

# Formaldehyde Emissions from Landfill Gas Fired Internal Combustion Engines

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- Past Assumptions
- Stack Testing
- Stack Testing Results
- Considerations
- Actions
- Steps Forward

# Past Assumptions

Sources of emission factors for  
combustion of landfill gas

Previous permitting requirements

A permit was approved with formaldehyde emission limits and stack testing requirements

# Stack Testing Results

Approximately half of the facilities in Michigan have completed stack testing

Stack testing results are consistent

## Considerations based on stack test results:

- Toxic Air Contaminant Emissions
- Hazardous Air Pollutant Emissions
- Prevention of Significant Deterioration  
Applicability

## Air Toxics:

- Reconsidered the formaldehyde screening levels

## Formed a workgroup:

- Two objectives
- Included industry stakeholders and Air Quality Division Staff

# Steps Moving Forward

Final Report for Replacement of Reciprocating Internal Combustion Engines at Landfill Gas-to-Energy Facilities, which includes:

- Information on engine replacement
- Information on formaldehyde emissions and how to address through permitting
- Future stack testing requirements for formaldehyde
- Existing versus new sources
- New permit template



# Questions/Comments?

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Permit Section

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