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

CERTIFIED MAIL: 91 7108 2133 3932 2020 6776
RETURN RECEIPT REQUESTED

October 25, 2017

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

RE: Notice of Violation
Compliance Evaluation Inspection
Drummonds Elementary School Wastewater Treatment System
NPDES Tracking Number: TN0058092
Drummonds, Tipton County, Tennessee

Dear Mr. Hall:

On Wednesday, October 18, 2017, Mr. Eddy Bouzeid with the Division of Water Resources, Memphis Environmental Field Office (DWR/MEFO) conducted a Compliance Evaluation Inspection (CEI) of the Drummonds Elementary School wastewater Treatment System in Drummonds, Tipton County. Upon arrival at the facility, Mr. Bouzeid met with you, Mr. Mark Walker, Munford Public Work Director, Mr. Ken Priest, Drummonds' wastewater treatment operator, and Mr. Ed Hargraves, Tipton County Board of Education (TCBE) engineering consultant (A2H), and stated that the purpose of the inspection was to evaluate the treatment system's compliance with its National Pollutant Discharge Elimination System (NPDES) permit. This was accomplished by reviewing the treatment system's records and discussing its self-monitoring program. Afterwards, you, Mr. Bouzeid, Mr. Walker and Mr. Hargraves inspected the treatment system. A copy of the Compliance Evaluation Inspection report and associated photo document is enclosed for your reference.

It should be noted that the Drummonds Elementary School wastewater treatment system had numerous exceedances (144 exceedances) of its NPDES permit limits for the period from January 2015 through September 2017. The Division has been made aware that the TCBE has retained the engineering firm A2H to assist in finding alternative methods to solve and address the exceedances at the school. A proposal being discussed is to pump the Drummonds treated wastewater into the force main that is carrying the Munford treated wastewater to the Mississippi River. It is the Division's understanding that A2H is studying this option and its viability.

Required Actions:

- On or before November 30, 2017, please submit a written response regarding the selected alternative method that the TCBE and its consultant have undertaken or will be undertaken to eliminate future exceedances at the treatment system. The Division is also requesting a quarterly progress report of the selected method implementation milestones until compliance with the NPDES permit is achieved.
- No explanation of the exceedances was submitted with the MORs for the period from January 2015 through September 2017. Please be advised that Part II Section C.2. (b) of the NPDES permit requires the permittee to report the noncompliance on the MOR. The report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue. Please ensure that future MORs contain all required information.

The Division appreciates your time and assistance during the inspection. If there are factors regarding this matter that need further discussion, please contact Mr. Eddy Bouzeid 901-371-3023 or at eddy.bouzeid@tn.gov.

Sincerely,

Joellyn Brazile
Environmental Program Manager
Division of Water Resources
Memphis Environmental Field Office

cc: TDEC/DWR/NCO - Enforcement & Compliance Section
TDEC/DWR/MEFO - file
ec: Ed Hargraves – A2H
Mark Walker – Munford Public Work Director

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: May 1, 2014	**Permit Expiration Date:** April 30, 2019
Date and Time of Inspection: 10/18/2017	**Inspector Name:** Eddy Bouzeid

Official Contact Person Name: Mr. Barnet 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, October 18, 2015, 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 Tipton County, Tennessee.

Upon arrival at the facility, Mr. Bouzeid met with Mr. Barnet Hall, the Tipton County Board of Education (TCBE) maintenance supervisor, Mr. Ken Priest, Drummonds' wastewater lagoon operator, and Mr. Mark Walker, Munford Public Work Director and certified operator. Also present at the facility was Mr. Ed Hargraves, A2H engineer and TCBE consultant. Mr. Bouzeid proceeded to reviewing the treatment system's monitoring records and discussing its self-monitoring program. Afterwards, Mr. Bouzeid, Mr. Hall, Mr. Walker, Mr. Priest and Mr. Hargraves inspected the wastewater treatment system and discussed the viability of tying-in the effluent to the force main carrying the Munford treated wastewater to the Mississippi River. The following is a summary of the findings and observations.

