



WEST MEMPHIS UTILITY COMMISSION  
P O Box 1868 604 East Cooper  
Phone: 870-735-3355  
West Memphis, AR 72301

October 26, 2022

Arkansas Energy and Environment  
Office of Water Quality  
Enforcement Branch  
5301 Northshore Drive  
North Little Rock, Arkansas 72118

Re: West Memphis Wastewater Treatment Plant  
NPDES Permit AR0022039

Please accept the following summary of past issues that the West Memphis Wastewater Treatment Plant has experienced during two time periods since September 2021 as referenced in your emails dated September 26 and October 12, 2022, relative to noncompliance conditions and their causes. As you are aware, the city has been diligently investigating root causes and corrective actions for this most recent event and offer the follow as summary as requested.

Concerning the upset condition as reported for September 2021, the wastewater treatment plant experienced on the 22<sup>nd</sup> and 23<sup>rd</sup> that cause several violations, including TSS and fecal coliform. As plant staff discovered these conditions, they immediately conducted a visual investigation of all wastewaters entering the plant headworks from the two primary lift stations. However, nothing notable was detected in either waste stream and the staff was able to bring the plant back into compliance.

On October 19, 2021, sample testing of the influent Biochemical Oxygen Demand (BOD) at the plant was much higher than normal and is believed to have caused the violation, however the exact source and cause was undetermined, and the staff was able to bring the plant back into compliance.

In June 2022, Coca-Cola Consolidated began to discharge a waste stream with higher than usual COD (Chemical Oxygen Demand) and BOD (Biochemical Oxygen Demand). Sampling of their discharge showed an average COD of 8015 mg/L, and the average BOD was 4980 mg/L. However, at this point there were no violations to the plant's NPDES Permit.

On July 11, 2022, Paul Holloway (Director of Wastewater Treatment Plant) determined that the plant was again exhibiting signs of an upset condition with dissolved oxygen levels below 1.0 ppm. On July 18, 2022, the plant's effluent quality was worsening with continued low D.O. levels. Plant staff maximized the aeration available in an attempt to increase the D.O. in the aeration basin on July 25, 2022. With this maximal aeration the D.O. stabilizes for a time. By August 1, 2022, the D.O fell to less than 0.5 ppm. The option to try and introduce more air into the aeration basins was ruled out due to concerns that the increased back pressure could damage the existing blowers and air distribution piping connecting individual diffusers to the main air source.

As the D.O. was not recovering with maximal aeration efforts, Mr. Holloway contacted Dr. Larry Moore, P.E., (B.S.C.E., M.S.C.E., and PhD in civil and Environmental Engineering and retired for the University of Memphis) for his advice. Dr. Moore has consulted with the city on many occasions in the past, most recently in the development of plant expansion options. Dr. Moore visited the plant on August 8 and reviewed plant operations. His initial observation was that the plant was overloaded biologically. Because of the previously noted increase strength effluent from Coca-Cola Consolidated, previously discharge sample from their waste stream were reviewed and additional sampled collected for review.

A review of these samples shows the monthly samples obtained on July 12 and 13, 2022, their CODs were 8,790/8,420 mg/L, respectively. There were six grab samples taken during the month, the average COD of 8605 mg/L, and the average BOD of 5680 mg/L. Also, in July their monthly total discharge increased to 8,564,304 gallons. This month was the first month that the wastewater treatment plant violated its NPDES Permit. Violations previously reported were, weekly effluent TSS mg/L, monthly effluent TSS mg/L, monthly pounds TSS, weekly fecal and monthly fecal. Based upon these five violations, it was determined that the best course of action to identify the source of these upsets would be to monitor and sample the effluent received from Coca-Cola Consolidated on a more frequent basis,

In August 2022, we began collecting grab samples at Coca-Cola Consolidated daily and composite samples once a week. Their average results on CODs were 8702 mg/L and BODs was 5200 mg/L. Also, their monthly discharge had again increased to 11,166,745 gallons.

On August 15, 2022, Marvin Jones and I met with the local representatives of Coca-Cola Consolidated and notified them that their CODs, BODs, and their flow were elevated to levels higher than normal. At that time, they stated that their facility was running normally and that they had not had any incidents that would cause or have contributed to these elevated COD and BOD. They also promised they would notify their corporate office to investigate the situation more thoroughly.

Because of the previously noted higher than normal COD and BOD levels, we increased our grab sampling frequency to four times a day (every 2 hours) on August 25, 2022, with composite sampling remaining at once a week. By the end of August 2022, we increased the frequency of composite sampling to four days per week. It was also noted that during this month the wastewater treatment plant was experiencing low influent flows typical in dryer summer months, but Coca-Cola Consolidated has increased its discharge.

By the end of August 2022, Coca-Cola Consolidated had retained outside assistance in the review of their operations and waste stream management as it relates to their discharge to our system.

On September 1, 2022, Todd Pedersen and I met with representatives from Coca-Cola Consolidated to stress the importance of getting their facility in compliance because of the impact their discharge was having on our wastewater treatment plant.

On September 5<sup>th</sup>, Coca-Cola Consolidated stopped the reclamation operation for products they receive from outside facilities and also started shipping internal reclamation products offsite. Then they shut down the facility on September 7<sup>th</sup> to do internal cleaning of the equipment, this waste was captured and shipped off site. We again met with Coca-Cola Consolidated staff from both their local operations and corporate offices on September 8<sup>th</sup> to discuss how their discharge would be better managed so that future slug loadings to the treatment plant would not be a continued issue.

Coca-Cola Consolidated informed us they had hired Kaya Enterprise to redesign the existing system to better manage expected wastewater flow, BOD, and ph. They informed us they would be increasing their maintenance shutdowns for cleaning of their system. The facility started producing product again on September 10, 2022, with internal reclamation product shipped offsite disposal. Coca-Cola Consolidated started back the reclamation line on September 21, 2022, for internal locally produced product only.

We continued to sample daily (both grabs and composites) until the end of September 2022. By this time, their discharge was back to normal levels on COD and BOD. Prior to the upset events experienced this summer, Coca-Cola Consolidated was only sampled once a month. However, due to these incidents, Coca-Cola Consolidated Industrial Waste Discharge Permit is being reevaluated and they are being sampled once per week.

It is believed that with diligent management and monitoring of their discharge coupled with our near-term plans to expand our wastewater treatment plant, we will have a much better ability to react to potential industrial slug loading and the ability to be able to react more aggressively at the plant to limit the potential of a violation of our NPDES Permit limits.

We also believe that in the future with the modifications to our wastewater treatment plant that we will be able to detect an issue such as this immediately since we will be monitoring D.O. in real time and the system will be reacting to those levels real time.

I hope that this outline of events and steps undertaken to limit the possibility of a recurrence demonstrates West Memphis' commitment to meeting the limits of our current permit. If you have any questions, please do not hesitate to contact me at (870) 702-5141 or email at [dbosnick@westmemphisar.gov](mailto:dbosnick@westmemphisar.gov)

Sincerely,



Denise Bosnick  
Director Environmental Quality