

## Ramsey, Marguerita (DEQ)

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**From:** Park, Sunhee <spark@eaest.com>  
**Sent:** Friday, March 17, 2017 4:38 PM  
**To:** DEQ-ROP  
**Cc:** Smith, Stevia  
**Subject:** [P0317] - ROP Renewal Application  
**Attachments:** Renewal Application Submittal.pdf; P0317 Final 02-02-16 ROP - Markup.doc

Hi,

Please find attached ROP renewal application package for Ameresco Woodland Meadows Romulus LLC. A hard copy of the application package is sent to the district office at Detroit, MI.

*Thanks,*

*Sunhee Park, PE, BCEE*  
EA Engineering, Science and Technology, Inc., PBC  
225 Schilling Circle, Suite 400  
Hunt Valley, MD 21031  
Tel) 410-584-7000 x5293  
Cell) 443-765-1234  
Fax) 410-771-1625

# **Title V Renewable Operating Permit (ROP) Renewal Application**

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**Ameresco Woodland Meadows Romulus LLC**

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*Prepared for:*

Michigan Department of Environmental Quality  
Detroit Field Office  
3058 West Grand Boulevard, Cadillac Place, Suite 2-300  
Detroit, MI 48202-6058

*Prepared by*



EA Engineering, Science, and Technology, Inc., PBC  
225 Schilling Circle, Suite 400  
Hunt Valley, Maryland 21031  
(410) 584-7000

**MARCH 2017**

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## 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 [www.michigan.gov/deg](http://www.michigan.gov/deg).

### PART A: GENERAL INFORMATION

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

#### SOURCE INFORMATION

SRN P0317	SIC Code 4931	NAICS Code 221210	Existing ROP Number MI-ROP-P0317-2012a	Section Number (if applicable)
Source Name Ameresco Woodland Meadows Romulus, LLC				
Street Address 4620 Hannan Road				
City Canton	State MI	ZIP Code 48184	County Wayne	
Section/Town/Range (if address not available)				
Source Description  High BTU landfill gas plant including enclosed and candlestick flares				
<input checked="" type="checkbox"/> 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 Ameresco Woodland Meadows Romulus LLC				Section Number (if applicable)
Mailing address ( <input type="checkbox"/> check if same as source address) 111 Speen Street, Suite 410				
City Framingham	State MA	ZIP Code 01701	County Middlesex	Country USA

<input type="checkbox"/> Check here if any information in this ROP renewal application is confidential. Confidential information should be identified on an Additional Information (AI-001) Form.
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SRN: P0317	Section Number (if applicable):
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**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 Richard Peary		Title Compliance Manager		
Mailing address ( <input type="checkbox"/> check if same as source address) 111 Speen Street, Suite 410				
City Framingham	State MA	ZIP Code 01701	County Middlesex	Country USA
Phone number 508-598-3076		E-mail address rpeary@ameresco.com		

Contact 2 Name (optional) Stevia Smith		Title Environmental Compliance Analyst		
Mailing address ( <input type="checkbox"/> check if same as source address) 30 Danforth St., Suite 108				
City Portland	State ME	ZIP Code 04101	County Cumberland	Country USA
Phone number 508 598 4386		E-mail address smiths@ameresco.com		

**RESPONSIBLE OFFICIAL INFORMATION**

Responsible Official 1 Name Joseph P. DeManche		Title Executive Vice President		
Mailing address ( <input type="checkbox"/> check if same as source address) 111 Speen Street, Suite 410				
City Framingham	State MA	ZIP Code 01701	County Middlesex	Country USA
Phone number 508 661 2266		E-mail address jdemanche@ameresco.com		

Responsible Official 2 Name (optional)		Title		
Mailing address ( <input type="checkbox"/> check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

<input type="checkbox"/> Check here if an AI-001 form is attached to provide more information for Part A. Enter AI-001 form ID:
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**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	
<input checked="" type="checkbox"/> Completed ROP Renewal Application Form (required)	<input type="checkbox"/> Compliance Plan/Schedule of Compliance
<input checked="" type="checkbox"/> Mark-up copy of existing ROP (required)	<input type="checkbox"/> Compliance Assurance Monitoring (CAM) Plan
<input checked="" type="checkbox"/> Copies of all Permit(s) to Install that have not been incorporated into existing ROP (required)	<input type="checkbox"/> Acid Rain Permit Initial/Renewal Application
<input type="checkbox"/> Additional Information (AI-001) Forms	<input type="checkbox"/> Clean Air Interstate Rule (CAIR) Permit Initial/Renewal Application(s)
<input type="checkbox"/> MAERS Forms (to report emissions not previously submitted)	<input type="checkbox"/> Confidential Information
<input type="checkbox"/> Greenhouse Gas Emissions information (if applicable)	<input type="checkbox"/> Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP
<input type="checkbox"/> Stack information	<input type="checkbox"/> Other, explain:
<input checked="" type="checkbox"/> Paper copy of all documentation provided (required)	<input checked="" type="checkbox"/> Electronic documents provided

Compliance Statement	
This source is in compliance with <b>all</b> 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
This source will meet in a timely manner applicable requirements that become effective during the permit term.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> 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)	
Joseph P. DeManche, Executive Vice President	
<i>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.</i>	
_____	_____
<b>Signature of Responsible Official</b>	<b>Date</b>

**PART C: SOURCE REQUIREMENT INFORMATION**

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

<p>C1. Actual emissions and associated data from <b>all</b> 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 <b>not</b> been reported in MAERS for the most recent emissions reporting year? Actual emissions and associated data from <b>all</b> emission units with applicable requirements (If Yes, identify the emission unit(s) that was not reported in MAERS in the comments field below or on an AI-001 form. Applicable MAERS form(s) for unreported emission units must be included with this application.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C2. Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C3. Is this source subject to the federal Prevention of Accidental Releases regulations? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68)</p> <p>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?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No
<p>C4. Does this stationary source have the potential to emit 100,000 tons per year or more of CO<sub>2</sub>e and 100 tons per year or more of greenhouse gases on a mass basis?</p> <p>If Yes, provide emissions information on an AI-001 form. See <i>instructions</i></p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>C5. Are any emission units subject to the Clean Air Interstate Rule (CAIR)? If Yes, identify the specific emission unit(s) subject to CAIR in the comments area below or on an AI-001 form.</p> <p>Is a CAIR Permit Renewal Application included with this application?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No
<p>C6. 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 in the comments field or on an AI-001 form.</p> <p>Is an Acid Rain Permit Renewal Application included with this application?</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No  <input type="checkbox"/> Yes <input type="checkbox"/> No
<p>C7. 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?</p> <p>If "Yes", then a copy must be submitted as part of the ROP renewal application.</p>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<p>Comments:</p>	
<p><input type="checkbox"/> Check here if an AI-001 form is attached to provide more information for Part C. Enter AI-001 form ID:</p>	







**PART F: PERMIT TO INSTALL INFORMATION**

Review all emission units and applicable requirements at the source and answer the following questions as they pertain to **all** emission units with Permits to Install (PTI). 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.  Yes  No  
 If No, go to Part G.

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (Include Process Equipment and Control Devices)	Date of Installation/Modification/Reconstruction
61-16	EUHBTUENCL	2,600 CFM enclosed flare used for the destruction of the pressure swing adsorption (PSA) process CO2 tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N2 tail gas will be used as supplementary fuel.	TBD
61-16	EUHBTUOPEN	1,440 CFM open flare used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.	TBD

F2. Do/Does the PTI(s) 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  
 If No, then all terms/conditions for new emission units/flexible groups from the PTI(s) above will be incorporated into the ROP.

F3. 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, identify the stack(s) that were not reported on the applicable MAERS form(s).  Yes  No

F4. Are any emission units in the PTI(s) subject to compliance assurance monitoring (CAM)?  
 If Yes, identify the specific emission unit(s) subject to CAM in the comments area below or on an AI-001 form. A CAM plan must be submitted as part of the ROP renewal application on an AI-001 form.  Yes  No

F5. Do any of the emission units in the PTI(s) listed above emit regulated fugitive emissions? If Yes, identify the specific emission unit(s) in the comments area below or on an AI-001 form.  Yes  No

F6. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs? 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:

**PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(h), 285(r)(iv), 287(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(h), 285(r)(iv), 287(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 date for each.*

Origin of Applicable Requirements	Emission Unit Description – <i>Provide Emission Unit ID and process equipment/control device descriptions</i>	Installation Date(s)
<input type="checkbox"/> Rule 281(h) or 285(r)(iv) cleaning operation		
<input type="checkbox"/> Rule 287(c) surface coating line		
<input type="checkbox"/> 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:

**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.

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 a mark-up of the Emission Unit Summary Table in the existing 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 names, process description, and control device(s) in a mark-up of the Emission Unit Summary Table in the existing ROP.  Yes  No

H4. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements in the existing ROP?  Yes  No  
If Yes, identify each emission unit/flexible group subject to the addition, change or deletion and identify the high level citation for each state or federal underlying applicable requirement that the emission unit/flexible group is subject to.

H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not cited in the existing ROP? If Yes, list the CO/CJ number(s) below and add, change and/or delete the applicable requirements in the mark-up of the existing 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. 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

H8. 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

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

H9. 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

H10. 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

H11. 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

H12. 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

H13. 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

H14. 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

H15. 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

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



## RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

*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 provide this information may result in civil and/or criminal penalties. Please type or print clearly.*

**This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.**

Form Type <b>C-001</b>	SRN P0317
------------------------	-----------

Stationary Source Name Ameresco Woodland Meadows Romulus LLC	
City Canton	County Wayne

<b>SUBMITTAL CERTIFICATION INFORMATION</b>	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input checked="" type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to _____	
3. Submittal Media <input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input checked="" type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. <b>AI</b>	

<b>CONTACT INFORMATION</b>	
Contact Name Richard Peary	Title Compliance Manager
Phone number 508 598 3076	E-mail address rpeary@ameresco.com

<b>This form must be signed and dated by a Responsible Official.</b>				
Responsible Official Name Joseph P. DeManche			Title Executive Vice President	
Mailing address 111 Speen Street, Suite 410				
City Framingham	State MA	ZIP Code 01701	County Middlesex	Country USA
<b>As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.</b>				
_____ Signature of Responsible Official			_____ Date	



## RENEWABLE OPERATING PERMIT M-001: RULE 215 CHANGE NOTIFICATION RULE 216 AMENDMENT/MODIFICATION APPLICATION

*This information is required by Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, 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.*

1. SRN P0317	2. ROP Number P0317-2012a	3. County Wayne
4. Stationary Source Name Ameresco Woodland Meadows Romulus, LLC		
5. Location Address 4620 Hannan Road	6. City Canton	
<p>7. Submittal Type - <i>The submittal must meet the criteria for the box checked below. Check only one box. Attach a mark-up of the affected ROP pages for applications for Rule 216 changes.</i></p> <p><input type="checkbox"/> Rule 215(1) Notification of change. Complete Items 7 – 10.</p> <p><input type="checkbox"/> Rule 215(2) Notification of change. Complete Items 7 – 10.</p> <p><input checked="" type="checkbox"/> Rule 215(3) Notification of change. Complete Items 7 – 11.</p> <p><input type="checkbox"/> Rule 216(1)(a)(i)-(iv) Administrative Amendment. Complete Items 7 – 10.</p> <p><input type="checkbox"/> Rule 216(1)(a)(v) Administrative Amendment. Complete Items 7 – 13. Results of testing, monitoring &amp; recordkeeping must be submitted. See detailed instructions.</p> <p><input type="checkbox"/> Rule 216(2) Minor Modification. Complete Items 7 – 12.</p> <p><input type="checkbox"/> Rule 216(3) Significant Modification. Complete Items 7 – 12 and provide any additional information needed on ROP application forms. See detailed instructions.</p> <p><input type="checkbox"/> Rule 216(4) State-Only Modification. Complete Items 7 – 12.</p>		
8. Effective date of the change. (MM/DD/YYYY) <i>See detailed instructions.</i> ____/____/____		9. Change in emissions? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
10. Description of Change - <i>Describe any changes or additions to the ROP, including any changes in emissions and/or pollutants that will occur. If additional space is needed, complete an Additional Information form (AI-001).</i> Incorporating two (2) new flares from PTI #61-16.		
11. New Source Review Permit(s) to Install (PTI) associated with this application? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
If Yes, enter the PTI Number(s) <u>61-16</u> -    -    -    -		
12. Compliance Status - <i>A narrative compliance plan, including a schedule for compliance, must be submitted using an AI-001 if any of the following are checked No.</i>		
a. Is the change identified above in compliance with the associated applicable requirement(s)?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
b. Will the change identified above continue to be in compliance with the associated applicable requirement(s)?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
c. If the change includes a future applicable requirement(s), will timely compliance be achieved?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
13. Operator's Additional Information ID - <i>Create an Additional Information (AI) ID for the associated AI-001 form used to provide supplemental information.</i>		<b>AI</b>
14. Contact Name Richard Peary	Telephone No. 508 598 3076	E-mail Address rpeary@ameresco.com
15. This submittal also updates the ROP renewal application submitted on ____/____/____ <i>(If yes, a mark-up of the affected pages of the ROP must be attached.)</i>		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> N/A

