

From: [Uhall, Justin](#)
To: [EGLE-ROP](#)
Cc: sandra.walker@stellantis.com; [NICK GEORGE](#); [DAVID JUMP - T2784DJ](#); [MARK WERTHMAN](#); [Carson, Liz](#); [Weiss, Stuart](#)
Subject: SRN: N1436 - ROP Renewal Application
Date: Tuesday, April 11, 2023 2:47:27 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[FCA-CTC Submittal ROP Renewal Application 4.11.23.pdf](#)
[N1436-2018a Markup Revised 03 31 23.docx](#)

CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

Hello,

Attached is the ROP renewal application for the FCA US LLC – Chrysler Tech Center (SRN: N1436). A hard copy of the application will also be delivered to the Southeast Michigan District Office. Please let us know if there is anything else you require.

Thanks,

Justin Uhall

Project Environmental Engineer | *Novi, MI*
Arcadis of Michigan, LLC
28550 Cabot Drive Suite 500 | Novi MI | 48377 | USA
T. +1 313 572 1336
www.arcadis.com



This email and any files transmitted with it are the property of Arcadis and its affiliates. All rights, including without limitation copyright, are reserved. This email contains information that may be confidential and may also be privileged. It is for the exclusive use of the intended recipient(s). If you are not an intended recipient, please note that any form of distribution, copying or use of this communication or the information in it is strictly prohibited and may be unlawful. If you have received this communication in error, please return it to the sender and then delete the email and destroy any copies of it. While reasonable precautions have been taken to ensure that no software or viruses are present in our emails, we cannot guarantee that this email or any attachment is virus free or has not been intercepted or changed. Any opinions or other information in this email that do not relate to the official business of Arcadis are neither given nor endorsed by it.

Ms. Joyce Zhu
District Supervisor
Southeast Michigan District
MDEQ – Air Quality Division
27700 Donald Court
Warren, MI 48092-2793

Arcadis of Michigan, LLC
28550 Cabot Drive
Suite 500
Novi
Michigan 48377
Phone: 248 994 2240
Fax:
www.arcadis.com

Date: April 11, 2023
Subject: SRN: N1436 – Renewable Operating Permit MI-ROP-N1436-2018a
Renewal Application

Ms. Zhu:

The FCA US LLC - Chrysler Tech Center (MI-ROP-N1436-2018) located in Auburn Hills has prepared the attached application to renew its Renewable Operating Permit (MI-ROP-N1436-2018a). The following forms are included:

- Form EQP 6000 (Section 1) with Responsible Official certification with respect to Section 1
- Form EQP 6000 (Section 2) with Responsible Official certification with respect to Section 2
- Malfunction Abatement Plan and Fuel Usage Monitoring Plan
- Marked up version of MI-ROP-N1436-2018a

Please contact me 248-266-0390 or Mark Werthman (Stellantis) at 248-944-1027 with any questions.

Sincerely,

Arcadis of Michigan, LLC



Stuart Weiss
Senior EHS Regulatory Specialist
stuart.weiss@arcadis.com
Direct Line: 313-572-1314

CC. EGLE AQD Permit Section <mailto:EGLE-ROP@Michigan.gov>
Mark Werthman – Stellantis



RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

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

GENERAL INSTRUCTIONS

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

PART A: GENERAL INFORMATION

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

SOURCE INFORMATION

SRN N1436	SIC Code 3711	NAICS Code 336111	Existing ROP Number MI-ROP-N1436-2018a	Section Number (if applicable) 01
Source Name FCA US LLC - Chrysler Technology Center				
Street Address 800 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48326-2757	County Oakland	
Section/Town/Range (if address not available)				
Source Description The FCA US LLC - Chrysler Technology Center is primarily a research and development center for automobile, light duty truck and vehicle component manufacturing. Operations and equipment include the dynamometer test stands used for engine and engine component testing, manufacturing and assembly pilot processes, and various lab activities. The Central Energy Plant provides steam and back-up emergency electrical power to both the technology center and the headquarters. This form addresses Section 1 of the permit, which is for the property's Facilities.				
<input 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 FCA US LLC	Section Number (if applicable) 01			
Mailing address (<input type="checkbox"/> check if same as source address) 1000 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48236-2757	County Oakland	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.				

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 Mark C. Werthman		Title EHS Manager		
Company Name & Mailing address (check <input type="checkbox"/> if same as source address) FCA US LLC - Chrysler Technology Center, CIMS 482-60-03, 800 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48326	County Oakland	Country USA
Phone number 248-576-7377		E-mail address mark.werthman@stellantis.com		

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

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name Robert Aguayo		Title Senior Manager – Facilities Services & Project Management		
Company Name & Mailing address (check <input type="checkbox"/> if same as source address) FCA US LLC - Chrysler Technology Center, CIMS 482-60-03, 800 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48326	County Oakland	Country USA
Phone number 248-576-4949		E-mail address rob.aguayo@stellantis.com		

Responsible Official 2 Name (optional)		Title		
Company Name & Mailing address (check <input type="checkbox"/> 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:

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

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

Listing of ROP Application Contents. Check the box for the items included with your application.

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

Compliance Statement

This source is in compliance with **all** of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will continue to be in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP. Yes No

This source will meet in a timely manner applicable requirements that become effective during the permit term. Yes No

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

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

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

Robert Aguayo, Senior Manager – Facilities Services & Project Management

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



 Signature of Responsible Official

4/5/2023

 Date

PART C: SOURCE REQUIREMENT INFORMATION

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

C1.	Actual emissions and associated data from all emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes , identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes , a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
C4.	Has this stationary source added or modified equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NO _x , PM ₁₀ , PM _{2.5} , SO ₂ , VOC, lead) emissions? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No , criteria pollutant potential emission calculations do not need to be included.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C5.	Has this stationary source added or modified equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No , HAP potential emission calculations do not need to be included.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes , identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes , identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes , identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/>
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes , then a copy must be submitted as part of the ROP renewal application.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes , then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input type="checkbox"/>	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-	

PART F: PERMIT TO INSTALL (PTI) INFORMATION

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

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

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

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

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

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

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

Comments:

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

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

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

G1. Does the source have any new and/or existing emission units which do not already appear in the existing ROP and which meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.
 If Yes, identify the emission units in the table below. If No, go to Part H. Yes No
Note: If several emission units were installed under the same rule above, provide a description of each and an installation/modification/reconstruction date for each.

Origin of Applicable Requirements	Emission Unit Description – <i>Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices</i>	Date Emission Unit was Installed/ Modified/ Reconstructed
<input type="checkbox"/> Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation		
<input type="checkbox"/> Rule 287(2)(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: **AI-**

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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



RENEWABLE OPERATING PERMIT APPLICATION AI-001: ADDITIONAL INFORMATION

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

SRN:

Section Number (if applicable):

1. Additional Information ID

AI-

Additional Information

2. Is This Information Confidential?

Yes No

Page of



RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

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

GENERAL INSTRUCTIONS

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

PART A: GENERAL INFORMATION

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

SOURCE INFORMATION

SRN N1436	SIC Code 3711	NAICS Code 336111	Existing ROP Number MI-ROP-N1436-2018a	Section Number (if applicable) 02
Source Name FCA US LLC - Chrysler Technology Center				
Street Address 800 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48326-2757	County Oakland	
Section/Town/Range (if address not available)				
Source Description The FCA US LLC - Chrysler Technology Center is primarily a research and development center for automobile, light duty truck and vehicle component manufacturing. Operations and equipment include the dynamometer test stands used for engine and engine component testing, manufacturing and assembly pilot processes, and various lab activities. The Central Energy Plant provides steam and back-up emergency electrical power to both the technology center and the headquarters. This form addresses Section 2 of the permit, which is for the property's Scientific Labs.				
<input 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 FCA US LLC	Section Number (if applicable) 02			
Mailing address (<input type="checkbox"/> check if same as source address) 1000 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48236-2757	County Oakland	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.				

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 Mark C. Werthman		Title EHS Manager		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) FCA US LLC - Chrysler Technology Center, CIMS 482-60-03, 800 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48326	County Oakland	Country USA
Phone number 248-576-7377		E-mail address mark.werthman@stellantis.com		

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

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name Lisa Lortie		Title Director Powertrain		
Company Name & Mailing address (<input type="checkbox"/> check if same as source address) FCA US LLC - Chrysler Technology Center, CIMS 486-01-55, 800 Chrysler Drive				
City Auburn Hills	State MI	ZIP Code 48326	County Oakland	Country USA
Phone number 248-576-1356		E-mail address lisa.lortie@stellantis.com		

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

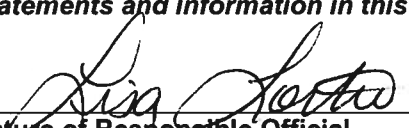
<input type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part A. Enter AI-001 Form ID: AI-001 Part A
--

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

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

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

Compliance Statement	
This source is in compliance with all of its applicable requirements, including those contained in the existing ROP, Permits to Install that have not yet been incorporated into that ROP, and other applicable requirements not currently contained in the existing ROP.	<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)	
Lisa Lortie, Director Powertrain	
<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>	
 Signature of Responsible Official	11-Apr-23 Date

PART C: SOURCE REQUIREMENT INFORMATION

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

C1.	Actual emissions and associated data from all emission units with applicable requirements (including those identified in the existing ROP, Permits to Install and other equipment that have not yet been incorporated into the ROP) are required to be reported in MAERS. Are there any emissions and associated data that have not been reported in MAERS for the most recent emissions reporting year? If Yes , identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68) If Yes , a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
C4.	Has this stationary source added or modified equipment since the last ROP renewal that changes the potential to emit (PTE) for criteria pollutant (CO, NO _x , PM ₁₀ , PM _{2.5} , SO ₂ , VOC, lead) emissions? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers, or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. If No , criteria pollutant potential emission calculations do not need to be included.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C5.	Has this stationary source added or modified equipment since the last ROP renewal that changes the PTE for hazardous air pollutants (HAPs) regulated by Section 112 of the federal Clean Air Act? If Yes , include potential emission calculations (or the PTI and/or ROP revision application numbers or other references for the PTE demonstration) for the added or modified equipment on an AI-001 Form. Fugitive emissions must be included in HAP emission calculations. If No , HAP potential emission calculations do not need to be included.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C6.	Are any emission units subject to the Cross-State Air Pollution Rule (CSAPR)? If Yes , identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
C7.	Are any emission units subject to the federal Acid Rain Program? If Yes , identify the specific emission unit(s) subject to the federal Acid Rain Program on an AI-001 Form. Is an Acid Rain Permit Renewal Application included with this application?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No
C8.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)? If Yes , identify the specific emission unit(s) subject to CAM on an AI-001 Form. If a CAM plan has not been previously submitted to EGLE, one must be included with the ROP renewal application on an AI-001 Form. If the CAM Plan has been updated, include an updated copy. Is a CAM plan included with this application? If a CAM Plan is included, check the type of proposed monitoring included in the Plan: 1. Monitoring proposed by the source based on performance of the control device, or 2. Presumptively Acceptable Monitoring, if eligible	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <input type="checkbox"/>
C9.	Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement? If Yes , then a copy must be submitted as part of the ROP renewal application.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
C10.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable? If Yes , then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<input checked="" type="checkbox"/>	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 Form ID: AI-001 Form Part C	

PART E: EXISTING ROP INFORMATION

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

<p>E1. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements as they appear in the existing ROP? If <u>Yes</u>, identify changes and additions on Part F, Part G and/or Part H.</p>	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>
<p>E2. For each emission unit(s) identified in the existing ROP, <u>all</u> stacks with applicable requirements are to be reported in MAERS. Are there any stacks with applicable requirements for emission unit(s) identified in the existing ROP that were <u>not</u> reported in the most recent MAERS reporting year? If <u>Yes</u>, identify the stack(s) that was/were not reported on applicable MAERS form(s).</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>E3. Have any emission units identified in the existing ROP been modified or reconstructed that required a PTI? If <u>Yes</u>, complete Part F with the appropriate information.</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>E4. Have any emission units identified in the existing ROP been dismantled? If <u>Yes</u>, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 Form.</p>	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Comments:</p> <p>Four of the nine the Test Cells permitted to be modified under PTI 155-18 (and included in MI-ROP-N1436-2018a) were not modified and are unchanged. References to these changed test cells and stacks are deleted from the markup of MI-ROP-N1436-2018a, as described further in Form AI-Form Part E & H.</p>	
<p><input checked="" type="checkbox"/> Check here if an AI-001 Form is attached to provide more information for Part E. Enter AI-001 Form ID: AI-Form Part E & H</p>	

PART F: PERMIT TO INSTALL (PTI) INFORMATION

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

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

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

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

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

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

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

Comments:

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

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

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

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

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

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

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

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

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

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

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

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

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

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

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



RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

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

SRN: N1436	Section Number (if applicable): 02
------------	------------------------------------

1. Additional Information ID
AI-001-Part C

Additional Information

2. Is This Information Confidential? Yes No

C4 and C5: This Section (02) of the ROP was modified in 2022; the application for significant modification was submitted in March 2022, and the final ROP was issued as MI-ROP N1436-2018a. The potential to emit was submitted with that application.

C.8 CAM Plan: A CAM plan was submitted along with the 2022 ROP modification and there have been no changes to the CAM plan since that time. Therefore, a copy of the CAM plan was not included with this ROP application.

C.9: The following plans are provided as an attachment:
1. Malfunction Abatement Plan – Attachment 1.
2. Fuel Usage Monitoring Plan – Attachment 2.



RENEWABLE OPERATING PERMIT APPLICATION

AI-001: ADDITIONAL INFORMATION

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

SRN: N1436	Section Number (if applicable): 02
------------	------------------------------------

1. Additional Information ID
AI-001-Part E & H

Additional Information

2. Is This Information Confidential? Yes No

General Description: Four of the nine the Test Cells permitted to be modified under PTI 155-18 (and included in MI-ROP-N1436-2018a) were not modified and are unchanged. References to these changed test cells and stacks are deleted from the markup of MI-ROP-N1436-2018a.

