July 26, 2023

EGLE – Air Quality Division
Saginaw Bay District Office
401 Ketchum Street, Suite B
Bay City, MI 48708

RE: Renewable Operating Permit Application - MI-ROP-N5985-2019
Whitefeather Landfill - SRN N5985
Fed Ex Tracking No. 7728 5817 5809

Republic Services of Michigan IV, LLC. (Republic) respectfully submits this Renewable Operating Permit (ROP) application for the Whitefeather Landfill in Pinconning, Michigan.

Included in this application package are all required documents for an administratively complete ROP renewal package including:

- All required EGLE ROP Renewal Forms (with Responsible Official Certification)
- Existing ROP mark-up for requested revisions

One (1) hard copy with the original signature of the Responsible Official is included with this submittal. A copy of this renewal package is also being submitted electronically. If you have any questions, please contact Benjamin Kotrba of Environmental Information Logistics (EIL), LLC at (989) 415-3741 or the undersigned at (810) 655-6906.

Sincerely,
Republic Services of Michigan IV, LLC

Robb Moore

Robb Moore, P.E.
Environmental Manager

Attachment: ROP Renewal Application

Cc: Dana Oleniacz – EIL, LLC (Electronically)
Benjamin Kotrba – EIL, LLC (Electronically)

EGLE

RENEWABLE OPERATING PERMIT
RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at http://michigan.gov/air (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates").

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN	SIC Code	NAICS Code	Existing ROP Number	Section Number (if applicable)
N5985		562212	MI-ROP-N5985-2019	

Source Name
Whitefeather Landfill

Street Address
2401 E. Whitefeather Road

City	State	ZIP Code	County
Pinconning	MI	48650	Bay

Section/Town/Range (if address not available)

Source Description
The Whitefeather Landfill is an existing Type II solid waste disposal facility which began accepting waste in 1991

☐ Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.

OWNER INFORMATION

Owner Name	Section Number (if applicable)
Republic Services of Michigan, LLC	

Mailing address (☒ check if same as source address)
2401 E. Whitefeather Road

City	State	ZIP Code	County	Country
Pinconning	MI	48650	Bay	USA

☐ Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.

SRN: N5985	Section Number (if applicable):

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.

CONTACT INFORMATION

Contact 1 Name	Title			
Robb Moore	Environmental Manager			
Company Name & Mailing address (☐ check if same as source address)				
Republic Services of Michigan, 2361 W. Grand Blanc Road				
City	State	ZIP Code	County	Country
Grand Blanc	MI	48439		USA
Phone number		E-mail address		
810-655-6906		RMoore@republicservices.com		

Contact 2 Name (optional)	Title			
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name	Title			
Richard Rolf	General Manager			
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
	MI			
Phone number		E-mail address		
810-768-2232		RRolf@republicservices.com		

Responsible Official 2 Name (optional)	Title			
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

☐ Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

SRN: N5985	Section Number (if applicable):

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.	
☒ Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	☐ Compliance Plan/Schedule of Compliance
☒ Mark-up copy of existing ROP using official version from the AQD website (required)	☐ Stack information
☐ Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	☐ Acid Rain Permit Initial/Renewal Application
☐ Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	☐ Cross-State Air Pollution Rule (CSAPR) Information
☐ MAERS Forms (to report emissions not previously submitted)	☐ Confidential Information
☐ Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	☒ Paper copy of all documentation provided (required)
☐ Compliance Assurance Monitoring (CAM) Plan	☒ Electronic documents provided (optional)
☐ Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	☐ Other, explain:

Compliance Statement	
This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will meet in a timely manner applicable requirements that become effective during the permit term.	☒ Yes ☐ No
The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.	
If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.	

Name and Title of the Responsible Official (Print or Type)

Richard Rolf, General Manager

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.

Signature of Responsible Official	**Date**
	7/24/23

SRN: N5985	Section Number (if applicable):

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

C1.	Actual emissions and associated data from **all** emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	☐ Yes ☒ No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	☐ Yes ☒ No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	☐ Yes ☒ No ☐ Yes ☐ No
C4.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NOx, PM10, PM2.5, SO_2, VOC, lead) emissions? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No, criteria pollutant potential emission calculations do not need to be included.	☐ Yes ☒ No
C5.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No, HAP potential emission calculations do not need to be included.	☐ Yes ☒ No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	☐ Yes ☒ No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?	☐ Yes ☒ No ☐ Yes ☒ No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes, identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible	☐ Yes ☒ No ☐ Yes ☐ No ☐ ☐
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes, then a copy must be submitted as part of the ROP renewal application.	☐ Yes ☒ No
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	☐ Yes ☒ No

☐ Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable):

PART D: PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNIT INFORMATION

Review all emission units at the source and answer the question below.

D1. Does the source have any emission units that do not appear in the existing ROP but are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules? If Yes, identify the emission units in the table below. ☒ Yes ☐ No

If No, go to Part E.

Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either Part G or H of this application form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).

Emission Unit ID	**Emission Unit Description**	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]	**Rule 201 Exemption Rule Citation** [e.g. Rule 282(2)(b)(i)]
EUCOLDCLEANER	Cold cleaner for parts washer	R 336.1281(2)(h)	R 336.1212(4)(b)
EUPROPANEHEATERS	Multiple propane fired space heaters and hot water heater for heating buildings < 50 mmbtu	R 336.1282(2)(b)(i)	R 336.1212(4)(c)
EUPROPANETANKS	Five (5) propane storage tanks: Two (2) - 1,000 gallon, Two (2) - 500 gallon and One (1) - 375 gallon.	R 336.1284(2)(b)	R 336.1212(4)(d)
PORTTORCHCUTS	Two (2) portable cutting torches for equipment repair and maintenance.	R 336.1285(2)(j)(i)	R 336.1212(4)(e)
EULEACHATETANKS	Two (2) 60,000 gallon above-ground leachate storage tanks	R 336.1291	R 336.1212(4)(i)
EUUSEDOILTANK	One (1) 500 gallon used oil tank	R 336.1284(2)(i)	R 336.1212(4)(d)
EUDIESELTANKS	Five (5) 1,000-gallon diesel tanks	R 336.1284(i)	R 336.1212(4)(d)
EUDIESELTANKS2	One (1) mobile diesel tank (2,000-gallon)	R 336.1284(i)	R 336.1212(4)(d)
EULUBEOILTANKS	Two (2) 500-gallon lube oil tanks	R 336.1212(4)(d)	R 336.1284(2)(i)
EUDIESELEXHAUSTFUEL	Three (3) DEF Storage Tanks: Two (2) 250 gallon, one (1) 300 gallon.	R 336.1284(i)	R 336.1212(4)(d)
EUGASOLINETANK	One (1) Gasoline Storage Tank (300 gallons)	R 336.1284(i)	R 336.1212(4)(d)

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part D. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable):

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to **all** emission units and **all** applicable requirements in the existing ROP.

E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? If Yes, identify changes and additions on Part F, Part G and/or Part H.	☐ Yes ☒ No
E2. For each emission unit(s) identified in the existing ROP, all stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were not reported in the most recent MAERS reporting year? If Yes, identity the stack(s) that was/were not reported on applicable MAERS form(s).	☐ Yes ☒ No
E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? If Yes, complete Part F with the appropriate information.	☐ Yes ☒ No
E4. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form.	☐ Yes ☒ No

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable):

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to **all** emission units with PTIs. Any PTI(s) identified below must be attached to the application.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. If No, go to Part G. ☐ Yes ☒ No

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (*Include Process Equipment, Control Devices and Monitoring Devices*)	Date Emission Unit was Installed/ Modified/ Reconstructed

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. ☐ Yes ☐ No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. ☐ Yes ☐ No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identity the stack(s) that were not reported on the applicable MAERS form(s). ☐ Yes ☐ No

F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If Yes, describe the changes on an AI-001 Form. ☐ Yes ☐ No

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable):

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.

If Yes, identify the emission units in the table below. If No, go to Part H. ☐ Yes ☒ No

Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	**Emission Unit Description – *Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices***	**Date Emission Unit was Installed/ Modified/ Reconstructed**
☐ Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
☐ Rule 287(2)(c) surface coating line		
☐ Rule 290 process with limited emissions		

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable):

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes	☐ No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☒ Yes	☐ No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes	☒ No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☒ Yes	☐ No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes	☒ No
H6. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes	☒ No
H7. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes	☒ No

SRN: N5985	Section Number (if applicable):

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☒ Yes ☐ No

A new rule has been promulgated, 40 CFR, Part 62, Subpart OOO. The specific requirement is 40 CFR 62.16714.

H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☐ Yes ☒ No

H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☒ Yes ☐ No

A new rule has been promulgated 40 CFR, Part 62, Subpart OOO. The specific requirement is 40 CFR 62.16716

H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☒ Yes ☐ No

A new rule has been promulgated 40 CFR, Part 62, Subpart OOO. The specific requirements are: 40 CFR 62.16716 and 40 CFR 62.16728.

H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☒ Yes ☐ No

A new rule has been promulgated, 40 CFR, Part 62, Subpart OOO. The specific requirements are 40 CFR 62.16718, and 40 CFR 62.16720.

H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☒ Yes ☐ No

A new rule has been promulgated, 40 CFR, Part 62, Subpart OOO. The specific requirements are 40 CFR 62.16722 and 40 CFR 62.16726.

H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☒ Yes ☐ No

A new rule has been promulgated, 40 CFR, Part 62, Subpart OOO. The specific requirement is 40 CFR 62.16724

PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☐ Yes ☒ No

H16. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below. ☒ Yes ☐ No

40 CFR Part 60 Subpart WWW – New Source Performance Standards for Municipal Solid Waste Landfills is replaced by 40 CFR Part 62, Subpart OOO. All references to Subpart WWW should be removed.

H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below. ☐ Yes ☒ No

☒ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**001

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

This information is required by Article II, Chapter 1, part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Please type or print clearly. Refer to instructions for additional information to complete this form.

	SRN: N5985	Section Number (if applicable):

1. Additional Information ID
AI-

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Whitefeather Landfill was subject to 40 CFR Part 62, Subpart OOO beginning on June 21, 2021. All references to Subpart WWW should be removed.

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RENEWAL APPLICATION OF RENEWABLE OPERATING PERMIT

Prepared for

Energy Developments Pinconning, LLC
2403 East Whitefeather Road
Pinconning, MI 48650

Prepared by

Geosyntec Consultants, Inc.
8217 Shoal Creek Blvd., Suite 200
Austin, TX 78757

July 2023

INTRODUCTION

1.1 Purpose

Enclosed is the renewal application for Renewable Operating Permit (ROP) MI-ROP-N5985-2019, Section 2, issued on February 4, 2019. The ROP consists of two sections, with Republic Services of Michigan IV, LLC – Whitefeather Landfill being subject to Section 1 and Energy Developments Pinconning, LLC being subject to Section 2. The application for renewal of Section 1 of the ROP will be submitted separately by Republic Services of Michigan IV, LLC – Whitefeather Landfill. The ROP expires on February 4, 2024. This document and attachments serve as a timely renewal prior to the August 4, 2023 application due date (six months prior to permit expiration).

1.2 Facility Description

The Whitefeather facility (Site) is owned by Republic Services of Michigan IV, LLC. The facility is located in Bay County near the City of Pinconning. This stationary source includes a Type II, active municipal solid waste landfill (MSW) with an active landfill gas (LFG) collection system, both of which are operated year-round. The collection system is comprised of a series of gas wells, a network of collection piping and headers, condensate drains, one (1) enclosed flare, one (1) open flare, and one (1) Landfill Gas-to-Energy Facility (LFGTE). The LFGTE facility is owned and operated by Energy Developments Pinconning, LLC. All other components of the stationary source are owned and operated by Republic Services of Michigan IV, LLC. Solid waste arrives in a variety of vehicles that potentially generate fugitive dust emissions. The primary standard industrial code is 4953 (Municipal Solid Waste Landfill).