**NOTE: A CERTIFICATION FORM (C-001) SIGNED BY A RESPONSIBLE OFFICIAL MUST ACCOMPANY ALL SUBMITTALS**



## RENEWABLE OPERATING PERMIT APPLICATION C-001: CERTIFICATION

*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 provide this information may result in civil and/or criminal penalties. Please type or print clearly.*

**This form is completed and included as part of Renewable Operating Permit (ROP) initial and renewal applications, notifications of change, amendments, modifications, and additional information.**

Form Type <b>C-001</b>	SRN P0317
------------------------	-----------

Stationary Source Name Ameresco Woodland Meadows Romulus LLC	
City Canton	County Wayne

<b>SUBMITTAL CERTIFICATION INFORMATION</b>	
1. Type of Submittal <i>Check only one box.</i>	
<input type="checkbox"/> Initial Application (Rule 210)	<input checked="" type="checkbox"/> Notification / Administrative Amendment / Modification (Rules 215/216)
<input type="checkbox"/> Renewal (Rule 210)	<input type="checkbox"/> Other, describe on AI-001
2. If this ROP has more than one Section, list the Section(s) that this Certification applies to _____	
3. Submittal Media <input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input checked="" type="checkbox"/> Disk <input checked="" type="checkbox"/> Paper	
4. Operator's Additional Information ID - Create an Additional Information (AI) ID that is used to provide supplemental information on AI-001 regarding a submittal. <b>AI</b>	

<b>CONTACT INFORMATION</b>	
Contact Name Richard Peary	Title Compliance Manager
Phone number 508 598 3076	E-mail address rpeary@ameresco.com

<b>This form must be signed and dated by a Responsible Official.</b>				
Responsible Official Name Joseph P. DeManche			Title Executive Vice President	
Mailing address 111 Speen Street , Suite 410				
City Framingham	State MA	ZIP Code 01701	County Middlesex	Country USA
<b>As a Responsible Official, I certify that, based on information and belief formed after reasonable inquiry, the statements and information in this submittal are true, accurate and complete.</b>				
_____ Signature of Responsible Official			_____ Date	



**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

EFFECTIVE DATE: DECEMBER 12, 2012

REVISION DATE: FEBRUARY 2, 2016

ISSUED TO

**AMERESCO WOODLAND MEADOWS ROMULUS LLC**

State Registration Number (SRN): P0317

LOCATED AT

4620 Hannan Road, Wayne, Michigan 48184

**RENEWABLE OPERATING PERMIT**

Permit Number: MI-ROP-P0317-2012a

Expiration Date: December 12, 2017

Administratively Complete ROP Renewal Application  
Due Between June 12, 2016 and June 12, 2017

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-P0317-2012a

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

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Wilhemina McLemore, Detroit 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 will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, 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.

## 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 federally enforceable Source-Wide PTI No. MI-PTI-P0317- 2012 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). **(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. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part; "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 Rule 301(1)(a) or (b) unless otherwise specified in this ROP." The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
  - a. A 6-minute average of 20 percent opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
  - b. A limit specified by an applicable federal new source performance standard.
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.<sup>1</sup> **(R 336.1901(a))**
  - b. Unreasonable interference with the comfortable enjoyment of life and property.<sup>1</sup> **(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). **(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(4))**

**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. **(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. **(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(9))**
- 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(7))**

### 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, Part 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, Part 68.10(a):
- June 21, 1999,
  - Three years after the date on which a regulated substance is first listed under 40 CFR, Part 68.130, or
  - 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))**

Ameresco Woodland Meadows Romulus LLC

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Expiration Date: December 12, 2017  
PTI No: MI-PTI-P0317-2012a

#### 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.<sup>2</sup> **(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.<sup>2</sup> **(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.<sup>2</sup> **(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, or has been interrupted for 18 months, the applicable terms and conditions from that PTI 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.<sup>2</sup> **(R 336.1201(4))**

#### **Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

Ameresco Woodland Meadows Romulus LLC

ROP No: MI-ROP-P0317-2012a  
Expiration Date: December 12, 2017  
PTI No: MI-PTI-P0317-2012a

## **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
<a href="#">EUHBTUENCL</a>	<a href="#">2,600 CFM enclosed flare used for the destruction of the pressure swing adsorption (PSA) process CO2 tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N2 tail gas will be used as supplementary fuel.</a>	<a href="#">TBD (2017)</a>	<a href="#">NA</a>
<a href="#">EUHBTUOPEN</a>	<a href="#">1,440 CFM open flare used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.</a>	<a href="#">TBD (2017)</a>	<a href="#">NA</a>

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- Deleted:** EUOILSEPARATOR
- Deleted:** Oil/water separation system for the landfill treatment system
- Deleted:** June 1, 1994
- Deleted:** NA
- Deleted:** EUCOLDCLEANER
- Deleted:** Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(r)(iv)
- Deleted:** NA
- Deleted:** FGCOLDCLEANERS

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**EUHBTUENCL**

**DESCRIPTION** – 2,600 CFM enclosed flare used for the destruction of the pressure swing adsorption (PSA) process CO<sub>2</sub> tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N<sub>2</sub> tail gas will be used as supplementary fuel.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT - NA**

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NMOC	Reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen	Test Protocol*	EUHBTUENCL	SC V.2	40 CFR 60.752(b)(2)(iii)(B), 40 CFR 60.754(d), 40 CFR 60.758(b)(2)
1. SO <sub>2</sub>	16.8 pph	Test Protocol*	EUHBTUENCL	SC V.3	40 CFR 52.21 (c) & (d)
2. SO <sub>2</sub>	73.7 tpy	12-month rolling time period as determined at the end of each month	EUHBTUENCL	SC V.3	R 336.1205(3)

\*Test Protocol shall determine averaging time.

**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall equip and maintain EUHBTUENCL with a temperature monitor. (R336.1205(1)(a), R 336.1225)
- The temperature monitor for EUHBTUENCL shall be calibrated annually to confirm accuracy, and adjustments made as necessary to maintain accuracy. (R336.1205(1)(a), R 336.1225)
- The permittee shall monitor and record the flaring duration each time EUHBTUENCL ground flare is ignited in a manner and with instrumentation acceptable to the Air Quality Division. All of the accumulated data shall be

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EMISSION UNIT CONDITIONS

**DESCRIPTION** – This emission unit treats landfill gas before it is sold for use as fuel. The treatment system removes particulate to at least the 10 micron level, compresses the landfill gas, and removes enough moisture to ensure good combustion during subsequent use, therefore, guaranteeing that the regulatory intent for the destruction of the NMOC will be maintained.

Flexible Group ID NA

**POLLUTION CONTROL EQUIPMENT** – Any emissions from atmospheric vents or stacks associated with the treatment system shall be subject to §60.752(b)(2)(iii)(A) or (B).

**I. EMISSION LIMIT(S)**

Pollutant ... [2]

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**Deleted: <#>EUOILSEPARATOR**

EMISSION UNIT CONDITIONS

**DESCRIPTION** – Oil/water separator used to treat condensate from the gas treatment plant prior to discharge to the sanitary sewage system.

Flexible Group ID: NA

**POLLUTION CONTROL EQUIPMENT - NA**

**I. EMISSION LIMIT(S)**

Pollutant ... [3]

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kept on file for a period of at least five years and made available to the Air Quality Division upon request. (R 336.1225, R336.1205(3))

- 4. The permittee shall operate EUHBTUENCL at all times when the collected gas is routed to the enclosed flare. (40 CFR 60.753(f), 40 CFR 63.1955(a))
- 5. The permittee shall not operate EUHBTUENCL unless a start-up, shutdown, malfunction abatement (SSM) plan as described in Rule 911(2), for the enclosed flare, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a start-up, shutdown, or malfunction, the permittee shall amend the SSM plan within 45 days after such an event occurs. The permittee shall also amend the SSM plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the SSM plan and any amendments to the SSM plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the SSM plan or amended SSM plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 63.1960, 40 CFR 63.6(e)(3))

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

- 1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the volumetric flow rate of landfill gas burned in EUHBTUENCL, on a continuous basis. (R 336.1224, R 336.1225, R 336.1901; R 336.12803, R 336.2804, 40 CFR 52.21(c) & (d); 40 CFR Part 60 Subparts A & WWW; 40 CFR Part 63 Subparts A & AAAA)
- 2. The nominal design capacity of EUHBTUENCL shall be 2,600 CFM, as specified by the equipment manufacturer. (R 336.1205(1)(a), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))

**V. TESTING/SAMPLING**

- 1. The permittee shall verify hydrogen sulfide or total reduced sulfur content of the landfill gas delivered to the HBTU process on a monthly basis, by gas testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to the initial test, 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 the first test. Thereafter, the permittee shall submit a test plan upon the request of the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 36.1205(3)), 40 CFR 52.21 (c) & (d))
- 2. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify either the reduction of NMOC by 98 weight percent efficiency or the 20 ppmv outlet concentration level from EUHBTUENCL, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and WWW. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of initial startup in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 60 days prior to 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. 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. (40 CFR 60.752(b)(2)(iii)(B), 40 CFR 60.754(d))
- 3. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify and quantify SO<sub>2</sub> emission rates from EUHBTUENCL by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to 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. Verification of emission rates includes the submittal of a complete

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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 336.1205(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

**VI. MONITORING/RECORDKEEPING**

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

- 1. The permittee shall calibrate, maintain, and operate EUHBTUENCL according to the manufacturer's specifications, including the following:
  - a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of plus or minus 1 percent of the temperature being measured expressed in degrees centigrade or plus or minus 0.5 degrees centigrade, whichever is greater. (40 CFR 60.756(b)(1), 40 CFR 63.1955(a))
  - b. A device that records flow to or bypass of the control device. The permittee shall either:
    - i. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes. (40 CFR 60.756(b)(2)(i), 40 CFR 63.1955(a))  
or
    - ii. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. (40 CFR 60.756(b)(2)(ii), 40 CFR 63.1955(a))
- 2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 (above in condition VI.1.), as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. (40 CFR 60.758(c))
  - a. The following constitute exceedances that shall be recorded and reported under §60.757(f):
    - i. 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50° F) below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined. (40 CFR 60.758(c)(1)(i))
      - (1) 3-hour block averages are calculated in the same way as they are calculated in 40 CFR part 60 subpart WWW, except that the data collected during the events listed below are not to be included in any average computed for 40 CFR Part 63, subpart AAAA. (40 CFR 63.1975)
        - (a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. (40 CFR 63.1975(a))
        - (b) Startups. (40 CFR 63.1975(b))
        - (c) Shutdowns. (40 CFR 63.1975(c))
        - (d) Malfunions. (40 CFR 63.1975(d))
- 3. The following information shall be recorded:
  - a. The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test. (40 CFR 60.758(b)(2)(i))
  - b. The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) achieved by the control device. (40 CFR 60.758(b)(2)(ii))
- 4. The permittee shall submit the SSM plan report for EUHBTUENCL to the AQD District office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))
- 5. The permittee shall calculate and record the SO<sub>2</sub> emission rates from EUHBTUENCL monthly, and for the preceding 12-month rolling time period using the equation in Appendix A.4. The calculations shall utilize monthly gas testing data collected (SC V.1), the actual monthly gas usage, and the average ratio of total sulfur to sulfur as H<sub>2</sub>S from the most recent laboratory test. All records shall be kept on file at the facility and make them available to the Department upon request. (R 336.1205(3), 40 CFR 52.21 (c) & (d))

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**VII. REPORTING**

- 1. The permittee shall submit the SSM plan report for EUHBTUENCL to the AQD District office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))
- 2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHBTUENCL. (R 336.1201(7)(a))

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**VIII. STACK/VENT RESTRICTION(S)**

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

<u>Stack &amp; Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
<u>SVHBTUENCL</u>	<u>72</u>	<u>40</u>	<u>R 336.12225, 40 CFR 52.21 (c) &amp; (d)</u>

**IX. OTHER REQUIREMENT(S)**

- 1. The permittee shall comply with all applicable provisions of the federal Standards of Performance for Municipal Solid Waste Landfills as specified in 40 CFR Part 60 Subpart A and WWW, as they apply to EUHBTUENCL. (40 CFR Part 60 Subpart A and WWW)
- 2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills as specified in 40 CFR Part 63 Subparts A and AAAA, as they apply to EUHBTUENCL. (40 CFR Part 63 Subpart A and AAAA)

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**EUHBTUOPEN**

**DESCRIPTION** – 1,440 CFM open flare used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.

Flexible Group ID: NA

**POLLUTION CONTROL EQUIPMENT - NA**

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	0% Opacity	Test Protocol*	EUHBTUOPEN	SC V.2, VI.2	R336.1301.40 CFR 60.18(c)(1)

\*Test Protocol shall determine averaging time.