Detailed description of proposed permit changes:

EMISSION UNIT SUMMARY TABLE: Descriptions for EU-CELL-C12, EU-CELL-C14, EU-CELL-E08, and EU-CELL-E20 have been edited to delete references to simulation testing, as the modifications to allow simulation testing in these cells were not made.

FG-CNTRLDCELLS FLEXIBLE GROUP CONDITIONS: Under I (Emission Limits), II (Material Limits), and VI (Monitoring/Recordkeeping), references to for EU-CELL-C12, EU-CELL-C14, EU-CELL-E08, and EU-CELL-E20 have been deleted as these cells were not modified to conduct simulation testing. Under VIII STACK/VENT RESTRICTIONS reference to stacks SV-WC-TC-C12A&B, SV-WC-TC-C14A&B, SV-WE-TC-E08, and SV-WE-TC-E20 have been deleted as they were previously added to the ROP for the test cells that were not modified.

Appendix 4-2. Recordkeeping: Reference to "simulation testing in 9 test cells" has been changed to "simulation testing in 5 test cells".

Attachment 1
FCA US LLC - CHRYSLER TECHNOLOGY CENTER
THERMAL OXIDIZER MALFUNCTION ABATEMENT PLAN

CONTENTS

Purpose and Use	2
Preventive Maintenance Program.....	4
Malfunction Detection and Notification.....	6
Appendix A: Schematic of Thermal Oxidizers	7
Appendix B: Major Thermal Oxidizer Replacement Parts	8

PURPOSE AND USE

This malfunction abatement plan ("MAP") satisfies the requirement of Michigan Renewable Operating Permit MI-ROP-N1436, FG-CNTRLDCELLS-S2.IX.2 and Mich. Admin. Code R 336.1911 for the thermal oxidizers used to control emissions from the controlled engine test stands in Wings C, D and E. Included in this plan is the preventive maintenance program for the thermal oxidizers, malfunction detection and notification procedures, and a description of corrective maintenance procedures and/or operational changes to be made in the event of a malfunction.

ARRANGEMENT OF OXIDIZERS

Eleven thermal oxidizers serve engine test stands in Wings C, D and E. These eleven units are identical natural gas-fired units. Each oxidizer is equipped an induced draft fan with variable frequency drive to maintain constant negative engine test stand exhaust duct pressure and force the engine exhausts into the oxidizer.

The oxidizers serving Wings D and E engine test stands operate in pairs. In one operating arrangement both oxidizers of a pair operate on line simultaneously. In a second operating arrangement one oxidizer of a pair operates on line and the second oxidizer remains off-line in standby mode or undergoing maintenance.

The three oxidizers serving Wing C engine test stands are inter-connected such that exhaust from the engine test stands may be controlled by one, two or three oxidizers simultaneously. Typically, two oxidizers may operate on line while the third oxidizer remains in standby mode or off-line for maintenance. Table 1 lists the thermal oxidizers covered by this malfunction abatement plan.

Within Wings C and E, there are test cells that can operate in either durability/transmission testing mode or simulation testing mode. When simulation testing is performed, the exhaust from the engine is not routed to the thermal oxidizer.

In order to accommodate a change in mode (i.e., from simulation to durability), the equipment within the cell typically requires replacement, including, the testing equipment (i.e., computer modules, etc.) as well as the engine and drive train being tested. The damper that routes the test cell exhaust to the thermal oxidizer is controlled by a human-machine interface. CTC personnel indicate the testing mode (i.e. durability) and the damper adjusts accordingly. The position of the damper can be verified by way of visually observing the damper actuators.

The operating mode of each cell does not impact the preventative maintenance or malfunction abatement program of the thermal oxidizers, as noted in this MAP.

TABLE 1
THERMAL OXIDIZERS COVERED BY MALFUNCTION ABATEMENT PLAN

Oxidizer Number	Test Wing Served
93-THO-4.01	Wing E
93-THO-4.02	Wing E
92-THO-4.01	Wing D
92-THO-4.02	Wing D
92-THO-4.03	Wing D
92-THO-4.04	Wing D
92-THO-4.05	Wing D
92-THO-4.06	Wing D
91-THO-4.01	Wing C
91-THO-4.02	Wing C
91-THO-4.03	Wing C

PREVENTIVE MAINTENANCE PROGRAM

This section describes the procedures for maintaining the thermal oxidizers and auxiliary equipment, the identification of performance variables monitored, the frequency of inspection, and the personnel responsible for overseeing inspection, maintenance and repair of the abatement equipment.

Preventive Maintenance Activities

The preventive maintenance activities for the thermal oxidizers incorporate the manufacturer's recommended general and preventive maintenance procedures, operational experience with the thermal oxidizers, and sound engineering practice in accordance with industry standards. These procedures may be modified based on recommendations of plant personnel with the approval of the Technical Engineering Supervisor and with the concurrence of the facility environmental staff. All modifications to maintenance procedures are documented in writing. Table 2 summarizes the thermal oxidizer preventive maintenance activities and frequencies.

A system schematic for the thermal oxidizers is provided in Appendix A. As a result of the paired/cross-connection capability of the oxidizers, control redundancy is available. One oxidizer in a pair may be kept in standby condition or undergo maintenance activities while off line while the second oxidizer in the pair controls the test stand emissions otherwise directed to both oxidizers. Therefore, downtime of one oxidizer may not affect the ability of an engine test stand to operate.

Major replacement parts maintained in inventory are listed in Appendix B.

Responsible Personnel

The following staff positions are responsible for inspection and maintenance of the thermal oxidizers covered by this malfunction abatement plan and verifying that the exhausts from the test cells are properly routed to the thermal oxidizer, in accordance with air permit obligations. In the event of a change in the mode of operation within any test cell, any of these staff positions shall ensure notification is made to the CTC Environmental Department.:

- Maintenance Manager
- Test Facilities Specialist
- Wing Engineer

TABLE 2
SUMMARY OF PREVENTIVE MAINTENANCE ACTIVITIES

Frequency	Maintenance Activity
Twice each year	Inspect shell and exhaust stack for damage
Once per year	Check oxidizer fan and ductwork
	Check oxidizer fan fasteners
	Check oxidizer burner and gas train components
	Calibrate control components
	Inspect ultraviolet sensor
	Replace blower fan thermocouple
	Replace high temperature limit thermocouple
	Replace combustion chamber thermocouple
	Inspect burner and combustion chamber

MALFUNCTION DETECTION AND NOTIFICATION

Monitoring and Malfunction Detection

The critical parameters monitored include the instantaneous oxidizer residence chamber temperature and the average oxidizer residence chamber temperature. All parameters are monitored on a control panel located at each thermal oxidizer. In addition, the parameters are monitored in a central control room through the Building Automation System (BAS). The typical operating temperature set point for the oxidizers is 1425°F to 1500°F. The set point will be at least as high as the temperature at which compliance was last demonstrated.

Fault conditions are displayed on the BAS control monitors and the individual oxidizer control panels with visual alarms. The BAS supervisor and designated powertrain test personnel are automatically notified by electronic communication when a critical fault alarm is received.

The ROP prohibits the operation of test cells when the temperature of the associated thermal oxidizer falls below the established compliance temperature, averaged over a 3-hour period. To prevent this limitation from being exceeded, the test cells connected to a problem oxidizer are automatically shut down before the oxidizer temperature falls 150 °F below the temperature at which compliance was last demonstrated. Prior to that automatic shutdown, the thermal oxidizer is programmed to generate a pre-shutdown warning to the BAS supervisor and designated powertrain test personnel, to allow for troubleshooting and an orderly shutdown of the test cells exhausting to the oxidizer in question.

Other automatic shutdown conditions for test cells include:

- Oxidizer low temperature (instantaneous)
- Oxidizer high temperature
- Oxidizer draft fan failure
- Oxidizer burner failure

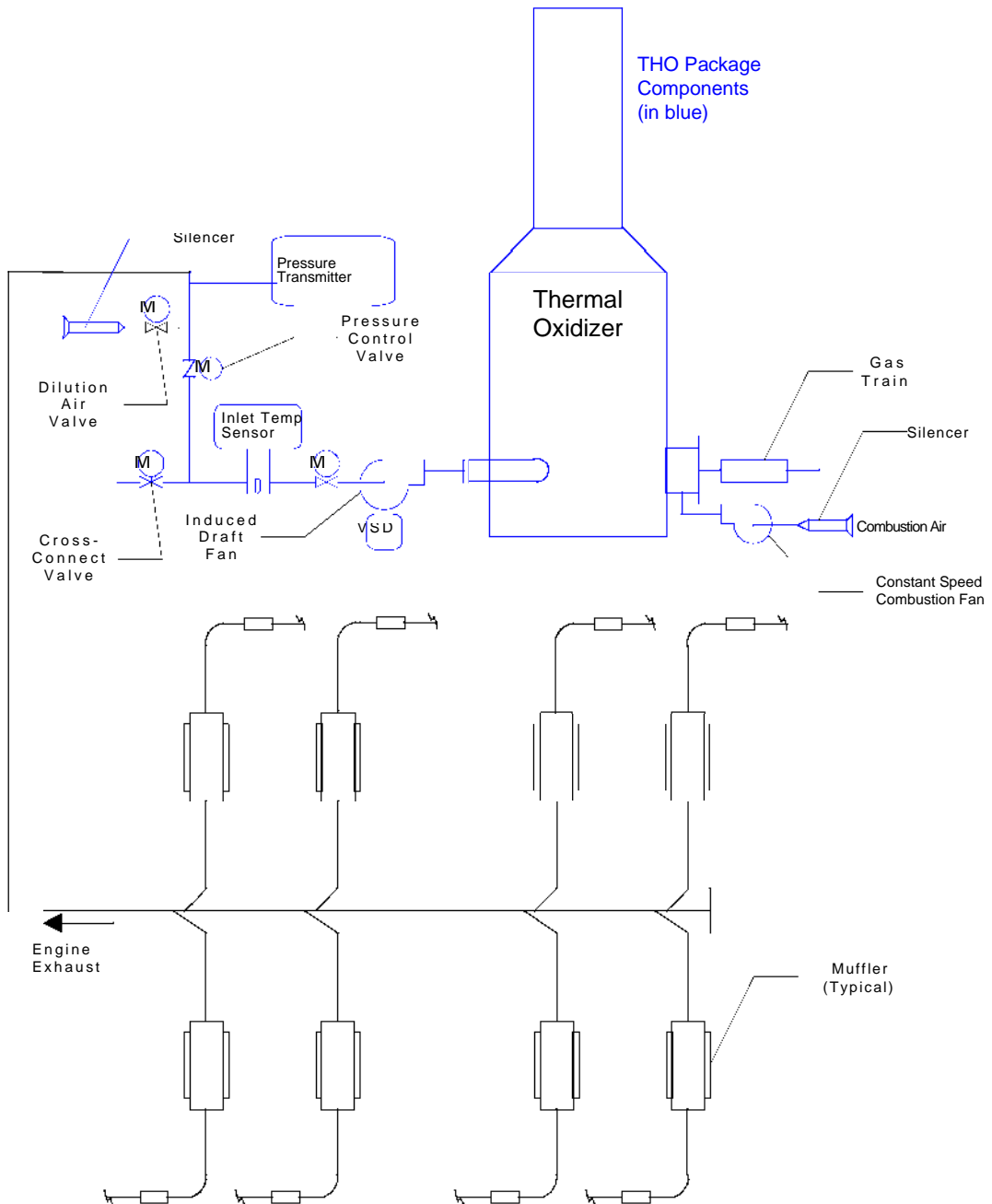
Malfunction Notification

In the event of a thermal oxidizer malfunction or a period of excess emissions, a facility environmental specialist will notify the Michigan Department of Environmental Quality as required pursuant to Mich. Admin. Code R 336.1912 and the ROP.

Malfunction Operating Scenarios

In the event of a malfunction, various measures are taken to reduce emissions. Engine test stands connected to a thermal oxidizer with operational difficulties will be shut down, either manually or automatically depending on the specific circumstances. Where possible following a shutdown, the exhaust from the test cells in question will be re-routed to the appropriate cross-connected thermal oxidizer before engine test stands are re-started.

APPENDIX A THERMAL OXIDIZER SYSTEM SCHEMATIC



APPENDIX B
MAJOR THERMAL OXIDIZER REPLACEMENT PARTS

- Ultra Violet Sensor
- 12" Thermocouple
- 24" Thermocouple
- Burner Air Filter
- Crank Arm
- Linkage Connector

Attachment 2
FCA US LLC – CHRYSLER TECHNOLOGY CENTER
ENGINE DYNAMOMETER TEST STANDS
FUEL USAGE MONITORING PLAN

PURPOSE AND SCOPE

Michigan Renewable Operating Permit MI-ROP-N1436 (ROP) specifies volumetric fuel usage limits for the engine dynamometer test stands at the FCA Technology Center (FCA-CTC). Fuel use is measured and recorded to document compliance with those limits. This Fuel Usage Monitoring Plan is established to meet requirements of ROP flexible groups FG-CNTRLDCELLS-S2.IX.1 and FG-UNCNTRLDCELLS-S2.IX.1.

TYPICAL FLOW METER ARRANGEMENT

Each engine dynamometer test stand is equipped with a fuel system that includes a fuel flow meter through which all fuel transferred to the engine in that test stand passes. Multiple fuel supply manifolds are included in each fuel system so that a variety of fuels can be used in each test engine. Each fuel system has a flow meter installed in series with the fuel pump to measure the flow of all fuels to the engine. The output signal from each fuel flow meter is recorded by a local computer system serving the individual engine test stand. Engine test stands may use either volumetric flow meters or mass flow meters for monitoring fuel consumption.

For liquid fuels, each engine test stand is connected to a flow meter in series with the fuel pump. Volumetric fuel flow meters typically measure fuel usage based on rotation of an internal component such as a gear or paddle wheel in the path of fuel flow. This movement generates an electronic signal/pulse that is transmitted to a local computer. These pulses are counted by the local computer system. The number of pulses generated by the flow meter is proportional to the volume of fuel that flows through the meter. A meter-specific multiplier ("K-Factor") is applied to the pulse count to generate a fuel usage volume. Volumetric fuel flow meters are initially calibrated by the manufacturer or supplier. The supplier provides the K-Factor for each flow meter.