I. Permit

The NPDES permit for the Drummonds Elementary School with tracking number TN0058092 expires on April 30, 2019. A copy of the NPDES permit was available for review and is maintained in Mr. Hall's office.

The NPDES permit authorizes the school to discharge its treated domestic wastewater to Hurricane Creek at mile 10.4.

The design capacity of the treatment system is 0.0285 Million Gallons per Day (MGD). From January 2015 through September 2017, the average effluent flow from the treatment system was 0.018 MGD.

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

- CBOD – twice per month grab
- Total Suspended Solids (TSS) – twice per month grab
- Ammonia, as N - 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
- 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 January 2015 through September 2017 were reviewed and appeared to be complete. Mr. Walker signed the MORs for that period. As required by the permit the records were kept in Mr. Hall's office for the required three-year 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 cell is used for polishing (photo 1). The treated wastewater is disinfected using sodium hypochlorite prior to discharge. The vegetation around the lagoon was properly maintained. The fence around the lagoon was in good condition and the access gate to the lagoon was locked.

The wastewater treatment system had numerous exceedances (144 exceedances) of its permit limits for the period from January 2015 through September 2017 (Table 1).

Table 1

Parameter	Limit	Date	Result
Ammonia Nitrogen	10 mg/l (daily max)	January 15, 2015	12 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	January 21, 2015	16.6 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	January 2015	14.3 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	February 11, 2015	25 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	February 25, 2015	26.1 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	February 2015	25.6 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	March 5, 2015	23.6 mg/l

Ammonia Nitrogen	10 mg/l (daily max)	March 31, 2015	23 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	March 2015	23.3 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	April 8, 2015	17.3 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	April 2015	9 mg/l
CBOD	15 mg/l (monthly ave)	January 2016	26 mg/l
TSS	45 mg/l (daily max)	January 25, 2016	58 mg/l
TSS	30 mg/l (monthly ave)	January 2016	51 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	January 2016	7.5 mg/l
CBOD	25 mg/l (daily max)	February 29, 2016	31 mg/l
CBOD	15 mg/l (monthly ave)	February 2016	28 mg/l
TSS	45 mg/l (daily max)	February 29, 2016	66 mg/l
TSS	30 mg/l (monthly ave)	February 2016	48.5 m/l
Ammonia Nitrogen	10 mg/l (daily max)	February 23, 2016	12 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	February 29, 2016	18 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	February 2016	15 mg/l
E. Coli	941 cfu	February 29, 2016	2420 cfu
TSS	45 mg/l (daily max)	March 3, 2016	223 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	March 3, 2016	11 mg/l
CBOD	15 mg/l (monthly ave)	April 2016	20.5 mg/l
TSS	45 mg/l (daily max)	April 28, 2016	100 mg/l
TSS	45 mg/l (daily max)	April 29, 2016	88 mg/l
TSS	30 mg/l (monthly ave)	April 2016	94 mg/l
DO	6 mg/l (daily minimum)	April 28, 2016	4.79 mg/l
DO	6 mg/l (daily minimum)	April 29, 2016	5.84 mg/l
E. Coli	941 cfu	April 28, 2016	2420 cfu
E. Coli	941 cfu	April 29, 2016	2420 cfu
CBOD	25 mg/l (daily max)	May 24, 2016	37 mg/l
CBOD	15 mg/l (monthly ave)	May 2016	31 mg/l
TSS	45 mg/l (daily max)	May 13, 2016	123 mg/l
TSS	45 mg/l (daily max)	May 24, 2016	157 mg/l
TSS	30 mg/l (monthly ave)	May 2016	140 mg/l
DO	6 mg/l (daily minimum)	May 24, 2016	5.09 mg/l
E. Coli	941 cfu	May 13, 2016	2420 cfu
E. Coli	941 cfu	May 24, 2016	2420 cfu
TSS	45 mg/l (daily max)	June 22, 2017	90 mg/l
DO	6 mg/l (daily minimum)	June 22, 2016	3.02 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	September 13, 2016	18 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	September 2016	9.5 mg/l
E. Coli	941 cfu	November 8, 2016	1120 cfu
E. Coli	941 cfu	November 29, 2016	2420 cfu
TRC	0.5 mg/l (daily max)	November 4, 2016	2.2 mg/l
TRC	0.5 mg/l (daily max)	November 15, 2016	0.92 mg/l
TRC	0.5 mg/l (daily max)	November 22, 2016	1.13 mg/l
TRC	0.5 mg/l (daily max)	November 23, 2016	1.64 mg/l
TRC	0.5 mg/l (daily max)	November 29, 2016	0.83 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	November 29, 2016	15 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	November 2016	8.5 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	December 1, 2016	15 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	December 9, 2016	16 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	December 2016	13.3 mg/l
E. Coli	941 cfu	December 1, 2016	2420 cfu