**II. MATERIAL LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Net heating value of landfill gas	≥ 200 Btu/scf for non-assisted flares	Test Protocol*	EUHBTUOPEN	SC V.1	40 CFR 60.18(c)(3)

\*Test Protocol shall determine averaging time.

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall operate EUHBTUOPEN in accordance with 40 CFR 60.18. (40 CFR 60.752(b)(2)(iii)(A), 40 CFR 63.1955(a))
- The permittee shall operate EUHBTUOPEN at all times when the collected gas is routed to it. (40 CFR 60.753(f), 40 CFR 63.1955(a))
- EUHBTUOPEN shall be designed for and operated with no visible emissions, as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. (40 CFR 60.18(c)(1))
- EUHBTUOPEN shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f). (40 CFR 60.18(c)(2))
- EUHBTUOPEN shall be used only with the net heating value of the gas being combusted of 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted of 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f) and Appendix A. (40 CFR 60.18(c)(3))
- Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii). (40 CFR 60.18(c)(4)(i))
  - Steam-assisted and non-assisted flares designed for and operated with an exit velocity, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the

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net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf). (40 CFR 60.18(c)(4)(iii))

b. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4) less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed. (40 CFR 60.18(c)(4)(iii))

7. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(6). (40 CFR 60.18(c)(5))

8. Flares used to comply with provisions of 40 CFR Part 60 Subpart A shall be operated at all times when landfill gas may be vented to them. (40 CFR 60.18(e))

9. The permittee shall operate the control system such that all collected gases are vented to a control system designed and operated in accordance with 40 CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour. (40 CFR 60.753(e), 40 CFR 63.1955(a))

10. The permittee shall not operate EUHBTUOPEN unless a SSM plan as described in Rule 911(2), for the open flare, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a start-up, shutdown, or malfunction, the permittee shall amend the SSM plan within 45 days after such an event occurs. The permittee shall also amend the SSM plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the SSM plan and any amendments to the SSM plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the SSM plan or amended SSM plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 63.1960, 40 CFR 63.6(e)(3))

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The nominal design capacity of EUHBTUOPEN shall be 1,440 CFM, as specified by the equipment manufacturer. (R 336.1205(1)(a), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))

**V. TESTING/SAMPLING**

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

1. For the performance test required in 40 CFR 60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4). (40 CFR 60.752(b)(2)(iii)(A), 40 CFR 60.754(e))

2. Method 22 of appendix A to 40 CFR Part 60 shall be used to determine the compliance of EUHBTUOPEN with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22. (40 CFR 60.18(f)(1), 40 CFR 60.752(b)(2)(iii)(A))

**VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. (40 CFR §60.756(c)(1), 40 CFR §63.1955(a))

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- 2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep up-to-date, readily accessible records for the life of the open flare of the data listed below in SC VI.3, as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the open flare vendor specifications shall be maintained until removal. (40 CFR §60.758(b), 40 CFR §63.1955(a)).
- 3. The permittee shall maintain records regarding the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the open flare pilot flame or open flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent. (40 CFR §60.758(b)(4), 40 CFR §63.1955(a)).
- 4. The following records for the flare shall be maintained onsite:
  - a. Records indicating presence of flare pilot flame. (40 CFR §60.18(f)(2))
  - b. The net heating value of the gas being combusted in the flare shall be calculated and recorded using the equation provided in Appendix A.1. (40 CFR §60.18(f)(3))
  - c. The actual exit velocity of the flare shall be calculated and recorded by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Federal Reference Test Methods 2, 2A, 2C, or 2D as appropriate, by the unobstructed (free) cross sectional area of the flare tip. (40 CFR §60.18(f)(4))
  - d. The maximum permitted velocity,  $V_{max}$ , for flares complying with 40 CFR §60.18(c)(4)(iii) shall be calculated and recorded using the equation provided in Appendix A.2. (40 CFR §60.18(f)(5))
  - e. The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be calculated and recorded using the equation provided in Appendix A.3. (40 CFR §60.18(f)(6))
- 5. The permittee shall monitor and record on a monthly basis the average Btu content of the landfill gas burned in EUHBTUOPEN. As an alternative, the permittee may use the monitored Btu value of the landfill gas burned in the Gas to Energy Plant. All records shall be kept on file for a period of at least five years and make them available to the Department upon request. (R 336.1205(3), 40 CFR 52.21 (c) & (d)).
- 6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling heat input calculations for EUHBTUOPEN. 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. (R 336.1205(3), 40 CFR 52.21 (c) & (d)).
- 7. The permittee shall calculate and record the SO<sub>2</sub> emission rates from EUHBTUOPEN monthly, and for the preceding 12-month rolling time period using the equation in Appendix A.4. The calculations shall utilize monthly gas testing data collected (SC V.1), the actual monthly gas usage, and the average ratio of total sulfur to sulfur as H<sub>2</sub>S from the most recent laboratory test. All records shall be kept on file at the facility and make them available to the Department upon request. (R 336.1205(3), 40 CFR 52.21 (c) & (d)).

**VII. REPORTING**

- 1. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5)).
- 2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHBTUOPEN. (R 336.1201(7)(a))

**VIII. STACK/VENT RESTRICTION(S)**

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

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<u>Stack &amp; Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
SHVBTUEOPEN	12 <sup>a</sup>	35 <sup>b</sup>	R 336.1225, 40 CFR 52.21(c) & (d)
<sup>a</sup> Calculated effective diameter is 4.56 inches.			
<sup>b</sup> Calculated effective height above ground is 37.1 feet.			

**IX. OTHER REQUIREMENT(S)**

- The duration of start-up, shutdown, or malfunction for the open flare shall not exceed 1 hour. **(40 CFR 60.755(e), 40 CFR 63.1955(a))**
- Compliance with 40 CFR Part 63, Subpart AAAA is determined in the same way it is determined for 40 CFR Part 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected above in SC VI.1 and VI.5 are used to demonstrate compliance with the operating conditions for the open flare. The permittee shall have developed and implemented a written SSM plan for EUHBTUOPEN, according to SC III.10. A copy of the SSM plan shall be maintained on site. **(40 CFR 63.1960, 40 CFR 63.6(e)(3))**
- The permittee shall comply with all applicable provisions of 40 CFR Part 60 Subpart A and WWW "Standard of Performance for Municipal Solid Waste Landfills as they apply to EUHBTUOPEN. **(40 CFR Part 60 Subpart A and WWW)**
- The permittee shall comply with all applicable provisions of 40 CFR Part 63 Subpart A and AAAA "National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as they apply to EUHBTUOPEN. **(40 CFR Part 63 Subpart A and AAAA)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

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### 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

**Deleted:** FGCOLDCLEANERS

**Deleted:** Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(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.

**Deleted:** EUCOLDCLEANER¶

<p><b>Deleted: &lt;#&gt;FGCOLDCLEANERS¶</b></p> <p><b>FLEXIBLE GROUP CONDITIONS¶</b></p> <p>¶</p> <p><b>DESCRIPTION</b> – Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(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.¶</p> <p><b>Emission Unit:</b> EUCOLDCLEANER¶</p> <p><b>POLLUTION CONTROL EQUIPMENT:</b> NA¶</p> <p><b>I. EMISSION LIMIT(S)¶</b></p> <p>¶</p> <p>NA¶</p> <p><b>II. MATERIAL LIMIT(S)¶</b></p> <p>¶</p> <p>1. The permittee shall not use cleaning solvents containing more than 5 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))¶</p> <p><b>III. PROCESS/OPERATIONAL RESTRICTION(S)¶</b></p> <p>¶</p> <p>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))¶</p> <p>¶</p> <p>2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. (R 336.1213(3))¶</p> <p><b>IV. DESIGN/EQUIPMENT PARAMETER(S)¶</b></p> <p>¶</p> <p>1. The cold cleaner must meet one of the following design requirements:¶</p> <p>a. The air/vapor interface of the cold cleaner is no more than 10 square feet. (R 336.1281(h))¶</p> <p>b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. (R 336.1285(r)(iv))¶</p> <p>¶</p> <p>2. The cold cleaner shall be equipped with a device for draining cleaned parts. (R 336.1611(2)(b), R 336.1707(3)(b))¶</p> <p>¶</p> <p>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))¶</p> <p>¶</p> <p>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))¶</p> <p>¶</p> <p>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:¶</p> <p>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))¶</p> <p>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))¶</p>
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Ameresco Woodland Meadows Romulus LLC

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PTI No: MI-PTI-P0317-2012a

### **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. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
GC	General Condition	psig	Pounds per square inch gauge
gr	Grains	PeTE	Permanent Total Enclosure
HAP	Hazardous Air Pollutant	PTI	Permit to Install
Hg	Mercury	RACT	Reasonable Available Control Technology
hr	Hour	ROP	Renewable Operating Permit
HP	Horsepower	SC	Special Condition
H <sub>2</sub> S	Hydrogen Sulfide	scf	Standard cubic feet
HVLP	High Volume Low Pressure *	sec	Seconds
ID	Identification (Number)	SCR	Selective Catalytic Reduction
IRSL	Initial Risk Screening Level	SO <sub>2</sub>	Sulfur Dioxide
ITSL	Initial Threshold Screening Level	SRN	State Registration Number
LAER	Lowest Achievable Emission Rate	TAC	Toxic Air Contaminant
lb	Pound	Temp	Temperature
m	Meter	THC	Total Hydrocarbons
MACT	Maximum Achievable Control Technology	tpy	Tons per year
MAERS	Michigan Air Emissions Reporting System	µg	Microgram
MAP	Malfunction Abatement Plan	VE	Visible Emissions
MDEQ	Michigan Department of Environmental Quality	VOC	Volatile Organic Compounds
mg	Milligram	yr	Year
mm	Millimeter		

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).