The landfill serves as the final disposal point for general and household waste and inert wastes such as construction and demolition debris, foundry sand, ash, and low-level contaminated soils. The facility also accepts asbestos waste. The solid waste is transported to an area (cell) where it is deposited on the working surface of the landfill. The deposited waste is covered with soil or other Michigan Department of Environment, Great Lakes, and Energy (MDEGLE) alternate daily cover materials (ADCM) daily. When a cell reaches its design capacity, a liner is installed, covering the waste. Natural biological processes occurring in landfills decompose the waste, producing leachate and LFG. Initially, decomposition is aerobic until the oxygen supply within the landfill is exhausted. Anaerobic decomposition of buried refuse creates most of the LFG which consists mainly of methane, carbon dioxide, and a small percentage of non-methane organic compounds (NMOC). The NMOC fraction consists of various organic hazardous air pollutants (HAP), greenhouse gases, and volatile organic compounds (VOC).

The LFG is collected at the Whitefeather Landfill facility by an active gas collection system utilizing a series of vertical extraction wells that are installed into the depths of the landfill refuse, which remove LFG by vacuum applied to the well from a blower. The LFG is then routed to the Energy Developments Pinconning, LLC LFGTE facility for combustion used to generate electricity. Any excess LFG, or when the LFGTE site is down, is routed to the Whitefeather Landfill's open flare. The collection system is periodically modified by adding gas wells and/or

collection piping when sections of the landfill begin to produce significant gas quantities. Whitefeather Landfill's enclosed flare is also present on-site and can be reconnected to the gas collection lines, if necessary.

The two owner and operators subject to the ROP have a contractual agreement in which Whitefeather Landfill sells LFG to Energy Developments Pinconning, LLC. Energy Developments Pinconning, LLC is dependent upon Whitefeather Landfill to provide LFG which is combusted in its two (2) internal combustion engines. The contractual and spatial relationship of the facilities established Whitefeather Landfill and Energy Developments Pinconning, LLC as a single stationary source based on Michigan's Rule 336.1119(r). Formerly, the companies were operating under separately issued ROPs but are now combined into one sectioned ROP due to an Air Quality Division policy change. Energy Developments Pinconning, LLC operated previously under SRN P0437; however, due to the policy change, the facilities were combined under Whitefeather Landfill's SRN N5985.

2. PROPOSED PERMIT UPDATES

2.1 Equipment

Energy Developments Pinconning, LLC's LFGTE facility maintains two (2) internal combustion engines (Caterpillar G3520C) for combusting treated LFG to produce electricity – Emission Unit IDs EUICENGINE1 and EUICEENGINE2. No modifications to these sources are being requested with this permit renewal; see Appendix A for the ROP Mark-up.

No new equipment is being requested for addition to the permit.

2.2 Applicable Regulation Changes

The LFGTE facility is not modifying or installing new air pollution sources; therefore, it is not expected that the permit conditions will change.

2.3 Application Forms

The appropriate MDEGLE ROP Renewal Application Form has been completed and included in this document as Attachment B.

3. EMISSION RATES

3.1 Emission Rate Updates

While the LFGTE facility is not requesting modifications to air pollution equipment, it would like to reconcile minor calculation errors discovered in the Potential to Emit calculations. The following changes were made to the pollutant concentrations in the combusted LFG, emission factors, and engine physical parameters:

- Corrected engines mechanical output rating from 2,242 to 2,223horsepower per engine technical data sheet.
- Corrected LFG Inlet Flow (wet) to engines from 538 standard cubic feet per minute (scfm) to 402 scfm per engine technical data sheet fuel flowrate.
- Sulfur conversion to Sulfur Oxides corrected from 99.7% to 86.1% per AP-42 Table 2.4-3 (IC Engine Control Device) destruction efficiency for non-halogenated species. Previously this calculation was using the destruction efficiency for a Flare.
- Ethyl mercaptan was changed from 2.25 to 2.28 parts per million by volume (ppmv) to match the default value in AP-42 Table 2.4-1.
- Chlorobenzene was changed from 0.254 to 0.25 ppmv to match the default value in AP-42 Table 2.4-1.
- 1,4-dichlorobenzene was changed from 0.213 to 0.21 ppmv to match the default value in AP-42 Table 2.4-1.
- 1,1-Dichloroethene was changed from 0.201 to 0.20 ppmv to match the default value in AP-42 Table 2.4-1.
- 1,2-Dichloroethane was changed from 0.407 to 0.41 ppmv to match the default value in AP-42 Table 2.4-1

Potential to Emit calculations have been included as Attachment C.

3.2 Facility-Wide Emission Rates

Table 1 below shows the facility-wide emission estimates for pollutants being submitted in this permit renewal application.

Table 1. Facility-wide Emission Rates.

Pollutant	Emission Rate (tpy)
Carbon Monoxide	142.31
Nitrogen Oxides	43.12
Particulate Matter 10	6.47
Particulate Matter 2.5	6.47
Sulfur Oxides	21.94
Volatile Organic Compounds	43.12
Total Hazardous Air Pollutants (HAP)	19.74
Max Single HAP (Formaldehyde)	18.33
Formaldehyde	18.33
Carbon Dioxide Equivalence	24,566

4. CLOSING

Enclosed you will find the appropriate application form, required ROP Mark-up with no changes requested, emission calculations, and the Malfunction Abatement Plan (Attachment D; required by ROP Renewal Application Form Part C.9). Please feel free to contact me at (517) 243-3676 or Phil Speeg of Geosyntec Consultants at (804) 971-3340 with any questions or concerns regarding this application.

Respectfully,

Meghan Stackhouse

Senior Environmental Manager

CC: Rocky Tondo (EDL)

Elizabeth Park (EDL)

Taryn Weiner (Geosyntec)

Attachments:

Appendix A: ROP Mark-up

Appendix B: ROP Renewal Application Form

Appendix C: Potential to Emit Calculatios

Appendix D: Malfunction Abatement Plan

APPENDIX A
ROP Mark-up

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

KEEP ALL CONDITIONS
NO CHANGES, ADDITIONS, OR DELETIONS

EFFECTIVE DATE: February 4, 2019

ISSUED TO

Republic Services of Michigan IV, LLC
Whitefeather Landfill

and

Energy Developments Pinconning, LLC

State Registration Number (SRN): N5985

LOCATED AT

2401 East Whitefeather Road, Pinconning, Michigan 48650

and

2403 East Whitefeather Road, Pinconning, Michigan 48650

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N5985-2019

Expiration Date: February 4, 2024

Administratively Complete ROP Renewal Application Due Between
August 4, 2022 and August 4, 2023

This Renewable Operating Permit (ROP) is issued in accordance with and subject to Section 5506(3) of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Pursuant to Michigan Air Pollution Control Rule 210(1), this ROP constitutes the permittee's authority to operate the stationary source identified above in accordance with the general conditions, special conditions and attachments contained herein. Operation of the stationary source and all emission units listed in the permit are subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-N5985-2019

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(5) of Act 451. Pursuant to Michigan Air Pollution Control Rule 214a, the terms and conditions herein, identified by the underlying applicable requirement citation of Rule 201(1)(a), constitute a federally enforceable PTI. The PTI terms and conditions do not expire and remain in effect unless the criteria of Rule 201(6) are met. Operation of all emission units identified in the PTI is subject to all applicable future or amended rules and regulations pursuant to Act 451 and the federal Clean Air Act.

Michigan Department of Environmental Quality

_____

Chris Hare, Saginaw Bay District Supervisor

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AUTHORITY AND ENFORCEABILITY

For the purpose of this permit, the **permittee** is defined as any person who owns or operates an emission unit at a stationary source for which this permit has been issued. The **department** is defined in Rule 104(d) as the Director of the Michigan Department of Environmental Quality (MDEQ) or his or her designee.

The permittee shall comply with all specific details in the permit terms and conditions and the cited underlying applicable requirements. All terms and conditions in this ROP are both federally enforceable and state enforceable unless otherwise footnoted. Certain terms and conditions are applicable to most stationary sources for which an ROP has been issued. These general conditions are included in Part A of this ROP. Other terms and conditions may apply to a specific emission unit, several emission units which are represented as a flexible group, or the entire stationary source which is represented as a Source-Wide group. Special conditions are identified in Parts B, C, D and/or the appendices.

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined, subsumed and/or are state-only enforceable will be noted as such.

In accordance with Section 5507 of Act 451, the permittee has included in the ROP application a compliance certification, a schedule of compliance, and a compliance plan. For applicable requirements with which the source is in compliance, the source will continue to comply with these requirements. For applicable requirements with which the source is not in compliance, the source will comply with the detailed schedule of compliance requirements that are incorporated as an appendix in this ROP. Furthermore, for any applicable requirements effective after the date of issuance of this ROP, the stationary source will meet the requirements on a timely basis, unless the underlying applicable requirement requires a more detailed schedule of compliance.

Issuance of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.

SECTION 1 - REPUBLIC SERVICES OF MICHIGAN IV, LLC WHITEFEATHER LANDFILL

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**

- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**

- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"[2] **(R 336.1301(1))**
    a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate: **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**
    d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EULANDFILL<50	This emission unit is of a landfill which has a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters. Actual non-methane organic compound (NMOC) emissions, based upon Tier 2 testing, are less than 50 megagrams per year. This landfill received a volume expansion (increased the design capacity) permit from the Department of Environmental Quality, since May 30, 1991, therefore making the landfill subject to 40 CFR Part 60, Subpart WWW. .	11/14/1989 10/07/2008	NA
EUOPENFLARE	Open flare is an open combustor without enclosure or shroud. This emission unit is operated as exempt per Rule 285(2)(aa).	11/14/2006	NA
EUENCLOSEDFLARE	An enclosed flare is considered an enclosed combustor which is an enclosed firebox which maintains a relatively constant limited peak temperature generally using a limited supply of combustion air. This emission unit is operated as exempt per Rule 285(2)(aa).	01/01/1997	NA
EUASBESTOS	Any active or inactive asbestos disposal site.	11/14/1989	NA
EUCOLDCLEANER	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979. The cold cleaner is used for degreasing various parts and small equipment and is located in the maintenance garage.	> 1979	FGCOLDCLEANERS

EULANDFILL<50
EMISSION UNIT CONDITIONS

DESCRIPTION

This emission unit is a landfill which has a design capacity greater than 2.5 million megagrams and 2.5 million cubic meters, but actual NMOC emission rate based upon reported Tier 2 test is less than 50 megagrams. This landfill also has received a volume expansion (increased the design capacity) permit from the Department of Environmental Quality since May 30, 1991, therefore making the landfill subject to 40 CFR Part 60, Subpart WWW.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

No pollution control equipment is required by 40 CFR Part 60, Subpart WWW. at this time; however, landfill gas from the landfill is controlled by one open flare and one landfill gas-to-energy facility (owned and operated by Energy Developments Pinconning, LLC - Section 2, formerly SRN P0437). An enclosed flare is on-site and can be reconnected to the gas collection lines if necessary.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee submitted an Odor Management Plan (OMP) for the site and it was approved in April 2008. The permittee shall amend the OMP as changes at the source necessitate. A copy of the amended OMP shall be submitted to the District Supervisor within sixty days of the change. **(R 336.1213(3), R 336.1901)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. Tier 2 or Tier 3 testing, as selected by the permittee, for NMOC emissions shall be performed in accordance with methods outlined in Appendix 5-1. **(40 CFR 60.754)**

2. Tier 2 testing shall be performed at least once every five years. **(40 CFR 60.754)**

3. Tier 3 testing shall be performed once to establish a site-specific methane generation rate constant. **(40 CFR 60.754)**

4. Alternative methods to determine NMOC emissions must have prior approval from USEPA. **(40 CFR 60.754(a)(5))**

5. No less than 30 days prior to any NMOC testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must

submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.7)**

See Appendix 5-1

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. The permittee shall keep a record of the design capacity report for the facility. **(40 CFR 60.758(a))**

2. The permittee shall monitor and record the current amount of solid waste in-place and the year-by-year waste acceptance rate. These records shall be available upon request. **(40 CFR 60.758(a))**

3. The permittee shall calculate the annual NMOC emission rates using methods outlined in Appendix 7-1 or the most recent version of USEPA's Landfill Gas Emissions Model (LandGEM). **(40 CFR 60.754(a)(1))**

4. If the landfill is permanently closed, a closure notification shall be submitted to the District Supervisor within 30 days. **(40 CFR 60.752(b)(1)(ii)(B))**

