

**United States Environmental Protection Agency Region 4**

Water Protection Division  
NPDES Permitting & Enforcement Branch  
61 Forsyth Street, SW  
Atlanta, Georgia 30303



**Compliance Evaluation Inspection Report**

Copiah County Industrial Park

NPDES Permit No. MS0032921

**Facility Address:**

US Highway 51 North  
Gallman, MS 39083

**Inspection Date:**

8/4/2021

**Inspectors:**

Tristan Odekirk, Environmental Engineer, EPA Region 4  
Richard Elliot, P.E., Environmental Engineer, EPA Region 4

Rusty Lyons, MDEQ

**Inspection Report Prepared by:**

Tristan Odekirk  
September 9, 2021

**Project ID: CV-MS0032921-08-04-2021**

## Approval Sheet

Title: Compliance Evaluation Inspection Copiah County Industrial Park

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CASTILLO

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Date

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## I. INTRODUCTION

On August 4, 2021, representatives of the United States Environmental Protection Agency, Region 4 and the Mississippi Department of Environmental Quality (MDEQ) conducted a Compliance Evaluation Inspection (CEI) on the Copiah County Industrial Park Wastewater Treatment Plant (WWTP), owned and operated by the Copiah County Board of Supervisors. MDEQ is authorized to administer the National Pollutant Discharge Elimination System (NPDES) program pursuant to Section 402 of the Clean Water Act (CWA), 33 U.S.C. § 1342, and issues NPDES permit number MS0032921 to the facility and its sewer collection system. The overall objective of these CEIs was to evaluate the condition and operational performance the WWTP and offer compliance assistance as needed.

Participants in the inspection included:

| <u>Name</u>     | <u>Position</u>                         | <u>Phone Number</u> |
|-----------------|-----------------------------------------|---------------------|
| Tristan Odekirk | EPA, Region 4 Inspector                 | 404-562-9295        |
| Richard Elliott | EPA, Region 4 Inspector                 | 404-562-8691        |
| Russel Lyons    | MDEQ, contractor                        | 601-572-7783        |
| Jason Hilliard  | Copiah County Industrial Park, Operator |                     |

## II. INSPECTION PROCEDURES

This facility was targeted for inspection because it has been in Significant Non-Compliance (SNC) with its effluent parameters for 11 of the last 12 quarters. The parameters of concern are Total Nitrogen, Total Suspended Solids (TSS), Ammonia, E. Coli and Biochemical Oxygen Demand (BOD<sub>5</sub>). The overall objective of this CEI was to evaluate the cause(s) of these violations and to evaluate compliance with the other requirements of the NPDES Permit. Specific tasks included conducting an opening conference, interview the operators, reviewing facility records, and conducting a site visit of the WWTF and an closing conference.

## III. FACILITY DESCRIPTION

The Copiah County Industrial Park is located in US Highway 51 North Gallman, MS, and treats industrial wastewater (process and non-process). The facility has a design capacity of 0.3 MGD with the following treatment units: a screening headworks, two aeration basins, and a chlorine contact chamber. Wastewater enters the facility into a screening headworks. A comminutor removes debris to drying beds. After dosing with lime, wastewater is pumped to an aerator. From one aerator, waste sludge is pumped to the second aerator which is used as storage. After secondary clarification water is disinfected in a contact chamber. Following chlorination, the water passes through a cascade aerator and exits the facility. Inspectors toured and observed all treatment units. Sludge is disposed at a landfill.

The treatment plant serves three sites, including a poultry hatchery and a commercial food store. The effluent discharges into an unnamed tributary of Copiah Creek, a traditional navigable water of the U.S.

## **IV. FIELD EVALUATION**

### **1. Permit**

The permit became effective February 5, 2019 and expires January 31, 2024. The facility has experienced difficulty with consistently meeting the permit effluent limits for several parameters. EPA verified the permit information regarding the name, description of the facility, location of the permitted outfall, and the location of the receiving waters.

### **2. Records/Reports**

Discharge Monitoring Reports (DMRs) and records were checked for agreement with NPDES self-monitoring program requirements regarding sampling documentation, equipment calibration, and reporting of parameter concentrations and loadings. The self-monitoring records, including the chain of custody records, calibration sheets, laboratory bench sheets, and commercial laboratory results, were maintained for a minimum of three years. Spot checking of NPDES monitoring data elements was conducted and the data reviewed was found to be consistent and accurately reported.

