMES NOW, David A. Spratt, and on his oath declares that he is of sound mind and lawful age; that he contributed to the attached Staff Report; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.



David A. Spratt

Subscribed and sworn to be this 3rd day of August, 2016.



Notary Public

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: June 28, 2019
Commission Number: 15207377

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

The Office of Public Counsel,)	
)	
Complainant,)	
)	
v.)	Case No. WC-2016-0252
)	
Moore Bend Water Utility, LLC,)	
)	
Respondent.)	

AFFIDAVIT OF JONATHAN DALLAS

State of Missouri)
) ss.
County of Cole)

AFFIDAVIT

COMES NOW Jonathan Dallas and on his oath declares that he is of sound mind and lawful age; that he contributed to the attached *Staff Report* and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.



Jonathan Dallas

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in the City of Jefferson City, on this 26th day of July, 2016.



NOTARY PUBLIC

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: June 28, 2019
Commission Number: 15207377

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

The Office of Public Counsel,)
)
Complainant,)
)
v.) **Case No. WC-2016-0252**
)
Moore Bend Water Utility, LLC,)
)
Respondent.)

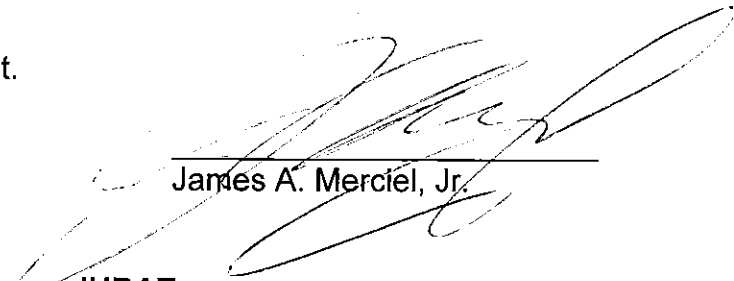
AFFIDAVIT OF JAMES A. MERCIEL, JR.

State of Missouri)
) ss.
County of Cole)

AFFIDAVIT

COMES NOW James A. Merciel, Jr. and on his oath declares that he is of sound mind and lawful age; that he contributed to the attached *Staff Report* and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

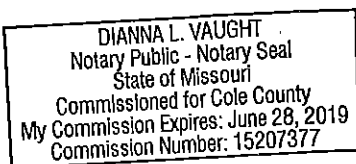


James A. Merciel, Jr.
JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in the City of Jefferson City, on this 26th day of July, 2016.



NOTARY PUBLIC



BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI


The Office of Public Counsel,)	
)	
Complainant)	
)	
v.)	Case No. WC-2016-0252
)	
Moore Bend Water Utility, LLC,)	
)	
Respondent)	

AFFIDAVIT OF DAVID A. SPRATT

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW David a. Spratt and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing Rebuttal Testimony; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

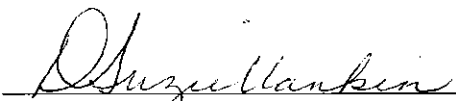


DAVID A. SPRATT

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 18th day of November, 2016.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: December 12, 2016
Commission Number: 12412070



Notary Public