



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 2021 0049
RETURN RECEIPT REQUESTED

March 19, 2015

The Honorable Dwayne Cole
Mayor Town of Munford
1397 Munford Avenue
Munford, TN 38058

Re: Compliance Evaluation Inspection
Munford Sewer Department Lagoon
NPDES Permit No. TN0062499
Tipton County

Dear Mayor Cole:

On Wednesday, March 11, 2015, Mr. Eddy Bouzeid with the Division of Water Resources, Memphis Environmental Field Office (DWR/MEFO), conducted a Compliance Evaluation Inspection (CEI) of the Munford Sewer Department Lagoon in Munford, Tipton County, Tennessee. Upon arrival at the facility, Mr. Bouzeid met with Mr. Mark Walker, the Munford 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 a walk-through inspection of the facility. Attached you will find the State Water Compliance Inspection Report, which summarizes the findings of the CEI.

The facility reported no exceedance of its permit limits for the period from January 2013 through February 2015.

Additionally, the following findings and observations were noted during the inspection that should be addressed:

- A Standard Operating Procedure (SOP) for field parameter measurement and laboratory analysis of samples was available at the facility. The SOP encompasses: sampling procedures; instructions on proper calibration of field equipment; QC procedures for equipment calibration; and QC procedures for lab analysis conducted at the facility. The QC procedures for equipment calibration and for lab analysis were not being conducted. Mr. Walker informed Mr. Bouzeid that Mr. Dwayne Cullpepper, with the Tennessee Association of Utility Districts, has been contacted for assistance in conducting the QC procedures. Mr. Bouzeid commended Mr. Walker for seeking the assistance of Mr. Cullpepper and advised him to initiate the QC procedures once the training is completed.
- The effluent digital flow meter was not functioning properly at the time of the inspection. The device was fairly new and it appeared that the recent inclement weather had caused the device to malfunction. Mr. Walker informed Mr. Bouzeid that the device was still under warranty and that the manufacturer would be sending a technician to repair/recalibrate the unit. Mr. Walker was advised to ensure that the flow meter is operating properly in the near future.
- The nutrient constituents, total nitrogen and total phosphorous, were being collected and analyzed semi-annually. Mr. Bouzeid advised Mr. Walker that the permit requires that these constituents be monitored quarterly. Mr. Walker informed Mr. Bouzeid that it was an operator oversight and that, going forward, the monitoring of these constituents will be conducted quarterly.
- The calibration of the pH meter was being conducted utilizing two buffer solutions, 7 and 10. Mr. Bouzeid informed Mr. Walker that a review of the treatment system effluent data revealed that the actual pH results were between 6.4 and 7.9 for the evaluation period. Since several pH readings were reported at or below 7.0, it is strongly recommended that 3 point calibration, buffer 4, be utilized to bracket readings at or below 7.0.

Required Actions:

- On or before April 17, 2015, submit documentation that the effluent digital flow meter has been repaired.
- On or before April 17, 2015, provide a written response confirming how the pH meter will be calibrated and how required monitoring of nutrients will be conducted to ensure compliance with the permit.

The Division appreciates the cooperation and assistance of Mr. Walker during the inspection and the Town's continues efforts to comply with its NPDES permit

requirements. If you have any questions or comments with regard to the inspection please contact Mr. Eddy Bouzeid at (901) 371-3023 or eddy.bouzeid@tn.gov.

Sincerely,

A handwritten signature in black ink that reads "Joellyn Brazile". The signature is written in a cursive style with a large initial "J" and "B".

Joellyn Brazile
Environmental Program Manager
Division of Water Resources

Enclosures: Compliance Inspection Report, Photographs

cc: TDEC/DWR/NCO, Enforcement & Compliance,
TDEC/DWR/MEFO – File
Mark Walker, Munford Certified Operator



TDEC - Division of Water Resources

ICIS NPDES Facilities Inspection Report

Facility Data

NPDES ID: TN0062499 Facility Site Name: Munford Sewer Department Lagoon Address: 1397 Munford Avenue, Munford, Tipton County, Tennessee Permit Eff. Date: Dec 1, 2011 Permit Exp Date: Sep 30, 2015 SIC Code:

Compliance Monitoring Information

Compliance Monitoring Activity Name: Compliance Evaluation (non-sampling) (CEI) * If Bio Monitoring is selected above, select the method used: Compliance Monitoring Activity: Evaluation

Compliance Monitoring Dates/Times

Entry Date/Time (mm/dd/yyyy hh:mm): 3/11/2015 11:00 Exit Date/Time (mm/dd/yyyy hh:mm): 3/11/2015 14:30