TRC	0.5 mg/l (daily max)	December 1, 2016	0.69 mg/l
TRC	0.5 mg/l (daily max)	December 1, 2016	0.64 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	January 2017	9.5 mg/l
TRC	0.5 mg/l (daily max)	January 12, 2017	1.83 mg/l
TRC	0.5 mg/l (daily max)	January 13, 2017	1.05 mg/l
TRC	0.5 mg/l (daily max)	January 20, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	January 25, 2017	0.87 mg/l
TRC	0.5 mg/l (daily max)	January 26, 2017	0.77 ,g/l
TRC	0.5 mg/l (daily max)	January 27, 2017	0.76 mg/l
TRC	0.5 mg/l (daily max)	January 31, 2017	0.81 mg/l
CBOD	25 mg/l (daily max)	February 14, 2017	52 mg/l
CBOD	15 mg/l (monthly ave)	February 2017	33mg/l
TSS	45 mg/l (daily max)	February 24, 2017	60 mg/l
TSS	30 mg/l (monthly ave)	February 2017	50 mg/l
E. Coli	941 cfu	February 24, 2017	1986 cfu
TRC	0.5 mg/l (daily max)	February 1, 2017	0.81 mg/l
TRC	0.5 mg/l (daily max)	February 2, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	February 3, 2017	0.76 mg/l
TRC	0.5 mg/l (daily max)	February 7, 2017	0.63 mg/l
TRC	0.5 mg/l (daily max)	February 14, 2017	0.52 mg/l
TRC	0.5 mg/l (daily max)	February 15, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	February 16, 2017	1.77 mg/l
TRC	0.5 mg/l (daily max)	February 24, 2017	0.78 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	February 24, 2017	11 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	February 2017	10.5 mg/l
CBOD	25 mg/l (daily max)	March 10, 2017	28 mg/l
CBOD	15 mg/l (monthly ave)	March 2017	20.5 mg/l
TSS	45 mg/l (daily max)	March 10, 2017	94 mg/l
TSS	45 mg/l (daily max)	March 24, 2017	53 mg/l
TSS	30 mg/l (monthly ave)	March 2017	73.5 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	March 24, 2017	12 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	March 2017	11 mg/l
TRC	0.5 mg/l (daily max)	March 2, 2017	1.54 mg/l
TRC	0.5 mg/l (daily max)	March 3, 2017	1.25 mg/l
TRC	0.5 mg/l (daily max)	March 9, 2017	1.41 mg/l
TRC	0.5 mg/l (daily max)	March 10, 2017	1.11 mg/l
TRC	0.5 mg/l (daily max)	March 14, 2017	1.09 mg/l
TRC	0.5 mg/l (daily max)	March 15, 2017	0.96 mg/l
TRC	0.5 mg/l (daily max)	March 17, 2017	0.82 mg/l
TRC	0.5 mg/l (daily max)	March 22, 2017	0.91 mg/l
TRC	0.5 mg/l (daily max)	March 23, 2017	1.38 mg/l
TRC	0.5 mg/l (daily max)	March 24, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	March 28, 2017	1.9 mg/l
TRC	0.5 mg/l (daily max)	March 29, 2017	1.36 mg/l
TRC	0.5 mg/l (daily max)	March 30, 20187	1.34 mg/l
TRC	0.5 mg/l (daily max)	March 31, 2017	0.76 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	April 2017	7.5 mg/l
TRC	0.5 mg/l (daily max)	April 5, 2017	1.86 mg/l
TRC	0.5 mg/l (daily max)	April 7, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	April 18, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	April 21, 2017	2.2 mg/l

