



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER RESOURCES

Memphis Environmental Field Office
8383 Wolf Lake Drive
Bartlett, TN 38133

Phone 901-371-3000 Statewide 1-888-891-8332 Fax 901-371-3170

February 11, 2020

Mr. Barnett Hall
Tipton County Board of Education
1580 Highway 51 South
Covington, TN 38019

Re: Compliance Evaluation Inspection
Drummonds Elementary School Wastewater Treatment System
NPDES Tracking Number: TN0058092
Drummonds, Tipton County, Tennessee

Dear Mr. Hall:

On Wednesday, February 5, 2020, Eddy Bouzeid with the Division of Water Resources, Memphis Environmental Field Office (DWR/MEFO), conducted a Compliance Evaluation Inspection (CEI) at the Drummonds Elementary School wastewater treatment lagoon located in Drummonds, Tipton County, Tennessee. Upon arrival at the facility, Mr. Bouzeid met with you and Mr. Mark Walker, Drummond's wastewater treatment lagoon certified operator, and stated that the purpose of the inspection was to evaluate the facility's compliance with its National Pollutant Discharge Elimination System (NPDES) permit. This was accomplished by reviewing the facility's self-monitoring records and reports and subsequently conducting an inspection of the lagoon. Attached you will find the Compliance Evaluation Inspection Report and corresponding photo documentation which summarize the findings of the CEI. The following are items to note regarding the inspection:

- The Drummonds Elementary School wastewater treatment system reported numerous exceedances of its permit limits through Outfall 001 for the period from October 2017 through January 2020. Those exceedances occurred during the period while the tie-in to the Munford force main via Outfall 002 was being constructed. However, it should be noted that no exceedances have been reported since the tie-in was completed in November 2019.
- The sign was placed at Outfall 002 and the information on the sign was consistent with the requirement of the permit.
- A new digital flow meter was recently installed to the newly installed lift station. The meter appeared to be operating properly.

The Division appreciates your cooperation and assistance during the inspection and the facility's continues efforts to comply with its NPDES permit requirements. If you have any questions or comments with regard to the inspection please contact me at (901) 371-3023 or eddy.bouzeid@tn.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Eddy Bouzeid". The signature is stylized with a large, sweeping initial "E" and a long horizontal stroke extending to the right.

Eddy Bouzeid
Environmental Protection Specialist
Division of Water Resources

cc: TDEC/DWR/MEFO – File
Mark Walker – Certified Operator

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Water Resources
 Memphis Environmental Field Office, 8383 Wolf Lake Drive, Bartlett, TN 38133
 1-888-891-8332 (TDEC)

Compliance Inspection for Individual NPDES Permit

Facility Name: Drummonds Elementary School	NPDES Tracking Number: TN0058092
Permit Effective Date: July 1, 2019	Permit Expiration Date: April 30, 2024
Date and Time of Inspection: 2/5/2020	Inspector Name: Eddy Bouzeid
Official Contact Person Name: Mr. Barnett Hall, Director of Physical Plant and Planning	
Address: 1580 Highway 51 South, Brighton, TN 38019	Phone Number: (901) 508-1796
	Email: bhall@tipton-county.com

Summary of Findings and Comments

On Wednesday, February 5, 2020, Eddy Bouzeid with the Division of Water Resources, Memphis Environmental Field Office (DWR/MEFO), conducted a Compliance Evaluation Inspection (CEI) at the Drummonds Elementary School wastewater treatment lagoon located in Drummonds, Tipton County, Tennessee. Mr. Bouzeid met with Mr. Barnett Hall, the Tipton County Board of Education (TCBE) maintenance supervisor, and Mr. Mark Walker, Drummond's wastewater treatment lagoon certified operator, and reviewed the treatment system's monitoring records and discussed its self-monitoring program. Afterwards, Mr. Bouzeid, Mr. Hall and Mr. Walker inspected the treatment system. The following is a summary of the findings and observations:

I. Permit

The NPDES permit for the Drummonds Elementary School wastewater treatment lagoon with tracking number TN0058092 expires on April 30, 2024. A copy of the NPDES permit was available for review.

The NPDES permit authorizes the discharge of treated wastewater effluent to the Mississippi River via Outfall 002 at mile 761 or to the Hurricane Creek via Outfall 001 at mile 10.4.

The design capacity for the lagoon is 0.0285 Million Gallons per Day (MGD). From October 2017 through January 2020, the average effluent flow from the lagoon was 0.014 MGD and the maximum flow was 0.018 MGD.

The Drummonds Elementary School wastewater treatment lagoon discharge effluent characteristic and monitoring requirements are as follows:

Through Outfall 001 to Hurricane Creek

- CBOD – twice per month grab
- Total Suspended Solids (TSS) – twice per month grab
- E. Coli – twice per month grab
- Settleable Solids – twice per week grab
- Dissolved Oxygen – five per week grab
- pH – twice per week grab
- Ammonia Nitrogen – twice per month grab
- Flow – five per week instantaneous

- TRC – five per week grab

Through Outfall 002 to Mississippi River

- BOD – twice per month grab
- Total Suspended Solids (TSS) – twice per month grab
- E. Coli – twice per month grab
- Settleable Solids – twice per week grab
- Dissolved Oxygen – five per week grab
- pH – twice per week grab
- Flow – five per week instantaneous
- Total Residual Chlorine (TRC) – five per week grab

II. Records/Reports

Site records and reports for the treatment system were observed and appeared to be maintained as required by the NPDES permit. Sampling and analytical data, including flow records, and Monthly Operation Reports (MORs) for the period from October 2017 through January 2020 were reviewed and appeared to be complete. Mr. Mark Walker, the facility's certified operator, signed the MORs for that period.