See Appendix 7-1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be postmarked or received by the appropriate AQD district office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be postmarked or received by the appropriate AQD district office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit an annual NMOC emission rate report to the District Supervisor. This report shall contain an annual or five-year estimate of the NMOC emission rate and all the data, calculations, sample reports, and measurements used to estimate the annual or five-year emissions. **(40 CFR 60.757(b)(1) and (2))**

5. The permittee shall submit any NMOC test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.2001(5))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. If the NMOC emission rate is calculated to be equal to or greater than 50 megagrams per year, the permittee shall install a collection and control system in compliance with 40 CFR 60.752(b)(2). Additionally, within 90 days the permittee shall apply for a revision of this permit to reflect applicable requirements of 40 CFR Part 60, Subpart WWW. **(40 CFR 60.752(b)(1)(ii)(A), R 336.216(2))**

2. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and Subpart WWW, as they apply to this facility. **(40 CFR Part 60, Subparts A & WWW)**

Footnotes:

[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

EUASBESTOS
EMISSION UNIT CONDITIONS

DESCRIPTION

Any active or inactive asbestos disposal at the MSW landfill.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. If the landfill accepts asbestos-containing waste materials from a source covered under 40 CFR 61.149, 40 CFR 61.150, or 40 CFR 61.155, the permittee shall meet the following operational requirements: **(40 CFR 61.154)**
   a. Either there must be no visible emissions to the outside air from any active waste disposal site where asbestos-containing waste material has been deposited, or the requirements of 40 CFR 61.154(c) or (d) must be met. **(40 CFR 61.154(a))**
   b. Unless a natural barrier adequately deters access by the general public, either warning signs and fencing must be installed and maintained as required in 40 CFR 60.154(b), or the requirements of 40 CFR 61.154(c)(1) must be met.
      i. Warning signs must be displayed at all entrances and at intervals of 100m (330ft) or less along the property line of the site or along the perimeter of the sections of the site where asbestos-containing waste material is deposited. The warning signs must:
         a) Be posted in such a manner and location that a person can easily read the legend; **(40 CFR 61.154(b)(1)(i))**
         b) Conform to the requirements of 51cm by 36cm (20in by 14in) upright format signs specified in 29 CFR 1910.145(d)(4) and 40 CFR 61.154(b)(1); **(40 CFR 61.154(b)(1)(ii))**
         c) The permittee shall display the legend in the lower panel with letter sizes and styles of a visibility at least equal to those specified in 40 CFR 61.154(b)(1). Spacing between any two lines must be at least equal to the height of the upper of the two lines. **(40 CFR 61.154(b)(1)(iii))**
      ii. The perimeter of the disposal site must be fenced in a manner adequate to deter access by the general public. **(40 CFR 61.154(b)(2))**
      iii. Upon request and supply of appropriate information, the appropriate AQD District Supervisor will determine whether a fence or a natural barrier adequately deters access by the general public. **(40 CFR 61.154(b)(3))**
   c. Rather than meet the no visible emission requirement of 40 CFR 61.154(a), at the end of each operating day or at least once every 24-hour period while the site is in continuous operation, the asbestos-containing waste material that has been deposited at the site during the operating day or previous 24-hour period shall:
      i. Be covered with at least 15cm (6in) of compacted non-asbestos-containing material, or **(40 CFR 61.154(c)(1))**
      ii. Be covered with a resinous or petroleum-based dust suppression agent that effectively binds dust and controls wind erosion. Such an agent shall be used in the manner and frequency recommended for the particular dust by the dust suppression agent manufacturer to achieve and maintain dust control. Other equally effective dust suppression agents may be used upon prior approval by the appropriate AQD

District Supervisor. For purposes of 40 CFR 61.154(c)(2), any used, spent, or other waste oil is not considered a dust suppression agent. **(40 CFR 61.154(c)(2))**

d. Rather than meet the no visible emission requirement of 40 CFR 61.154(a), use an alternative emissions control method that has received prior written approval by the appropriate AQD District Supervisor according to the procedures described in 40 CFR 61.149(c)(2). **(40 CFR 61.154(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Any segregated area of asbestos or nondegradable material may be excluded from collection if documented as provided under 40 CFR 60.758(d). The documentation shall provide the nature, date of deposition, location, and amount of asbestos or nondegradable material deposited in the area and shall be provided to the AQD upon request. **(40 CFR 60.759(a)(3)(i))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of 5 years. **(R 336.1213(3)(b)(ii))**

1. For all asbestos-containing waste material received, the permittee of the active waste disposal site shall:
   a. Maintain waste shipment records that include the following information: **(40 CFR 61.154(e)(1))**
      i. The name, address, and telephone number of the waste generator; **(40 CFR 61.154(e)(1)(i))**
      ii. The name, address, and telephone number of the transporter(s); **(40 CFR 61.154(e)(1)(ii))**
      iii. The quantity of the asbestos-containing waste material in cubic meters (cubic yards); **(40 CFR 61.154(e)(1)(iii))**
      iv. The presence of improperly enclosed or uncovered waste, or any asbestos-containing waste material not sealed in leak-tight containers; **(40 CFR 61.154(e)(1)(iv))**
      v. The date of the receipt. **(40 CFR 61.154(e)(1)(v))**
   b. As soon as possible and no longer than 30 days after receipt of the waste, send a copy of the signed waste shipment record to the waste generator. **(40 CFR 61.154(e)(2))**
   c. Upon discovering a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received, attempt to reconcile the discrepancy with the waste generator. **(40 CFR 61.154(e)(3)**

2. The permittee shall maintain, until closure, records of the location, depth and area, and quantity in cubic meters (cubic yards) of asbestos-containing waste material within the disposal site on a map or diagram of the disposal area storage. **(40 CFR 61.154(f))**

3. The permittee shall keep readily accessible documentation of the nature, date of deposition, amount, and location of asbestos-containing waste excluded from collection as provided in 40 CFR 60.769(a)(3)(i). **(40 CFR 60.768(d)(2))**

4. The permittee shall keep records of one the following regarding any active disposal site where asbestos containing materials have been deposited:
   a. USEPA Method 22 readings demonstrating no visible emissions from any active disposal site where asbestos containing materials have been deposited. These readings are to be taken for 15 minutes each operating day.
   b. Records of the date asbestos waste is received, the amount and type of material that has been used to cover the asbestos waste, and documentation that the cover material was applied in the frequency required in SC III.1.c. **(40 CFR 61.154(c))**
   c. Records pursuant to an alternative emissions control method that has prior written approval of the AQD District Supervisor as required in SC III.1.d. **(40 CFR 61.154(d))**

   The permittee shall keep all records on file in a format acceptable to the AQD District Supervisor and make them available upon request. **(R 336.1213(3), 40 CFR 61.154)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. Report shall be postmarked or received by the appropriate the AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. For all asbestos-containing waste material received, the permittee of the active waste disposal site shall:
   a. Report in writing to the AQD District Supervisor by the following working day, the presence of a significant amount of improperly enclosed or uncovered waste and submit a copy of the waste shipment record along with the report. **(40 CFR 61.154(e)(1)(iv))**
   b. If a discrepancy between the quantity of waste designated on the waste shipment records and the quantity actually received cannot be reconciled with the waste generator within 15 days after receiving the waste, immediately report in writing to the AQD District Supervisor. **(40 CFR 61.154(e)(3))**

5. The permittee shall notify the AQD Technical Programs Unit and appropriate AQD District Office in writing at least 45 days prior to excavating or otherwise disturbing any asbestos-containing waste material that has been deposited at a waste disposal site and is covered. If the excavation will begin on a date other than the one contained in the original notice, notice of the new start date must be provided to the appropriate AQD District Office at least 10 working days before excavation begins and in no event shall excavation begin earlier than the date specified in the original notification. The notice shall include the following information:
   a. Scheduled starting and completion dates. **(40 CFR 61.154(j)(1))**
   b. Reason for disturbing the waste. **(40 CFR 61.154(j)(2))**
   c. Procedures to be used to control emissions during the excavation, storage, transport, and ultimate disposal of the excavated asbestos-containing waste material. If deemed necessary, the AQD or may require changes in the emission control procedures to be used. **(40 CFR 61.154(j)(3))**
   d. Location of any temporary storage site and the final disposal site. **(40 CFR 61.154(j)(4))**

6. The permittee shall submit to the AQD District Supervisor, upon closure of the facility, a copy of records of asbestos waste disposal locations and quantities. **(40 CFR 61.154(h))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 61 Subparts A and M. **(40 CFR 63, Subparts A and M)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

D. FLEXIBLE GROUP CONDITIONS

Part D outlines terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGCOLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EUCOLDCLEANER

FGCOLDCLEANERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.

Emission Unit: EUCOLDCLEANER

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall not use cleaning solvents containing more than five percent by weight of the following halogenated compounds: methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride, chloroform, or any combination thereof. **(R 336.1213(2))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**

2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
   a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
   b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285((2)r)(iv))**

2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**

3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**

4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia or if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:
   a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**
   b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**

c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1213(3)(b)(ii))**

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**

2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
   a. A serial number, model number, or other unique identifier for each cold cleaner;
   b. The date the unit was installed, manufactured, or that it commenced operation;
   c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h);
   d. The applicable Rule 201 exemption;
   e. The Reid vapor pressure of each solvent used;
   f. If applicable, the option chosen to comply with Rule 707(2).

3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**

4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

E. NON-APPLICABLE REQUIREMENTS

At the time of ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to this stationary source. This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

Emission Unit/ Flexible Group ID	Non-Applicable Requirement	Justification
EULANDFILL<50	40 CFR Part 63, Subpart AAAA (Landfill MACT)	The Landfill has estimated uncontrolled emissions less than 50 megagrams of NMOC per year as determined from Tier 2 NMOC test results. The facility must repeat the Tier 2 landfill gas testing before August 21, 2020, and Subpart AAAA of Part 63 will be revisited for applicability at this time.

APPENDICES

Appendix 1-1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	%	Percent
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO_2	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 2-1. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 3-1. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit, and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 4-1. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit, and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5-1. Testing Procedures

The permittee shall use the following approved procedures, to measure the pollutant emissions for the applicable requirements referenced in EULANDFILL<50.

Tier 2

The permittee shall determine the NMOC concentration using the following sampling procedure. The permittee shall install at least two sample probes per hectare of landfill surface that has retained waste for at least 2 years. If the landfill is larger than 25 hectares in area, only 50 samples are required. The sample probes should be located to avoid known areas of nondegradable solid waste.

The permittee shall collect and analyze one sample of landfill gas from each probe to determine the NMOC concentration using Method 25 or 25C of Appendix A of 40 CFR Part 60. Method 18 of Appendix A of 40 CFR Part 60 may be used to analyze the samples collected by the Method 25 or 25C sampling procedure. Taking composite samples from different probes into a single cylinder is allowed; however, equal sample volumes must be taken from each probe. For each composite, the sampling rate, collection times, beginning and ending cylinder vacuums, or alternative volume measurements must be recorded to verify that composite volumes are equal. Composite sample volumes should not be less than one liter unless evidence can be provided to substantiate the accuracy of smaller volumes. Terminate compositing before the cylinder approaches ambient pressure where measurement accuracy diminishes.

If using Method 18, the permittee must identify all compounds in the sample and, as a minimum, test for those compounds published in the most recent Compilation of Air Pollutant Emission Factors (AP-42), minus carbon monoxide, hydrogen sulfide, and mercury. As a minimum, the instrument must be calibrated for each of the compounds on the list. Convert the concentration of each Method 18 compound to CNMOC as hexane by multiplying by the ratio of its carbon atoms divided by six. If more than the required number of samples is taken, all samples must be used in the analysis.