Facility Representatives

Mark Walker (901) 837-5974 / Certified Operator On-Site Representative(s) Title, Phone Number Dwayne Cole (901) 837-0171 / Mayor Responsible Official(s), Title, Phone Number

Statute and Section Information

Federal Statute: CWA - Clean Water Act State Statute: Tennessee Water Quality Control Act Programs: NPDES- Base Program (Limits, Reporting, & Schedule)

Compliance Monitoring Reason: Core Program

Compliance Monitoring Agency Type: State Agency Name: TDEC - DWR

Did EPA assist/ Inspection? No Time Physically conducting activity: Days: 1 Hours:

Inspection Type: State Compliance Monitoring Action Outcome:

Lead Agency: State Compliance Monitoring Rating Code:

If Joint Inspection, what was the purpose of the other party?

Areas Evaluated During Inspection (Check only those areas evaluated)

Table with 3 columns and 5 rows of evaluation areas: Permit, Records / Records, Facility Site Review, Effluent / Receiving Waters, Flow Measurement, Self - Compliance Program, Compliance Schedule, Laboratory, Operations & Maintenance, Sludge Handling / Disposal, Pretreatment, Pollution Prevention, Storm Water, Combined Sewer Overflow, Sanitary Sewer Overflow.

Compliance Monitoring Summary

See attached inspection report and/or letter.

EPA and State Representatives

Inspector's Signature: [Signature] TDEC/DWR/MEFO (901) 371-3023 Agency / Office / Phone Mar 19, 2015 Date

Manager's Signature: [Signature] TDEC/DWR/MEFO (901) 371-3025 Agency / Office / Phone Mar 19, 2015 Date

(Note: This form can only be printed to an XPS document, then saved for later use.)

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: Munford Sewer Department Lagoon	NPDES Tracking Number: TN0062499
Permit Effective Date: December 1, 2011	Permit Expiration Date: September 30, 2015
Date and Time of Inspection: 3/11/2015	Inspector Name: Eddy Bouzeid

Official Contact Person Name: Mark Walker, Munford Certified Operator	
Address: 1397 Munford Avenue, Munford, TN 38058	Phone Number: (901) 837-5974
	Email: mwalker@munford.com

Summary of Findings and Comments

On Wednesday, March 11, 2015, Eddy Bouzeid with the Division of Water Resources, Memphis Environmental Field Office (DWR/MEFO), conducted a Compliance Evaluation Inspection (CEI) at the Munford Sewer Department Lagoon located in Munford, Tipton County, Tennessee. He met with Mr. Mark Walker, the certified wastewater operator, and reviewed the treatment system's monitoring records and discussed its self-monitoring program. Afterwards, Mr. Bouzeid and Mr. Walker inspected the treatment system. The following is a summary of the findings and observations:

I. Permit

The NPDES permit for the Munford Sewer Department Lagoon with tracking number TN0062499 expires on September 30, 2015. A copy of the NPDES permit was in a binder at the facility's laboratory.

The NPDES permit authorizes the discharge of treated domestic wastewater to the Mississippi River at mile 761.

The design capacity of the treatment system is 2 Million Gallons per Day (MGD). From January 2013 through February 28, 2015, the average effluent flow from the treatment system was 1 MGD and the maximum flow was 2.6 MGD, recorded in December 2013.

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 past two years were reviewed and appeared to be complete.

III. Facility Site Review

The Munford treatment system consists of a multi-cellular aerated lagoon. A total of 14 floating brush aerators are installed at the plant. Nine aerators are designated for the complete mix cell, two aerators are designated for each of the two partial mix cells, and one aerator is for the polishing cell. All aerators were operating properly at the time of the inspection except for one. One aerator in the partial mix cells was down awaiting repair work. There was no duckweed in the lagoon cells (photo 1). From the polishing cell, the effluent is chlorinated using sodium hypochlorite, than pumped approximately 13 miles to the Mississippi River.

The Munford treatment system had no exceedances of its permit limits for the period from January 2013 through February 2015.

IV. Effluent/Receiving Waters

There was a discharge at the time of the inspection. The effluent in the discharge pipe from the lagoon was slightly green (photo 2) and the odor at the plant was minimal.

The elevated water in the Mississippi River, as well as the access fields to the outfall being under water, prohibited the inspection of the NPDES sign as well as the discharge pipe into the Mississippi River. Mr. Walker provided Mr. Bouzeid with a photo of the sign (photo 3) taken in December 2014.

