

Guidance on permitting Anaerobic Digesters & MMP Requirements

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Regulations & Policies of Community-Based Anaerobic Digesters

- Inputs
- Waste conversion processes
- Post digestion products
- Post digestion nutrients
- Post digestion liquids

Applicable DNR Regulations

- Iowa Administrative Code, Chapter 22, Air Quality Permits are necessary for new or existing stationary sources
- Iowa Administrative Code, Chapter 65, Animal Feeding Operations
- Code of Iowa 459.312 – Manure management plan requirements
- Code of Iowa 459.206 – Applies to qualified confinement feeding operations - manure storage structure must employ bacterial action & aeration equipment

Air Quality Permits for an Anaerobic Digester

- A digester located and operated by an AFO would be exempt from AQ permitting requirements
- For non-AFO digesters with emission sources venting to the atmosphere, the following may require permits
 - Flares
 - Electric pumps
 - Emergency generators
 - Compressors
 - Pressure Swing Absorber (clean up of methane)

If an AFO installs a digester...

- It will be regulated as an AFO and permitted as an animal feeding operation structure
- If it accepts waste from industrial organic source, special requirements regarding storage and nutrient application will apply

A methane production facility not located at an AFO

- Is considered an industrial operation
- No minimum separation distance requirements apply for the process
- No wastewater construction permit is necessary for pretreatment prior to discharge to another permitted facility
- Manure is accepted & stored in closed containers - not open to atmosphere

However,

- If the wastewater is discharged to a waterway, a National Pollutant Discharge Elimination System (NPDES) permit is required
- Storing treated process water in an earthen basin will need a construction permit

Post-digestion solid material

- If materials returned to AFO, it may be land applied if it is accounted for in the MMP
 - Nutrient analysis of material is necessary
- Produced as a fertilizer/soil amendment
 - Registration & approval from IDALS (under Code of Iowa Chapter 200)

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