**Appendix 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. 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. 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. 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. Permits to Install**

The following table lists any PTIs issued since the effective date of previously issued ROP No. MI-ROP-P0317-2012a. This includes any PTIs that were incorporated into Source-wide PTI No. MI-PTI-P0317-2012a through amendments or modifications and any PTI that remained off-permit until this ROP renewal. Section 2 of Source-Wide PTI No. MI-PTI-M4449 was reissued as Source-Wide PTI No. MI-PTI-P0317-2012a.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
61-16	2,600 CFM enclosed flare (EUHBTUENCL) used for the destruction of the pressure swing adsorption (PSA) process CO2 tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N2 tail gas will be used as supplementary fuel.	NA
61-16	1,440 CFM open flare (EUHBTUOPEN) used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.	NA

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**Appendix 7. Emission Calculations**

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

**Appendix 8. Reporting**

**A. Annual, Semiannual, and Deviation Certification Reporting**

The permittee shall use the MDEQ Report Certification form (EQP 5736) and MDEQ Deviation Report form (EQP 5737) for the annual, semiannual and deviation certification reporting referenced in the Reporting Section of

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Expiration Date: December 12, 2017  
PTI No: MI-PTI-P0317-2012a

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.

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EUGASTREAT	Processing equipment that treats collected landfill gas for subsequent sale to a third party end user	May 1, 1987	NA
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## EUGASTREATMENT

### EMISSION UNIT CONDITIONS

**DESCRIPTION** – This emission unit treats landfill gas before it is sold for use as fuel. The treatment system removes particulate to at least the 10 micron level, compresses the landfill gas, and removes enough moisture to ensure good combustion during subsequent use, therefore, guaranteeing that the regulatory intent for the destruction of the NMOC will be maintained.

Flexible Group ID **NA**

**POLLUTION CONTROL EQUIPMENT** – Any emissions from atmospheric vents or stacks associated with the treatment system shall be subject to §60.752(b)(2)(iii)(A) or (B).

#### I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

#### II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
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Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

### III. PROCESS/OPERATIONAL RESTRICTION(S)

**The permittee shall operate the treatment system at all times when the collected gas is routed to the treatment system. (40 CFR §60.753(f))**

**The permittee shall operate the treatment system so that any emissions from any atmospheric vents or stacks associated with the treatment system shall be subject to §60.752(b)(2)(iii)(A) or (B). (40 CFR §60.752(b)(2)(iii)(C), 40 CFR §63.1955(a))**

**The permittee shall operate the treatment system to comply with the provisions of 60.753(e) and (f), and 60.756(d). (40 CFR §60.752(b)(2)(iv), 40 CFR §63.1955(a))**

### IV. DESIGN/EQUIPMENT PARAMETER(S)

**The treatment system shall be designed and installed as approved by AQD. (40 CFR §60.752(b)(2)(iii)(C), 40 CFR §60.752(b)(2)(i)(D), 40 CFR §63.1955(a))**

### 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))**

**The permittee shall keep up-to-date, readily accessible records of all control system exceedances of the operational standards in §60.753. (40 CFR §60.758(e), 40 CFR §63.1955(a))**

**The permittee shall keep records of all preventive maintenance performed in accordance with the preventive maintenance plan (PMP) prepared pursuant to special condition IX.3. (R 336.1213(3)(b))**

**The permittee shall provide information to the AQD as provided in 40 CFR §60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The AQD shall review the information and either approve it, or request that additional information be submitted. The AQD may specify additional appropriate monitoring procedures. (40 CFR §60.756(d)).**

## 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 received by 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))**

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

**The permittee shall submit to the appropriate AQD District Office semi-annual reports for the landfill gas treatment system. The report shall be received by 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. (40 CFR 60.757(f), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**

**Value and length of time for exceedance of applicable parameters monitored under §60.756(d). (R 336.1213(3), 40 CFR 60.757(f)(1), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**

**Description and duration of all periods when the gas stream is diverted from the treatment system through a bypass line or the indication of bypass flow. (R 336.1213(3))**

**Description and duration of all periods when the treatment system was not operating for a period exceeding 1 hour and length of time the control device was not operating. (40 CFR 60.757(f)(3), 40 CFR 63.1980(a), 40 CFR 63.1955(a))**

**Description and duration of all periods when the treatment system was not operated in accordance with the operating parameters and monitoring procedures that were part of the plan in condition number VII.4. (R 336.1213(3))**

**The permittee shall provide a description of the operation of the treatment system, the operating parameters that indicate proper performance, and the appropriate monitoring procedures to the appropriate AQD District Office for review within 30 days after the issuance of this permit. (40 CFR §60.752(b)(2)(i)(B), 40 CFR §63.1955(a))**

**The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office, delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (40 CFR §63.10(a)(5), 40 CFR §63.10(d)(5))**

See Appendix 2

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## **VIII. STACK/VENT RESTRICTION(S)**

**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
<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>

### IX. OTHER REQUIREMENT(S)

**The provisions of §60.755 apply at all times, except during periods of start-up, shutdown, or malfunction (SSM), provided that the duration of start-up, shutdown, or malfunction shall not exceed 1 hour for the treatment system. (40 CFR §60.755(e), 40 CFR §63.1955(a))**

**The permittee shall have developed and implemented a written SSM plan according to the provision in 40 CFR §63.6(e)(3) for EUGASTREATMENT. A copy of the SSM plan shall be maintained on site. (40 CFR §63.1960, 40 CFR §63.1965(c))**

**The permittee shall have developed and implemented a written preventive maintenance plan (PMP) for EUGASTREATMENT. At a minimum, the plan shall include a schedule of maintenance activities consistent with the equipment manufacturers' recommendations. A copy of the PMP shall be maintained on site. (R 336.1213(2))**

Footnotes:

<sup>1</sup>This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).



## EUOILSEPARATOR EMISSION UNIT CONDITIONS

**DESCRIPTION** – Oil/water separator used to treat condensate from the gas treatment plant prior to discharge to the sanitary sewage system.

Flexible Group ID: NA

### **POLLUTION CONTROL EQUIPMENT** - NA

#### **I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
Volatile organic compounds (VOC)	0.1 lb/hour <sup>2</sup>	Hourly limit	EUOILSEPARATOR	NA	R 336.1702(c)

#### **II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

#### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall maintain the cover in the closed position during operation to minimize emissions of VOC.<sup>2</sup> (R 336.1201(3))

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

#### **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))

NA

#### **VII. REPORTING**

- 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

**VIII. STACK/VENT RESTRICTION(S)**

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
SVOILSEPARATOR	11 <sup>2</sup>	14 <sup>2</sup>	R 336.1201(3)

**IX. OTHER REQUIREMENT(S)**

NA

**Footnotes:**

<sup>1</sup> This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup> This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

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Page 22: [4] Deleted			Smith, Stevia	1/5/2017 9:20:00 AM
<b>FGCOLDCLEANERS FLEXIBLE GROUP CONDITIONS</b>				

**DESCRIPTION** – Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(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 5 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 10 square feet. **(R 336.1281(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(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 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 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(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%, 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 compliance pursuant to General Condition 23 of Part A. Due 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. Due annually by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

**See Appendix 8**

## **VIII. STACK/VENT RESTRICTION(S)**

NA

## **IX. OTHER REQUIREMENT(S)**

NA

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION

August 29, 2016

PERMIT TO INSTALL  
61-16

ISSUED TO  
Ameresco Woodland Meadows Romulus, LLC

LOCATED AT  
4620 Hannan Road  
Canton, Michigan

IN THE COUNTY OF  
Wayne

STATE REGISTRATION NUMBER  
P0317

The Air Quality Division has approved this Permit to Install, pursuant to the delegation of authority from the Michigan Department of Environmental Quality. This permit is hereby issued in accordance with and subject to Section 5505(1) of Article II, Chapter I, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Pursuant to Air Pollution Control Rule 336.1201(1), this permit constitutes the permittee's authority to install the identified emission unit(s) in accordance with all administrative rules of the Department and the attached conditions. Operation of the emission unit(s) identified in this Permit to Install is allowed pursuant to Rule 336.1201(6).


DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

**July 7, 2016**

DATE PERMIT TO INSTALL APPROVED:

**August 29, 2016**

SIGNATURE:



DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

**PERMIT TO INSTALL**

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**Common Abbreviations / Acronyms**

<b>Common Acronyms</b>		<b>Pollutant / Measurement Abbreviations</b>	
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 <sub>2</sub> e	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
EU	Emission Unit	gr	Grains
FG	Flexible Group	HAP	Hazardous Air Pollutant
GACS	Gallons of Applied Coating Solids	Hg	Mercury
GC	General Condition	hr	Hour
GHGs	Greenhouse Gases	HP	Horsepower
HVLP	High Volume Low Pressure*	H <sub>2</sub> S	Hydrogen Sulfide
ID	Identification	kW	Kilowatt
IRSL	Initial Risk Screening Level	lb	Pound
ITSL	Initial Threshold Screening Level	m	Meter
LAER	Lowest Achievable Emission Rate	mg	Milligram
MACT	Maximum Achievable Control Technology	mm	Millimeter
MAERS	Michigan Air Emissions Reporting System	MM	Million
MAP	Malfunction Abatement Plan	MW	Megawatts
MDEQ	Michigan Department of Environmental Quality	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO <sub>x</sub>	Oxides of Nitrogen
NA	Not Applicable	ng	Nanogram
NAAQS	National Ambient Air Quality Standards	PM	Particulate Matter
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM10	Particulate Matter equal to or less than 10 microns in diameter
NSPS	New Source Performance Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSR	New Source Review	pph	Pounds per hour
PS	Performance Specification	ppm	Parts per million
PSD	Prevention of Significant Deterioration	ppmv	Parts per million by volume
PTE	Permanent Total Enclosure	ppmw	Parts per million by weight
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 <sub>2</sub>	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.

### GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install 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 this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit 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 R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. 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 Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department 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 condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.



11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of R 336.1301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with R 336.1303. **(R 336.1301)**
  - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
  - b) A visible emission limit specified by an applicable federal new source performance standard.
  - c) A visible emission limit specified as a condition of this Permit to Install.
  
12. 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 R 336.1370(2). **(R 336.1370)**
  
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

**SPECIAL CONDITIONS**

**EMISSION UNIT SUMMARY TABLE**

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUHBTUENCL	2,600 cubic feet per minute (CFM) enclosed flare used for the destruction of the pressure swing adsorption (PSA) process CO2 tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N2 tail gas will be used as supplementary fuel.	To be determined	N/A
EUHBTUOPEN	1,440 CFM open flare used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.	To be determined	N/A
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.			

**The following conditions apply to: EUHBTUENCL**

**DESCRIPTION:** 2,600 CFM enclosed flare used for the destruction of the pressure swing adsorption (PSA) process CO<sub>2</sub> tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N<sub>2</sub> tail gas will be used as supplementary fuel.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing/ Monitoring Method	Underlying Applicable Requirements
1. NMOC	Reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen	Test Protocol*	EUHBTUENCL	SC V.2	40 CFR 60.752(b)(2)(iii)(B), 40 CFR 60.754(d), 40 CFR 60.758(b)(2)
2. SO <sub>2</sub>	16.8 pph	Test Protocol*	EUHBTUENCL	SC V.3	40 CFR 52.21 (c) & (d)
3. SO <sub>2</sub>	73.7 tpy	12-month rolling time period as determined at the end of each month	EUHBTUENCL	SC V.3, VI.5	R 336.1205(3)

\*Test Protocol shall determine averaging time.