The permittee must divide the NMOC concentration from Method 25 or 25C of Appendix A of 40 CFR Part 60 by six to convert from CNMOC as carbon to CNMOC as hexane. If the landfill has an active or passive gas removal system in place, Method 25 or 25C samples may be collected from these systems instead of surface probes provided the removal system can be shown to provide sampling as representative as the two sampling probe per hectare requirement. For active collection systems, samples may be collected from the common header pipe before the gas moving or condensate removal equipment. For these systems, a minimum of three samples must be collected from the header pipe. **(40 CFR 60.754(a)(3))**

Tier 3

The site-specific methane generation rate constant shall be determined using the procedures provided in Method 2E of Appendix A of 40 CFR Part 60. The permittee shall estimate the NMOC mass emission rate using **Equation 1** (40 CFR 60.754(a)(1)(i)) or **Equation 2** (40 CFR 60.754(a)(1)(ii)) and using a site-specific methane generation rate constant (k), and the site-specific NMOC concentration as determined in 40 CFR 60.754(a)(3) instead of the default values provided in 40 CFR 60.754(a)(1). The permittee shall compare the resulting NMOC mass emission rate to the standard of 50 megagrams per year. **(40 CFR 60.754(a)(4))**

Appendix 6-1. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N5985-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N5985-2013 is being reissued as Source-Wide PTI No. MI-PTI-N5985-20XX.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	NA	NA	NA

Appendix 7-1. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in EULANDFILL<50.

Default Values

The permittee shall calculate the NMOC emission rate using either **Equation 1** (the equation provided in 40 CFR 60.754(a)(1)(i)) or **Equation 2** (the equation provided in 40 CFR 60.754(a)(1)(ii)). Both equations may be used if the actual year-to-year solid waste acceptance rate is known, as specified in **Equation 1** (40 CFR 60.754(a)(1)(i)), for part of the life of the landfill and the actual year-to-year solid waste acceptance rate is unknown, as specified in **Equation 2** (the equation provided in 40 CFR 60.754(a)(1)(ii)), for part of the life of the landfill. The values to be used in both equations are 0.05 per year for k, 170 cubic meters per megagram for L_o, and 4,000 parts per million by volume as hexane for the C_{NMOC}. For landfills located in geographical areas with a thirty-year annual average precipitation of less than 25 inches, as measured at the nearest representative official meteorological site, the k value to be used is 0.02 per year. **(40 CFR 60.754(a)(1))**

Equation 1

The following equation shall be used if the actual year-to-year solid waste acceptance rate is known. **(40 CFR 60.754(a)(1)(i))**

$$M_{NMOC} = \sum_{i=1}^{n} 2\,k\,L_o M_i \left(e^{-kt_i}\right)\left(C_{NMOC}\right)\left(3.6\times10^{-9}\right)$$

Where:

M_{NMOC} = Total NMOC emission rate from the landfill, megagrams per year

k = methane generation rate constant, year−1

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the ith section, megagrams
t_i = age of the i^{th} section, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane

3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value for M_i if documentation of the nature and amount of such wastes is maintained.

Equation 2

The following equation shall be used if the actual year-to-year solid waste acceptance rate is unknown. **(40 CFR 60.754(a)(1)(ii))**

$$M_{NMOC} = 2L_o R (e^{-kc} - e^{-kt}) (C_{NMOC}) (3.6 \times 10^{-9})$$

Where:

M_{NMOC} = mass emission rate of NMOC, megagrams per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, $year^{-1}$

t = age of landfill, years

C_{NMOC} = concentration of NMOC, parts per million by volume as hexane

c = time since closure, years; for active landfill c = 0 and $e^{-kc} = 1$

3.6×10^{-9} = conversion factor

The mass of nondegradable solid waste may be subtracted from the total mass of solid waste in a particular section of the landfill when calculating the value of R, if documentation of the nature and amount of such wastes is maintained.

Tier 2

The permittee shall recalculate the NMOC mass emission rate using the **Equation 1** or **Equation 2** in **Appendix 7-1** and using the average NMOC concentration from the collected samples (**Tier 2** testing in **Appendix 5-1**) instead of the default value in the equation provided in 40 CFR 60.754(a)(1). **(40 CFR 60.754(a)(3)(i))**

If the resulting mass emission rate calculated using the site-specific NMOC concentration is equal to or greater than 50 megagrams per year, then the permittee shall either comply with 40 CFR 60.752(b)(2) (submit a collection and control system design plan prepared by a professional engineer within 1 year), or determine the site-specific methane generation rate constant and recalculate the NMOC emission rate using the site-specific methane generation rate using the procedure specified in **Tier 3** (40 CFR 60.752(a)(4)). **(40 CFR 60.754(a)(3)(ii))**

If the resulting **Tier 2** NMOC mass emission rate is less than 50 megagrams per year, the permittee shall submit a periodic estimate of the emission rate report as provided in 40 CFR 60.757(b)(1) and retest the site-specific NMOC concentration every 5 years using the methods specified in this section. **(40 CFR 60.754(a)(3)(iii))**

Tier 3

If the Tier 3 NMOC mass emission rate as calculated using the site-specific methane generation rate and concentration of NMOC is equal to or greater than 50 megagrams per year, the permittee shall comply with 40 CFR 60.752(b)(2) (submit a collection and control system design plan prepared by a professional engineer within 1 year). **(40 CFR 60.754(a)(4)(i))**

If the NMOC mass emission rate is less than 50 megagrams per year, then the permittee shall submit a periodic emission rate report as provided in 40 CFR 60.757(b)(1) and shall recalculate the NMOC mass emission rate annually, as provided in 40 CFR 60.757(b)(1) using **Equation 1** or **Equation 2**, and using the site-specific methane generation rate constant (**Tier 3**) and NMOC concentration (**Tier 2**) obtained in 40 CFR 60.754(a)(3). The calculation of the methane generation rate constant (**Tier 3**) is performed only once, and the value obtained from this test shall be used in all subsequent annual NMOC emission rate calculations. **(40 CFR 60.754(a)(4)(ii))**

Calculating expected gas generation flow rates from the landfill

For the purposes of calculating the maximum expected gas generation flow rate from the landfill to determine compliance with 40 CFR 60.752(b)(2)(ii)(A)(*1*), either **Equation 3** or **Equation 4**, below, shall be used. The k and L_o kinetic factors should be those published in the most recent Compilation of Air Pollutant Emission Factors (AP-42) or other site specific values demonstrated to be appropriate and approved by the USEPA, Region V. If k has been determined as specified in 40 CFR 60.754(a)(4), the value of k determined from the test shall be used. A value of no more than 15 years shall be used for the intended use period of the gas mover equipment. The active life of the landfill is the age of the landfill plus the estimated number of years until closure. **(40 CFR 60.755(a)(1))**

If a collection and control system has been installed, actual flow data may be used to project the maximum expected gas generation flow rate instead of, or in conjunction with, **Equation 3** or **Equation 4**. If the landfill is still accepting waste, the actual measured flow data will not equal the maximum expected gas generation rate, so calculations using **Equation 3** or **Equation 4** or other methods shall be used to predict the maximum expected gas generation rate over the intended period of use of the gas control system equipment. **(40 CFR 60.755(a)(1)(ii))**

Equation 3

For sites with unknown year-to-year solid waste acceptance rate:

$$Q_m = 2L_o R (e^{-kc} - e^{-kt})$$

Where:

Q_m = maximum expected gas generation flow rate, cubic meters per year

L_o = methane generation potential, cubic meters per megagram solid waste

R = average annual acceptance rate, megagrams per year

k = methane generation rate constant, $year^{-1}$

t = age of the landfill at equipment installation plus the time the owner or operator intends to use the gas mover equipment or active life of the landfill, whichever is less. If the equipment is installed after closure, t is the age of the landfill at installation, years

c = time since closure, years (for an active landfill c = 0 and $e^{-kc} = 1$)

Equation 4

For sites with known year-to-year solid waste acceptance rate:

$$Q_M = \sum_{i=1}^{n} 2\,k\,L_o\,M_i\left(e^{-kt_i}\right)$$

Where,

Q_M = maximum expected gas generation flow rate, cubic meters per year

k = methane generation rate constant, $year^{-1}$

L_o = methane generation potential, cubic meters per megagram solid waste

M_i = mass of solid waste in the ith section, megagrams

t_i = age of the i^{th} section, years

Appendix 8-1. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

SECTION 2 – ENERGY DEVELOPMENTS PINCONNING, LLC

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**

- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**

- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**

2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**

3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**

4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
   a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
   c. Inspect, at reasonable times, any of the following:
      i. Any stationary source.
      ii. Any emission unit.
      iii. Any equipment, including monitoring and air pollution control equipment.
      iv. Any work practices or operations regulated or required under the ROP.
   d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**

7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**

8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).[2] **(R 336.1370)**

10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:"[2] **(R 336.1301(1))**
    a. A 6-minute average of 20% opacity, except for one 6-minute average per hour of not more than 27% opacity.
    b. A limit specified by an applicable federal new source performance standard.

    The grading of visible emissions shall be determined in accordance with Rule 303.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[1] **(R 336.1901(a))**
    b. Unreasonable interference with the comfortable enjoyment of life and property.[1] **(R 336.1901(b))**

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).[2] **(R 336.2001)**

14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate: **(R 336.1213(3)(b))**
    a. The date, location, time, and method of sampling or measurements.
    b. The dates the analyses of the samples were performed.
    c. The company or entity that performed the analyses of the samples.
    d. The analytical techniques or methods used.
    e. The results of the analyses.
    f. The related process operating conditions or parameters that existed at the time of sampling or measurement.

17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**

19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**

20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**

21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
    a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
    b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
    c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

22. For reports required pursuant to Rule 213(3)(c)(ii), prompt certification of the reports is described in Rule 213(3)(c)(iii) as either of the following: **(R 336.1213(3)(c))**
    a. Submitting a certification by a Responsible Official with each report which states that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.
    b. Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.

23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**

24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**

25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.[2] **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
    a. The applicable requirements are included and are specifically identified in the ROP.
    b. The permit includes a determination or concise summary of the determination by the department that other specifically identified requirements are not applicable to the stationary source.

    Any requirements identified in Part E of this ROP have been identified as non-applicable to this ROP and are included in the permit shield.

27. Nothing in this ROP shall alter or affect any of the following:
    a. The provisions of Section 303 of the CAA, emergency orders, including the authority of the USEPA under Section 303 of the CAA. **(R 336.1213(6)(b)(i))**
    b. The liability of the owner or operator of this source for any violation of applicable requirements prior to or at the time of this ROP issuance. **(R 336.1213(6)(b)(ii))**
    c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**

28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
    a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
    b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
    c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
    d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
    e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**

29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**

31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**

33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

34. A ROP shall be reopened by the department prior to the expiration date and revised by the department under any of the following circumstances:
    a. If additional requirements become applicable to this stationary source with three or more years remaining in the term of the ROP, but not if the effective date of the new applicable requirement is later than the ROP expiration date. **(R 336.1217(2)(a)(i))**
    b. If additional requirements pursuant to Title IV of the CAA become applicable to this stationary source. **(R 336.1217(2)(a)(ii))**
    c. If the department determines that the ROP contains a material mistake, information required by any applicable requirement was omitted, or inaccurate statements were made in establishing emission limits or the terms or conditions of the ROP. **(R 336.1217(2)(a)(iii))**
    d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(9))**

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.

37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).

39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
    a. June 21, 1999,
    b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
    c. The date on which a regulated substance is first present above a threshold quantity in a process.

40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.

41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

42. Emission averaging and emission reduction credit trading are allowed pursuant to any applicable interstate or regional emission trading program that has been approved by the Administrator of the USEPA as a part of Michigan's State Implementation Plan. Such activities must comply with Rule 215 and Rule 216. **(R 336.1213(12))**

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.[2] **(R 336.1201(1))**

44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.[2] **(R 336.1201(8), Section 5510 of Act 451)**

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, MDEQ.[2] **(R 336.1219)**

46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, MDEQ, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.[2] **(R 336.1201(4))**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

Part B outlines the Source-Wide Terms and Conditions that apply to this stationary source. The permittee is subject to these special conditions for the stationary source in addition to the general conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply to this source, NA (not applicable) has been used in the table. If there are no Source-Wide Conditions, this section will be left blank.

C. EMISSION UNIT CONDITIONS

Part C outlines terms and conditions that are specific to individual emission units listed in the Emission Unit Summary Table. The permittee is subject to the special conditions for each emission unit in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no conditions specific to individual emission units, this section will be left blank.