Certain test stands use mass flow meters. Mass flow meters used in the test stands are generally of the Coriolis flow meter type. When fluid flows through the mass flow meter an electronic signal from the mass flow meter is transferred to the test stand computer, which calculates mass flow. Mass fuel flow meters are initially calibrated and signal to fuel mass constants are determined by the supplier for each flow meter. Mass flow meters may be used for either liquid fuels or gaseous fuels.

Fuel use data is recorded for each engine test stand and the results are available for viewing or download as needed. Electronic and hard copies of the fuel usage data are retained by the facility.

FLOW METER CALIBRATION

Each new volumetric (liquid) fuel meter is furnished with a calibration report from the supplier indicating the initial K-Factor, expressed in units of "signals/pulses" per unit of fuel volume. Upon installation of a new flow meter, the initial K-Factor is applied. On an annual basis, FCA-CTC checks the flow measurement of each installed volumetric flow meter by comparing the flow determined by the installed flow meter against the flow determined by a separate calibrated flow meter. The instrument technician conducting the check removes an installed flow meter from service for repair or replacement if the comparison indicates a significant deviation from the calibrated flow meter's measurement. A new or refurbished and recalibrated volumetric flow meter is then installed as a replacement with accompanying K-Factor provided by the instrument supplier or servicer.

Mass (Coriolis type) flow meters are initially calibrated by the supplier on a flow calibration rig certified as traceable to the United States National Institutes of Standards and Technologies. Calibration data is provided by the supplier with each mass flow meter. On an annual basis, FCA-CTC checks the flow measurement of each installed mass flow meter by comparing the flow determined by the installed flow meter against the flow determined by a separate calibrated mass flow meter of the same type. The instrument technician conducting the check removes an installed mass flow meter from service for repair or replacement if the comparison indicates a significant deviation from the calibrated mass flow meter's measurement. A new or refurbished and recalibrated mass flow meter is then installed as a replacement with new calibration data provided by the instrument supplier or servicer.

DATA COLLECTION

An automated system is used to gather the data from the individual engine test stand computers. This system periodically routes fuel usage data from each computer to a central server. In turn, that data is used to generate summary fuel usage reports consistent with permit requirements. Fuel usage data is transferred monthly to spreadsheets used by the FCA-CTC environmental staff to maintain permit compliance records.

RECORDKEEPING

The test stand fuel usage data is used to create electronic summary tables. Those tables are stored in the on-line Powertrain Development System. Fuel usage data is transferred to the electronic spreadsheets used by the CTC environmental staff to maintain permit compliance records monthly.

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

EFFECTIVE DATE: October 30, ~~2018~~
~~REVISION DATE: December 20, 2022~~2023

ISSUED TO

FCA US LLC - Chrysler Technology Center

State Registration Number (SRN): N1436

LOCATED AT

800 Chrysler Drive, Auburn Hills, Michigan 48326-2757

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N1436-~~2018a~~2023

Expiration Date: October 30, ~~2023~~2028

Administratively Complete ROP Renewal Application
Due Between April 30, ~~2022-2027~~ and April 30, ~~2023~~2028

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-N1436-~~2018a~~2023

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 Environment, Great Lakes, and Energy

Joyce Zhu, Southeast Michigan District Supervisor

TABLE OF CONTENTS

AUTHORITY AND ENFORCEABILITY 4

SECTION 1 – Facilities..... 5

A. GENERAL CONDITIONS..... 6

Permit Enforceability 6

General Provisions..... 6

Equipment & Design 7

Emission Limits..... 7

Testing/Sampling 7

Monitoring/Recordkeeping 8

Certification & Reporting 8

Permit Shield 9

Revisions ~~1140~~

Reopenings..... ~~1140~~

Renewals..... ~~1244~~

Stratospheric Ozone Protection ~~1244~~

Risk Management Plan ~~1244~~

Emission Trading ~~1244~~

Permit to Install (PTI) ~~1342~~

B. SOURCE-WIDE CONDITIONS 1413

C. EMISSION UNIT CONDITIONS 1544

EMISSION UNIT SUMMARY TABLE ~~1544~~

EU-12HWG-1.07..... ~~1746~~

D. FLEXIBLE GROUP CONDITIONS..... 1948

FLEXIBLE GROUP SUMMARY TABLE ~~1948~~

FG-BOILERS ~~2049~~

FG-BOILERMACT ~~2322~~

FG-B/UP-TURBINES ~~3029~~

FG-EMERGENCY-RICE ~~3432~~

E. NON-APPLICABLE REQUIREMENTS 3735

APPENDICES 3836

Appendix 1-1. Acronyms and Abbreviations ~~3836~~

Appendix 2-1. Schedule of Compliance ~~3937~~

Appendix 3-1. Monitoring Requirements ~~3937~~

Appendix 4-1. Recordkeeping ~~3937~~

Appendix 5-1. Testing Procedures ~~3937~~

Appendix 6-1. Permits to Install..... ~~3937~~

Appendix 7-1. Emission Calculations ~~3937~~

Appendix 8-1. Reporting ~~4038~~

SECTION 2 – Scientific Labs 4139

[2018a2023](#)

ROP No: MI-ROP-N1436-

[20232028](#)

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

A. GENERAL CONDITIONS.....	4240
Permit Enforceability	4240
General Provisions.....	4240
Equipment & Design	4344
Emission Limits.....	4344
Testing/Sampling	4344
Monitoring/Recordkeeping	4442
Certification & Reporting	4442
Permit Shield	4543
Revisions	4744
Reopenings.....	4744
Renewals	4845
Stratospheric Ozone Protection	4845
Risk Management Plan	4845
Emission Trading	4845
Permit to Install (PTI)	4946
B. SOURCE-WIDE CONDITIONS	5047
C. EMISSION UNIT CONDITIONS	5148
EMISSION UNIT SUMMARY TABLE	5148
EU-KIRKSITEFURN	6662
D. FLEXIBLE GROUP CONDITIONS	6864
FLEXIBLE GROUP SUMMARY TABLE	6864
FG-TESTCELLSA	7167
FG-ENGPAINTSHP	7369
FG-CNTRLDCELLS.....	7772
FG-CAMTO.....	9085
FG-UNCNTRLDCELLS.....	9388
FG-GASTANKS	9892
FG-WETFUELSTEST	10094
FG-RULE331	10296
FG-RULE290	10498
FG-RULE287(2)(c).....	108401
FG-COLD CLEANERS.....	110403
E. NON-APPLICABLE REQUIREMENTS	113406
APPENDICES	114407
Appendix 1-2. Acronyms and Abbreviations.....	114407
Appendix 2-2. Schedule of Compliance	115408
Appendix 3-2. Monitoring Requirements	115408
Appendix 4-2. Recordkeeping	115408
Appendix 5-2. Testing Procedures	116409
Appendix 6-2. Permits to Install.....	116409
Appendix 7-2. Emission Calculations	118444
Appendix 8-2. Reporting	118444

[2018a2023](#)

[20232028](#)

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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 Environment, Great Lakes, and Energy (EGLE) or his or her designee.

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

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is 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.

[2018a2023](#)

[20232028](#)

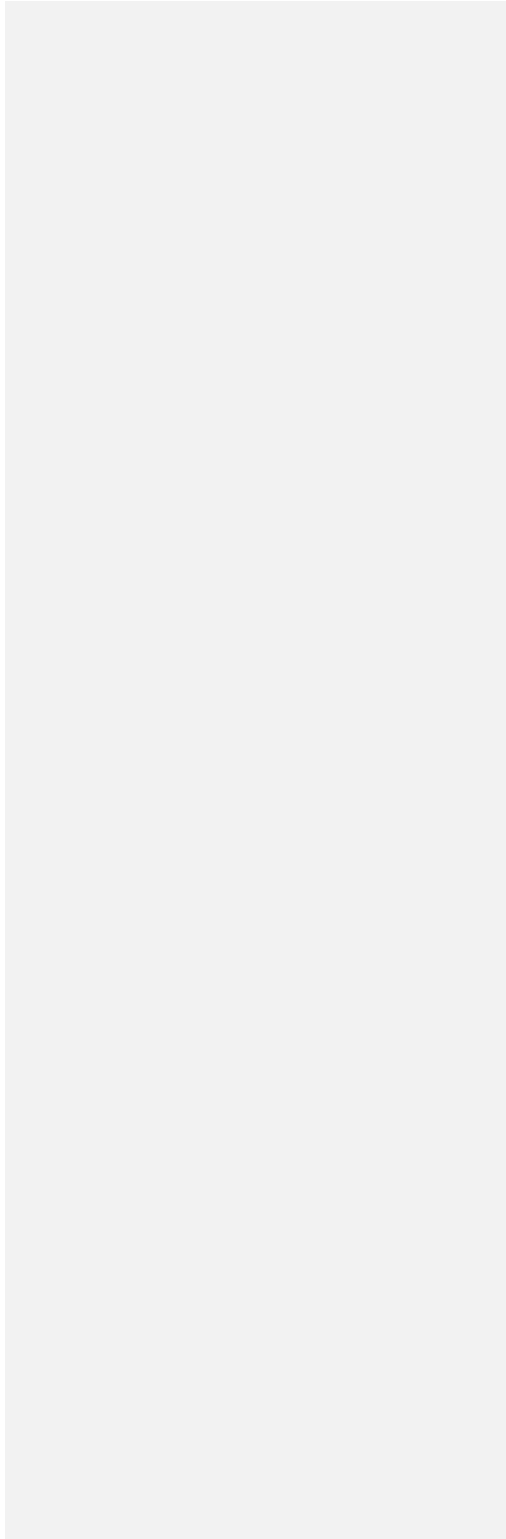
Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

SECTION 1 – Facilities



[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

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

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

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

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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))**
- 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.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
 - 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:
- 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))**
 - 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))**

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

- c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA.
(R 336.1213(6)(b)(iii))

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
 - a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

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

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

- d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

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

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
 - a. June 21, 1999,
 - b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - c. The date on which a regulated substance is first present above a threshold quantity in a process.
40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c). **(40 CFR Part 68)**

Emission Trading

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

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

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

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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.

[2018a2023](#)

[20232028](#)

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Section 1 – Facilities

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
EU-12-HWG-1.01	Natural gas-fired boiler with a heat input of 10 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12-HWG-1.02	Natural gas-fired boiler with a heat input of 40 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12-HWG-1.03	Natural gas-fired boiler with a heat input of 40 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12-HWG-1.04	Natural gas-fired boiler with a heat input of 40 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12HWG-1.05	Natural gas-fired boiler with a heat input of 40 million BTU/hour.	03/01/1990	FG-BOILERS, FG-BOILERMACT
EU-12HWG-1.06	Natural gas-fired boiler with a heat input of 40 million BTU/hour.	06/01/1996	FG-BOILERS, FG-BOILERMACT
EU-12HWG-1.07	Natural gas-fired boiler with a heat input of 40 million BTU/hour.	11/01/2000	FG-BOILERMACT
EU-16-B-4.01	Natural gas-fired boiler with a heat input of 2.511 million BTU/hour.	10/29/1991	FG-BOILERS, FG-BOILERMACT
EU-16-B-4.02	Natural gas-fired boiler with a heat input of 2.511 million BTU/hour.	10/29/1991	FG-BOILERS, FG-BOILERMACT
EU-16-B-4.03	Natural gas-fired boiler with a heat input of 2.511 million BTU/hour.	10/29/1991	FG-BOILERS, FG-BOILERMACT
EU-PT-B-5.01	Exempt natural gas-fired boiler with a heat input of 8.37 million BTU/hour	1997	FG-BOILERMACT
EU-PT-B-5.02	Exempt natural gas-fired boiler with a heat input of 8.37 million BTU/hour	1997	FG-BOILERMACT
EU-B/UP-TURBINE1	Natural gas-fired turbine generator No. 1, with a heat input rating of approximately 237.8 million BTU/hour. The turbine generator is capable of producing 19.14 MW output at peak load and is utilized to provide supplemental electrical power during peak demand periods.	01/01/1995	FG-B/UP-TURBINES

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-B/UP-TURBINE2	Natural gas-fired turbine generator No. 2, with a heat input rating of approximately 237.8 million BTU/hour. The turbine generator is capable of producing 19.14 MW output at peak load and is utilized to provide supplemental electrical power during peak demand periods.	01/01/1995	FG-B/UP-TURBINES
EU-FIREPUMP-1	Diesel Fuel fired pump at the CEP to provide backup pumping capabilities for the building fire suppression system.	10/01/1986	FG-EMERGENCY-RICE
EU-FIREPUMP-2	Diesel Fuel fired pump at the west HQ to provide backup pumping capabilities for the building fire suppression system.	011/01/1995	FG-EMERGENCY-RICE

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

EU-12HWG-1.07 EMISSION UNIT CONDITIONS

DESCRIPTION

Natural gas-fired boiler with a heat input of 40 million BTU/hour. This boiler utilizes natural gas exclusively.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Low NOx Burners

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only fire pipeline quality natural gas in the boiler. **(R 336.1213(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))**

1. The permittee shall monitor and record the fuel usage for EU-12HWG-1.07 on a monthly basis in a manner and with instrumentation acceptable to the AQD District Supervisor. **(R 336.1213(3), 40 CFR 60.48c(g)(2))**
2. The permittee shall develop a boiler preventative maintenance program and log preventative maintenance. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart A (General Provisions), 40 CFR Part 63, Subpart DDDDD (NESHAP Standards for Industrial, Commercial and Institutional Boilers and Process Heaters), and 40 CFR Part 60, Subpart Dc (Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units). **(40 CFR Part 63, Subpart DDDDD, 40 CFR 60, Subpart Dc)**

Footnotes:

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

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

[2018a2023](#)

[20232028](#)