**II. MATERIAL LIMITS**

NA

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall equip and maintain EUHBTUENCL with a temperature monitor. **(R336.1205(1)(a), R 336.1225)**
2. The temperature monitor for EUHBTUENCL shall be calibrated annually to confirm accuracy, and adjustments made as necessary to maintain accuracy. **(R336.1205(1)(a), R 336.1225)**
3. The permittee shall monitor and record the flaring duration each time EUHBTUENCL ground flare is ignited in a manner and with instrumentation acceptable to the Air Quality Division. All of the accumulated data shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. **(R 336.1225, R336.1205(3))**
4. The permittee shall operate EUHBTUENCL at all times when the collected gas is routed to the enclosed flare. **(40 CFR 60.753(f), 40 CFR 63.1955(a))**

5. The permittee shall not operate EUHBTUENCL unless a start-up, shutdown, malfunction abatement (SSM) plan as described in Rule 911(2), for the enclosed flare, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a start-up, shutdown, or malfunction, the permittee shall amend the SSM plan within 45 days after such an event occurs. The permittee shall also amend the SSM plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the SSM plan and any amendments to the SSM plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the SSM plan or amended SSM plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 63.1960, 40 CFR 63.6(e)(3))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the volumetric flow rate of landfill gas burned in EUHBTUENCL, on a continuous basis. **(R 336.1224, R 336.1225, R 336.1901; R 336.12803, R 336.2804, 40 CFR 52.21(c) & (d); 40 CFR Part 60 Subparts A & WWW; 40 CFR Part 63 Subparts A & AAAA)**
2. The nominal design capacity of EUHBTUENCL shall be 2,600 CFM, as specified by the equipment manufacturer. **(R 336.1205(1)(a), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

#### **V. TESTING/SAMPLING**

1. The permittee shall verify hydrogen sulfide or total reduced sulfur content of the landfill gas delivered to the HBTU process on a monthly basis, by gas testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to the initial test, 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 the first test. Thereafter, the permittee shall submit a test plan upon the request of the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. **(R 336.1205(3)), 40 CFR 52.21 (c) & (d))**
2. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify either the reduction of NMOC by 98 weight percent efficiency or the 20 ppmv outlet concentration level from EUHBTUENCL, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and WWW. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of initial startup in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 60 days prior to 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. 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. **(40 CFR 60.752(b)(2)(iii)(B), 40 CFR 60.754(d))**
3. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify and quantify SO<sub>2</sub> emission rates from EUHBTUENCL by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to 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. 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. **(R 336.1205(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

## **VI. MONITORING/RECORDKEEPING**

Records shall be maintained on file for a period of 5 years. **(R 336.1201(3))**

1. The permittee shall calibrate, maintain, and operate EUHBTUENCL according to the manufacturer's specifications, including the following:
  - a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of plus or minus 1 percent of the temperature being measured expressed in degrees centigrade or plus or minus 0.5 degrees centigrade, whichever is greater. **(40 CFR 60.756(b)(1), 40 CFR 63.1955(a))**
  - b. A device that records flow to or bypass of the control device. The permittee shall either:
    - i. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; **(40 CFR 60.756(b)(2)(i), 40 CFR 63.1955(a)) or**
    - ii. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. **(40 CFR 60.756(b)(2)(ii), 40 CFR 63.1955(a))**
2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 (above in condition VI.1.), as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. **(40 CFR 60.758(c))**
  - a. The following constitute exceedances that shall be recorded and reported under §60.757(f):
    - i. All 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50° F) below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined. **(40 CFR 60.758(c)(1)(i))**
      - (1) 3-hour block averages are calculated in the same way as they are calculated in 40 CFR part 60 subpart WWW, except that the data collected during the events listed below are not to be included in any average computed for 40 CFR Part 63, subpart AAAA. **(40 CFR 63.1975)**
        - (a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. **(40 CFR 63.1975(a))**
        - (b) Startups. **(40 CFR 63.1975(b))**
        - (c) Shutdowns. **(40 CFR 63.1975(c))**
        - (d) Malfunctions. **(40 CFR 63.1975(d))**
3. The following information shall be recorded:
  - a. The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test. **(40 CFR 60.758(b)(2)(i))**
  - b. The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) achieved by the control device. **(40 CFR 60.758(b)(2)(ii))**
4. The permittee shall keep up-to-date, readily accessible records of all control system exceedances of the operational standards in §60.753 (SC III.4. and III.5.). **(40 CFR 60.758(e))**
5. The permittee shall calculate and record the SO<sub>2</sub> emission rates from EUHBTUENCL monthly, and for the preceding 12-month rolling time period using the equation in Appendix A.4. The calculations shall utilize monthly gas testing data collected (SC V.1), the actual monthly gas usage, and the average ratio of total sulfur to sulfur as H<sub>2</sub>S from the most recent laboratory test. All records shall be kept on file at the facility and make them available to the Department upon request. **(R 336.1205(3)), 40 CFR 52.21 (c) & (d))**

**VII. REPORTING**

1. The permittee shall submit the SSM plan report for EUHBTUENCL to the AQD District office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))**
2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHBTUENCL. **(R 336.1201(7)(a))**

**VIII. STACK/VENT RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter/Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVHBTUENCL	72	40	R336.1225, 40 CFR 52.21 (c) & (d)

**IX. OTHER REQUIREMENTS**

1. The permittee shall comply with all applicable provisions of the federal Standards of Performance for Municipal Solid Waste Landfills as specified in 40 CFR Part 60 Subpart A and WWW, as they apply to EUHBTUENCL. **(40 CFR Part 60 Subpart A and WWW)**
2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills as specified in 40 CFR Part 63 Subparts A and AAAA, as they apply to EUHBTUENCL. **(40 CFR Part 63 Subpart A and AAAA)**

**The following conditions apply to: EUHBTUOPEN**

**DESCRIPTION:** 1,440 CFM open flare used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT:** NA

**I. EMISSION LIMITS**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Visible Emissions	0% Opacity	Test Protocol*	EUHBTUOPEN	SC V.2, VI.2	R336.1301, 40 CFR 60.18(c)(1)
*Test Protocol shall determine averaging time period.					

**II. MATERIAL LIMITS**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Net heating value of landfill gas	≥ 200 Btu/scf for non-assisted flares	Test Protocol*	EUHBTUOPEN	SC V.1	40 CFR 60.18(c)(3)
*Test Protocol shall determine averaging time period.					

**III. PROCESS/OPERATIONAL RESTRICTIONS**

1. The permittee shall operate EUHBTUOPEN in accordance with 40 CFR 60.18. **(40 CFR 60.752(b)(2)(iii)(A), 40 CFR 63.1955(a))**
2. The permittee shall operate EUHBTUOPEN at all times when the collected gas is routed to it. **(40 CFR 60.753(f), 40 CFR 63.1955(a))**
3. EUHBTUOPEN shall be designed for and operated with no visible emissions, as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **(40 CFR 60.18(c)(1))**
4. EUHBTUOPEN shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f). **(40 CFR 60.18(c)(2))**
5. EUHBTUOPEN shall be used only with the net heating value of the gas being combusted of 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted of 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f) and Appendix A. **(40 CFR 60.18(c)(3))**

6. Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii). **(40 CFR 60.18(c)(4)(i))**
  - a. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf). **(40 CFR 60.18(c)(4)(ii))**
  - b. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4) less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed. **(40 CFR 60.18(c)(4)(iii))**
7. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(6). **(40 CFR 60.18(c)(5))**
8. Flares used to comply with provisions of 40 CFR Part 60 Subpart A shall be operated at all times when landfill gas may be vented to them. **(40 CFR 60.18(e))**
9. The permittee shall operate the control system such that all collected gases are vented to a control system designed and operated in accordance with 40 CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour. **(40 CFR 60.753(e), 40 CFR 63.1955(a))**
10. The permittee shall not operate EUHBTUOPEN unless a SSM plan as described in Rule 911(2), for the open flare, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a start-up, shutdown, or malfunction, the permittee shall amend the SSM plan within 45 days after such an event occurs. The permittee shall also amend the SSM plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the SSM plan and any amendments to the SSM plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the SSM plan or amended SSM plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 63.1960, 40 CFR 63.6(e)(3))**

#### **IV. DESIGN/EQUIPMENT PARAMETERS**

1. The nominal design capacity of EUHBTUOPEN shall be 1,440 CFM, as specified by the equipment manufacturer. **(R 336.1205(1)(a), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**

#### **V. TESTING/SAMPLING**

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

1. For the performance test required in 40 CFR 60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4). **(40 CFR 60.752(b)(2)(iii)(A), 40 CFR 60.754(e))**
2. Method 22 of appendix A to 40 CFR Part 60 shall be used to determine the compliance of EUHBTUOPEN with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22. **(40 CFR 60.18(f)(1), 40 CFR 60.752(b)(2)(iii)(A))**



## **VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. **(40 CFR §60.756(c)(1), 40 CFR §63.1955(a))**
2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep up-to-date, readily accessible records for the life of the open flare of the data listed below in SC VI.3, as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the open flare vendor specifications shall be maintained until removal. **(40 CFR §60.758(b), 40 CFR §63.1955(a))**
3. The permittee shall maintain records regarding the flare type (i.e., steam-assisted, air-assisted, or non-assisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the open flare pilot flame or open flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent. **(40 CFR §60.758(b)(4), 40 CFR §63.1955(a))**
4. The following records for the flare shall be maintained onsite:
  - a. Records indicating presence of flare pilot flame. **(40 CFR §60.18(f)(2))**
  - b. The net heating value of the gas being combusted in the flare shall be calculated and recorded using the equation provided in Appendix A.1. **(40 CFR §60.18(f)(3))**
  - c. The actual exit velocity of the flare shall be calculated and recorded by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Federal Reference Test Methods 2, 2A, 2C, or 2D as appropriate, by the unobstructed (free) cross sectional area of the flare tip. **(40 CFR §60.18(f)(4))**
  - d. The maximum permitted velocity,  $V_{max}$ , for flares complying with 40 CFR §60.18(c)(4)(iii) shall be calculated and recorded using the equation provided in Appendix A.2. **(40 CFR §60.18(f)(5))**
  - e. The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be calculated and recorded using the equation provided in Appendix A.3. **(40 CFR §60.18(f)(6))**
5. The permittee shall monitor and record on a monthly basis the average Btu content of the landfill gas burned in EUHBTUOPEN. As an alternative, the permittee may use the monitored Btu value of the landfill gas burned in the Gas to Energy Plant. All records shall be kept on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3), 40 CFR 52.21 (c) & (d))**
6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling heat input calculations for EUHBTUOPEN. 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. **(R 336.1205(3), 40 CFR 52.21 (c) & (d))**
7. The permittee shall calculate and record the SO<sub>2</sub> emission rates from EUHBTUOPEN monthly, and for the preceding 12-month rolling time period using the equation in Appendix A.4. The calculations shall utilize monthly gas testing data collected (SC V.1), the actual monthly gas usage, and the average ratio of total sulfur to sulfur as H<sub>2</sub>S from the most recent laboratory test. All records shall be kept on file at the facility and make them available to the Department upon request. **(R 336.1205(3), 40 CFR 52.21 (c) & (d))**

**VII. REPORTING**

1. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))**
2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHBTUOPEN. **(R 336.1201(7)(a))**

**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 Diameter (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVHBTUOPEN	12 <sup>a</sup>	35 <sup>b</sup>	R 336.1225, 40 CFR 52.21(c) & (d)
<sup>a</sup> Calculated effective diameter is 4.56 inches. <sup>b</sup> Calculated effective height above ground is 37.1 feet.			

**IX. OTHER REQUIREMENTS**

1. The duration of start-up, shutdown, or malfunction for the open flare shall not exceed 1 hour. **(40 CFR 60.755(e), 40 CFR 63.1955(a))**
2. Compliance with 40 CFR Part 63, Subpart AAAA is determined in the same way it is determined for 40 CFR Part 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected above in SC VI.1 and VI.5 are used to demonstrate compliance with the operating conditions for the open flare. The permittee shall have developed and implemented a written SSM plan for EUHBTUOPEN, according to SC III.10. A copy of the SSM plan shall be maintained on site. **(40 CFR 63.1960, 40 CFR 63.6(e)(3))**
3. The permittee shall comply with all applicable provisions of 40 CFR Part 60 Subpart A and WWW “Standard of Performance for Municipal Solid Waste Landfills as they apply to EUHBTUOPEN. **(40 CFR Part 60 Subpart A and WWW)**
4. The permittee shall comply with all applicable provisions of 40 CFR Part 63 Subpart A and AAAA “National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as they apply to EUHBTUOPEN. **(40 CFR Part 63 Subpart A and AAAA)**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

## APPENDIX A

### 1. Net Heating Value of the gas being combusted in the flare:

The net heating value of the gas being combusted in the flare shall be calculated and recorded using the equation provided in 40 CFR 60.18(f)(3). **(40 CFR 60.18(f)(3))**

$$H_T = K \sum_{i=1}^n C_i H_i$$

#### WHERE:

$H_T$  = Net heating value of the sample, MJ/scm;

where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C;

$$K = \frac{\text{Constant}}{1.740 \times 10^{-7}} \left( \frac{1}{\text{ppm}} \right) \left( \frac{\text{g mole}}{\text{scm}} \right) \left( \frac{\text{MJ}}{\text{kcal}} \right)$$

where the standard temperature for  $\left( \frac{\text{g mole}}{\text{scm}} \right)$  is 20°C;

$C_i$  = Concentration of sample component  $i$  in ppm on a dry basis, as measured by Reference Method 3C (40 CFR 60.754(e)); and

$H_i$  = Net heat of combustion of sample component  $i$ , kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76, 88 (incorporated by reference as specified in 60.17(30)) or D4809–95 (incorporated by reference as specified in 60.17(56)) if published values are not available or cannot be calculated.