EMISSION UNIT SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EUICEENGINE1	Internal combustion engine (Caterpillar G3520C) for combusting treated landfill gas to produce electricity.	5/8/2009	FGICEENGINES
EUICEENGINE2	Internal combustion engine (Caterpillar G3520C) for combusting treated landfill gas to produce electricity.	5/8/2009	FGICEENGINES
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

D. FLEXIBLE GROUP CONDITIONS

Part D outlines the terms and conditions that apply to more than one emission unit. The permittee is subject to the special conditions for each flexible group in addition to the General Conditions in Part A and any other terms and conditions contained in this ROP.

The permittee shall comply with all specific details in the special conditions and the underlying applicable requirements cited. If a specific condition type does not apply, NA (not applicable) has been used in the table. If there are no special conditions that apply to more than one emission unit, this section will be left blank.

FLEXIBLE GROUP SUMMARY TABLE

The descriptions provided below are for informational purposes and do not constitute enforceable conditions.

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGICEENGINES	Two internal combustion engines (Caterpillar G3520C) for combusting treated landfill gas to produce electricity.	EUICEENGINE1 EUICEENGINE2
FGRICEMACT	New and reconstructed non-emergency engines greater than 500 hp firing landfill/digester gas, located at a major source of HAPs. Commenced construction or reconstruction on or after December 19, 2002.	EUICEENGINE1 EUICEENGINE2

FGICENGINES
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Two internal combustion engines (Caterpillar G3520C) for combusting treated landfill gas to produce electricity. (PTI 130-08A)

Emission Units: EUICEENGINE1, EUICEENGINE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. CO	3.3 g/hp-hr per engine[2]	Hourly	EUICEENGINE1, EUICEENGINE2	SC V.1 & 2	**40 CFR 60.4233(e)**
2. CO	16.23 pph per engine[2]	Hourly	EUICEENGINE1, EUICEENGINE2	SC V.1 & 2 SC VI.1 & 2	**R 336.2804, 40 CFR 52.21(d)**
3. NOx	1.0 g/hp-hr per engine[2]	Hourly	EUICEENGINE1, EUICEENGINE2	SC V.1 & 2	**40 CFR 60.4233(e)**
4. NOx	4.92 pph per engine[2]	Hourly	EUICEENGINE1, EUICEENGINE2	SC V.1 & 2 SC VI.1 & 2	**R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)**
5. VOC	1.0 g/hp-hr per engine[2]	Hourly	EUICEENGINE1, EUICEENGINE2	SC V.1 & 2	**40 CFR 60.4233(e)**
6. Formaldehyde	2.10 lb/hr[1] per engine	Hourly	EUICEENGINE1, EUICEENGINE2	SC V.1 & 2	**R 336.1225(2)**

II. MATERIAL LIMITS

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Landfill Gas	565.88 MMscf per year[2]	12-month rolling time period as determined at the end of each calendar month	FGICEENGINES	SC VI.1	**R 336.1205(1)(a)**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall only burn treated landfill gas in FGICEENGINES except during times of start-up, shut-down or malfunction or during times of maintenance on the gas treatment system.[2] **(40 CFR 60.752(b)(2)(iii)(c))**

2. No later than 60 days after issuance of this permit, the permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement/preventative maintenance plan for FGICEENGINES. After approval of the malfunction abatement/preventative maintenance plan by the AQD District Supervisor, the

permittee shall not operate FGICEENGINES unless the malfunction abatement/preventative maintenance plan, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum the plan shall include:

a. Identification of the equipment and, if applicable, air-cleaning device, and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair;
b. Description of the items or conditions to be inspected and frequency of the inspections or repairs;
c. Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures;
d. Identification of the major replacement parts that shall be maintained in inventory for quick replacement;
e. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the plan within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the malfunction abatement/preventative maintenance plan to be inadequate, the AQD District Supervisor may request modification of the plan to address those inadequacies.[2] **(R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR 60.4243(b)(2))**

3. Based on each engine's kilowatt output, the permittee shall adjust the engine's air/fuel ratio, as needed, to ensure that each engine in FGICEENGINES operates at its maximum design output based on the fuel available to burn.[2] **(R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

4. The permittee shall operate and maintain each engine in FGICEENGINES such that it meets the emission limits in SC I.1, I.3, and I.5 over the entire life of the engine.[2] **(40 CFR 60.4234, 40 CFR 60.4243(b))**

5. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for FGICEENGINES and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions.[2] **(40 CFR 60.4243(b))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate any engine in FGICEENGINES unless the engines air/fuel ratio controller is installed, maintained and operated in a satisfactory manner.[2] **(R 336.1702, R 336.1910)**

2. The permittee shall equip and maintain each engine in FGICEENGINES with non-resettable hours meters to track the operating hours.[2] **(R 336.1225, 40 CFR 60.4243)**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years.[2] **(R 336.1201(3))**

1. The permittee shall conduct an initial performance test for each engine in FGENGINES, to verify NOx, CO, and VOC emission rates. The permittee shall conduct an initial performance test within 60 days after achieving the maximum production rate but not later than 180 days after initial startup of each engine in FGENGINES and subsequent performance testing every 8760 hours of operation or three years, whichever occurs first, to demonstrate compliance. The performance tests shall be conducted according to 40 CFR 60.4244. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR Part 60, Subpart JJJJ)**

2. The permittee shall verify formaldehyde emission rates from one or more engine(s) in FGICEENGINES by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The final

plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.[2] **(R 336.1225, R 336.2001, R 336.2003, R 336.2004, R 336.1213(3))**

3. Testing for CO, formaldehyde, NOx, and VOC shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference*
NOx	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOC	40 CFR Part 60, Appendix A;

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

4. The permittee shall verify the formaldehyde emission rates from FGICEENGINES, at a minimum, every five years from the date of the last test. **(R 336.1213(3), R 336.2001, R 336.2003, R 336.2004)**

5. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 30 days of the time and place before performance tests are conducted. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

1. The permittee shall continuously monitor and record, in a satisfactory manner, the landfill gas usage for the engines in FGICEENGINES.[2] **(R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The permittee shall continuously monitor, in a satisfactory manner, the kilowatt output from each engine in FGICEENGINES.[2] **(R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

3. The permittee shall continuously monitor, in a satisfactory manner, the hours of operation from each engine in FGICEENGINES.[2] **(40 CFR 60.4243)**

4. The permittee shall keep, in a satisfactory manner, records of all maintenance activities conducted according to the malfunction abatement/preventative maintenance plan (pursuant to SC III.2). The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1702(a), R 336.1911, R 336.1912, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

5. The permittee shall keep, in a satisfactory manner, records of the landfill gas usage for the engines in FGICEENGINES on a monthly and 12-month rolling time period basis as determined at the end of each calendar month, as required by SC VI.1. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1225, R 336.1702, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

6. The permittee shall record the kilowatt output from each engine in FGICEENGINES, a minimum of once per day, excluding holidays and weekends when an engine operator is not scheduled, or called in, to be on site, as required by SC VI.2. A list of excluded holidays shall be maintained on site and made available to the Air Quality Division upon request. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

7. The permittee shall keep, in a satisfactory manner, records of the hours of operation from each engine in FGICEENGINES, on a monthly and 12-month rolling time period basis as determined at the end of each calendar month, as required by SC VI.3. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1225, R 336.1702, R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d), 40 CFR 60.4243)**

8. The permittee shall keep records of the following information for each engine included in FGICEENGINES:
   a. All notifications submitted to comply with 40 CFR Part 60, Subpart JJJJ and all documentation supporting

any notification;
b. Maintenance conducted on EUICEENGINE1 or EUICEENGINE2;
c. If EUICEENGINE1 or EUICEENGINE2 is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable;
d. If EUICEENGINE1 or EUICEENGINE2 is not a certified engine or is a certified engine operating in a non-certified manner and subject to 40 CFR 60.4243(a)(2), documentation that EUICEENGINE1 or EUICEENGINE2 meet the emission standards.[2] **(40 CFR 60.4245(a))**

9. The permittee shall maintain the following record for each engine in FGICENGINES:
   a. Engine manufacturer;
   b. Date engine was manufactured;
   c. Engine model number and model year;
   d. Maximum engine power;
   e. Engine serial number;
   f. Engine specification sheet;
   g. Date of initial startup of the engine;
   h. Date engine was removed from service at this stationary source;
   i. Date replacement engine was installed at this stationary source;
   j. Manufacturer's data, specifications, and operating and maintenance procedures for each engine;
   k. Maintenance activities conducted according to the MAP.

   The permittee shall keep the records on file in a format acceptable to the AQD District Supervisor and make them available to the Department upon request. **(R 336.1213(3), R 336.1911)**

10. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

See Appendices 3-2, 4-2, and 7-2

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A.[2] **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30.[2] **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year.[2] **(R 336.1213(4)(c))**

4. In accordance with R 336.1285(2)(a)(vi), engine replacements can only be done under a normal maintenance program. If EUICEENGINE1 or EUICEENGINE2 is replaced with an equivalent-emitting or lower-emitting engine, the permittee shall notify the AQD District Supervisor of such change-out and submit a description of the engine and acceptable emissions data to show that the alternate engine is equivalent-emitting or lower-emitting. The data shall be submitted within 30-days of the engine change out. **(R 336.1213(3))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTIONS

The exhaust gases from the stacks listed in the table below shall be discharged unobstructed vertically upwards to the ambient air unless otherwise noted:

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVICEENG1	13.7[2]	65.0[2]	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)**
2. SVICEENG2	13.7[2]	65.0[2]	**R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)**

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60, Subpart A and Subpart JJJJ, as they apply to each engine in FGICEENGINES.[2] **(40 CFR Part 60, Subparts A and JJJJ)**

2. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to each engine in FGICEENGINES.[2] **(40 CFR Part 63, Subparts A and ZZZZ)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FGRICEMACT
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

New and Reconstructed Engines located at a Major Source > 500 HP, Non-emergency firing Landfill/Digester Gas. Commenced Construction or Reconstruction on or after December 19, 2002. Compliance date is upon start-up. (PTI 130-08a)

Emission Unit ID: FGICEENGINES

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Each engine in FGRICEMACT shall operate in a manner which reasonably minimizes HAP emissions.[2] **(40 CFR 63.6625(c))**

2. Each engine in FGRICEMACT shall operate in a manner which minimizes time spent at idle during startup and minimize the startup time to a period needed for appropriate and safe loading of each engine, not to exceed 30 minutes.[2] **(40 CFR 63.6625(h))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The engines in FGRICEMACT shall equip and maintain separate fuel meters to monitor and record the daily fuel usage and volumetric flow rate of each fuel used.[2] **(40 CFR 63.6625(c))**

V. TESTING/SAMPLING

Records shall be maintained on file for a period of five years. **(R 336.1201(3))**

NA

VI. MONITORING/RECORDKEEPING

Records shall be maintained on file for a period of five years. **(R 336.1201(3), 40 CFR 63.6660)**

1. Each engine in FGRICEMACT, which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, must monitor and record the daily fuel usage with separate fuel meters to measure the volumetric flow rate of each fuel.[2] **(40 CFR 63.6625(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

4. The permittee shall submit an annual report in accordance with Table 7 of 40 CFR Part 63, Subpart ZZZZ to the appropriate AQD district office by March 15th for the reporting period from January 1 to December 31. The following information shall be included in this annual report: [2] **(40 CFR 63.6650(g), 40 CFR 63.6650(b)(5))**
   a. The fuel flow rate and the heating values that were used in the permittee's calculations to determine the gross heat input on an annual basis. Also, the permittee must demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.[2] **(40 CFR 63.6650(g)(1))**
   b. The operating limits provided in the permittee's federally enforceable permit, and any deviations from these limits.[2] **(40 CFR 63.6650(g)(2))**
   c. Any problems or errors suspected from the fuel flow rate meters.[2] **(40 CFR 63.6650(g)(3))**

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, as they apply to each engine in FGRICEMACT.[2] **(40 CFR Part 63, Subparts A and ZZZZ)**

Footnotes:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that no non-applicable requirements have been identified for incorporation into the permit shield provision set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii).