TRC	0.5 mg/l (daily max)	April 22, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	April 26, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	April 27, 2017	1.07 mg/l
TRC	0.5 mg/l (daily max)	April 28, 2018	1.39 mg/l
TRC	0.5 mg/l (daily max)	May 2, 2017	1.99 mg/l
TRC	0.5 mg/l (daily max)	May 10, 2017	1.46 mg/l
TRC	0.5 mg/l (daily max)	May 16, 2017	0.52 mg/l
TRC	0.5 mg/l (daily max)	May 17, 2017	0.6 mg/l
TRC	0.5 mg/l (daily max)	May 23, 2017	1.17 mg/l
TRC	0.5 mg/l (daily max)	May 24, 2017	1.07 mg/l
TRC	0.5 mg/l (daily max)	June 15, 2017	1.82 mg/l
DO	6 mg/l (daily minimum)	August 1, 2017	4.59 mg/l
DO	6 mg/l (daily minimum)	August 18, 2017	5.93 mg/l
DO	6 mg/l (daily minimum)	August 29, 2017	4.82 mg/l
DO	6 mg/l (daily minimum)	August 30, 2017	4.93 mg/l
DO	6 mg/l (daily minimum)	August 31, 2017	4.8 mg/l
TRC	0.5 mg/l (daily max)	August 29, 2017	0.63 mg/l
TRC	0.5 mg/l (daily max)	August 30, 2017	0.72 mg/l
E. Coli	941 cfu	August 29, 2017	2420 cfu
E. Coli	941 cfu	August 30, 2017	2420 cfu
Ammonia Nitrogen	10 mg/l (daily max)	August 30, 2017	11 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	August 2017	10.5 mg/l
TSS	30 mg/l (monthly ave)	August 2017	37.5 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	September 13, 2017	13 mg/l
Ammonia Nitrogen	10 mg/l (daily max)	September 27, 2017	17 mg/l
Ammonia Nitrogen	5 mg/l (monthly ave)	September 2017	15 mg/l
DO	6 mg/l (daily minimum)	September 1, 2017	5.47 mg/l
DO	6 mg/l (daily minimum)	September 27, 2017	5.28 mg/l
E. Coli	941 cfu	September 27, 2017	2420 cfu
TRC	0.5 mg/l (daily max)	September 1, 2017	0.69 mg/l
TRC	0.5 mg/l (daily max)	September 8, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	September 15, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	September 19, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	September 20, 2017	2.2 mg/l
TRC	0.5 mg/l (daily max)	September 27, 2017	0.61 mg/l

No explanation of the exceedances was submitted with the MORs for the period from January 2015 through September 2017. Part II Section C.2.(b) of the NPDES permit requires the permittee to report the noncompliance on the MORs. As a reminder, the report shall contain all information concerning the steps taken, or planned, to reduce, eliminate, and prevent recurrence of the violation and the anticipated time the violation is expected to continue.

