DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Off-site Inspection

P131773402

FACILITY: Meadowbrook Ag-grid, LLC		**SRN / ID:** P1317
LOCATION: 333 E Tupper Lake Road, LAKE ODESSA		**DISTRICT:** Grand Rapids
CITY: LAKE ODESSA		**COUNTY:** IONIA
CONTACT: Abu Akki , Director, Business Development		**ACTIVITY DATE:** 07/31/2024
STAFF: Eric Grinstern	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** Minor
SUBJECT: Scheduled Inspection		
RESOLVED COMPLAINTS:		

FACILITY DESCRIPTION

Meadowbrook Ag-grid is permitted to operate an anerobic digestion facility located at the Meadowbrook Farm. Meadowbrook Farm is located in rural Barry County and has a mailing address of Lake Odessa. The facility will include three anaerobic digestion tanks, a natural gas boiler, a combined heat and power generator (CHP), an upgrader with H2S scrubber, and a backup flare. The facility is proposed to received source separated organic matter (SSOM) and off-site manure to be processed with manure from the farm. Gas generated from the AD process will primarily be used to produce renewable natural gas (RNG) that will be pipeline injected.

The facility is proposed to process manure in Digester 1 and/or Digester 2, while SSOM will be processed in Digester 3. All the digester tanks have a 1.6-million-gallon capacity. The tanks will use ferric chloride to reduce the concentration of H2S in the biogas. Gas from Digester 1 and Digester 2 will be processed in the upgrader, which includes an iron sponge and activated carbon for H2S reduction. Gas from Digester 3 will be sent to the CHP to power the upgrader.

COMPLIANCE EVALUATION

The facility has one permit to install, PTI No. 48-23, which was issued on April 4, 2023. The permit contains the following emission units:

EUGCU Gas cleaning and upgrading unit including an iron sponge, adsorption chiller, and activated carbon media. EUGCU is used to upgrade the raw anaerobic biogas (collected from either the digesters or lagoon) to meet pipeline specifications. Following H2S removal, the biogas will be injected into the pipeline and sold as renewable natural gas.

EUFLARE One digester gas flare used as backup for EUGCU. The flare is capable of burning up to 700 scfm, giving a heat input capacity of 27.6 MMBtu/hr when using the estimated higher heating value of the biogas of 656.5 Btu/scf.

EUBOILER Natural gas-fired boiler used to provide heat to the digesters when additional heat is necessary. Maximum heat input: 5 MMBTU/hr.

EUCHP **Combined heat and power (CHP) unit with a maximum heat input of 4.95 MMBTU/hr. The CHP unit is used to supply electricity to the gas upgrading unit, and any excess electricity will be sent off-site to the electrical grid.**

The CHP is subject to the applicable requirements of Subpart JJJJ and Subpart ZZZZ.

EUGCU and EUFLARE require the permittee, within 90 days of permit issuance, to submit, implement, and maintain a nuisance minimization plan for odors.

The facility submitted an approved plan on June 30, 2023.

Staff contacted the facility, Abbu Akki, Director of Business Development, on July 13, 2024, regarding the status of the facility. Mr. Akki stated that they have not begun construction, and were working on the closing for the facility, which is scheduled to be completed in October 2024. AQD Staff subsequently informed Mr. Akki of the requirement to begin construction within 18 months of permit issuance, with the possibility of seeking an extension. Mr. Akki acknowledge the requirement.

AQD staff conducted an evaluation of the facility from the public roadway on July 30, 2024. Staff did not observe any construction activity associated with the proposed anaerobic digestion facility.

CONCLUSION

Construction has not begun on the facility. The facility will be scheduled for an inspection in FY25.

NAME Eric Grinstern DATE 09/05/2024 SUPERVISOR HH