APPENDICES

Appendix 1-2. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU	Emission Unit	HAP	Hazardous Air Pollutant
FG	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	%	Percent
PTI	Permit to Install	psia	Pounds per square inch absolute
RACT	Reasonable Available Control Technology	psig	Pounds per square inch gauge
ROP	Renewable Operating Permit	scf	Standard cubic feet
SC	Special Condition	sec	Seconds
SCR	Selective Catalytic Reduction	SO_2	Sulfur Dioxide
SNCR	Selective Non-Catalytic Reduction	TAC	Toxic Air Contaminant
SRN	State Registration Number	Temp	Temperature
TEQ	Toxicity Equivalence Quotient	THC	Total Hydrocarbons
USEPA/EPA	United States Environmental Protection Agency	tpy	Tons per year
VE	Visible Emissions	µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

Appendix 2-2. Schedule of Compliance

The permittee certified in the ROP application that this stationary source is in compliance with all applicable requirements and the permittee shall continue to comply with all terms and conditions of this ROP. A Schedule of Compliance is not required. **(R 336.1213(4)(a), R 336.1119(a)(ii))**

Appendix 3-2. Monitoring Requirements

Specific monitoring requirement procedures, methods or specifications are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 4-2. Recordkeeping

Specific recordkeeping requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 5-2. Testing Procedures

Specific testing requirement plans, procedures, and averaging times are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, this appendix is not applicable.

Appendix 6-2. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-P0437-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-P0437-2013 is being reissued as Source-Wide PTI No. MI-PTI-N5985-20XX.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
NA	NA	NA	NA

Appendix 7-2. Emission Calculations

Specific emission calculations to be used with monitoring, testing or recordkeeping data are detailed in the appropriate Source-Wide, Emission Unit and/or Flexible group Special Conditions. Therefore, this appendix is not applicable.

Appendix 8-2. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use the MDEQ, AQD, Report Certification form (EQP 5736) and MDEQ, AQD, Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of the Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Alternative formats must meet the provisions of Rule 213(4)(c) and Rule 213(3)(c)(i), respectively, and be approved by the AQD District Supervisor.

B. Other Reporting

Specific reporting requirement formats and procedures are detailed in Part A or the appropriate Source-Wide, Emission Unit and/or Flexible Group Special Conditions. Therefore, Part B of this appendix is not applicable.

APPENDIX B

ROP Renewal Application Form

EGLE

RENEWABLE OPERATING PERMIT
RENEWAL APPLICATION FORM

This information is required by Article II, Chapter 1, Part 55 (Air Pollution Control) of P.A. 451 of 1994, as amended, and the Federal Clean Air Act of 1990. Failure to obtain a permit required by Part 55 may result in penalties and/or imprisonment. Refer to instructions for additional information to complete the Renewable Operating Permit Renewal Application Form.

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at http://michigan.gov/air (select the Permits Tab, "Renewable Operating Permits (ROP)/Title V", then "ROP Forms & Templates").

PART A: GENERAL INFORMATION

Enter information about the source, owner, contact person and the responsible official.

SOURCE INFORMATION

SRN	SIC Code	NAICS Code	Existing ROP Number	Section Number (if applicable)
N5985	4953	562212	MI-ROP-N5985-2019	2

Source Name: Energy Developments Pinconning, LLC

Street Address: 2403 East Whitefeather Road

City	State	ZIP Code	County
Pinconning	MI	48650	Bay County

Section/Town/Range (if address not available)

Source Description

Whitefeather Landfill is an active municipal solid waste landfill with an active landfill gas collection system, both of which operate year-round. The collection system is comprised of a series of gas wells, a network of collection piping and headers, condensate drains, one enclosed flare, an open flare, and one Landfill Gas-to-Energy Facility (owned and operated by Energy Developments Pinconning, LLC).

☐ Check here if any of the above information is different than what appears in the existing ROP. Identify any changes on the marked-up copy of your existing ROP.

OWNER INFORMATION

Owner Name	Section Number (if applicable)
Energy Developments Pinconning, LLC	2

Mailing address (☒ check if same as source address)

City	State	ZIP Code	County	Country

☐ Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.

SRN: N5985	Section Number (if applicable): 2

PART A: GENERAL INFORMATION (continued)

At least one contact and responsible official must be identified. Additional contacts and responsible officials may be included if necessary.

CONTACT INFORMATION

Contact 1 Name: Meghan Stackhouse			Title: Senior Environmental Manager	
Company Name & Mailing address (☐ check if same as source address): Energy Developments, Inc.; PO Box 15217				
City: Lansing	State: MI	ZIP Code: 48901	County: Ingham	Country: U.S.
Phone number: 517.243.3676		E-mail address: meghan.stackhouse@edlenergy.com		

Contact 2 Name (optional)			Title	
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name: Rocky Tondo			Title: Head of Project Delivery and Technical Services	
Company Name & Mailing address (☐ check if same as source address): Energy Developments, Inc.; PO Box 15217				
City: Lansing	State: MI	ZIP Code: 48901	County: Ingham	Country: U.S.
Phone number: 330.728.5266		E-mail address: rocky.tondo@edlenergy.com		

Responsible Official 2 Name (optional)			Title	
Company Name & Mailing address (☐ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

☐ Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID:

SRN: N5985	Section Number (if applicable): 2

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

Identify the items that are included as part of your administratively complete application in the checklist below. For your application to be complete, it must include information necessary to evaluate the source and to determine all applicable requirements. Answer the compliance statements as they pertain to all the applicable requirements to which the source is subject. The source's Responsible Official must sign and date this form.

Listing of ROP Application Contents. Check the box for the items included with your application.	
☒ Completed ROP Renewal Application Form (and any AI-001 Forms) (required)	☐ Compliance Plan/Schedule of Compliance
☒ Mark-up copy of existing ROP using official version from the AQD website (required)	☐ Stack information
☒ Copies of all Permit(s) to Install (PTIs) that have not been incorporated into existing ROP (required)	☐ Acid Rain Permit Initial/Renewal Application
☒ Criteria Pollutant/Hazardous Air Pollutant (HAP) Potential to Emit Calculations	☐ Cross-State Air Pollution Rule (CSAPR) Information
☐ MAERS Forms (to report emissions not previously submitted)	☐ Confidential Information
☐ Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP	☒ Paper copy of all documentation provided (required)
☐ Compliance Assurance Monitoring (CAM) Plan	☐ Electronic documents provided (optional)
☒ Other Plans (e.g., Malfunction Abatement, Fugitive Dust, Operation and Maintenance, etc.)	☐ Other, explain:

Compliance Statement

This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	☒ Yes ☐ No
This source will meet in a timely manner applicable requirements that become effective during the permit term.	☒ Yes ☐ No

The method(s) used to determine compliance for each applicable requirement is/are the method(s) specified in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other applicable requirements not currently contained in the existing ROP.

If any of the above are checked No, identify the emission unit(s) or flexible group(s) affected and the specific condition number(s) or applicable requirement for which the source is or will be out of compliance at the time of issuance of the ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-001 Form.

Name and Title of the Responsible Official (Print or Type)

Rocky Tondo, Head of Project Delivery and Technical Services

As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this application are true, accurate, and complete.

Rocky Tondo
Signature of Responsible Official

5/24/23
Date

SRN: N5985	Section Number (if applicable): 2

PART C: SOURCE REQUIREMENT INFORMATION

Answer the questions below for specific requirements or programs to which the source may be subject.

C1.	Actual emissions and associated data from **all** emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	☐ Yes ☒ No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	☐ Yes ☒ No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68)	☐ Yes ☒ No
	If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	☐ Yes ☒ No
C4.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NOx, PM10, PM2.5, SO_2, VOC, lead) emissions? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No, criteria pollutant potential emission calculations do not need to be included.	☐ Yes ☒ No
C5.	Has this stationary source **added or modified** equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes, include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No, HAP potential emission calculations do not need to be included.	☐ Yes ☒ No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	☐ Yes ☒ No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form.	☐ Yes ☒ No
	Is an Acid Rain Permit Renewal Application included with this application?	☐ Yes ☒ No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes, identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy.	☐ Yes ☒ No
	Is a CAM plan included with this application?	☐ Yes ☒ No
	If a CAM Plan is included, check the type of proposed monitoring included in the Plan:	
	1. Monitoring proposed by the source based on performance of the control device, or	☐
	2. Presumptively Acceptable Monitoring, if eligible	☐
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes, then a copy must be submitted as part of the ROP renewal application.	☒ Yes ☐ No
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	☐ Yes ☒ No
☐	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: **AI-**	

SRN: N5985	Section Number (if applicable): 2

PART D: PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNIT INFORMATION

Review all emission units at the source and answer the question below.

D1. Does the source have any emission units that do not appear in the existing ROP but are required to be listed in the ROP application under R 336.1212(4) (Rule 212(4)) of the Michigan Air Pollution Control Rules? If Yes, identify the emission units in the table below. ☐ Yes ☒ No

If No, go to Part E.

Note: Emission units that are subject to process specific emission limitations or standards, even if identified in Rule 212, must be captured in either Part G or H of this application form. Identical emission units may be grouped (e.g. PTI exempt Storage Tanks).

Emission Unit ID	**Emission Unit Description**	**Rule 212(4) Citation** [e.g. Rule 212(4)(c)]	**Rule 201 Exemption Rule Citation** [e.g. Rule 282(2)(b)(i)]

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part D. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable): 2

PART E: EXISTING ROP INFORMATION

Review all emission units and applicable requirements (including any source wide requirements) in the existing ROP and answer the questions below as they pertain to **all** emission units and **all** applicable requirements in the existing ROP.

E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? If Yes, identify changes and additions on Part F, Part G and/or Part H.	☐ Yes ☒ No
E2. For each emission unit(s) identified in the existing ROP, all stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were not reported in the most recent MAERS reporting year? If Yes, identity the stack(s) that was/were not reported on applicable MAERS form(s).	☐ Yes ☒ No
E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? If Yes, complete Part F with the appropriate information.	☐ Yes ☒ No
E4. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form.	☐ Yes ☒ No

Comments:

Potential to Emit calculations were updated to reconcile minor calculation errors discovered during the renewal process. The updated calculations are included as Appendix C. This update does not affect permit renewal or regulatory applicability.

☐ Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable): 2

PART F: PERMIT TO INSTALL (PTI) INFORMATION

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to **all** emission units with PTIs. Any PTI(s) identified below must be attached to the application.

F1. Has the source obtained any PTIs where the applicable requirements from the PTI have not been incorporated into the existing ROP? If Yes, complete the following table. If No, go to Part G. ☐ Yes ☒ No

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (*Include Process Equipment, Control Devices and Monitoring Devices*)	Date Emission Unit was Installed/ Modified/ Reconstructed

F2. Do any of the PTIs listed above change, add, or delete terms/conditions to **established emission units** in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP. ☐ Yes ☐ No

F3. Do any of the PTIs listed above identify **new emission units** that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP. ☐ Yes ☐ No

F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identity the stack(s) that were not reported on the applicable MAERS form(s). ☐ Yes ☐ No

F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into the ROP? If Yes, describe the changes on an AI-001 Form. ☐ Yes ☐ No

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part F. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable): 2

PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

Review all emission units and applicable requirements at the source and answer the following questions.

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.

If Yes, identify the emission units in the table below. If No, go to Part H. ☐ Yes ☒ No

Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	**Emission Unit Description – *Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices***	**Date Emission Unit was Installed/ Modified/ Reconstructed**
☐ Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
☐ Rule 287(2)(c) surface coating line		
☐ Rule 290 process with limited emissions		

Comments:

☐ Check here if an AI-001 Form is attached to provide more information for Part G. Enter AI-001 Form ID: **AI-**

SRN: N5985	Section Number (if applicable): 2

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

Complete this part of the application form for all proposed additions, changes or deletions to the existing ROP. This includes state or federal regulations that the source is subject to and that must be incorporated into the ROP or other proposed changes to the existing ROP. **Do not include additions or changes that have already been identified in Parts F or G of this application form.** If additional space is needed copy and complete an additional Part H.