On February 25, 2015, the Division received a response letter from Mr. Donnie Wallace, the former TCBE maintenance supervisor describing the corrective measures that the Board was undertaking to address the findings/exceedances noted in the CEI that was conducted on January 13, 2015. In the letter, Mr. Wallace noted that the Board had contracted with Engineering firm, A2H, to help with alternative methods to solve the problems at the Drummonds' wastewater lagoon.

As of May 26, 2016, Mr. Barnet Hall became the TCDE maintenance supervisor replacing long time supervisor Mr. Donnie Wallace who retired.

On June 17, 2016, Mr. Hall submitted a letter to the Division describing his new role as the new maintenance supervisor and noting the current and future corrective actions that were being undertaken to bring the school's wastewater lagoon into compliance with its NPDES permit. In the letter, Mr. Hall noted that there has been discussion with the City of Munford to pump the Drummonds treated wastewater into the force main that is carrying the Munford treated wastewater to the Mississippi River. It was also noted in the letter that another meeting would be held with the City of Munford in September 2016 regarding the proposal.

On January 13, 2017, Mr. Bouzeid received an email from Mr. Hall noting that the proposal to tie-in the Drummonds' wastewater effluent to the Munford force main which discharges in to the Mississippi River had been referred to its engineering consultant A2H for further study.

IV. Effluent/Receiving Waters

There was a discharge at the outfall at the time of the inspection and the discharge was clear (photos 2 and 3).

The sign was in place at the outfall (photo 4) and all the information on the sign was correct.

V. Flow Measurement

The flow measurement is done manually by recording the length of time it takes to fill a 5 gallon bucket multiplied by the duration of the discharge. The flow is recorded in gallons per minute then converted to million gallons per day (MGD).

VI. Self-Compliance Program

According to Mr. Hall, Mr. Priest collects grab samples from the effluent as required by the permit. All analytical work is conducted at the Waypoint Analytical Laboratory (WAL) in Memphis. The grab samples are analyzed for CBOD, ammonia nitrogen, suspended solids, settleable solids and E. Coli, and are collected twice a month. 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 laboratory analyses are conducted at WAL in Memphis, Tennessee. Lab sheet are maintained with Mr. Hall with the MORs.

The calibration logs for the pH, TRC and DO meters were inspected and the calibrations were properly documented. The calibration logs are kept at the Munford wastewater treatment laboratory which is located only few miles from the Drummonds Elementary School. Three buffers (4, 7 and 10) are utilized in the calibration of the pH meter. The DO meter was being calibrated according to the instructions noted in the manufacturer's manual.

Photographic Log

Client or Facility Name:	Site Location:	Tracking No.:
Drummonds Elementary School	Drummonds, Tipton County	TN0058092

Photo No.	Date
1	10-18-2017

Description
View of Drummonds wastewater treatment system.