A duplicate sign was also posted on the fence at the entrance of the facility (photo 4). The information on the sign was correct as required by the permit.

V. Flow Measurement

The lagoon has digital flow measurement devices for the influent and effluent. The influent digital flow meter was functioning at the time of the inspection. The device is calibrated annually by an independent contractor. A certificate of calibration was available at the facility. The effluent digital flow meter is fairly new. The device was installed in March 2014 (photo 5). However, the effluent device was not functioning properly at the time of the inspection. According to Mr. Walker, the recent inclement weather had apparently caused the device to malfunction. Mr. Walker stated that the device was still under warranty and that the manufacturer would be sending a technician to repair/recalibrate the meter. At the time of the inspection, Mr. Walker was utilizing the time run by the two discharge pumps to calculate the effluent flow.

VI. Self-Compliance Program

Mr. Kenny Tamboli, Munford's laboratory technician, collects composite samples (aliquot samples) of the influent and grab samples of the effluent for analysis as mandated by its NPDES permit. The analyses for BOD, settleable solids, total suspended solids and E. Coli, are conducted on site except for the nutrient constituents which are shipped to ETC Laboratory in Memphis, Tennessee.

Dissolved oxygen (DO), temperature and pH are effluent parameters routinely measured by Mr. Tamboli at the time of sample collection. The BOD effluent sample is collected before disinfection to eliminate the need to seed the sample prior to being analyzed.

A review of the chain-of custodies revealed that the samples shipped to ETC in the cooler were maintained below the 6 degrees Celsius as required by 40 CFR, Part 136.

The nutrient constituents, total nitrogen (TN) and total phosphorous (TP), were being collected and analyzed semi-annually. Mr. Bouzeid advised Mr. Walker and Mr. Tamboli that the permit requires that these constituents be monitored quarterly. Mr. Walker informed Mr. Bouzeid that it was an operator oversight and that the monitoring of the TN and TP will be conducted quarterly.

VII. Compliance Schedule

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

VIII. Laboratory

A Standard Operating Procedure (SOP) for field parameter measurement and laboratory analysis of samples was available at the facility. The SOP was being modified to comply with EPA 40 CFR Part 136. The modified SOP would encompass: sampling procedures; instructions on proper calibration of field equipment; QC procedures for equipment calibration; and QC procedures for lab analysis conducted at the plant. Mr. Walker informed Mr. Bouzeid that Mr. Dwayne Cullpepper, with the Tennessee Association of Utility Districts (TAUD), was contacted for assistance in conducting the QC procedures.

Calibration of the pH and DO meters was observed. The calibration logs were also inspected and the calibrations were properly documented. Two buffers (7 and 10) were being utilized in the calibration of the pH meter. Mr. Bouzeid informed Mr. Walker that a review of the MORs revealed that the actual pH results were between 6.4 and 7.9 for the evaluation period from January 2013 through February 2015. Since several pH readings were reported at or below 7.0, it is recommended that a 3 point calibration (buffer 4) be utilized to bracket readings at or below 7.0.

The DO meter was calibrated according to the instructions noted in the manufacturer's manual.

IX. Operations and Maintenance

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

X. Sludge Handling/Disposal

The Munford treatment system consists of aerated lagoon cells which should not generate a significant amount of sludge for several years. According to Mr. Walker, the sludge level is measured biannually. The last measurement was in 2013 and the sludge level was determined to be approximately one foot thick which is normal for this treatment system. The BOD and TSS concentrations were within permit limits and these two parameters are typical indicators if sludge build-up becomes a concern.

Photographic Log



Client or Facility Name: Munford Sewer Department Lagoon		Site Location: Munford, Tipton County	Tracking No.: TN0062499
Photo No. 1	Date 3-11-2015		
Description The aerated lagoon is shown in this photo. No duckweed was observed.			

Photo No. 2	Date 3-11-2015	
Description Effluent from the aerated lagoon was slightly green in color.		

Photographic Log



Client or Facility Name:		Site Location:	Tracking No.:
Munford Sewer Department Lagoon		Munford, Tipton County	TN0062499
Photo No.	Date		
3	3-11-2015		
Description			
Sign at the outfall provided by Mr. Walker			

Photo No.	Date		
4	3-11-2015		
Description			
Sign at the entrance of the facility			

Photographic Log

Client or Facility Name: Munford Sewer Department Lagoon		Site Location: Munford, Tipton County	Tracking No.: TN0062499
Photo No. 5	Date 3-11-2015		
Description Digital flow meter for the effluent.			