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Section 1 – Facilities

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
FG-BOILERS	Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and five (5) boilers using natural gas exclusively.	EU-12-HWG-1.01 EU-12-HWG-1.02 EU-12-HWG-1.03 EU-12-HWG-1.04 EU-12-HWG-1.05 EU-12-HWG-1.06 EU-16-B-4.01 EU-16-B-4.02 EU-16-B-4.03
FG-BOILERMACT	Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and eight (8) boilers using natural gas exclusively. This flexible group is applicable to the following emission units when operating as a "Unit designed to burn gas 1 subcategory." This includes gaseous fuel boilers that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year and gaseous fuel boilers that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration.	EU-12-HWG-1.01 EU-12-HWG-1.02 EU-12-HWG-1.03 EU-12-HWG-1.04 EU-12-HWG-1.05 EU-12-HWG-1.06 EU-12-HWG-1.07 EU-16-B-4.01 EU-16-B-4.02 EU-16-B-4.03 EU-PT-B-5.01 EU-PT-B-5.02
FG-B/UP-TURBINES	Two natural gas-fired turbine generators used for peaking.	EU-B/UP-TURBINE1 EU-B/UP-TURBINE2
FG-EMERGENCY-RICE	This flexible group includes existing emergency stationary reciprocating internal combustion engines (RICE) that have a maximum site rating of 500 brake horsepower (HP) and less than 30 liters per cylinder located at a major source of hazardous air pollutants (HAPs).	EU-FIREPUMP-1 EU-FIREPUMP-2

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

**FG-BOILERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and five (5) boilers using natural gas exclusively.

Emission Units: EU-12-HWG-1.01, EU-12-HWG-1.02, EU-12-HWG-1.03, EU-12-HWG-1.04, EU-12-HWG-1.05, EU-12-HWG-1.06, EU-16-B-4.01, EU-16-B-4.02, and EU-16-B-4.03

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. SO ₂	104.7 lb/hr ²	Monthly Average	FG-BOILERS	SC V.1 SC VI.4	40 CFR 52.21(c) & (d)
2. SO ₂	232.9 tons/year ²	12-month rolling time as determined at the end of each calendar month	FG-BOILERS	SC V.1 SC VI.4	40 CFR 52.21(c) & (d)
3. SO ₂	0.50 pounds/million BTU heat input ²	24-hour period, when firing No. 2 fuel oil. This is equivalent to using fuel oil No. 2 with a 0.5% sulfur content, by weight, and a minimum heat content of 137,000 BTU/gallon of fuel oil	FG-BOILERS	SC V.1 SC VI.1	R 336.1402 40 CFR 60.42c(d)
4. NO _x	85.8 tons/year ²	12-month rolling time period as determined at the end of each calendar month	FG-BOILERS	SC VI.5	40 CFR 52.21(c) & (d)

The permittee shall use the applicable emission factors in Appendix 7-1 for calculating SO₂ and NO_x emission rates.

See Appendix 7-1

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	521.50 million cubic feet/ year ²	12-month rolling time period as determined at the end of each calendar month	FG-BOILERS	SC VI.2	R 336.1201(3)

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Fuel Oil No. 2	6,415,000 gallons/year ²	12-month rolling time period as determined at the end of each calendar month	FG-BOILERS	SC VI.2	R 336.1201(3)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only fire pipeline quality natural gas in boiler numbers 12-HWG-1.05, 12-HWG-1.06, 16-B-4.01, 16-B-4.02 and 16-B-4.03.² **(R 336.1201(3))**
2. The permittee shall only fire pipeline quality natural gas or fuel oil No. 2 in boiler numbers 12-HWG-1.01, 12-HWG-1.02, 12-HWG-1.03 and 12-HWG-1.04.² **(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))**

1. The permittee shall determine the sulfur content of No. 2 fuel oil, by fuel supplier certification or fuel sample test data, for each delivery of fuel oil that will be used in any emission unit in FG-BOILERS. The certification or test data shall include the name of the oil supplier or laboratory and the sulfur content of the fuel oil. **(R 336.1213(3))**

VI. MONITORING/RECORDKEEPING

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

1. For each fuel oil No. 2 shipment, the permittee shall keep a record of the sulfur content in percent by weight, heat content in BTU/gallon and quantity of shipment received.² **(R 336.1201(3))**
2. The permittee shall monitor and record the quantity and type of each fuel used in each boiler on a monthly and 12-month rolling basis in a manner and with instrumentation acceptable to the AQD District Supervisor.² **(40 CFR 60.48c)**
3. The permittee shall monitor and record the boiler monthly hours of operation. **(R 336.1213(3))**
4. The permittee shall keep a record of the average hourly and monthly 12-month rolling emissions of SO₂. **(R 336.1213(3))**
5. The permittee shall keep a record of the monthly and 12-month rolling emissions of NO_x. **(R 336.1213(3))**
6. The permittee shall develop a boiler preventative maintenance program and log preventative maintenance. **(R 336.1213(3))**

See Appendix 7-1

VII. REPORTING

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

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-12-HWG-1.01	21 ²	100 ²	40 CFR 52.21(c) & (d)
2. SV-12-HWG-1.02	36 ²	100 ²	40 CFR 52.21(c) & (d)
3. SV-12-HWG-1.03	36 ²	100 ²	40 CFR 52.21(c) & (d)
4. SV-12-HWG-1.04	36 ²	100 ²	40 CFR 52.21(c) & (d)
5. SV-12-HWG-1.05	36 ²	100 ²	40 CFR 52.21(c) & (d)
6. SV-12-HWG-1.06	36 ²	100 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR 60 Subpart A (General Provisions), 40 CFR 63 Subpart DDDDD (NESHAP Standards for Industrial, Commercial and Institutional Boilers and Process Heaters), and 40 CFR 60 Subpart Dc (Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units).² **(40 CFR Part 63 Subpart DDDDD, 40 CFR 60, Subpart Dc)**

Footnotes:

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

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

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

FG-BOILERMACT FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and eight (8) boilers using natural gas exclusively. This flexible group is applicable to the following emission units when operating as a "Unit designed to burn gas 1 subcategory." This includes gaseous fuel boilers that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year and gaseous fuel boilers that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration.

Emission Units: EU-12-HWG-1.01, EU-12-HWG-1.02, EU-12-HWG-1.03, EU-12-HWG-1.04, EU-12-HWG-1.05, EU-12-HWG-1.06, EU-12-HWG-1.07, EU-16-B-4.01, EU-16-B-4.02, EU-16-B-4.03, EU-PT-B-5.01, and EU-PT-B-5.02

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn fuels as allowed in the Unit designed to burn gas 1 subcategory definition in 40 CFR 63.7575, as stated in SC II.1.a below, unless as identified and in compliance with SC VII.9 and SC VII.10 and SC IX.6. **(40 CFR 63.7499(I), 40 CFR 63.7575)**
 - a. Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must meet the requirements in paragraphs (a)(1) and (3) of 40 CFR 63.7500, as listed below, except as provided in paragraphs (b) and (e) of 40 CFR 63.7500, stated in SC III.2. The permittee must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of 40 CFR 63.7500, stated in SC III.4. **(40 CFR 63.7500(a))**
 - a. The permittee must meet each work practice standard in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies to the boiler or process heater, for each boiler or process heater at the source. **(40 CFR 63.7500(a)(1))**
 - b. At all times, the permittee must operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**

2. As provided in 40 CFR 63.6(g), EPA may approve use of an alternative to the work practice standards. **(40 CFR 63.7500(b))**
3. The above standards apply at all times the affected unit is operating, except during periods of startup and shutdown. **(40 CFR 63.7500(f))**
4. For startup and shutdown, the permittee must meet the work practice standards according to items 5 and 6 of Table 3 of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7540(d))**
5. The permittee must complete an initial tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through (vi), stated in SC IX.4, no later than the compliance date specified in 40 CFR 63.7495, stated in SC IX.1. The permittee must complete the one-time energy assessment specified in Table 3 of 40 CFR Part 63, Subpart DDDDD no later than the compliance date specified in 40 CFR 63.7495, stated in SC IX.1. **(40 CFR 63.7510(e))**
6. If the permittee is required to meet an applicable tune-up work practice standard, the permittee must conduct an annual performance tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.a; biennial performance tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.4.b; or five-year performance tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in 40 CFR 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each five-year tune-up specified in 40 CFR 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. **(40 CFR 63.7515(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee must keep records according to paragraphs (a)(1) and (2) of 40 CFR 63.7555, as listed below. **(40 CFR 63.7555(a))**
 - a. A copy of each notification and report that the permittee submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
 - b. Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). **(40 CFR 63.7555(a)(2))**
2. If the permittee uses an alternative fuel in any unit in FG-BOILERMACT, other than natural gas, refinery gas, gaseous fuel subject to another subpart under 40 CFR Part 63, other gas 1 fuel, or gaseous fuel subject to another subpart of 40 CFR Part 63 or Parts 60, 61, or 65, the permittee must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies. **(40 CFR 63.7555(h))**

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

3. The permittee's records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). **(40 CFR 63.7560(a))**
4. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.7560(b))**
5. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least two years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining three years. **(40 CFR 63.7560(c))**

See Appendices 3-1 and 4-1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee must meet the notification requirements in 40 CFR 63.7545 according to the schedule in 40 CFR 63.7545, both stated in SC VII.7 through SC VII.9, and in Subpart A of 40 CFR 63. **(40 CFR 63.7495(d))**
5. The permittee must submit a signed statement in the Notification of Compliance Status report that indicates that the permittee conducted a tune-up of each unit in FG-BOILERMACT. **(40 CFR 63.7530(d))**
6. The permittee must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 of 40 CFR Part 63, Subpart DDDDD, and that the assessment is an accurate depiction of the facility at the time of the assessment. **(40 CFR 63.7530(e))**
7. The permittee must submit to the Administrator all of the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) that apply to the permittee by the dates specified. **(40 CFR 63.7545(a))**
8. As specified in 40 CFR 63.9(b)(2), if permittee starts up the affected source before January 31, 2013, the permittee must submit an Initial Notification not later than 120 days after January 31, 2013. **(40 CFR 63.7545(b))**
9. If the permittee intends to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of 40 CFR Part 63, Part 60, Part 61, or Part 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575, the permittee must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of 40 CFR 63.7545, as listed below. **(40 CFR 63.7545(f))**
 - a. Company name and address. **(40 CFR 63.7545(f)(1))**
 - b. Identification of the affected unit. **(40 CFR 63.7545(f)(2))**

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

- c. Reason the permittee is unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared, or the natural gas supply interruption began. **(40 CFR 63.7545(f)(3))**
 - d. Type of alternative fuel that the permittee intends to use. **(40 CFR 63.7545(f)(4))**
 - e. Dates when the alternative fuel use is expected to begin and end. **(40 CFR 63.7545(f)(5))**
10. If the permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, the permittee must provide notice of the date upon which the permittee switched fuels or made the physical change within 30 days of the switch/change. The notification must identify: **(40 CFR 63.7545(h))**
- a. The name of the owner or operator of the affected source, as defined in 40 CFR 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice. **(40 CFR 63.7545(h)(1))**
 - b. The currently applicable subcategory under 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7545(h)(2))**
 - c. The date upon which the fuel switch or physical change occurred. **(40 CFR 63.7545(h)(3))**
11. The permittee must submit each report in Table 9 of 40 CFR Part 63, Subpart DDDDD that applies. **(40 CFR 63.7550(a))**
12. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of 40 CFR 63.7550, stated in SC VII.15, by the date in Table 9 of 40 CFR Part 63, Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below. For units that are subject only to a requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC X.14.a, biennial tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.4.b, or five-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c, and not subject to emission limits or Table 4 operating limits, the permittee may submit only an annual, biennial, or five-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below, instead of a semiannual compliance report. **(40 CFR 63.7550(b))**
- a. The first semiannual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495, stated in SC IX.1, and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for the source in 40 CFR 63.7495, stated in SC IX.1. If submitting an annual, biennial, or five-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31 within one, two, or five years, as applicable, after the January 31, 2016 compliance date. **(40 CFR 63.7550(b)(1))**
 - b. The first semiannual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495, stated in SC IX.1. The first annual, biennial, or five-year compliance report must be postmarked or submitted no later than January 31. **(40 CFR 63.7550(b)(2), (40 CFR 63.10(a)(5))**
 - c. Each subsequent semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and five-year compliance reports must cover the applicable one, two, or five-year periods from January 1 to December 31. **(40 CFR 63.7550(b)(3))**
 - d. Each subsequent semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the semiannual reporting

[2018a2023](#)

[20232028](#)

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Section 1 – Facilities

period. Annual, biennial, and five-year compliance reports must be postmarked or submitted no later than March 15. **(40 CFR 63.7550(b)(4), (40 CFR 63.10(a)(5))**

13. The first and subsequent compliance reports may be submitted according to the dates specified in SC VII.2 for semiannual ROP reporting. **(40 CFR 63.7550(b)(5))**
14. A compliance report must contain the following information depending on how the permittee chooses to comply with the limits set in this rule. **(40 CFR 63.7550(c))**
 - a. If the facility is subject to the requirements of a tune up, the permittee must submit a compliance report with the information in SC VII.14 (a)(i) through (iv) as follows: **(40 CFR 63.7550(c)(1))**
 - i. Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
 - ii. Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
 - iii. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
 - iv. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.a, biennial tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.b, or five-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a five-year period and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**
15. The permittee must submit the reports according to the procedures specified in paragraphs (h) of 40 CFR 63.7550, as listed below. **(40 CFR 63.7550(h))**
 - a. The permittee must submit all reports required by Table 9 of 40 CFR Part 63, Subpart DDDDD electronically to the EPA via the CEDRI (CEDRI can be accessed through the EPA's CDX). The permittee must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI website (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90-days after the form become available in CEDRI. **(40 CFR 63.7550(h)(3))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee must comply with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016, except as provided in 40 CFR 63.6(i). **(40 CFR 63.7495(b))**
2. The permittee must be in compliance with the emission limits, work practice standards, and operating limits of 40 CFR Part 63, Subpart DDDDD. These emission and operating limits apply at all times when the affected unit is operating except for the periods noted in 40 CFR 63.7500(f), stated in SC III.3. **(40 CFR 63.7505(a))**
3. For affected sources (as defined in 40 CFR 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, the permittee must complete a subsequent tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

(vi), stated in SC IX.4.a, and the schedule described in 40 CFR 63.7540(a)(13), stated in SC IX.4.d, for units that are not operating at the time of their scheduled tune-up. **(40 CFR 63.7515(g))**

4. The permittee must demonstrate continuous compliance with the work practice standards in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies according to the methods specified in paragraphs (a)(10) through (13) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a))**
 - a. If the boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, the permittee must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540, as listed below. The tune-up must be conducted while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. **(40 CFR 63.7540(a)(10))**
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
 - iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
 - v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
 - vi. Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a)(10)(vi))**
 - A. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
 - B. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
 - C. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
 - b. If the boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of 40 CFR 63.7540), the permittee must conduct a biennial tune-up of the

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. **(40 CFR 63.7540(a)(11))**

- c. If the boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to five million Btu per hour and the unit is in the units designed to burn gas 1 subcategory, the permittee must conduct a tune-up of the boiler or process heater every five years as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. The permittee may delay the burner inspection specified in paragraph (a)(10)(i) of 40 CFR 63.7540 until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every five years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. **(40 CFR 63.7540(a)(12))**
- d. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
5. Table 10 of 40 CFR Part 63, Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 applies to the permittee. **(40 CFR 63.7565)**
6. If the permittee has switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, the permittee must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change. **(40 CFR 63.7495 (h))**

Footnotes:

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

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

**FG-B/UP-TURBINES
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Two natural gas-fired turbine generators used for peaking.