### 2. Calculation for Vmax steam-assisted and non-assisted flares:

The maximum permitted velocity,  $V_{max}$ , for flares complying with 40 CFR 60.18(c)(4)(iii) shall be calculated and recorded using the equation provided in 40 CFR 60.18(f)(5). **(40 CFR 60.18(f)(5))**

$$\text{Log}_{10} (V_{max}) = (HT+28.8)/31.7$$

$V_{max}$  = Maximum permitted velocity, M/sec

28.8=Constant

31.7=Constant

HT= The net heating value as determined above.

### 3. Calculation for Vmax for air-assisted flares:

The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be calculated and recorded using the equation provided in 40 CFR 60.18(f)(6). **(40 CFR 60.18(f)(6))**

$$V_{max} = 8.706+0.7084 (HT)$$

$V_{max}$  = Maximum permitted velocity, m/sec 8.706=Constant 0.7084=Constant HT=The net heating value as determined above.

**4. Calculation for Monthly SO<sub>2</sub> Emissions:**

The following calculation for SO<sub>2</sub> emissions shall utilize monthly H<sub>2</sub>S concentration measurements from testing data collected, the actual monthly gas usage, and the average ratio of total sulfur to sulfur as H<sub>2</sub>S from the most recent laboratory test. The permittee shall use a default ratio of total sulfur to sulfur as H<sub>2</sub>S equal to 1.2, if there are no test results.

*SO<sub>2</sub> Emissions (tons per month)*

$$\begin{aligned} &= \frac{\text{Monthly H}_2\text{S Concentration (ppmv)}}{1,000,000} \times \frac{1.1733 \text{ mols Sulfur}}{\text{ft}^3} \times \frac{34.065 \text{ grams}}{\text{mol Sulfur}} \times \frac{\text{pound}}{453.59 \text{ grams}} \times \frac{\text{ton}}{2,000 \text{ pounds}} \\ &\times \frac{1.88 \text{ SO}_2}{\text{H}_2\text{S}} \times \frac{1.2 \text{ TRS}}{\text{H}_2\text{S}} \times \text{Actual Monthly Landfill Gas Usage (ft}^3\text{/month)} \end{aligned}$$

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION**

EFFECTIVE DATE: DECEMBER 12, 2012

REVISION DATE: FEBRUARY 2, 2016

ISSUED TO

**AMERESCO WOODLAND MEADOWS ROMULUS LLC**

State Registration Number (SRN): P0317

LOCATED AT

4620 Hannan Road, Wayne, Michigan 48184

**RENEWABLE OPERATING PERMIT**

Permit Number: MI-ROP-P0317-2012a

Expiration Date: December 12, 2017

Administratively Complete ROP Renewal Application  
Due Between June 12, 2016 and June 12, 2017

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-P0317-2012a

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

Wilhemina McLemore, Detroit 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 will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, 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.

## 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 federally enforceable Source-Wide PTI No. MI-PTI-P0317- 2012 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.,



Ameresco Woodland Meadows Romulus LLC

ROP No: MI-ROP-P0317-2012a  
Expiration Date: December 12, 2017  
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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). **(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. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part; "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 Rule 301(1)(a) or (b) unless otherwise specified in this ROP." The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part):**
  - a. A 6-minute average of 20 percent opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
  - b. A limit specified by an applicable federal new source performance standard.
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.<sup>1</sup> **(R 336.1901(a))**
  - b. Unreasonable interference with the comfortable enjoyment of life and property.<sup>1</sup> **(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). **(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(4))**

**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. **(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. **(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(9))**
- 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(7))**

### 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, Part 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, Part 68.10(a):
- June 21, 1999,
  - Three years after the date on which a regulated substance is first listed under 40 CFR, Part 68.130, or
  - 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.<sup>2</sup> **(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.<sup>2</sup> **(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.<sup>2</sup> **(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, or has been interrupted for 18 months, the applicable terms and conditions from that PTI 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.<sup>2</sup> **(R 336.1201(4))**

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

Ameresco Woodland Meadows Romulus LLC

ROP No: MI-ROP-P0317-2012a  
Expiration Date: December 12, 2017  
PTI No: MI-PTI-P0317-2012a

## **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
EUGASTREAT	Processing equipment that treats collected landfill gas for subsequent sale to a third party end user	May 1, 1987	NA
EUOILSEPARATOR	Oil/water separation system for the landfill treatment system	June 1, 1994	NA
EUCOLDCLEANER	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(r)(iv)	NA	FGCOLDCLEANERS
<u>EUHBTUENCL</u>	<u>2,600 CFM enclosed flare used for the destruction of the pressure swing adsorption (PSA) process CO2 tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N2 tail gas will be used as supplementary fuel.</u>	<u>TBD (2017)</u>	<u>NA</u>
<u>EUHBTUOPEN</u>	<u>1,440 CFM open flare used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.</u>	<u>TBD (2017)</u>	<u>NA</u>



**EUGASTREATMENT**

**EMISSION UNIT CONDITIONS**

**DESCRIPTION** — This emission unit treats landfill gas before it is sold for use as fuel. The treatment system removes particulate to at least the 10-micron level, compresses the landfill gas, and removes enough moisture to ensure good combustion during subsequent use, therefore, guaranteeing that the regulatory intent for the destruction of the NMOC will be maintained.

Flexible Group ID: NA

**POLLUTION CONTROL EQUIPMENT** — Any emissions from atmospheric vents or stacks associated with the treatment system shall be subject to §60.752(b)(2)(iii)(A) or (B).

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

**II. MATERIAL LIMIT(S)**

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements

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Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
NA	NA	NA	NA	NA	NA

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**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. ~~The permittee shall operate the treatment system at all times when the collected gas is routed to the treatment system.~~ (40 CFR §60.753(f))
2. ~~The permittee shall operate the treatment system so that any emissions from any atmospheric vents or stacks associated with the treatment system shall be subject to §60.752(b)(2)(iii)(A) or (B).~~ (40 CFR §60.752(b)(2)(iii)(C), 40 CFR §63.1955(a))
3. ~~The permittee shall operate the treatment system to comply with the provisions of 60.753(e) and (f), and 60.756(d).~~ (40 CFR §60.752(b)(2)(iv), 40 CFR §63.1955(a))

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. ~~The treatment system shall be designed and installed as approved by AQD.~~ (40 CFR §60.752(b)(2)(iii)(C), 40 CFR §60.752(b)(2)(i)(D), 40 CFR §63.1955(a))

**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. The permittee shall keep up-to-date, readily accessible records of all control system exceedances of the operational standards in §60.753. (40 CFR §60.758(e), 40 CFR §63.1955(a))~~
- ~~2. The permittee shall keep records of all preventive maintenance performed in accordance with the preventive maintenance plan (PMP) prepared pursuant to special condition IX.3. (R 336.1213(3)(b))~~
- ~~3. The permittee shall provide information to the AQD as provided in 40 CFR §60.752(b)(2)(i)(B) describing the operation of the control device, the operating parameters that would indicate proper performance, and appropriate monitoring procedures. The AQD shall review the information and either approve it, or request that additional information be submitted. The AQD may specify additional appropriate monitoring procedures. (40 CFR §60.756(d)).~~

VII. REPORTING

- ~~1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(iii))~~
- ~~2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. Report shall be received by 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 received by appropriate AQD district office by March 15 for the previous calendar year. (R 336.1213(4)(e))~~
- ~~4. The permittee shall submit to the appropriate AQD District Office semi-annual reports for the landfill gas treatment system. The report shall be received by 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. (40 CFR 60.757(f), 40 CFR 63.1980(a), 40 CFR 63.1955(a))~~

- a. ~~Value and length of time for exceedance of applicable parameters monitored under §60.756(d).~~  
(R 336.1213(3), 40 CFR 60.757(f)(1), 40 CFR 63.1980(a), 40 CFR 63.1955(a))
- b. ~~Description and duration of all periods when the gas stream is diverted from the treatment system through a bypass line or the indication of bypass flow.~~ (R 336.1213(3))
- c. ~~Description and duration of all periods when the treatment system was not operating for a period exceeding 1 hour and length of time the control device was not operating.~~ (40 CFR 60.757(f)(3), 40 CFR 63.1980(a), 40 CFR 63.1955(a))
- d. ~~Description and duration of all periods when the treatment system was not operated in accordance with the operating parameters and monitoring procedures that were part of the plan in condition number VII.4.~~  
(R 336.1213(3))
  
- 5. ~~The permittee shall provide a description of the operation of the treatment system, the operating parameters that indicate proper performance, and the appropriate monitoring procedures to the appropriate AQD District Office for review within 30 days after the issuance of this permit.~~ (40 CFR §60.752(b)(2)(i)(B), 40 CFR §63.1955(a))
  
- 6. ~~The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office, delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30.~~ (40 CFR §63.10(a)(5), 40 CFR §63.10(d)(5))

See Appendix 2

**VIII. STACK/VENT RESTRICTION(S)**

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
NA	NA	NA	NA

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**IX. OTHER REQUIREMENT(S)**

1. The provisions of §60.755 apply at all times, except during periods of start-up, shutdown, or malfunction (SSM), provided that the duration of start-up, shutdown, or malfunction shall not exceed 1 hour for the treatment system. (40 CFR §60.755(e), 40 CFR §63.1955(a))

2. The permittee shall have developed and implemented a written SSM plan according to the provision in 40 CFR §63.6(e)(3) for EUGASTREATMENT. A copy of the SSM plan shall be maintained on-site. (40 CFR §63.1960, 40 CFR §63.1965(e))

3. The permittee shall have developed and implemented a written preventive maintenance plan (PMP) for EUGASTREATMENT. At a minimum, the plan shall include a schedule of maintenance activities consistent with the equipment manufacturers' recommendations. A copy of the PMP shall be maintained on-site. (R-336.1213(2))

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Footnotes:

Ameresco Woodland Meadows Romulus LLC

ROP No: MI-ROP-P0317-2012a  
Expiration Date: December 12, 2017  
PTI No: MI-PTI-P0317-2012a

~~<sup>1</sup>This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).~~

~~<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).~~

~~—EUOILSEPARATOR  
EMISSION UNIT CONDITIONS~~

~~DESCRIPTION~~ — Oil/water separator used to treat condensate from the gas treatment plant prior to discharge to the sanitary sewage system.

~~Flexible Group ID:~~ NA

~~POLLUTION CONTROL EQUIPMENT~~ — NA

~~I. EMISSION LIMIT(S)~~

<del>Pollutant</del>	<del>Limit</del>	<del>Time Period/ Operating Scenario</del>	<del>Equipment</del>	<del>Monitoring/ Testing Method</del>	<del>Underlying Applicable Requirements</del>
<del>Volatile organic compounds (VOC)</del>	<del>0.1 lb/hour<sup>2</sup></del>	<del>Hourly limit</del>	<del>EUOILSEPARATOR</del>	<del>NA</del>	<del>R 336.1702(c)</del>

~~II. MATERIAL LIMIT(S)~~

<del>Material</del>	<del>Limit</del>	<del>Time Period/ Operating Scenario</del>	<del>Equipment</del>	<del>Monitoring/ Testing Method</del>	<del>Underlying Applicable Requirements</del>
<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>	<del>NA</del>

~~III. PROCESS/OPERATIONAL RESTRICTION(S)~~

~~1. The permittee shall maintain the cover in the closed position during operation to minimize emissions of VOC.<sup>2</sup>  
(R 336.1201(3))~~

~~IV. DESIGN/EQUIPMENT PARAMETER(S)~~

~~NA~~

~~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))~~

~~NA~~

~~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)(e))~~

~~See Appendix 8~~

~~VIII. STACK/VENT RESTRICTION(S)~~

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

<del>Stack &amp; Vent ID</del>	<del>Maximum Exhaust Dimensions (inches)</del>	<del>Minimum Height Above Ground (feet)</del>	<del>Underlying Applicable Requirements</del>
<del>SVOILSEPARATOR</del>	<del>44<sup>2</sup></del>	<del>44<sup>2</sup></del>	<del>R 336.1201(3)</del>

~~IX. OTHER REQUIREMENT(S)~~

~~NA~~

~~Footnotes:~~

~~<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).~~

~~<sup>2</sup>This condition is federally enforceable and was established pursuant to Rule 201(1)(a).~~

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**EUHBTUENCL**

**DESCRIPTION** – 2,600 CFM enclosed flare used for the destruction of the pressure swing adsorption (PSA) process CO<sub>2</sub> tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N<sub>2</sub> tail gas will be used as supplementary fuel.