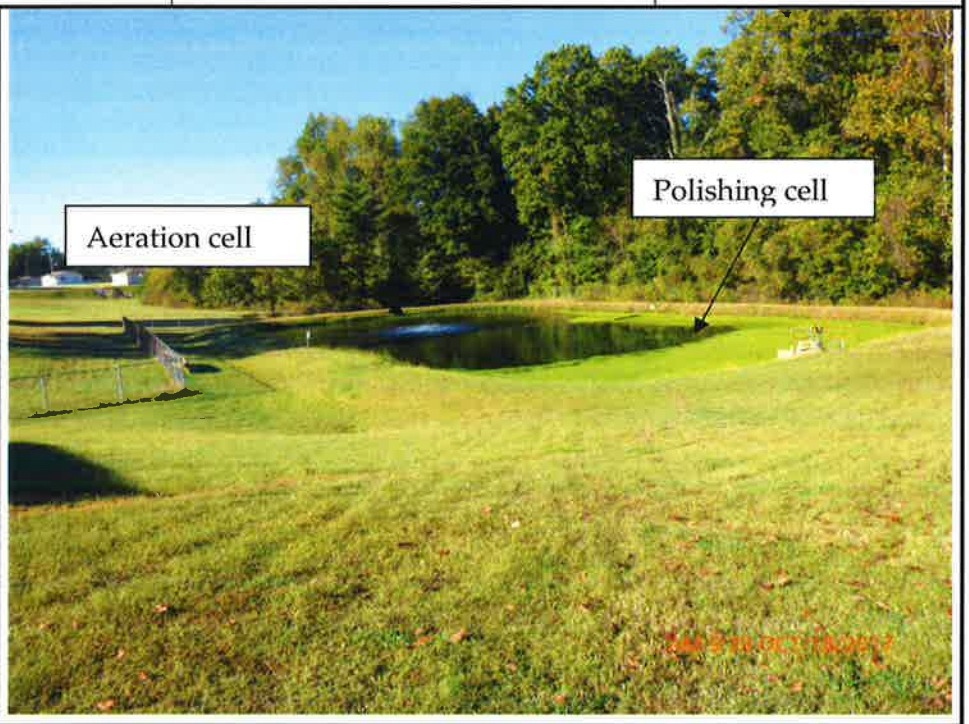
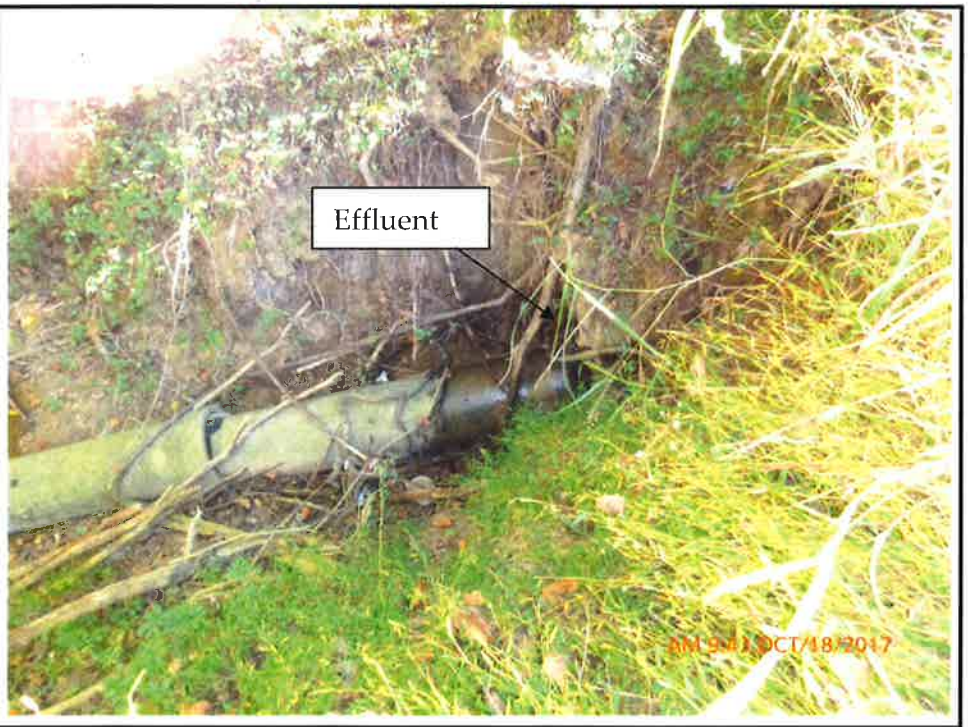


Photo No.	Date
2	10-18-2017

Description
View of the disinfected effluent being discharged from the wastewater treatment system. The effluent was clear at the time of the inspection.



Photographic Log

Client or Facility Name:	Site Location:	Tracking No.:
Drummonds Elementary School	Drummonds, Tipton County	TN0058092

Photo No.	Date
3	10-18-2017

Description
Close-up view of the effluent.

Photo No.	Date
4	10-18-2017

Description
View of the Sign at the outfall. The information on the sign was correct on the sign.