Complete a separate Part H for each emission unit with proposed additions and/or changes.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☐ Yes	☒ No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	☐ Yes	☐ No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes	☐ No
H4. Does the source propose to add new state or federal regulations to the existing ROP? If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.	☐ Yes	☐ No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	☐ Yes	☐ No
H6. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes	☐ No
H7. Are you proposing to **streamline** any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	☐ Yes	☐ No

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PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H8. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H9. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H10. Does the source propose to add, change and/or delete **process/operational restriction** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H11. Does the source propose to add, change and/or delete **design/equipment parameter** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H12. Does the source propose to add, change and/or delete **testing/sampling** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H13. Does the source propose to add, change and/or delete **monitoring/recordkeeping** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H14. Does the source propose to add, change and/or delete **reporting** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No

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PART H: REQUIREMENTS FOR ADDITION OR CHANGE – (continued)

H15. Does the source propose to add, change and/or delete **stack/vent restrictions**? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H16. Does the source propose to add, change and/or delete any **other** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
H17. Does the source propose to add terms and conditions for an alternative operating scenario or intra-facility trading of emissions? If Yes, identify the proposed conditions in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☐ No
☐ Check here if an AI-001 Form is attached to provide more information for Part H. Enter AI-001 Form ID: **AI-**	

APPENDIX C
Potential to Emit Calculations

Emission Unit	Description	Fuel Flow (cfm)	Calculated Emissions									
			CO (lb/hr) (tpy)	NO_x (lb/hr) (tpy)	PM_{10} (lb/hr) (tpy)	$PM_{2.5}$ (lb/hr) (tpy)	SO_2 (lb/hr) (tpy)	VOC (lb/hr) (tpy)	HAP (T) (lb/hr) (tpy)	HAP (S)[1] (lb/hr) (tpy)	Formaldehyde (lb/hr) (tpy)	CO_{2e} (lb/hr) (tpy)
EUICEENGINE1	CAT G3520C	402	16.2	4.92	0.74	0.74	2.50	4.92	2.25	2.09	2.09	2,804
			71.2	21.6	3.23	3.23	10.97	21.6	9.87	9.16	9.16	12,283
EUICEENGINE2	CAT G3520C	402	16.2	4.92	0.74	0.74	2.50	4.92	2.25	2.09	2.09	2,804
			71.15	21.56	3.23	3.23	10.97	21.56	9.87	9.16	9.16	12,283
TOTAL			32.5	9.85	1.48	1.48	5.01	9.85	4.51	4.18	4.18	5,609
			142.31	43.12	6.47	6.47	21.94	43.12	19.74	18.33	18.33	24,566

[1] formaldehyde

Equipment Information (1)

Type	Generator
Manufacturer	Caterpillar
Model	G3520C
Year Manufactured (1)	2008
Mechanical Output Rating (2)	2,233 hp
Power Output Rating (3)	1,593 kw

Standard Conditions and Assumptions	**Value**
Standard Temperature	59 °F
Standard Temperature [absolute]	519 R
Standard Pressure	1 atm
Universal Gas Constant	0.7302 atm-ft^3/lb-mol-R

Operating Schedule

Hours Per Day	24 hr/day
Days Per Year	365 day/yr
Hours Per Year	8,760 hr/yr

Gas Information

Methane Heating Value [HHV]	1,013 Btu/ft^3
LFG Moisture (1)	8%
LFG Methane Content (1)	55%
Carbon Dioxide Content (4)	44.8%
LFG Heating Value	557 Btu/ft^3
LFG Temperature (1)	77 °F
LFG Temperature [absolute]	537 R
LFG Inlet Flow [wet] (2)	402 scfm
LFG Inlet Flow [dry]	370 scfm
Heat Input (5)	13.4 MMBtu/hr

Destruction and Conversion Efficiences

Halogenated Compounds (6)	93%
Non-Halogenated Compounds (6)	86%
Sulfur to SO2 (7)	86.10%

[1]Assumed or Typical

[2]LFG Inlet Flow (scfm) = (Fuel Consumption, BTU/bhp-hr)*(Mechanical Output Rating, hp)/(LFG Heating Value, BTU/ft3)/(60 mins/hour)

[3]Accounts for 95.7% generator efficiency (100% efficiency = 1672 kW)

[4] Derived from user-supplied methane content

[5] Derived from methane HHV, inlet flow, and assumed maximum methane content

[6] According to AP42 Section 2.4 (11/98), Table 2.4-1.

[7] Sulfur-containing compounds are non-halogenated; therefore 99.7% conversion to SO2 is assumed. Use other amount if credible source can be referenced.

Criteria Pollutant, Formaldehyde, and GHG Emission Factors

CO2 (1)	747 g/hp-hr
CO (1)	3.30 g/hp-hr
NOx (1)	1.00 g/hp-hr
PM10 (2)	0.15 g/hp-hr
VOC (1,3)	1.00 g/hp-hr
Formaldehyde (7)	0.43 g/hp-hr

Sulfur to SO_2

Sulfur coversion to SO2 (4)	86.1%
Total Sulfur Compound Concentration in LFG (5)	713.66 ppmv

Criteria Pollutant and GHG Emissions

CO2	3,677 lb/hr	16,107 tpy
CO	16.2 lb/hr	71.2 tpy
NOx	4.92 lb/hr	21.6 tpy
PM2.5 (6)	0.74 lb/hr	3.23 tpy
PM10 (4)	0.74 lb/hr	3.23 tpy
TSP (6)	0.74 lb/hr	3.23 tpy
SO2	2.50 lb/hr	10.97 tpy
VOC	4.92 lb/hr	21.6 tpy
Formaldehyde (7)	2.09 lb/hr	9.16 tpy

[1] Source: Gas Engine Technical Data Sheet, G3520C, Caterpillar

[2] EPA, "Nonroad Compression Ignition Engines - Exhaust Emission Standards" - Tier 3 Emission Factors

[3] Emission factor for NMOC.

[4] AP-42 destruction efficiency (conversion) for non-halogenated compounds

[5] 700 ppm 2017 test results for H2S plus other sulfer compounds listed in AP-42

[6] PM2.5 and TSP assumed to be equivalent to PM20

[7] Permitted limit

Global Warming Potential

CO2 (1)	1
CH4 (1,2)	25
N2O (1,3)	298

Biogenic GHG[5]

CO2 Emission Factor - Combustion (1)	52.07 kg/MMBtu

LFG Inlet Flow = 402 scfm

LFG Compound	CAS	MW (lb/lb-mol)	Conc in Inlet Gas (ppmv)[1]	DE (%)	Emissions (lb/hr)	Emissions (tpy)
Carbon Dioxide ("Pass Through")	124-38-9	44.01	448,101	0%	1,255	5,496

CO2 [Combustion Device]	1,542 lb/hr
	6,752 tpy
CO2 [from landfill passing through the combustion device]	1,255 lb/hr
	5,496 tpy
Biogenic CO2e	2,796 lb/hr
	12,249 tpy

Anthropogenic GHG[5]

CH4 Emission Factor - Combustion (4)	3.20E-03 kg/MMBtu
N2O Emission Factor - Combustion (4)	6.30E-04 kg/MMBtu
CH4	0.09 lb/hr
	0.41 tpy
N2O	0.02 lb/hr
	0.08 tpy
Anthropogenic CO2e	8 lb/hr
	35 tpy

Biogenic + Anthropogenic GHG

Grand Total CO2e	2,804 lb/hr
	12,283 tpy

[1] 40 CFR 98, Subpart A Table A-1

[2] GWP of CH4 increased from 21 to 25, effective Jan. 1, 2014

[3] GWP of N2O decreased from 310 to 298, effective Jan. 1, 2014.

[4] 40 CFR 98, Subpart C, Tables C-1, C-2, Rev. September 10, 2010; factors are for biogas

[5] Biogenic CO2 is defined as, "emissions of CO_2 from a stationary source directly resulting from the combustion or decomposition of biologically-based materials other than fossil fuels." Anthropogenic emissions are emissions resulting from "man-made" actions. All calculated CO_2 emissions in this workbook are considered biogenic. Conversely, CH_4 and N_2O are considered anthropogenic.

DE - destruction efficiency

LFG Inlet Flow = 402 scfm

LFG Compound	Halo-genated	HAP	VOC	CAS	MW (lb/lb-mol)	Conc in Inlet Gas (ppmv)[1]	DE[4] (%)	Engine Emissions (lb/hr)	Engine Emissions (tpy)
1,1,1 - Trichloroethane (methyl chloroform)	x	x	--	71-55-6	133.41	0.48	86.1%	5.66E-04	2.48E-03
1,1,2,2 - Tetrachloroethane	x	x	x	79-34-5	167.85	1.11	86.1%	1.65E-03	7.22E-03
1,1 - Dichloroethane (ethylidene dichloride)	x	x	x	75-34-3	98.96	2.35	86.1%	2.06E-03	9.01E-03
1,1 - Dichloroethene (vinylidene chloride)	x	x	x	75-35-4	96.94	0.2	86.1%	1.71E-04	7.51E-04
1,2 - Dichloroethane (ethylene dichloride)	x	x	x	107-06-2	98.96	0.41	86.1%	3.59E-04	1.57E-03
1,2 - Dichloropropane (propylene dichloride)	x	x	x	78-87-5	112.99	0.18	86.1%	1.80E-04	7.88E-04
2-Propanol (isopropyl alcohol)	--	--	x	67-63-0	60.11	50.1	93.0%	1.34E-02	5.88E-02
Acetone (2-propanone)	--	--	--	67-64-1	58.08	7.01	93.0%	1.81E-03	7.94E-03
Acrylonitrile (Propenenitrile)	--	x	x	107-13-1	53.06	6.33	93.0%	1.50E-03	6.55E-03
Benzene	--	x	x	71-43-2	78.12	1.91	93.0%	6.65E-04	2.91E-03
Bromodichloromethane	x	--	x	75-27-4	163.83	3.13	86.1%	4.54E-03	1.99E-02
Butane	--	--	x	106-97-8	58.12	5.03	93.0%	1.30E-03	5.70E-03
Carbon Disulfide	--	x	x	75-15-0	76.14	0.58	93.0%	1.97E-04	8.62E-04
Carbon Tetrachloride	x	x	x	56-23-5	153.84	0.004	86.1%	5.44E-06	2.38E-05
Carbonyl Sulfide	--	x	x	463-58-1	60.07	0.49	93.0%	1.31E-04	5.74E-04
Chlorobenzene (monochlorobenzene)	x	x	x	108-90-7	112.56	0.25	86.1%	2.49E-04	1.09E-03
Chlorodifluoromethane (CFC-22, freon-22)	x	--	--	75-45-6	86.47	1.3	86.1%	9.94E-04	4.35E-03
Chloroethane (ethyl chloride)	x	x	x	75-00-3	64.52	1.25	86.1%	7.13E-04	3.12E-03
Chloroform (trichloromethane)	x	x	x	67-66-3	119.38	0.03	86.1%	3.17E-05	1.39E-04
Chloromethane (methyl chloride)	x	x	x	74-87-3	50.49	1.21	86.1%	5.40E-04	2.37E-03
1,4 Dichlorobenzene (p-dichlorobenzene)	x	x	x	106-46-7	147	0.21	86.1%	2.73E-04	1.20E-03
Dichlorodifluoromethane (CFC-12, freon-12)	x	--	--	75-71-8	120.91	15.7	86.1%	1.68E-02	7.35E-02
Dichlorofluoromethane (freon-21)	x	--	--	75-43-4	102.92	2.62	86.1%	2.38E-03	1.04E-02
Dichloromethane (methylene chloride)	x	x	--	75-09-2	84.93	14.3	86.1%	1.07E-02	4.70E-02
Dimethyl Sulfide (methyl sulfide)	--	--	x	75-18-3	62.13	7.82	93.0%	2.16E-03	9.48E-03
Ethane	--	--	--	74-84-0	30.07	889	93.0%	1.19E-01	5.22E-01
Ethanol (ethyl alcohol)	--	--	x	64-17-5	46.08	27.2	93.0%	5.58E-03	2.45E-02
Ethyl Mercaptan	--	--	x	75-08-1	62.13	2.28	93.0%	6.31E-04	2.76E-03
Ethylbenzene	--	x	x	100-41-4	106.17	4.61	93.0%	2.18E-03	9.55E-03
Ethylene dibromide (1,2 dibromoethane)	x	x	x	106-93-4	187.88	0.001	86.1%	1.66E-06	7.28E-06
Fluorotrichloromethane (CFC-11, freon-11)	x	--	--	75-69-4	137.37	0.76	86.1%	9.23E-04	4.04E-03
Hexane	--	x	x	110-54-3	86.18	6.57	93.0%	2.52E-03	1.10E-02
Hydrogen Sulfide[5]	--	--	--	7783-06-4	34.08	700	93.0%	1.06E-01	4.65E-01
Mercury (total)	--	x	--	7439-97-6	200.61	2.92E-04	93.0%	2.61E-07	1.14E-06
Methyl Ethyl Ketone (2-butanone)	--	--	x	78-93-3	72.11	7.09	93.0%	2.28E-03	9.97E-03
Methyl Isobutyl Ketone (hexone)	--	x	x	108-10-1	100.16	1.87	93.0%	8.34E-04	3.65E-03
Methyl Mercaptan	--	--	x	74-93-1	48.11	2.49	93.0%	5.34E-04	2.34E-03
Pentane	--	--	x	109-66-0	72.15	3.29	93.0%	1.06E-03	4.63E-03
Tetrachloroethylene (perchloroethylene, -ethene)	x	x	--	127-18-4	165.83	3.73	86.1%	5.47E-03	2.40E-02
Propane	--	--	x	74-98-6	44.1	11.1	93.0%	2.18E-03	9.55E-03
Toluene (methylbenzene)	--	x	x	108-88-3	92.14	39.3	93.0%	1.61E-02	7.06E-02
Trichloroethylene (trichloroethene)	x	x	x	79-01-6	131.38	2.82	86.1%	3.28E-03	1.44E-02
t - 1,2 - Dichloroethene (1,2 dichloroethylene)	x	--	x	156-60-5	96.94	2.84	86.1%	2.44E-03	1.07E-02
Vinyl Chloride (chloroethylene, VCM)	x	x	x	75-01-4	62.50	7.34	86.1%	4.06E-03	1.78E-02
Xylenes (m, o, p)	--	x	x	1330-20-7	106.17	12.1	93.0%	5.72E-03	2.51E-02
Hydrogen Chloride[2,3]	--	x	--	7647-01-0	36.5	42	0%	9.74E-02	4.27E-01
Formaldehyde	--	x	--	50-00-0	30.03	0.43	0%	2.09E+00	9.16