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**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT - NA**

**I. EMISSION LIMIT(S)**

<u>Pollutant</u>	<u>Limit</u>	<u>Time Period/ Operating Scenario</u>	<u>Equipment</u>	<u>Monitoring/ Testing Method</u>	<u>Underlying Applicable Requirements</u>
1. NMOC	Reduce NMOC by 98 weight-percent or reduce the outlet NMOC concentration to less than 20 parts per million by volume, dry basis as hexane at 3 percent oxygen	Test Protocol*	EUHBTUENCL	SC V.2	40 CFR 60.752(b)(2)(iii)(B), 40 CFR 60.754(d), 40 CFR 60.758(b)(2)
1. SO <sub>2</sub>	16.8 pph	Test Protocol*	EUHBTUENCL	SC V.3	40 CFR 52.21 (c) & (d)
2. SO <sub>2</sub>	73.7 tpy	12-month rolling time period as determined at the end of each month	EUHBTUENCL	SC V.3	R 336.1205(3)

\*Test Protocol shall determine averaging time.

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**II. MATERIAL LIMIT(S)**

NA

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall equip and maintain EUHBTUENCL with a temperature monitor. (R336.1205(1)(a), R 336.1225)
- The temperature monitor for EUHBTUENCL shall be calibrated annually to confirm accuracy, and adjustments made as necessary to maintain accuracy. (R336.1205(1)(a), R 336.1225)
- The permittee shall monitor and record the flaring duration each time EUHBTUENCL ground flare is ignited in a manner and with instrumentation acceptable to the Air Quality Division. All of the accumulated data shall be kept on file for a period of at least five years and made available to the Air Quality Division upon request. (R 336.1225, R336.1205(3))
- The permittee shall operate EUHBTUENCL at all times when the collected gas is routed to the enclosed flare. (40 CFR 60.753(f), 40 CFR 63.1955(a))

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5. The permittee shall not operate EUHBTUENCL unless a start-up, shutdown, malfunction abatement (SSM) plan as described in Rule 911(2), for the enclosed flare, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a start-up, shutdown, or malfunction, the permittee shall amend the SSM plan within 45 days after such an event occurs. The permittee shall also amend the SSM plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the SSM plan and any amendments to the SSM plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the SSM plan or amended SSM plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 63.1960, 40 CFR 63.6(e)(3))

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**IV. DESIGN/EQUIPMENT PARAMETER(S)**

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1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the volumetric flow rate of landfill gas burned in EUHBTUENCL, on a continuous basis. (R 336.1224, R 336.1225, R 336.1901; R 336.12803, R 336.2804, 40 CFR 52.21(c) & (d); 40 CFR Part 60 Subparts A & WWW; 40 CFR Part 63 Subparts A & AAAA)

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2. The nominal design capacity of EUHBTUENCL shall be 2,600 CFM, as specified by the equipment manufacturer. (R 336.1205(1)(a), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))

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**V. TESTING/SAMPLING**

1. The permittee shall verify hydrogen sulfide or total reduced sulfur content of the landfill gas delivered to the HBTU process on a monthly basis, by gas testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to the initial test, 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 the first test. Thereafter, the permittee shall submit a test plan upon the request of the AQD District Supervisor. The permittee shall keep all records on file at the facility and make them available to the Department upon request. (R 36.1205(3), 40 CFR 52.21 (c) & (d))

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2. Within 60 days after achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify either the reduction of NMOC by 98 weight percent efficiency or the 20 ppmv outlet concentration level from EUHBTUENCL, as required by federal Standards of Performance for New Stationary Sources, by testing at owner's expense, in accordance with 40 CFR Part 60 Subparts A and WWW. The permittee shall notify the AQD District Supervisor in writing within 15 days of the date of commencement of initial startup in accordance with 40 CFR 60.7(a)(3). Stack testing procedures and the location of stack testing ports shall be in accordance with the applicable federal Reference Methods, 40 CFR Part 60 Appendix A. No less than 60 days prior to 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. 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. (40 CFR 60.752(b)(2)(iii)(B), 40 CFR 60.754(d))

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3. Within 60 days of achieving the maximum production rate, but not later than 180 days after commencement of initial startup, the permittee shall verify and quantify SO<sub>2</sub> emission rates from EUHBTUENCL by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to 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. 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. (R 336.1205(3), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

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**VI. MONITORING/RECORDKEEPING**

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

- 1. The permittee shall calibrate, maintain, and operate EUHBTUENCL according to the manufacturer's specifications, including the following:
  - a. A temperature monitoring device equipped with a continuous recorder and having a minimum accuracy of plus or minus 1 percent of the temperature being measured expressed in degrees centigrade or plus or minus 0.5 degrees centigrade, whichever is greater. (40 CFR 60.756(b)(1), 40 CFR 63.1955(a))
  - b. A device that records flow to or bypass of the control device. The permittee shall either:
    - i. Install, calibrate, and maintain a gas flow rate measuring device that shall record the flow to the control device at least every 15 minutes; (40 CFR 60.756(b)(2)(i), 40 CFR 63.1955(a)) or
    - ii. Secure the bypass line valve in the closed position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and that the gas flow is not diverted through the bypass line. (40 CFR 60.756(b)(2)(ii), 40 CFR 63.1955(a))
- 2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep readily accessible continuous records of the equipment operating parameters specified to be monitored in §60.756 (above in condition VI.1.), as well as up-to-date, readily accessible records for periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. (40 CFR 60.758(c))
  - a. The following constitute exceedances that shall be recorded and reported under §60.757(f):
    - i. All 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50° F) below the average combustion temperature during the most recent performance test at which compliance with §60.752(b)(2)(iii) was determined. (40 CFR 60.758(c)(1)(i))
      - (1) 3-hour block averages are calculated in the same way as they are calculated in 40 CFR part 60 subpart WWW, except that the data collected during the events listed below are not to be included in any average computed for 40 CFR Part 63, subpart AAAA. (40 CFR 63.1975)
        - (a) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments. (40 CFR 63.1975(a))
        - (b) Startups. (40 CFR 63.1975(b))
        - (c) Shutdowns. (40 CFR 63.1975(c))
        - (d) Malfunions. (40 CFR 63.1975(d))
- 3. The following information shall be recorded:
  - a. The average combustion temperature measured at least every 15 minutes and averaged over the same time period of the performance test. (40 CFR 60.758(b)(2)(i))
  - b. The percent reduction of NMOC determined as specified in 40 CFR 60.752(b)(2)(iii)(B) achieved by the control device. (40 CFR 60.758(b)(2)(ii))
- 4. The permittee shall submit the SSM plan report for EUHBTUENCL to the AQD District office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))
- 5. The permittee shall calculate and record the SO<sub>2</sub> emission rates from EUHBTUENCL monthly, and for the preceding 12-month rolling time period using the equation in Appendix A.4. The calculations shall utilize monthly gas testing data collected (SC V.1), the actual monthly gas usage, and the average ratio of total sulfur to sulfur as H<sub>2</sub>S from the most recent laboratory test. All records shall be kept on file at the facility and make them available to the Department upon request. (R 336.1205(3)), 40 CFR 52.21 (c) & (d))

**VII. REPORTING**

- 1. The permittee shall submit the SSM plan report for EUHBTUENCL to the AQD District office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5))

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2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHBTUENCL. (R 336.1201(7)(a))

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**VIII. STACK/VENT RESTRICTION(S)**

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

<u>Stack &amp; Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
<u>SVHBTUENCL</u>	<u>72</u>	<u>40</u>	<u>R 336.12225, 40 CFR 52.21 (c) &amp; (d)</u>

**IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all applicable provisions of the federal Standards of Performance for Municipal Solid Waste Landfills as specified in 40 CFR Part 60 Subpart A and WWW, as they apply to EUHBTUENCL. (40 CFR Part 60 Subpart A and WWW)

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2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants for Municipal Solid Waste Landfills as specified in 40 CFR Part 63 Subparts A and AAAA, as they apply to EUHBTUENCL. (40 CFR Part 63 Subpart A and AAAA)

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**EUHBTUOPEN**

**DESCRIPTION** – 1.440 CFM open flare used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.

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Flexible Group ID: NA

**POLLUTION CONTROL EQUIPMENT - NA**

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Visible Emissions	0% Opacity	Test Protocol*	EUHBTUOPEN	SC V.2. VI.2	R336.1301.40 CFR 60.18(c)(1)

\*Test Protocol shall determine averaging time.

**II. MATERIAL LIMIT(S)**

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Net heating value of landfill gas	≥ 200 Btu/scf for non-assisted flares	Test Protocol*	EUHBTUOPEN	SC V.1	40 CFR 60.18(c)(3)

\*Test Protocol shall determine averaging time.

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall operate EUHBTUOPEN in accordance with 40 CFR 60.18. **(40 CFR 60.752(b)(2)(iii)(A), 40 CFR 63.1955(a))**
- The permittee shall operate EUHBTUOPEN at all times when the collected gas is routed to it. **(40 CFR 60.753(f), 40 CFR 63.1955(a))**
- EUHBTUOPEN shall be designed for and operated with no visible emissions, as determined by the methods specified in 40 CFR 60.18(f), except for periods not to exceed a total of 5 minutes during any 2 consecutive hours. **(40 CFR 60.18(c)(1))**
- EUHBTUOPEN shall be operated with a flame present at all times, as determined by the methods specified in 40 CFR 60.18(f). **(40 CFR 60.18(c)(2))**
- EUHBTUOPEN shall be used only with the net heating value of the gas being combusted of 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or with the net heating value of the gas being combusted of 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted shall be determined by the methods specified in 40 CFR 60.18(f) and Appendix A. **(40 CFR 60.18(c)(3))**
- Steam-assisted and non-assisted flares shall be designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4), less than 18.3 m/sec (60 ft/sec), except as provided in 40 CFR 60.18(c)(4)(ii) and (iii). **(40 CFR 60.18(c)(4)(i))**
  - Steam-assisted and non-assisted flares designed for and operated with an exit velocity, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec) are allowed if the

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net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf). (40 CFR 60.18(c)(4)(ii))

b. Steam-assisted and non-assisted flares designed for and operated with an exit velocity, as determined by the methods specified in 40 CFR 60.18(f)(4) less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(5), and less than 122 m/sec (400 ft/sec) are allowed. (40 CFR 60.18(c)(4)(iii))

7. Air-assisted flares shall be designed and operated with an exit velocity less than the velocity,  $V_{max}$ , as determined by the method specified in 40 CFR 60.18(f)(6). (40 CFR 60.18(c)(5))

8. Flares used to comply with provisions of 40 CFR Part 60 Subpart A shall be operated at all times when landfill gas may be vented to them. (40 CFR 60.18(e))

9. The permittee shall operate the control system such that all collected gases are vented to a control system designed and operated in accordance with 40 CFR 60.752(b)(2)(iii). In the event the collection or control system is inoperable, the gas mover system shall be shut down and all valves in the collection and control system contributing to venting of the gas to the atmosphere shall be closed within one hour. (40 CFR 60.753(e), 40 CFR 63.1955(a))