Emission Units: EU-B/UP-TURBINE1, EU-B/UP-TURBINE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	89.29 pph ²	Monthly average, for each of the turbines.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	R 336.1205, 40 CFR 52.21(c) & (d)
2. NOx	35.72 tons/ year ²	Total combined for the two turbines, based on a 12-month rolling time period as determined at the end of each calendar month.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	R 336.1205, 40 CFR 52.21(c) & (d)
3. CO	16.23 pph ²	Monthly average, for each of the turbines.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	40 CFR 52.21(d)
4. CO	6.50 tons/ year ²	Total combined for the two turbines, based on a 12-month rolling time period as determined at the end of each calendar month.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	40 CFR 52.21(d)
5. Sulfur	0.8%	By weight sulfur in natural gas.	FG-B/UP-TURBINES	SC VI.2	40 CFR 60.333(b)

The permittee shall use the applicable emission factors in Appendix 7-1 for calculating NOx and CO emission rates.

See Appendix 7-1

II. MATERIAL LIMIT(S)

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	190.20 million cubic feet/year, total combined for the two turbines. ²	12-month time period	FG-B/UP-TURBINES	SC VI.1	R 336.1205

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate the units only when the necessary power is not being supplied by the local utility or as a backup emergency generator to the utility grid.² (R 336.1205)
2. The permittee shall only fire pipeline quality natural gas, as defined in 40 CFR 72.2, in the turbines. (R 336.1213(3))
3. The permittee shall not operate each turbine for more than 400 hours based on a rolling 12-month time period. (R 336.1213(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))

1. The permittee shall monitor and record the monthly hours of operation of each turbine. (R 336.1213(3))
2. The permittee shall keep records of the 12-month rolling fuel consumption of each turbine.² (R 336.1201(3))
3. The permittee shall keep a record of the monthly 12-month rolling emissions of NOx and CO. (R 336.1213(3))
4. The permittee shall develop a turbine preventative maintenance program and log preventative maintenance. (R 336.1213(3))

See Appendix 7-1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. 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))

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

See Appendix 8-1

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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
1. SV-TURBINE1	168 ²	27.6 ²	40 CFR 52.21(c) & (d)
2. SV-TURBINE2	168 ²	27.6 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

FG-EMERGENCY-RICE FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group includes existing emergency stationary reciprocating internal combustion engines (RICE) that have a maximum site rating of 500 brake horsepower (HP) and less than 30 liters per cylinder located at a major source of hazardous air pollutants (HAPs).

Emission Units: EU-FIREPUMP-1, EU-FIREPUMP-2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. There is no limit on the use of FG-EMERGENCY-RICE units in emergency situations. **(40 CFR 63.6640(f)(1))**
2. The permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions. Alternatively, the permittee may develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e)(2))**
3. The permittee must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to each engine at all times. **(40 CFR 63.6605(b))**
4. The permittee shall operate and maintain, at all times, any affected CI RICE, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.6605(b))**
5. The permittee shall comply with the following requirements, except during periods of startup:
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.5.
 - b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6602, Table 2c to 40 CFR Part 63, Subpart ZZZZ)**

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Note: If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in SC III.4, the work practice should be performed as soon as practicable after the emergency has ended.

6. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement in 40 CFR 63.6602 and as listed in SC III 4(a). If utilized, the oil analysis program must be part of the maintenance plan for the engine. The oil analysis program must be performed at the same frequency as oil changes are required. The analysis program must analyze the parameters and keep records as required in 40 CFR 63.6625(i). **(40 CFR 63.6625(i))**
7. The permittee must minimize each engine's time spent at idle during startup and minimize each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d of 40 CFR Part 63, Subpart ZZZZ. **(40 CFR 63.6625(h))**
8. The permittee shall not allow the CI engine(s) to exceed 100 hours for maintenance checks and readiness testing. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. **(40 CFR 63.6640(f)(2)(ii))**
9. The permittee shall not allow the CI engine(s) to operate more than 50 hours per year for non-emergency situations, as allowed in 40 CFR 63.6640(f)(2). **(40 CFR 63.6640(f)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install a non-resettable hour meter to each engine, if one is not already installed. **(R 36.1213(3), 40 CFR 63.6625(f))**

V. TESTING/SAMPLING

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

1. If using the oil analysis program for CI Engine(s), the permittee shall test for Total Base Number, viscosity and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. **(40 CFR 63.6625(i))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee must keep records of the hours of operation of each engine that is recorded through the non-resettable hour meter. The permittee must document:
 - a. How many hours are spent for emergency operation?
 - b. What classified the operation as emergency?
 - c. How many hours are spent for non-emergency operation, including routine testing and readiness?
 - d. If the engines are used for demand response operation, the permittee must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. **(40 CFR 63.6655(f), 40 CFR 63.6660)**
2. The permittee shall keep records for each CI engine of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. **(40 CFR 63.6655(a)(2), 40 CFR 63.6660)**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

3. The permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. **(40 CFR 63.6655(a)(5), 40 CFR 63.6660)**
4. The permittee must keep records of the parameters that are analyzed as part of the oil analysis program, the results of the analysis, and the oil changes for the engine. The records shall be kept for five years. **(40 CFR 63.6625(i))**
5. The permittee shall keep the RICE maintenance records required in 40 CFR 63.6655(d) and 63.6655(e). The records shall be kept for five years. **(40 CFR 63.6655(d), 40 CFR 63.6655(e), 40 CFR 63.6660)**
6. The permittee shall keep records of the sulfur content of the diesel fuel oil used in FG-EMERGENCY-RICE. **(R 336.1402)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A-General Provisions and ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. **(R 336.1213, 40 CFR Part 63, Subparts A and ZZZZ)**
2. If all of the condemning limits specified in SC V.1 are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee must change the oil within two days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within two days or before commencing operation, whichever is later. **(40 CFR 63.6625(i))**

Footnotes:

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

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

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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).

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

APPENDICES

Appendix 1-1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	°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 ₂ 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
EGLE	Michigan Department of Environment, Great Lakes, and Energy	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	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	%	Percent
RACT	Reasonable Available Control Technology	psia	Pounds per square inch absolute
ROP	Renewable Operating Permit	psig	Pounds per square inch gauge
SC	Special Condition	scf	Standard cubic feet
SCR	Selective Catalytic Reduction	sec	Seconds
SNCR	Selective Non-Catalytic Reduction	SO ₂	Sulfur Dioxide
SRN	State Registration Number	TAC	Toxic Air Contaminant
TEQ	Toxicity Equivalence Quotient	Temp	Temperature
USEPA/EPA	United States Environmental Protection Agency	THC	Total Hydrocarbons
VE	Visible Emissions	tpy	Tons per year
		µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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

Appendix 2-1. Schedule of Compliance

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

Appendix 3-1. Monitoring Requirements

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

Appendix 4-1. Recordkeeping

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

Appendix 5-1. Testing Procedures

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 6-1. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N1436-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N1436-2013 is being reissued as Source-Wide PTI No. MI-PTI-N1436-2018.

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

Appendix 7-1. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-BOILERS:

In calculating the sulfur dioxide, SO₂ emission rate for the boilers in FG-BOILERS, use the following emission factors:

FUEL	SO ₂ EMISSION FACTOR
------	---------------------------------

[2018a2023](#)

[20232028](#)

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

Section 1 – Facilities

Natural gas	0.60 pounds/MM ft ³
No. 2 fuel oil	72 pounds/1000 gallons

In calculating the nitrogen oxides, NOx emission rate for the boilers in FG-BOILERS, use the following emission factors:

FUEL	NOx EMISSION FACTOR
Natural gas	100 pounds/MM ft ³
No. 2 fuel oil	20 pounds/1000 gallons

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-B/UP-TURBINES:

In calculating the NOx and CO emission rates for the turbines in FG-B/UP-TURBINES, use the following emission factors:

POLLUTANT	EMISSION FACTOR
NOx	375 pounds/MM ft ³ of natural gas
CO	68 pounds/MM ft ³ of natural gas

Appendix 8-1. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

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

B. Other Reporting

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

Section 2 – Scientific Labs
[20232028](#)

ROP No: MI-ROP-N1436-2018a
Expiration Date: October 30,
PTI No: MI-PTI-N1436-2018a

SECTION 2 – Scientific Labs

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

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

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

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

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
 - a. The date, location, time, and method of sampling or measurements.
 - b. The dates the analyses of the samples were performed.
 - c. The company or entity that performed the analyses of the samples.
 - d. The analytical techniques or methods used.
 - e. The results of the analyses.
 - f. The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
 - a. For deviations that exceed the emissions allowed under the ROP, prompt reporting means reporting consistent with the requirements of Rule 912 as detailed in Condition 25. All reports submitted pursuant to this paragraph shall be promptly certified as specified in Rule 213(3)(c)(iii).
 - b. For deviations which exceed the emissions allowed under the ROP and which are not reported pursuant to Rule 912 due to the duration of the deviation, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe reasons for each deviation and the actions taken to minimize or correct each deviation.
 - c. For deviations that do not exceed the emissions allowed under the ROP, prompt reporting means the reporting of all deviations in the semiannual reports required by Rule 213(3)(c)(i). The report shall describe the reasons for each deviation and the actions taken to minimize or correct each deviation.

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

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))**
- 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.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
 - 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:
- 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))**
 - 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))**
 - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
- 28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
 - a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
- 29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

- 30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
- 31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
- 32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
- 33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

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

Renewals

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

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 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))**

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

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

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

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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.

ROP No: MI-ROP-N1436-

[2018a2023](#) [20232028](#) **Section 2 – Scientific Labs** Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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.

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
EU-KIRKSITEFURN	Electrically heated melting furnace. Kirksite is a zinc-based metal casting formulation. Casting operation utilizes Pep Set sand mold.	10/28/1991	NA
EU-WINGATESTCELL- (1-14)	Fourteen (14) engine dynamometer test cells (performance test cells) located at Wing A. At the time of installation, these test cells were exempt from the requirements of R 336.1201 pursuant to R 336.1285(d) (currently R 336.1285(2)(g)).	10/1990	FG-TESTCELLSA
EU-SPOVEN1	Paint spray booth/oven combination No. 1	10/28/1991 11/01/2000	FG-ENGPAINSHOP
EU-SPOVEN2	Paint spray booth/oven combination No. 2	10/28/1991 11/01/2000	FG-ENGPAINSHOP
EU-SPOVEN3	Paint spray booth/oven combination No. 3	11/01/2000	FG-ENGPAINSHOP
EU-SPOVEN4	Paint spray booth/oven combination No. 4	11/01/2000	FG-ENGPAINSHOP
EU-HIBAKE	High bake oven	10/28/1991	FG-ENGPAINSHOP
EU-PB/MIX	Paint spray booth and mix bench	10/28/1991	FG-ENGPAINSHOP
EU-BATCH	Batch oven	10/28/1991	FG-ENGPAINSHOP
EU-LOFLOVPRGNRTR	Low flow vapor generator utilized to create gas vapors for testing and developing refueling emission canisters.	04/02/1991	FG-WETFUELSTEST
EU-HIFLOVPRGNRTR	High flow vapor generator utilized to create gas vapors for testing and developing refueling emission canisters.	04/02/1991	FG-WETFUELSTEST
EU-WETFUELGASTST	Wet fuels gasoline test equipment consisting of a twenty-four (24) station fuel pump test stand, one hundred (100) station fuel injector endurance test stand and a gasoline tank purge operation.	04/02/1991	FG-WETFUELSTEST
EU-WETFUELSMINSPR	Wet fuels mineral spirits testing equipment for fuel injector performance, electrical fuel pump and fuel filter tests.	04/02/1991	FG-WETFUELSTEST
EU-MAINTPAINTING	Paint booth located in the maintenance area.	01/01/1999	FG-RULE287(2)(c)
EU-PRODDSGNPAINT	Paint booth located in the product design area.	01/01/1999	FG-RULE287(2)(c)
EU-WOODSHOPPAINT	Paint booth located in the wood shop.	01/01/1999	FG-RULE287(2)(c)

ROP No: MI-ROP-N1436-
 Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[2023a2028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-B01	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B02	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B03	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B04	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B05	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B06	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B07	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS

ROP No: MI-ROP-N1436-
 Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-B08	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B09	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B10	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B11	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B12	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B13	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B14	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS

ROP No: MI-ROP-N1436-
 Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-B15	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B16	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B17	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B18	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C01	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C02	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C03	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS

ROP No: MI-ROP-N1436-
 Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-C04	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C05	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C06	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C07	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C08	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C09	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-C10	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C11	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C12	One durability/transmission test cell located in Wing C; it can also perform simulation tests. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C13	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C14	One durability/transmission test cell located in Wing C; it can also perform simulation tests. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-C15	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C16	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C17	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C18	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C19	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C20	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-
 2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
 20232028

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D01	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D02	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D03	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D04	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D05	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D06	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-
 2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
 20232028

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D07	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D08	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D09	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D10	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D11	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D12	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-
 2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
 20232028

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D13	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D14	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D15	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D16	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D17	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D18	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-
 2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
 20232028

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D19	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D20	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D21	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D22	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-E01	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E02	One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E03	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E04	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E05	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E06	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E07	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E08	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer; except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E09	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E10	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E11	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E12	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E13	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E14	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-
 2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
 20232028

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E15	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E16	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E17	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E18	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E19	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E20	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

**EU-KIRKSITEFURN
EMISSION UNIT CONDITIONS**

DESCRIPTION

Electrically heated melting furnace. Kirksite is a zinc-based metal casting formulation. Casting operation utilizes Pep Set sand mold. Processing of the mold and core is exempt under R 336.1282(2)(a)(iv).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))

1. The permittee shall conduct and record visible emission readings, using USEPA Method 9, once during each 5-year period to demonstrate compliance with the visible emission limit. (R 336.1213(3))

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)(c))

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436- Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

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.