Total Sulfur	--	--	--	--	--	713.66	--	--	--
Total HAP	--	--	--	--	--	--	--	**2.25**	**9.87**
Maximum Single HAP	--	--	--	--	--	--	--	**2.09**	**9.16**

[1] AP42 5th Ed., "Compilation of Air Pollutant Emissions Factors, Vol. 1: Stationary Point and Area Sources," Table 2.4-1 and 2.4-2, Nov. 1998

[2] Product of combustion

[3] Because HCl is a production of combustion, a default ionic Cl LFG concentration of 42 ppmv is listed; AP-42, Section 2.4.4.

[4] AP-42 gives ranges for control efficencies. Control efficiences for halogenated compounds and non-halogenated compounds are 93% and 86.1% respectively.

[5] 2017 stack test result (non AP-42 default value)

6 Formaldehyde concentration is based on the permit limit in lbs/hour.

DE - Destruction Efficiency

APPENDIX D

Malfunction Abatement Plan

cornerstone
A TETRA TECH COMPANY

Building lifetime relationships with our clients and employees.

Malfunction Abatement and Preventative Maintenance Plan

Energy Developments Pinconning

April 2018

Prepared for:

Energy Developments

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1 BACKGROUND

This Malfunction Abatement and Preventative Maintenance Plan (Plan) was prepared in accordance with Condition III.2 of Permit-to-Install (PTI) No. 130-08 and Renewable Operating Permit (ROP) No. MI-ROP-PO437-2013 for Energy Developments Pinconning (EDP), LLC. The PTI condition reads as follows:

No later than 60 days after issuance of this permit, the permittee shall submit to the AQD (Air Quality District) District Supervisor, for review and approval, a malfunction abatement/preventative maintenance plan for FGICEENGINES. After approval of the malfunction abatement/preventative maintenance plan by the AQD District Supervisor, the permittee shall not operate FGICEENGINES unless the malfunction abatement/preventative maintenance plan, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum the plan shall include:

a. Identification of the equipment and, if applicable, air-cleaning device, and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair.

b. Description of the items or conditions to be inspected and frequency of the inspections or repairs.

c. Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures.

d. Identification of the major replacement parts that shall be maintained in inventory for quick replacement.

e. A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the plan within 45 days after such an event occurs and submit the revised plan for approval to the

AQD District Supervisor. Should the AQD determine the malfunction abatement/preventative maintenance plan to be inadequate, the AQD District Supervisor may request modification of the plan to address those inadequacies. (R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

This Plan has been developed to satisfy the above requirements. As such, it provides procedures and elements of inspection, inspection frequencies, back up equipment inventories and general information used to prevent, detect, and correct malfunctions.

It is important to note that the regulations anticipated that periodic shutdown of the each individual control equipment at a landfill is anticipated. Since periodic malfunctions, unforeseen circumstances or short duration maintenance activities are anticipated by the regulations, EDP believes they have implemented a program consistent with these requirements.

EDP understands that AQD expects EDP to address any temporary break down of a control device or devices. While a plan has been written suggesting parts lists, inspections, inspection frequencies, etc. to comply with the above paragraph it is anticipated the short duration shutdown events will continue to occur which are beyond EDP's control.

2 AFFECTED EQUIPMENT

EDP plans to operate two internal combustion engines that are covered by this Plan. The engines are used for combusting treated landfill gas to produce electricity. These engines are identified as Emission Units EUICEENGINE1 and EUICEENGINE2 in the ROP No. MI-ROP-PO437-2013 issued by Michigan Department of Environmental Quality.

3 RESPONSIBLE PERSONNEL

All supervisory personnel responsible for overseeing the inspection, maintenance, and repair of the engine plant are listed below:

Name and Title	Phone Number
Chip Cogan, Regional Operations Supervisor	517-449-7272
Rob Stewart, Plant Operator	517-896-9725
Greg Micale, Maintenance Manager	517-372-8335
Dan Zimmerman, Dir of NA, H&S & Compliance	517-896-4417

4 MALFUNCTION ABATEMENT AND PREVENTATIVE MAINTENANCE PLAN

The following section of this Plan contains prevention of malfunctions, detection of malfunctions, and correction of malfunctions for each of the engines.

4.1 Description of Equipment

EDP plans to operate two internal combustion engines (both Caterpillar G3520C) for combusting treated landfill gas to produce electricity. These engines are identified as Emission Units EUICEENGINE1 and EUICEENGINE2 in the ROP No. MI-ROP-PO437-2013.

4.2 Equipment Inspection

Table 1 shows the Engine Plant items or conditions that are inspected, the frequency of the inspections, the procedures followed to aid in the prevention of a malfunction, monitoring parameters that are used to detect and aid in the prevention of a malfunction or equipment failure, the normal range of these parameters, and recording / retaining of the monitoring records.

Table 1
List of Engine Plant Prevention / Detection Items

Item or Conditions to Be Inspected	Frequency of Inspection /Monitoring	Procedures to be Followed to Aid in the Prevention of Malfunctions
Engine Air Cleaner Element	*Performance based assessment	Check Sensor (difference in pressure) Replace when necessary
Engine Oil	*Performance based assessment	Establish baseline, use oil chemistry and performance as a guide (Change when necessary)
Engine Oil Sample	Establish Baseline for each engine (Performance/oil sample)	Once baseline is established verify frequency with oil chemistry sampling results
Engine Oil Level	Weekly	Check float & secondary auto-fill
Engine Oil Temperature	Weekly	Check temperature gauge
Oil Filter Differential Pressure	Weekly	Check Electronic Technician (ET) software

Item or Conditions to Be Inspected	Frequency of Inspection /Monitoring	Procedures to be Followed to Aid in the Prevention of Malfunctions
Engine Oil Filter	Establish Baseline for each engine (Performance/oil sample)	Check pressure differential, change engine oil filter as needed
Fuel Metering Valve	Performance based assessment	Check codes, clean sensor
Throttle Control Valve (Check electronic valves)	Performance based assessment	Check ET software
Cooling System Coolant Level	Weekly	Check sight glass for level and color
Cooling System Coolant Temperature	Weekly	Check ET software
Cooling System Coolant Pressure	Weekly	Check ET software
Differential Pressure Crankcase Vent	Weekly	Check pressure, control vacuum (walk around)
Generator Load	Weekly	Check load conditions (Kilowatts)
Walk-Around Inspection	Weekly	Check for any unusual conditions, leaks, broken gauges, pinched wires/tubing etc.
Battery Electrolyte Level	*Every 6 months of service	Check battery electrolyte level
Belts (Radiator)	*Every 12 months	Inspect/Adjust/Replace
Engine Valve	Performance based assessment	Adjust as needed
Radiator	Performance based assessment	Check inlet & outlet temperatures, clean/wash exterior surfaces as needed
Water Pump	Performance based assessment	Inspect for leaks during walk-around inspection
Generator	*Performance based assessment (assess at approximately 8,000 hours of use)	Visually inspect system for loose wires/fittings, vibration damage etc.
Ignition System Spark Plugs	Performance based assessment	Inspect/Replace
Turbocharger	*Performance based assessment (assess at approximately 8,000 hours of use)	Establish baseline to use as a guide (Change when necessary)

Item or Conditions to Be Inspected	Frequency of Inspection /Monitoring	Procedures to be Followed to Aid in the Prevention of Malfunctions
Overhaul - Top End	*Performance based assessment (assess at approximately 50,000 hours of use)	Overhaul
Overhaul - In-Frame	Performance based assessment	Overhaul
Overhaul - Major	*Performance based assessment (assess at approximately 100,000 hours of use)	Overhaul

Engine performance supersedes frequency of maintenance activities. Approximate values used in this table* ***should only be used as a guideline* *in evaluation of each parameter to be inspected, maintained and replaced.*

Based on facility records and EDP personnel, a preventative maintenance program is conducted. Routine maintenance is conducted on the engines in accordance with manufacturer and company specifications which include replacing engine spark plugs, oil, and lubrication. Maintenance is also conducted on an as needed basis. In addition, a "top-end" overhaul, which includes replacing/cleaning cylinder heads, turbochargers and valves, is conducted on each engine. This is typically completed on site.

A "Major" overhaul includes all of the work of a topend overhaul plus disassembling all of the bearings, seals, gaskets, and components that wear and may even include replacing the crankshaft. When an engine is due for a major overhaul, it is swapped out with another engine. When the engine is swapped, it is removed from the facility and either replaced with an engine with a different serial number and manufacture date or the same unit is brought back after being rebuilt and will have the same serial number and manufacture date. Swapping engines in this manner is an industry standard for maintaining the engines.

4.3 Replacement Parts

To facilitate quick replacement, the spare or replacement parts necessary for proper engine operation and routine maintenance will be located on site at each generation facility or at EDP's central maintenance facility (major components or specialty parts will be ordered as needed). Inventory may vary from time to time

4.4 Corrective Procedures

The corrective procedures or operational changes shall be undertaken in the event of a malfunction or failure of the generation facility. EDP will expeditiously implement the appropriate procedures to correct the event. Repair records will be maintained in an operations log.

5 IMPLEMENTATION OF AND UPDATES TO PLAN

5.1 Implementation of the Plan

If the plan fails to address or inadequately addresses an event that meets the characteristics of a malfunction at the time the plan is initially developed, the owner or operator shall revise the plan within 45 days after such an event occurs and submit the revised plan for approval to the AQD District Supervisor. Should the AQD determine the malfunction abatement/preventative maintenance plan to be inadequate, the AQD District Supervisor may request modification of the plan to address those inadequacies.

5.2 Updates to the Plan

This Plan will be updated within 60 days of replacing or expanding the components of the Engine Plant with components not described herein. If no components of the Engine Plant are replaced or expanded with components described herein, the Plan will be updated at least once every 5 years or as needed.