

**CLEAN WATER ACT INVESTIGATION REPORT  
U.S. ENVIRONMENTAL PROTECTION AGENCY  
REGION 5**

**Purpose:** Compliance Investigation

**Address:** Emerald BioEnergy  
2279 Co Rd 156,  
Cardington, Ohio 43315

**NPDES Permit Number:** OH0142492

**Date of Investigation:** March 7, 2023

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## **I. INTRODUCTION**

The purpose of this report is to describe, evaluate, and document Emerald BioEnergy's corrective actions as a response to the December 24, 2022, spill.

## **II. BACKGROUND**

The Emerald BioEnergy facility (Facility) is located at 2279 Co Rd, Cardington, Ohio 43315. The Facility is covered under the National Pollutant Discharge Elimination System (NPDES) Permit No. OH0142492, which has an effective date of May 1, 2021, and an expiration date of April 30, 2026.

## **III. INVESTIGATION ACTIVITY SUMMARY**

*The following information was provided to U.S. EPA representatives by Emerald BioEnergy staff during an EPA site visit on March 7, 2023:*

On December 24, 2022, an unauthorized release of digestate occurred. The unauthorized release entered a neighboring residential property and an unnamed tributary to the Whetstone Creek in Morrow County. The Whetstone Creek and its tributaries/conveyances are Waters of the State of Ohio.

Under normal operations, raw material is trucked in and stored in underground concrete tanks (Photo #1). From there, material would be transferred to the biomass tank before entering the Dual Purpose (DP) tank, where it would remain for up to 120 days. After that, material is transferred to Lagoon 1, on eastern side of Facility, where material is slowly drained into the remaining onsite lagoons.

The release on December 24, 2022, was caused by a malfunction in the Facility's DP Tank, where an internal pipe fell into the liquid causing the liquid to siphon and be released through the gas piping system. An approximate volume of 150,000 gallons of material was released, with 100,000 gallons being contained at the Facility. The rest was discharged to an unnamed tributary prior to entering the Whetstone Creek.

A pond containing the discharge material was created in the northern area of the Facility. Subsurface tiles, that normally drain water to the Whetstone Creek, were cut and sealed. This was done to prevent additional contaminated material from being discharged. Water is slowly pumped from the northern pond, into a sediment trap, to remove material from the water prior to discharging to Whetstone Creek (Photos #11 and #12).

The initial top layer of soil, where the spill occurred, was removed by contractors, and has been placed on the eastern side of Lagoon 1. The eastern side of Lagoon 1 is where all material from the DP Tank is discharged under normal operations (Photo #8). Areas that were contaminated by the spill have been covered with straw matting to help prevent sheet flow and additional material from being transported offsite (Photos #7, #15, and #17).

The process for repairing the damaged dome of the DP tank, along with the clean-up for the spill that occurred on December 24, 2022, has been frequently monitored by the Ohio Environmental

Protection Agency (OEPA). Since the initial spill, OEPA staff have been performing site visits two to three times a week, and were present on-site during U.S. EPA's visit.

The repair to the DP Tank dome was completed over the weekend of March 11-12, 2023, and the Facility is back to full operation.

A visual investigation was performed on the Whetstone Creek both upstream and downstream of the Facility (Photos #19 and #20). Clean-up for the spill and contaminated areas was ongoing and no final date provided at the time of the investigation.