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
FG-TESTCELLSA	Fourteen (14) engine dynamometer test cells (performance test cells) located at Wing A. At the time of installation, these test cells were exempt from the requirements of R 336.1201 pursuant to R 336.1285(d) (currently R 336.1285(2)(g)).	EU-WINGATESTCELL- (1-14)
FG-ENGPAINSHOP	Surface coating and associated auxiliary coating equipment located at the engineering paint shop.	EU-SPOVEN1 EU-SPOVEN2 EU-SPOVEN3 EU-SPOVEN4 EU-HIBAKE EU-PB/MIX EU-BATCH
FG-CNTRLDCELLS	Forty-six (46) engine dynamometer test cells located in Wing C, Wing D and Wing E (durability, transmission and simulation test cells). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands. Emissions from these test cells are controlled with thermal oxidizers, except when performing simulation testing. During simulation testing, the emissions are controlled with a catalytic converter and also a diesel particulate filter if burning diesel.	EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18,

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-CNTRLDCELLS (cont.)		EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E10, EU-CELL-E12, EU-CELL-E14, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20
FG-UNCNTRLDCELLS	Thirty-four (34) engine dynamometer test cells (performance test cells) located in Wings B, C and E. The 34 engine dynamometer test cells house a total of 34 engine dynamometer test stands. Performance test cells do not have emission control equipment.	EU-CELL-B01, EU-CELL-B02, EU-CELL-B03, EU-CELL-B04, EU-CELL-B05, EU-CELL-B06, EU-CELL-B07, EU-CELL-B08, EU-CELL-B09, EU-CELL-B10, EU-CELL-B11, EU-CELL-B12, EU-CELL-B13, EU-CELL-B14, EU-CELL-B15, EU-CELL-B16, EU-CELL-B17, EU-CELL-B18, EU-CELL-C01, EU-CELL-C02, EU-CELL-C03, EU-CELL-C04, EU-CELL-C05, EU-CELL-C06, EU-CELL-C07, EU-CELL-C08, EU-CELL-E01, EU-CELL-E03, EU-CELL-E05, EU-CELL-E07, EU-CELL-E09, EU-CELL-E11, EU-CELL-E13, EU-CELL-E15

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-CAMTO	Eleven (11) natural gas fired thermal oxidizers serving forty-six (46) dynamometer test cells used to describe the monitoring procedures, methods and/or specifications for operating and maintaining carbon monoxide (CO) and volatile organic compounds (VOC) control devices for FG-CNTRLDCELLS at the Chrysler Technology Center (CTC). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands.	NA
FG-GASTANKS	Any existing or future emission unit that emits air contaminants that are exempt from the requirements of R 336.1201 pursuant to R 336.1284(2)(g)(i). The FG currently includes six (6) underground storage tanks for Wet Fuel Building, eighteen (18) underground gasoline storage tanks at the South Tank Farm, and three (3) underground gasoline storage tanks at the North Tank Farm.	NA
FG-WETFUELSTEST	Testing equipment in the wet fuels area. Process and process equipment are exempt from the provisions of R 336.1201 pursuant to R 336.1283(2)(a)(ii).	EU-LOFLOVPRGNRTR EU-HIFLOVPRGNRTR EU-WETFUELGASTST EU-WETFUELSMINSPR
FG-RULE331	Any existing or future emission units that emit air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1285(2)(l)(vi)(A) and R 336.1285(2)(l)(vi)(C). Flexible group includes any equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening or polishing metals, plastics, wood and wood products, and any exhaust system or collector exclusively serving the above equipment. Equipment is exhausted externally and used on a non-production basis	NA
FG-RULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	NA
FG-RULE287(2)(c)	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 287(2)(c). Emission units installed/modified before December 20, 2016, may show compliance with Rule 287 in effect at the time of installation/modification.	EU-MAINTPAINTING EU-PRODDSGNPAIN EU-WOODSHOPPAINT
FG-COLDCLEANERS	Any new cold solvent cleaner placed into operation after 07/01/79 that is exempt from the requirements of R 336.1201 pursuant to R 336.1281(2)(h) and R 336.1285(2)(r)(iv).	NA

**FG-TESTCELLSA
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Fourteen (14) engine dynamometer test cells (performance test cells) located at Wing A. At the time of installation, these test cells were exempt from the requirements of R 336.1201 pursuant to R 336.1285(d) (currently R 336.1285(2)(g)).

Emission Unit: EU-WINGATESTCELL-(1-14)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. SO ₂	1.7 lb/MMBTU heat input of fuel oil ²	When fired by fuel oil	Each engine of EU-WINGATESTCELL-(1-14)	SC VI.1 SC VI.3	R 336.1402(1)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))

1. When fired by fuel oil, the permittee shall maintain a record of the fuel specifications for the fuel oil used. (R 336.1213(3))
2. The permittee shall maintain a record of the date of installation for each engine test cell. (R 336.1213(3))
3. The permittee shall record the types and amounts of fuel used per calendar year. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**FG-ENGPAINSHOP
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Surface coating and associated auxiliary coating equipment located at the engineering paint shop.

Emission Units: EU-SPOVEN1, EU-SPOVEN2, EU-SPOVEN3, EU-SPOVEN4, EU-HIBAKE, EU-PB/MIX, EU-BATCH

POLLUTION CONTROL EQUIPMENT

Dry Filters

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1185.6 pounds/day ²	Monthly averaging	FG-ENGPAINSHOP	SC VI	R 336.1702(d)
2. VOC	30.3 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month	FG-ENGPAINSHOP	SC VI	R 336.1205 R 336.1702(d)
3. VOC	6.60 lb/gallon, minus water, as applied ²	Calendar day weighted average	Top Coat (basecoat and clearcoat) painting process	SC VI	R 336.1702(d)
4. VOC	5.44 lb/gallon, minus water, as applied ²	Calendar day weighted average	Prime painting process	SC VI	R 336.1702(d)
5. VOC	5.16 lb/gallon, minus water, as applied ²	Calendar day weighted average	Primer/surfacers painting process	SC VI	R 336.1702(d)
6. VOC	3.6 lb/gallon, minus water, as applied ²	Calendar day weighted average	Plastic parts painting process	SC VI	R 336.1702(d)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any paint spray booths unless the associated filters are installed and operating in a satisfactory manner.² (R 336.1224, R 336.1301, R 336.1331, R 336.1910)
2. The permittee shall collect and store waste coatings and solvents in closed containers to minimize the release of air contaminants.² (R 336.1370, R 336.1702(d))

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))

1. The VOC content of any coating as applied and as received shall be determined using federal Reference Test Method 24. Upon prior approval of the AQD District Supervisor, VOC content may alternatively be determined from manufacturer's formulation data.² (R 336.1205, R 336.1225, R 336.1702(a))

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 keep a record of the identity of each coating and the coating category to which it belongs.² (R 336.1205, R 336.1225, R 336.1702(d))
2. The permittee shall keep a daily usage rate, in gallons, for each coating.² (R 336.1205, R 336.1225, R 336.1702(d))
3. The permittee shall keep a record of the VOC content of each coating, in pounds VOC/gallon of coating, minus water, as applied.² (R 336.1205, R 336.1225, R 336.1702(d))
4. The permittee shall keep a record of the VOC content of each coating, in pounds VOC/gallon of coating, with water, as applied.² (R 336.1205, R 336.1225, R 336.1702(d))
5. For each raw coating, the permittee shall keep a record of the VOC content of the raw coating, in pounds VOC/gallon of coating, with water as received and in pounds VOC/gallon of coating, minus water, as received, and the VOC content of each reducer added. (R 336.1213(3))
6. The permittee shall keep a record of the daily mass VOC emissions and yearly mass VOC emissions from FG-ENGPAINSHOP. Yearly emissions shall be determined at the end of each calendar month based on a rolling 12-month time period.² (R 336.1205, R 336.1225, R 336.1702(d))
7. The VOC content of each coating, minus water, as applied, shall be determined using EPA Reference Test Method 24. As an alternative, the VOC content may be determined from formulation data. If the Method 24 and formulation values should differ, then the Method 24 results shall be used to determine compliance. (R 336.1213(3))

See Appendix 7-2

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8-2

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
1. SV-SPOVEN1	36 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
2. SV-SPOVEN2	36 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
3. SV-SPOVEN3-1 (Spray booth stack)	50 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
4. SV-SPOVEN3-2 (Oven stack)	14 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
5. SV-SPOVEN4-1 (Spray booth stack)	60 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
6. SV-SPOVEN4-2 (Oven stack)	12 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
7. SV-HIBAKE	18 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
8. SV-PB/MIX	18 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
9. SV-BATCH	14 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

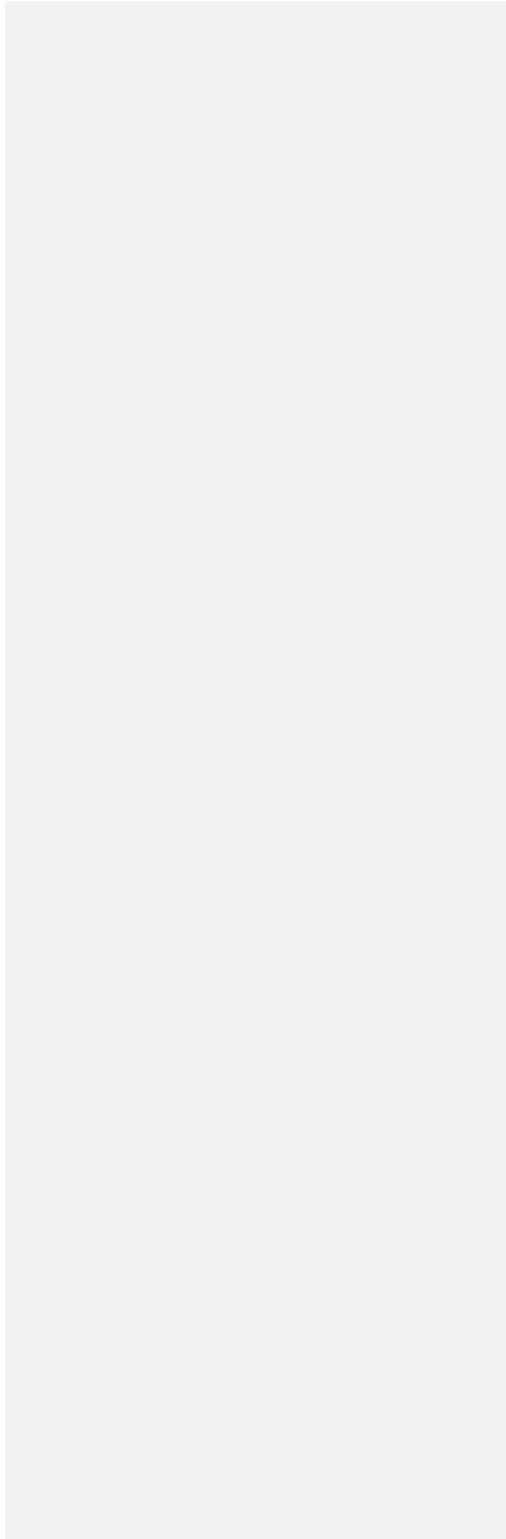
Footnotes:

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

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

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)



**FG-CNTRLDCELLS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Forty-six (46) engine dynamometer test cells located in Wing C, Wing D and Wing E (durability, transmission and simulation test cells). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands. Emissions from these test cells are controlled with thermal oxidizers, except when performing simulation testing. During simulation testing, the emissions are controlled with a catalytic converter and also a diesel particulate filter if burning diesel.

Emission Units: EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18, EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E10, EU-CELL-E12, EU-CELL-E14, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20

POLLUTION CONTROL EQUIPMENT

Eleven (11) thermal oxidizers for durability and transmission test cells. Three-way catalytic converters for simulation test cells, with diesel particulate filters if burning diesel.

I. EMISSION LIMITS

Scenario A: This emission limit table is effective until the notification specified in SC VII.5 is submitted to the AQD:

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	0.1049 lb/gallon ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1,	40 CFR 52.21(j)
2. NO _x	218.2 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.6	40 CFR 52.21(j)
3. CO	0.01 lb/gallon ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1	40 CFR 52.21(j)
4. CO	20.8 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC VI.6	40 CFR 52.21(j)

ROP No: MI-ROP-N1436-

2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
20232028

PTI No: MI-PTI-N1436-2018a2023

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
5. CO	17.57 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing simulation testing in all listed below, combined: EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC-VI.6	R 336.1205(1)(a)&(3), 40 CFR 52.21(d)
6. VOC	0.006 lb/gallon ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC-V.1	40 CFR 52.21(j)
7. VOC	12.5 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	40 CFR 52.21(j)
8. Lead	0.58 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	40 CFR 52.21(j)
9. PM10	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)
10. PM2.5	0.0186 pph per test stand ²	Hourly ^A	While performing simulation testing in all listed below, combined: EU-CELL-C12 ^B , EU-CELL-C14 ^B , EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC-V.2	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)
11. PM2.5	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)

^A If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements.

^B EU-CELL-C12 and EU-CELL-C14 each have 2 test stands, so the overall pph out of their stack would be doubled.