III. Facility Site Review

The wastewater treatment system consists of a two-cell aerated lagoon that treats domestic waste from the elementary school. The aeration unit in the first cell was operating at the time of the inspection. The second is used for polishing. The treated wastewater is disinfected using sodium hypochlorite prior to discharge. The vegetation around the lagoon was properly maintained. The fence around the lagoon appeared to be in good condition and the access to the lagoon was restricted (photo 1). The effluent from the lagoon is pumped via a recently constructed lift station (photo 2) to the Mississippi River via the City Munford force main (photo 5).

The Drummonds Elementary School wastewater treatment system had numerous exceedances of its NPDES permit limits for the period from January 2015 through September 2017. A Notice of Violation was issued to the Tennessee County Board of Education (TCBE) on October 25, 2017, for the aforementioned exceedances. In November 2017, the TCBE provided the Division information that it had retained the engineering firm A2H to assist in finding alternative methods to solve and address the exceedances at the school. The approved proposal to pump the Drummonds treated wastewater into the force main that is carrying the Munford treated wastewater to the Mississippi River was completed in November 2019 (Outfall 002).

The Drummonds Elementary School wastewater treatment system reported numerous exceedances of its permit limits through Outfall 001 for the period from October 2017 through January 2020. Those exceedances occurred during the period while the tie-in to the Munford force main via Outfall 002 was being constructed. The exceedances were broken down as follows:

- October 2017: three (3) ammonia exceedances and four (4) TRC exceedances.
- November 2017: three (3) ammonia exceedances and six (6) TRC exceedances.
- December 2017: three (3) ammonia exceedances and seven (7) TRC exceedances.
- February 2018: two (2) E. Coli exceedance, three (3) ammonia exceedances and ten (10) TRC exceedances.

- March 2018: three (3) CBOD exceedances, one (1) TSS exceedance, three (3) ammonia exceedances and seven (7) TRC exceedances.
- April 2018: three (3) ammonia exceedances and nine (9) TRC exceedances.
- May 2018: four (4) TRC exceedances and one (1) E. Coli exceedance.
- September 2018: three (3) ammonia exceedances, four (4) DO exceedances and two (2) TRC exceedances.
- April 2019: three (3) ammonia exceedances and twelve (12) TRC exceedances.
- May 2019: eight (8) TRC exceedances.
- June 2019: four (4) TRC exceedances.
- July 2019: four (4) TRC exceedances.

No exceedances were reported through Outfall 002 for the period from November 2019 through January 2020 after the tie-in was completed.

IV. Effluent/Receiving Waters

There was no discharge at Outfall 002 at the time of the inspection since the lift station was idle and the water level in the lagoon was down.

The sign was in place at the Outfall 002 and the information on the sign was consistent with the requirements of the permit (photo 3).

V. Flow Measurement

A digital flow meter was installed in December 2019 to measure the flow that is being pumped from the lagoon effluent to the Munford force main (photo 4). The digital flow meter measures the flow in gallons per minutes then converted to million gallons per day (MGD).

VI. Self-Compliance Program

According to Mr. Hall, a grab sample is collected from the effluent as required by the permit. All analytical work is conducted at the Waypoint Analytical Laboratory (WAL) in Memphis. A review of the chain-of-custodies revealed that the samples shipped to WAL in a cooler were maintained below the 6 degrees Celsius as required by 40 CFR, Part 136.

Total chlorine residual, pH and dissolved oxygen (DO) are field parameters measured at the time of sample collection as mandated by Part I Section B.2. (b) of the NPDES permit.

VII. Compliance Schedule

The treatment system is not under any compliance schedule at this time, with the exception of the permit requirements.

VIII. Laboratory

All analytical work is being conducted at the Waypoint Laboratory in Memphis.

The calibration logs for the pH and DO meters were inspected and the calibrations were properly documented. Three buffers (4, 7 and 10) are utilized in the calibration of the pH meter.

IX. Operations and Maintenance

The treatment system appeared to be maintained properly at the time of the inspection.

Photographic Log


Facility Name: Drummonds Elementary School		Site Location: Drummonds, Tipton County	Tracking No.: TN0058092
Photo No. 1	Date 2-5-20		
Description View of the Drummonds Elementary School wastewater treatment lagoon.			

Photo No. 2	Date 2-5-20		
Description View of the recently constructed lift station. The lift station pumps the effluent from the lagoon to Munford's force main which discharges into the Mississippi River.			

Photographic Log




Facility Name: Drummonds Elementary School		Site Location: Drummonds, Tipton County	Tracking No.: TN0058092
Photo No. 3	Date 2-5-20		
Description View of the sign at the facility. The information on the sign was consistent with the requirements of the permit.			

Photo No. 4	Date 2-5-20	
Description View of the recently installed digital flow meter.		

Photographic Log

Facility Name: Drummonds Elementary School		Site Location: Drummonds, Tipton County	Tracking No.: TN0058092
Photo No. 5	Date 2-5-20	 <p>Tie-in to Munford force main.</p> <p>AW 11.25.18 10:31 AM</p>	
Description Another view of the Drummonds Elementary School wastewater lagoon and the approximate location of the tie-in to the Munford force main. The Munford force main discharges to the Mississippi River.			