### **3. Operation & Maintenance**

The facility is operated by a class 4 operator. The operator is present in the facility only 3 days a week.

#### *Headworks*

Water enters the facility through an old, now inoperable lift station (Photo 1) which, at the time of inspection, was filled with trash and debris. From the lift station the water is then screened (photo 2). EPA observed inoperable drying beds with plants overgrown (Photo 3), and water bypassed screening. Lime was injected to the water (Photo 4) before it was sent to a new pump station (Photo 5).

#### *Aeration tank 2*

At the time of the inspection, only aeration tank 2 was operational (Photo 6). The aeration tank influent was dark reddish-brown color (Photo 7). The aeration mixer was missing paddles (Photo 8). The secondary clarifier influent had a significant amount of trash and vegetative growth (Photo 9). The clarifiers weirs were overgrown with algae. Maintenance equipment was strewn about the walkway (Photo 10).

#### *Aeration tank 1*

Aeration tank 1 (Photo 11) is used as storage for waste sludge from aeration tank 2. When wasting is needed sludge is routed from aeration tank 2, through the new pump station, to aeration tank 1. Water in aeration tank 1 is brown and the tank has heavy vegetative growth (Photos 12 and 13). Water in the clarifier has significant algae growth (Photo 14).

#### *Chlorine contact chambers*

Chlorine contact chambers had significant solids and foam (Photos 15, 16, and 17). Using an on-site sludge judge the operator showed that sludge depth reached at least 2 feet in the chlorine contact chamber (Photos 18 and 19). SO<sub>2</sub> is added to the effluent for dechlorination.

#### **4. Sludge Handling**

Sludge is periodically pumped into aerator #1 for stabilization. When the aerator is full a vacuum truck is used to transport waste sludge to a landfill.

#### **5. Sampling/Laboratory**

All NPDES required samples are collected by the operator. All laboratory analyses are conducted by a commercial laboratory:

Waypoint Analytical  
235 Highpoint Dr  
Ridgeland, MS 39157  
601-957-2676

The commercial laboratory was not evaluated.

#### **6. Flow Measurement**

Flow is measured by a 22-1/2° V-notch weir (Photos 20). No staff gauge was available onsite for water flow measurement.

#### **7. Effluent and Receiving Waters**

Following the plant's V-notch weir, effluent goes through cascade aeration before being discharged through outfall 001. Dark reddish-brown coloration, foam, and solids were visible in the effluent chamber (Photo 21).

### **V. RECOMMENDATIONS**

As described previously, the operation and maintenance of the plant need significant improvements. EPA recommendations are as follow:

- a. The headworks and the old lift station should be cleaned of debris and trash.
- b. The screening device in the headworks should be repaired as soon as possible.
- c. Plant growth on aeration tanks should be removed.
- d. Weirs on aeration tanks should be cleaned.
- e. Sludge should be removed from the chlorine contact basin.
- f. Install measurement gauge on effluent weir for accurate flow measurement and calibrate annually.

### **ATTACHMENTS**

#### **1. Photographic Log**

## **Photographic Log**



*Photo 1: Old Influent lift station. Inoperable and filled with trash and debris.*



*Photo 2: Facility headworks. Area is overgrown and cleaning mechanism inoperable.*



*Photo 3 :Overgrown drying beds.*



*Photo 4: Lime dosing following headworks.*



*Photo 5: New pump station.*



*Photo 6: Aeration tank 2 from new pump station.*



*Photo 7: Influent pipe from pump station to aeration tank 2.*



*Photo 8: Aerator in aeration tank 2. Return sludge pipe.*



*Photo 9: Suspended trash and vegetative growth in aeration tank 2.*



*Photo 10: Water hose laid out on aeration tank 2 walkway.*



*Photo 11: Aeration tank 1 and manholes leading to chlorine contact chambers.*



*Photo 12: Heavy vegetative growth and water coloration in aeration tank 1.*



*Photo 13: Vegetative growth and aerator in aeration tank 1.*



*Photo 14: Vegetative and algae growth in aeration tank 1.*



*Photo 15:Chlorine contact chamber 1.*



*Photo 16: Foam and solids after chlorine contact chamber 1.*



*Photo 17: Solids after chlorine contact chamber 2.*



*Photo 18: Sludge judge from chlorine contact chamber 1.*



*Photo 19: Sludge judge from chlorine contact chamber 2.*



*Photo 20: Effluent v-notch weir.*



*Photo 20: Effluent v-notch weir. Solids visible in effluent.*

END OF REPORT