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
Default emission factors shall be used unless otherwise approved by the AQD District Supervisor:					
Durability and Transmission Testing NO _x = 0.1049 lb/gallon CO = 0.01 lb/gallon VOC = 0.006 lb/gallon Lead, leaded fuel = 0.0075 lb/gallon Lead, unleaded fuel = 0.00011 lb/gallon PM10/PM2.5, all other fuels = 0.0062 lb/gallon PM10/PM2.5, ultra-low sulfur diesel = 0.012 lb/gallon			Simulation Testing NO _x = 0.0052 lb/gallon CO = 0.13 lb/gallon VOC = 0.0082 lb/gallon Lead, leaded fuel = 0.0075 lb/gallon Lead, unleaded fuel = 0.00011 lb/gallon PM10/PM2.5 = 0.0062 lb/gallon		

Scenario B: This emission limit table is effective after the notification specified in SC VII.5 is submitted to the AQD:

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	10.45 pph per thermal oxidizer ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1	40 CFR 52.21(j)
2. NO _x	218.2 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
3. CO	1 pph per thermal oxidizer ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1	40 CFR 52.21(j)
4. CO	20.8 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
5. CO	17.57 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing simulation testing in all listed below, combined: EU-CELL-C12 , EU-CELL-C14 , EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08 , EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(d)
6. VOC	0.64 pph per thermal oxidizer ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1	40 CFR 52.21(j)

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
7. VOC	12.5 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
8. Lead	0.58 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
9. PM10	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)
10. PM2.5	0.0186 pph per test stand ²	Hourly ^A	While performing simulation testing in all listed below, combined: EU-CELL-C12^B ; EU-CELL-C14^B ; EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08 ; EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC V.2	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)
11. PM2.5	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)

^A If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements.

^B [EU-CELL-C12](#) and [EU-CELL-C14](#) each have 2 test stands, so the overall pph out of their stack would be doubled.

Default emission factors shall be used unless otherwise approved by the AQD District Supervisor:

Durability and Transmission Testing	Simulation Testing
NO _x = 0.1049 lb/gallon	NO _x = 0.0052 lb/gallon
CO = 0.01 lb/gallon	CO = 0.13 lb/gallon
VOC = 0.006 lb/gallon	VOC = 0.0082 lb/gallon
Lead, leaded fuel = 0.0075 lb/gallon	Lead, leaded fuel = 0.0075 lb/gallon
Lead, unleaded fuel = 0.00011 lb/gallon	Lead, unleaded fuel = 0.00011 lb/gallon
PM10/PM2.5, all other fuels = 0.0062 lb/gallon	PM10/PM2.5 = 0.0062 lb/gallon
PM10/PM2.5, ultra-low sulfur diesel = 0.012 lb/gallon	

II. MATERIAL LIMITS

Scenario A: This material limit table is effective until the notification specified in SC VII.5 is submitted to the AQD:

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total Fuel	4,160,700 gallons/yr ^{2C}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R-336.1225, R-336.1702(a), 40 CFR 52.21(c), (d), & (j)
1a. Ultra-low sulfur diesel fuel	1,040,175 gallons/yr ^{2D}	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC-VI.6	R-336.1205(1)(a)&(3), R-336.1225, R-336.1702(a), 40 CFR 52.21(c)&(d)
1b. Total Fuel	265,000 gallons/yr ^{2D}	12-month rolling time period as determined at the end of each calendar month.	While performing assimilation testing in all listed below, combined: EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC-VI.6	R-336.1205(1)(a)&(3), R-336.1225, R-336.1702(a), 40 CFR 52.21(c)&(d)
1c. Leaded Gasoline	95,000 gallons/yr ^{2D,E}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS & FG-UNCNTRLDCELLS	SC-VI.2, SC-VI.6	40 CFR 52.21(d)
2. Total Fuel	26,311 gallons/day ^{2C}	Average calendar day as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R-336.1225, R-336.1702(a), 40 CFR 52.21(c), (d), & (j)

^CGaseous fuels must be converted to Gasoline Gallon Equivalents (GGE) for demonstrations of compliance with this material limits. One GGE of natural gas is equal to 125 ft³.
^DThese material limits are subsets of SC II.1 and are not in addition to SC II.1. They must be included in the total fuel calculation to demonstrate compliance.
^EThis material limit is a combined limit for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS.

Formatted: Justified
 Formatted: Justified
 Formatted: Justified, Indent: Left: 0", First line: 0"
 Formatted: Justified
 Formatted: Justified
 Formatted: Justified
 Formatted: Justified, Indent: Left: 0", First line: 0"
 Formatted: Justified
 Formatted: Justified
 Formatted: Justified, Indent: Left: 0", First line: 0"

2018a2023 **Section 2 – Scientific Labs**
20232028

Scenario B: This material limit table is effective after the notification specified in SC VII.5 is submitted to the AQD:

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total Fuel	4,160,700 gallons/yr ^{2,C}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d),&(j)
1a. Ultra-low sulfur diesel fuel	1,040,175 gallons/yr ^{2,D}	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC VI.7	R 336.1205(1)(a)&(3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d)
1b. Total Fuel	265,000 gallons/yr ^{2,D}	12-month rolling time period as determined at the end of each calendar month.	While performing simulation testing in all listed below, combined: EU-CELL-C12 , EU-CELL-C14 , EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08 , EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC VI.7	R 336.1205(1)(a)&(3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d)
1c. Leaded Gasoline	95,000 gallons/yr ^{2,D,E}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS and FG-UNCNTRLDCELLS	SC VI.2, SC VI.8	40 CFR 52.21(d)
2. Total Fuel	1,096.3 gallons/hr ^{2,C}	Average hour as determined at the end of each calendar day.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.8	R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d),&(j)

^CGaseous fuels must be converted to Gasoline Gallon Equivalents (GGE) for demonstrations of compliance with this material limits. One GGE of natural gas is equal to 125 ft³.
^DThese material limits are subsets of SC II.1 and are not in addition to SC II.1. They must be included in the total fuel calculation to demonstrate compliance.
^EThis material limit is a combined limit for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS.

3. The permittee shall only burn the following fuels on test stands in FG-CNTRLDCELLS:² **(R 336.1205(1)(a)&(3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d))**
- a. Durability and transmission testing: unleaded gasoline (with ethanol contents less than 20 percent), various ethanol and unleaded gasoline blends (with ethanol contents from 20 to 85 percent by volume), ethanol fuel (fuel with an ethanol content of at least 85 percent by volume), leaded gasoline ultra-low sulfur diesel, and compressed natural gas.
 - b. Simulation testing: unleaded gasoline (with ethanol contents less than 20 percent), various ethanol and gasoline blends (with ethanol contents from 20 to 85 percent by volume), ethanol fuel (fuel with an ethanol content of at least 85 percent by volume), leaded gasoline, and ultra-low sulfur diesel.
 - c. Ultra-low sulfur diesel shall have a maximum sulfur content of 15 ppm (0.0015 percent) by weight.

III. **PROCESS/OPERATIONAL RESTRICTION**

1. The permittee shall not operate the durability and transmission test cells unless the associated thermal oxidizers are installed, maintained and operated in a satisfactory manner. Proper operation of the thermal oxidizers includes maintaining a minimum temperature of the greater of the following for each oxidizer:² **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c), (d) & (j))**
 - a. 1400°F averaged over any consecutive three-hour period and a minimum retention time of 0.5 second.
 - b. The thermal oxidizer temperature averaged over any consecutive three-hour period during AQD approved testing that demonstrated compliance with the NOx, CO, and VOC emission rates.
2. The permittee shall submit, implement, and maintain an updated malfunction abatement plan (MAP) as described in Rule 911(2) for FG-CNTRLDCELLS. The MAP shall, at a minimum, specify the following new requirements:
 - a. How the test cells will be switched between the simulation testing and durability or transmission testing.
 - b. How the permittee will assure that the thermal oxidizer is properly reconnected to a test cell that was previously doing simulation testing.

The MAP will continue to include the optimum operating parameters for the thermal oxidizers, maintenance and inspection schedules, monitoring equipment, and corrective action plans for equipment failure. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP 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.² **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

3. The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits.² **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))**
 - a. The approved Fuel Usage Monitoring Plan includes measures that will be taken to insure the quality of the data, such as meter calibration procedures.
 - b. The approved written plan shall be an enforceable requirement of this permit.
 - c. The plan may be revised and resubmitted for approval by AQD. The permittee shall revise the plan within 45 days after the notification specified in SC VII.5 is submitted to the AQD.
 - d. The existing approved plan shall apply until any revision is approved.

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))**

1. The permittee shall verify NOx, CO, VOC, PM10, and PM2.5 emission rates from a thermal oxidizer that is controlling a representative number of durability, and transmission test cells in FG-CNTRLDCELLS, by testing at owner's expense, in accordance with Department requirements, unless the permittee has submitted an acceptable demonstration that the most recent acceptable test remains valid and representative per pollutant. A representative number of test cells means several test cells operating in various testing modes. The permittee

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

must complete the required testing once every five years of operation, thereafter. Testing shall be based on an average of three 1-hour or longer test runs performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test in a format approved by the AQD.² (R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))

- The permittee shall verify NO_x, CO, VOC, PM10, and PM2.5 emission rates from simulation test cells in FG-CNTRLDCELLS, by testing at owner's expense, in accordance with Department requirements. Testing may be conducted on representative test cells if approved by the AQD District Supervisor. The permittee must complete the required testing once every five years of operation, thereafter, unless the permittee has submitted an acceptable demonstration that the most recent acceptable test remains valid and representative per pollutant. Testing shall be based on an average of three 1-hour or longer test runs performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. Emission rate results may be compared to the following:

Pollutant	lb/gallon	Typically higher emitting fuel
NO _x	0.0052	Ultra-low sulfur diesel
CO	0.13	Gasoline
VOCs	0.0082	Gasoline
PM10/PM2.5	0.0062	Gasoline, if ultra-low sulfur diesel has diesel particulate filter

The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1205(1)(a) & (3), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days before testing of the time and place performance tests will be conducted. (R 336.1213(3), R 336.2001(4))

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 complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(1)(a) & (3), 40 CFR 52.21(j))
2. The permittee shall keep, in a satisfactory manner, records of the maximum lead content in each fuel. The permittee shall keep all records on file and make them available to the Department upon request.² (40 CFR 52.21(d))
3. The permittee shall keep, in a satisfactory manner, records of the maximum sulfur content in the ultra-low sulfur diesel fuel. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))
4. The permittee shall install, calibrate, maintain and operate on a continuous basis and in a satisfactory manner, during engine testing operations, a device to monitor the temperature in the thermal oxidizers near the combustion chamber outlet. On a continuous basis, during engine testing operations, the permittee shall keep records of the temperature averaged over any consecutive three-hour period.² (R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c), (d) & (j))
5. The permittee shall calculate and keep records of the annual emissions of NO_x from FG-CNTRLDCELLS, described in Appendix A, in tons per calendar year. Calculations and record keeping shall begin the month in which regular operations of FG-CNTRLDCELLS resume and shall continue for five (5) calendar years. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.2818, R 336.2902)

~~6. Scenario A: This monitoring/recordkeeping condition is effective until the notification specified in SC VII.5 is submitted to the AQD. The permittee shall keep the following information on a monthly basis for FG-CNTRLDCELLS:~~

- ~~a. A record of the days of operation for each test cell operating during the calendar month.~~
- ~~b. Gallons of each fuel used per month in each test cell for each type of testing (routed to a thermal oxidizer or simulation).~~
- ~~c. Daily fuel use calculations based upon a calendar month fuel use for each test cell divided by the number of days each respective test cell operated during the calendar month. This is a combination of all test types for each test cell. This calculation shall be performed for each of the 46 test cells and then added together to determine the total daily fuel usage rate.~~
- ~~d. Ultra-low sulfur diesel fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells when routed to the thermal oxidizers in FG-CNTRLDCELLS.~~
- ~~e. Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for simulation testing for EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20 in FG-CNTRLDCELLS combined.~~
- ~~f. Leaded gasoline fuel use calculations determining the annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS combined.~~
- ~~g. Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells in FG-CNTRLDCELLS and all testing types combined.~~
- ~~h. NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the monthly emission rate in tons per calendar month.~~
- ~~i. CO emission calculations determining the monthly emission rate in tons per calendar month for durability and transmission testing combined and for simulation testing.~~

Formatted: Indent: Left: 0", Don't hyphenate

2018a2023 **Section 2 – Scientific Labs**
20232028

- ~~j. NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.~~
- ~~k. CO emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for durability and transmission testing combined and for simulation testing.~~

Formatted: Indent: Left: 0", Space After: 6 pt, Don't hyphenate

~~The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))~~

Formatted: Normal, Indent: Hanging: 0.25", Space After: 6 pt, Don't hyphenate, Tab stops: Not at 0.5"

~~67. Scenario B: This monitoring/recordkeeping condition is effective after the notification specified in SC VII.5 is submitted to the AQD.~~ The permittee shall keep the following information on a monthly basis for FG-CNTRLDCCELLS:

- a. Gallons of each fuel used per month in each test cell for each type of testing (routed to a thermal oxidizer or simulation).
- b. Ultra-low sulfur diesel fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells when routed to the thermal oxidizers in FG-CNTRLDCCELLS.
- c. Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for simulation testing for EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20 in FG-CNTRLDCCELLS combined.
- d. Leaded gasoline fuel use calculations determining the annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for FG-CNTRLDCCELLS and FG-UNCNTRLDCCELLS combined.
- e. Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells in FG-CNTRLDCCELLS and all testing types combined.
- f. NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the monthly emission rate in tons per calendar month.
- g. CO emission calculations determining the monthly emission rate in tons per calendar month for durability and transmission testing combined and for simulation testing.
- h. NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
- i. CO emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for durability and transmission testing combined and for simulation testing.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))

~~78. Scenario B: This monitoring/recordkeeping condition is effective after the notification specified in SC VII.5 is submitted to the AQD.~~ The permittee shall keep the following information on a daily basis for FG-CNTRLDCCELLS:

- a. A record of hours of operation for each test cell operating during the calendar day.
- b. Gallons of each fuel used per day in each test cell for all types of testing combined.

