

ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
 WATER DIVISION – INDUSTRIAL AND MUNICIPAL SECTIONS  
**NONCOMPLIANCE NOTIFICATION FORM**

PERMITTEE NAME: Village Creek WWTP PERMIT NO: AL0023647

FACILITY LOCATION: 1440 Pleasant Hill Rd., Birmingham, AL. 35203 (Jefferson County)

DMR REPORTING PERIOD: October 2016

1. DESCRIPTION OF DISCHARGE: (Include outfall number (s)):  
The 0011 calculated monthly average exceeded the E-coli discharge limitation.
2. DESCRIPTION OF NON-COMPLIANCE: (Attach additional pages if necessary):

LIST EFFLUENT VIOLATIONS (If applicable)			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Result Reported (Include units)	Permit Limit (Include units)
0011	E. Coli Monthly Average	802 col/100 L	548 col/100 mL
LIST MONITORING / REPORTING VIOLATIONS (If applicable)			
Outfall Number (s)	NONCOMPLIANCE PARAMETER(S)	Monitoring / Reporting Violation (Provide description)	
N/A	N/A	N/A	

3. CAUSE OF NON-COMPLIANCE (Attach additional pages if necessary):  
The cause of the higher than normal E.Coli values are unknown. There were no process changes or upsets leading up to the daily violation on the 25th. The influent flow was low allowing greater contact time for disinfection. There were no equipment malfunctions. The effluent TSS, CBOD5, Ammonia, and pH were all within typical ranges, and there was no interference from organic nitrogen. Because of the higher than normal spikes, the WWTP staff had taken steps to review sampling procedures and increase the chlorine feed to maintain a higher than normal Total Chlorine Residual prior to dechlorinating.
4. PERIOD OF NONCOMPLIANCE: (Include exact date(s) and time(s) or, if not corrected, the anticipated time the noncompliance is expected to continue): Daily exceedance occurred on October 25, 2016.
5. DESCRIPTION OF STEPS TAKEN AND/OR BEING TAKEN TO REDUCE OR ELIMINATE THE NONCOMPLYING DISCHARGE AND TO PREVENT ITS RECURRENCE (attach additional sheets if necessary):  
See attachment.

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Terrence M. Lane, Acting WWTP Manager, Village Creek WWTP  
 NAME AND TITLE OF RESPONSIBLE OFFICIAL (type or print)

 22 Nov 2016  
 SIGNATURE OF RESPONSIBLE OFFICIAL / DATE SIGNED

## ATTACHMENT

### 5. DESCRIPTION OF STEPS TAKEN AND/OR BEING TAKEN TO REDUCE OR ELIMINATE THE NONCOMPLYING DISCHARGE AND TO PREVENT ITS RECURRENCE (attach additional sheets if necessary):

Beginning on October 11, 2016, the WWTP staff increased the target Total Residual Chlorine (TRC) to 0.5 mg/l from the normal range of 0.3 to 0.4 mg/l. Sampling procedures were reviewed by the WWTP Shift Supervisor. Feed rates of chlorine were monitored to ensure adequate pounds per day were delivered for the flow rate based on decades of onsite experience successfully operating the disinfection system.

On October 26, 2016 at 10:47 a.m., the WWTP staff and Environmental Services Department (ESD) management were informed of the daily effluent E. Coli violation. ADEM was notified via email and a Public Advisory was issued to inform the public to avoid contact with the downstream waters. Shortly after noon, the staff was instructed to maintain a 0.8 mg/l TRC. Individuals from the County's Barton Laboratory were instructed to perform concurrent sampling with the WWTP staff on the following day to verify that sampling errors were not the cause. ESD's treatment engineer interviewed the WWTP Management and analyzed the effluent and operating data to investigate the cause of the violation. Nothing in the operating and effluent data indicated the cause was the result of problems from the upstream treatment process. Nothing in the chlorination/dechlorination records indicated inadequate dosage of chlorine. No onsite activities indicated a problem.

The E Coli results from the 26<sup>th</sup> were reviewed on the morning of the 27<sup>th</sup> and showed a value of 2,419.6 col/100mL. The WWTP staff was instructed to cease discharge from the 0011 plant and direct effluent flow to the 0021 plant influent pump station until the cause of the high E Coli could be determined and corrected. ESD management inspected the chlorination facilities with the WWTP operating and maintenance staff. It was determined that:

- 1) E Coli reading would be taken from the second stage effluent flow to verify that E Coli was not significantly elevated coming into the disinfection process;
  - a. On 31 October 2016, readings were taken from 001 2<sup>nd</sup> stage effluent and 002 Final Clarifier effluent for comparison. Both indicated normal E.Coli levels. In fact, the 0011 2<sup>nd</sup> stage effluent indicated less E. Coli (1841 col/100 mL) than the 0021 Clarifier effluent (>2419 col/100 mL).
  - b. TSS, CBOD, Ammonia, Nitrite, Nitrate, total Nitrogen and TKN were also in the normal range.
- 2) Any settled debris would be removed from the contact chamber and the gates would be checked for leakage while second stage effluent flow was directed away from the contact chamber;
  - a. The contact chamber was drained and cleaned. Gates were inspected for leakage and none was observed.
- 3) A water pressure test would be conducted to identify possible problems with the delivery and diffuser system;
  - a. Water was adequate.
- 4) After the test, the exposed PVC chlorine feed piping would be replaced while the basin was empty.
  - a. The piping was inspected and found to be in good condition and was not replaced.

ESD also contacted a disinfection specialist from Hazen and Sawyer, P.C. with knowledge of the Village Creek WWTP to review data and discuss trouble shooting activities. The consulting engineer recommended that Total Nitrogen be measured to determine if organic nitrogen levels are present that could interfere with disinfection while showing an adequate TRC. No high levels were found.

The discharge from 0011 is still being redirected to the 0021 plant. All necessary preparations to return to normal operations have been completed at this time. Discharge to Village Creek from outfall 0011 will not occur until three consecutive days of normal E.coli (<50 col/100 mL) have been observed. Full 2<sup>nd</sup> stage effluent testing is ongoing.