10. The permittee shall not operate EUHBTUOPEN unless a SSM plan as described in Rule 911(2), for the open flare, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the SSM plan fails to address or inadequately addresses an event that meets the characteristics of a start-up, shutdown, or malfunction, the permittee shall amend the SSM plan within 45 days after such an event occurs. The permittee shall also amend the SSM plan within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the SSM plan and any amendments to the SSM plan to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the SSM plan or amended SSM plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. (R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 63.1960, 40 CFR 63.6(e)(3))

**IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The nominal design capacity of EUHBTUOPEN shall be 1.440 CFM, as specified by the equipment manufacturer. (R 336.1205(1)(a), R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))

**V. TESTING/SAMPLING**

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

1. For the performance test required in 40 CFR 60.752(b)(2)(iii)(A), the net heating value of the combusted landfill gas as determined in 40 CFR 60.18(f)(3) is calculated from the concentration of methane in the landfill gas as measured by Method 3C. A minimum of three 30-minute Method 3C samples are determined. The measurement of other organic components, hydrogen, and carbon monoxide is not applicable. Method 3C may be used to determine the landfill gas molecular weight for calculating the flare gas exit velocity under 40 CFR 60.18(f)(4). (40 CFR 60.752(b)(2)(iii)(A), 40 CFR 60.754(e))

2. Method 22 of appendix A to 40 CFR Part 60 shall be used to determine the compliance of EUHBTUOPEN with the visible emission provisions of this subpart. The observation period is 2 hours and shall be used according to Method 22. (40 CFR 60.18(f)(1), 40 CFR 60.752(b)(2)(iii)(A))

**VI. MONITORING/RECORDKEEPING**

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

1. The permittee shall install, calibrate, maintain, and operate, according to the manufacturer's specifications, a heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light or the flame itself to indicate the continuous presence of a flame. (40 CFR §60.756(c)(1), 40 CFR §63.1955(a))

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2. Except as provided in §60.752(b)(2)(i)(B), the permittee shall keep up-to-date, readily accessible records for the life of the open flare of the data listed below in SC VI.3, as measured during the initial performance test or compliance determination. Records of subsequent tests or monitoring shall be maintained for a minimum of 5 years. Records of the open flare vendor specifications shall be maintained until removal. (40 CFR §60.758(b), 40 CFR §63.1955(a)).

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3. The permittee shall maintain records regarding the flare type (i.e., steam-assisted, air-assisted, or nonassisted), all visible emission readings, heat content determination, flow rate or bypass flow rate measurements, and exit velocity determinations made during the performance test as specified in §60.18; continuous records of the open flare pilot flame or open flare flame monitoring and records of all periods of operations during which the pilot flame of the flare flame is absent. (40 CFR §60.758(b)(4), 40 CFR §63.1955(a)).

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4. The following records for the flare shall be maintained onsite:

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a. Records indicating presence of flare pilot flame. (40 CFR §60.18(f)(2))

b. The net heating value of the gas being combusted in the flare shall be calculated and recorded using the equation provided in Appendix A.1. (40 CFR §60.18(f)(3))

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c. The actual exit velocity of the flare shall be calculated and recorded by dividing the volumetric flow rate (in units of standard temperature and pressure), as determined by Federal Reference Test Methods 2, 2A, 2C, or 2D as appropriate, by the unobstructed (free) cross sectional area of the flare tip. (40 CFR §60.18(f)(4))

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d. The maximum permitted velocity,  $V_{max}$ , for flares complying with 40 CFR §60.18(c)(4)(iii) shall be calculated and recorded using the equation provided in Appendix A.2. (40 CFR §60.18(f)(5))

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e. The maximum permitted velocity,  $V_{max}$ , for air-assisted flares shall be calculated and recorded using the equation provided in Appendix A.3. (40 CFR §60.18(f)(6))

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5. The permittee shall monitor and record on a monthly basis the average Btu content of the landfill gas burned in EUHBTUOPEN. As an alternative, the permittee may use the monitored Btu value of the landfill gas burned in the Gas to Energy Plant. All records shall be kept on file for a period of at least five years and make them available to the Department upon request. (R 336.1205(3), 40 CFR 52.21 (c) & (d)).

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6. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling heat input calculations for EUHBTUOPEN. 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. (R 336.1205(3), 40 CFR 52.21 (c) & (d)).

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7. The permittee shall calculate and record the SO<sub>2</sub> emission rates from EUHBTUOPEN monthly, and for the preceding 12-month rolling time period using the equation in Appendix A.4. The calculations shall utilize monthly gas testing data collected (SC V.1), the actual monthly gas usage, and the average ratio of total sulfur to sulfur as H<sub>2</sub>S from the most recent laboratory test. All records shall be kept on file at the facility and make them available to the Department upon request. (R 336.1205(3), 40 CFR 52.21 (c) & (d)).

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**VII. REPORTING**

1. The permittee shall submit the startup, shutdown, and malfunction (SSM) report to the appropriate AQD district office and it shall be delivered or postmarked by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (40 CFR 63.10(a)(5), 40 CFR 63.10(d)(5)).

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2. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUHBTUOPEN. (R 336.1201(7)(a)).

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**VIII. STACK/VENT RESTRICTION(S)**

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

<u>Stack &amp; Vent ID</u>	<u>Maximum Exhaust Dimensions (inches)</u>	<u>Minimum Height Above Ground (feet)</u>	<u>Underlying Applicable Requirements</u>
SHVBTUEOPEN	12 <sup>a</sup>	35 <sup>b</sup>	R 336.1225, 40 CFR 52.21(c) & (d)
<sup>a</sup> Calculated effective diameter is 4.56 inches.			
<sup>b</sup> Calculated effective height above ground is 37.1 feet.			

**IX. OTHER REQUIREMENT(S)**

- The duration of start-up, shutdown, or malfunction for the open flare shall not exceed 1 hour. (40 CFR 60.755(e), 40 CFR 63.1955(a))
- Compliance with 40 CFR Part 63, Subpart AAAA is determined in the same way it is determined for 40 CFR Part 60, Subpart WWW, including performance testing, monitoring of the collection system, continuous parameter monitoring, and other credible evidence. In addition, continuous parameter monitoring data collected above in SC VI.1 and VI.5 are used to demonstrate compliance with the operating conditions for the open flare. The permittee shall have developed and implemented a written SSM plan for EUHBTUOPEN, according to SC III.10. A copy of the SSM plan shall be maintained on site. (40 CFR 63.1960, 40 CFR 63.6(e)(3))
- The permittee shall comply with all applicable provisions of 40 CFR Part 60 Subpart A and WWW "Standard of Performance for Municipal Solid Waste Landfills as they apply to EUHBTUOPEN. (40 CFR Part 60 Subpart A and WWW)
- The permittee shall comply with all applicable provisions of 40 CFR Part 63 Subpart A and AAAA "National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills as they apply to EUHBTUOPEN. (40 CFR Part 63 Subpart A and AAAA)

**Footnotes:**

<sup>1</sup>This condition is state only enforceable and was established pursuant to Rule 201(1)(b).

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### 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
<del>FGCOLDCLEANERS</del>	<del>Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(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.</del>	<del>EUCOLDCLEANER</del>

**~~—FGCOLDCLEANERS  
FLEXIBLE GROUP CONDITIONS~~**

**~~DESCRIPTION~~**—Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 281(h) or Rule 285(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 5 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 10 square feet. (R 336.1281(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(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))~~
- e. ~~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 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 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(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%, 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 compliance pursuant to General Condition 23 of Part A. Due 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. Due annually by March 15 for the previous calendar year. (R 336.1213(4)(c))~~

See Appendix 8

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

NA

Ameresco Woodland Meadows Romulus LLC

ROP No: MI-ROP-P0317-2012a  
Expiration Date: December 12, 2017  
PTI No: MI-PTI-P0317-2012a

### **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. Abbreviations and Acronyms

The following is an alphabetical listing of abbreviations/acronyms that may be used in this permit.

AQD	Air Quality Division	MM	Million
acfm	Actual cubic feet per minute	MSDS	Material Safety Data Sheet
BACT	Best Available Control Technology	MW	Megawatts
BTU	British Thermal Unit	NA	Not Applicable
°C	Degrees Celsius	NAAQS	National Ambient Air Quality Standards
CAA	Federal Clean Air Act	NESHAP	National Emission Standard for Hazardous Air Pollutants
CAM	Compliance Assurance Monitoring	NMOC	Non-methane Organic Compounds
CEM	Continuous Emission Monitoring	NOx	Oxides of Nitrogen
CFR	Code of Federal Regulations	NSPS	New Source Performance Standards
CO	Carbon Monoxide	NSR	New Source Review
COM	Continuous Opacity Monitoring	PM	Particulate Matter
department	Michigan Department of Environmental Quality	PM-10	Particulate Matter less than 10 microns in diameter
dscf	Dry standard cubic foot	pph	Pound per hour
dscm	Dry standard cubic meter	ppm	Parts per million
EPA	United States Environmental Protection Agency	ppmv	Parts per million by volume
EU	Emission Unit	ppmw	Parts per million by weight
°F	Degrees Fahrenheit	PS	Performance Specification
FG	Flexible Group	PSD	Prevention of Significant Deterioration
GACS	Gallon of Applied Coating Solids	psia	Pounds per square inch absolute
GC	General Condition	psig	Pounds per square inch gauge
gr	Grains	PeTE	Permanent Total Enclosure
HAP	Hazardous Air Pollutant	PTI	Permit to Install
Hg	Mercury	RACT	Reasonable Available Control Technology
hr	Hour	ROP	Renewable Operating Permit
HP	Horsepower	SC	Special Condition
H <sub>2</sub> S	Hydrogen Sulfide	scf	Standard cubic feet
HVLP	High Volume Low Pressure *	sec	Seconds
ID	Identification (Number)	SCR	Selective Catalytic Reduction
IRSL	Initial Risk Screening Level	SO <sub>2</sub>	Sulfur Dioxide
ITSL	Initial Threshold Screening Level	SRN	State Registration Number
LAER	Lowest Achievable Emission Rate	TAC	Toxic Air Contaminant
lb	Pound	Temp	Temperature
m	Meter	THC	Total Hydrocarbons
MACT	Maximum Achievable Control Technology	tpy	Tons per year
MAERS	Michigan Air Emissions Reporting System	µg	Microgram
MAP	Malfunction Abatement Plan	VE	Visible Emissions
MDEQ	Michigan Department of Environmental Quality	VOC	Volatile Organic Compounds
mg	Milligram	yr	Year
mm	Millimeter		

\*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 pounds per square inch gauge (psig).

**Appendix 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. 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. 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. 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. Permits to Install**

The following table lists any PTIs issued since the effective date of previously issued ROP No. MI-ROP-M4449-2007P0317-2012a. This includes any PTIs that were incorporated into Source-wide PTI No MI-PTI-M4449-2007MI-PTI-P0317-2012Aa through amendments or modifications and any PTI that remained off-permit until this ROP renewal. Section 2 of Source-Wide PTI No. MI-PTI-M4449 is was being reissued as Source-Wide PTI No. MI-PTI-P0317-2012a.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
NA61-16	2,600 CFM enclosed flare (EUHBTUENCL) used for the destruction of the pressure swing adsorption (PSA) process CO2 tail gas stream. Due to the low BTU value of the gas stream, landfill gas and N2 tail gas will be used as supplementary fuel.NA	NA
61-16	1,440 CFM open flare (EUHBTUOPEN) used for the destruction of the N2 tail gas stream. The flare will use product gas (approximately 94% methane) and propane to run the pilot continuously if needed for flame stability.	NA

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**Appendix 7. Emission Calculations**

There are no specific emission calculations to be used for this ROP. Therefore, this appendix is not applicable.

**Appendix 8. Reporting**

**A. Annual, Semiannual, and Deviation Certification Reporting**

Ameresco Woodland Meadows Romulus LLC

ROP No: MI-ROP-P0317-2012a  
Expiration Date: December 12, 2017  
PTI No: MI-PTI-P0317-2012a

The permittee shall use the MDEQ Report Certification form (EQP 5736) and MDEQ 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.

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