- c. Hourly fuel use calculations based upon a calendar day fuel use for each test cell divided by the number of hours each respective test cell operated during the calendar day. This is a combination of all test types for each test cell. This calculation shall be performed for each of the 80 test stands and then added together to determine the total hourly fuel usage rate.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))**

89. The permittee shall maintain a record of the size of the dynamometer used for each test stand in each test cell in an acceptable format. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. **(R 336.1213(3)(c), R 336.2001(5))**

~~5. The permittee shall notify the AQD District Supervisor, in writing, of the intent to change from Scenario A to Scenario B, which affects the applicability of emission limits, material limits, and monitoring and recordkeeping conditions. All affected requirements are designated as Scenario A or Scenario B. If there is no designation of Scenario in the Special Condition, then the condition is applicable regardless of the operating scenario.² **(40 CFR 52.21(j))**~~

56. The permittee shall submit records of the annual actual emissions of NO_x from FG-CNTRLDCELLS, described in Appendix 4, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:
 - a. The calendar year actual emissions of NO_x exceed the baseline actual emissions (BAE) by a significant amount (as defined by R 336.2801 and R 336.2901), and
 - b. The calendar year actual emissions differ from the pre-construction projection.

The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to SC VI.5, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).² **(R 336.2818, R 336.2902)**

See Appendices 4-2 and 8-2

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 Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-WC-TC-C12A&B ^E	16 ²	59-56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-WC-TC-C14A&B ^E	16 ²	59-56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-WC-TC-C16A&B ^F	16 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-WC-TO-91-4.01	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-WC-TO-91-4.02	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-WC-TO-91-4.03	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-WD-TO-92-4.01	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-WD-TO-92-4.02	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-WD-TO-92-4.03	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV-WD-TO-92-4.04	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV-WD-TO-92-4.05	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV-WD-TO-92-4.06	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
13. SV-WE-TO-93-4.01	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
14. SV-WE-TO-93-4.02	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
15. SV-WE-TC-E02	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
16. SV-WE-TC-E04	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
17. SV-WE-TC-E06	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
18. SV-WE-TC-E08	12²	56²	R 336.1225, 40 CFR 52.21(c) & (d)
19,18. SV-WE-TC-E17	12²	56²	R 336.1225, 40 CFR 52.21(c) & (d)
20,19. SV-WE-TC-E19	12²	56²	R 336.1225, 40 CFR 52.21(c) & (d)
21. SV-WE-TC-E20	12²	56²	R 336.1225, 40 CFR 52.21(c) & (d)

^F Stacks are abandoned and not connected to engine test stands.

Formatted: Font: 10 pt
 Formatted: Normal, No bullets or numbering

Formatted: Font: 10 pt
 Formatted: Normal, No bullets or numbering

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) Expiration Date: October 30,

ROP No: MI-ROP-N1436-

PTI No: MI-PTI-N1436-[2018a2023](#)

IX. OTHER REQUIREMENT(S)

1. Special conditions that are effective until the notification specified in SC VII.5 is submitted to the AQD will become obsolete upon submittal of the notification.² **(40 CFR 52.21(j))**
2. The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits. The approved Fuel Usage Monitoring Plan includes measures that will be taken to ensure the quality of the data, such as meter calibration procedures. The approved written plan shall be an enforceable requirement of this permit. The plan may be revised and resubmitted for approval by AQD. The existing approved plan shall apply until any revision is approved. **(R 336.1213(3))**

Footnotes:

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

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

**FG-CAMTO
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Eleven (11) natural gas fired thermal oxidizers serving forty-six (46) dynamometer test cells used to describe the monitoring procedures, methods and and/or specifications for operating and maintaining carbon monoxide (CO) and volatile organic compounds (VOC) control devices for FG-CNTRLDCELLS at the Chrysler Technology Center (CTC). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands.

Emission Units: EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18, EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E10, EU-CELL-E12, EU-CELL-E14, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20

POLLUTION CONTROL EQUIPMENT

Eleven (11) thermal oxidizers for durability and transmission test cells.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))**

1. The permittee shall continuously monitor combustion chamber temperature and record every 15 minutes for a 3-hour average as an indicator of proper operation of the thermal oxidizer. The indicator range is maintaining a minimum temperature of the greater of the following for each oxidizer: **(40 CFR 64.6(c)(1)(i) and (ii))**
 - a. 1400°F averaged over any consecutive three-hour period and a minimum retention time of 0.5 second.
 - b. The thermal oxidizer temperature averaged over any consecutive three-hour period established during AQD approved testing that demonstrated compliance with the CO and VOC emission rates in FG-CNTRLDCELLS.

2. The permittee shall inspect and maintain the thermal oxidizers to ensure the proper operation of the thermal oxidizer. The inspections and maintenance shall be conducted annually as specified in the CAM plan. **(40 CFR 64.6(c)(1)(i))**
3. For each control device in operation, the permittee shall conduct bypass monitoring for each bypass line such that the valve or closure method cannot be opened without creating an alarm condition for which a record shall be made. Records of the bypass line that was opened and the length of time the bypass line was opened shall be kept on file. **(40 CFR 64.3(a)(2))**
4. The temperature monitor shall continuously monitor combustion chamber temperature. The averaging period is 3-hour. The monitor shall be calibrated annually or according to manufacturer recommendations, which is more frequent. **(40 CFR 64.6(c)(1)(iii))**
5. An excursion is a 3-hr average temperature below the indicator range specified in SC VI.1. **(40 CFR 64.6(c)(2))**
6. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). The engine dynamometer test stands connected to a specific oxidizer receive an electronic "ready" status signal from the oxidizer control system upon that oxidizer achieving an outlet temperature greater than the temperature at which compliance was last demonstrated, minus 50°F. Upon failure of the thermal oxidizer, the "ready" status signal is removed. The engine dynamometer test stands cannot operate without a "ready" status signal from the oxidizer. **(40 CFR 64.7(d))**
7. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
8. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**
9. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

See Appendix 3-2

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))**

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9 (a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9 (a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a Quality Improvement Plan (QIP) during the reporting period (if appropriate). If a QIP has been completed, the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. For the purposes of Compliance Assurance Monitoring (CAM), excursions will be defined as follows: **(40 CFR 64.6(c)(2))**
 - a. A temperature excursion is defined as a confirmed three-hour period during which the average fails to meet the specified temperature requirements in SC VI.1.
 - b. A CAM excursion is defined as a failure to properly monitor as required in SC VI.1 and SC VI.2. **(40 CFR 64.3(b)(4))**
2. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 64)**
3. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
4. The permittee shall submit a QIP, if six (6) excursions occur in any three-month period. **(40 CFR 64.8(a))**

**FG-UNCNTRLDCELLS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Thirty-four (34) engine dynamometer test cells (performance test cells) located in Wings B, C and E. The 34 engine dynamometer test cells house a total of 34 engine dynamometer test stands. Performance test cells do not have emission control equipment.

Emission Units: EU-CELL-B01, EU-CELL-B02, EU-CELL-B03, EU-CELL-B04, EU-CELL-B05, EU-CELL-B06, EU-CELL-B07, EU-CELL-B08, EU-CELL-B09, EU-CELL-B10, EU-CELL-B11, EU-CELL-B12, EU-CELL-B13, EU-CELL-B14, EU-CELL-B15, EU-CELL-B16, EU-CELL-B17, EU-CELL-B18, EU-CELL-C01, EU-CELL-C02, EU-CELL-C03, EU-CELL-C04, EU-CELL-C05, EU-CELL-C06, EU-CELL-C07, EU-CELL-C08, EU-CELL-E01, EU-CELL-E03, EU-CELL-E05, EU-CELL-E07, EU-CELL-E09, EU-CELL-E11, EU-CELL-E13, EU-CELL-E15

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.20 lb/gal ²	Hourly ^A	FG-UNCNTRLDCELLS	SC V.2	40 CFR 52.21 (j)
2. NOx	32.1 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.2 lb NOx/ gal of fuel	FG-UNCNTRLDCELLS	SC VI.7	40 CFR 52.21 (j)
3. CO	3.12 lb/gal ²	Hourly ^A	FG-UNCNTRLDCELLS	SC V.2	40 CFR 52.21 (j)
4. CO	501 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 3.12 lb CO/gal of fuel	FG-UNCNTRLDCELLS	SC VI.8	40 CFR 52.21 (j)
5. VOC	0.16 lb/gal ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.16 lb VOC/ gal of fuel	FG-UNCNTRLDCELLS	SC V.2	R336.1225, R336.1702(a)
6. VOC	25.7 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.16 lb VOC/ gal of fuel	FG-UNCNTRLDCELLS	SC VI.9	R336.1225, R336.1702(a)

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
7. Lead	0.37 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.0075 lb Lead/gal of leaded fuel and 0.00011 for unleaded fuel	FG-UNCNTRLDCELLS	SC VI.10	40 CFR 52.21(j)

^A If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements.

Default emission factors shall be used unless otherwise approved by the AQD District Supervisor:

NO_x = 0.20 lb/gallon

CO = 3.12 lb/gallon

VOC = 0.16 lb/gallon

Lead, leaded fuel = 0.0075 lb/gallon

Lead, unleaded fuel = 0.00011 lb/gallon

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total Fuel	320,952 gallons/yr ²	12-month rolling time period as determined at the end of each calendar month.	FG-UNCNTRLDCELLS	SC VI.1, SC VI.4	R 336.1225, R 336.1702(a), 40 CFR 52.21(c) (d),&(j)
1a. Leaded Gasoline	95,000 gallons/yr ^{2,C,D}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS and FG-UNCNTRLDCELLS	SC VI.1, SC VI.5, SCVI.6	40 CFR 52.21(d)
2. Total Fuel	2,362 gallons/day ²	Calendar day	FG-UNCNTRLDCELLS	SC VI.1, SC VI.2, SC VI.3, SC VI.4	R 336.1225, R 336.1702(a), 40 CFR 52.21(c) (d),&(j)

^CThis material limit is a subset of SC II.1 and is not in addition to SC II.1. It must be included in the total fuel calculation to demonstrate compliance.

^DThis material limit is a combined limit for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS.

III. PROCESS/OPERATIONAL RESTRICTION

- The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits. The approved Fuel Usage Monitoring Plan includes measures that will be taken to ensure the quality of the data, such as meter calibration procedures. The approved written plan shall be an enforceable requirement of this permit. The plan may be revised and resubmitted for approval by AQD. The existing approved plan shall apply until any revision is approved.² (**R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j)**)

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))**

1. All testing, sampling, analytical and calibration procedures used for this test program shall be performed in accordance with 40 CFR Part 60, Appendix A, Methods 2, 7E, 10 and 25A, or other acceptable reference methods approved by the AQD. All test methods must be approved by AQD prior to testing. Not less than 60 days prior to the anticipated test date, the permittee shall submit a complete test plan to the AQD.² **(R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))**
2. Verification of NO_x, CO, and VOC emission rates from a representative number of performance test cells in FG-UNCNTRLDCELLS, by testing at owner's expense, in accordance with Department requirements, is required within 365 days of issuance of this permit if an acceptable emissions test has not been conducted within five years prior to the issuance of this ROP, unless the permittee has submitted and acceptable demonstration that the most recent acceptable test remains valid and representative. A representative number of test cells means several test cells operating in various testing modes. No less than 60 days prior to testing, a complete stack-testing plan must be submitted to the Air Quality Division. The final plan must be approved by the Division prior to testing. Verification of emission rates includes the submittal of a complete report of the test results within 60 days following the last day of testing.² **(R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))**
3. Additional testing shall be conducted, at a minimum, every five years from the date of the last test.² **(R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))**
4. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3), R 336.2001(4))**

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 monitor and record the fuel usage from each test stand on a monthly basis.² **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d) & (j))**
2. The permittee shall monitor and record the number of days each test stand operated during each calendar month.² **(R 336.1702(a), 40 CFR 52.21(c), (d) & (j))**
3. Within 30 days of the end of the calendar month, the permittee shall calculate daily fuel usage rate based upon a calendar month fuel use for each test stand divided by the number of days each respective test stand operated during the calendar month. This calculation shall be performed for each of the 34 test stands and then added together to determine the total daily fuel usage rate.² **(R 336.1702(a), 40 CFR 52.21(c), (d) & (j))**
4. The permittee shall keep a record of total monthly and 12-month rolling time period fuel use for all test stands included in FG-UNCNTRLDCELLS.² **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))**
5. The permittee shall keep a record of the total combined monthly leaded fuel usage for all test cells included in FG-CNTRLDCELLS and in FG-UNCNTRLDCELLS combined for the purpose of compliance demonstration.² **(40 CFR 52.21(d))**
6. The permittee shall keep records of the maximum lead content for each type of fuel used. **(40 CFR 52.21(d))**
7. The permittee shall keep monthly and previous 12-month NO_x emission calculation records for the purpose of compliance demonstration.² **(40 CFR 52.21(j))**
8. The permittee shall keep monthly and previous 12-month CO emission calculation records for the purpose of compliance demonstration.² **(40 CFR 52.21(j))**

9. The permittee shall keep monthly and previous 12-month VOC emission calculation records for the purpose of compliance demonstration.² **(R 336.1225, R 336.1702(a))**
10. The permittee shall keep monthly and previous 12-month lead emission calculation records for the purpose of compliance demonstration.² **(40 CFR 52.21(d))**
11. The permittee shall maintain a record of the size of the dynamometer used for each test stand in each test cell in an acceptable format. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD.² **(R 336.2001(5))**

See Appendix 8-2

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
1. SV-WINGB-PERF	10 ²	56 ²	R 336.1225 40 CFR 52.21(c) & (d)
2. SV-WINGC-PERF	16 ²	56 ²	R 336.1225 40 CFR 52.21(c) & (d)
3. SV-WINGE-PERF	10 ²	56 ²	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits. The approved Fuel Usage Monitoring Plan includes measures that will be taken to ensure the quality of the data, such as meter calibration procedures. The approved written plan shall be an enforceable requirement of this permit. The plan may be revised and resubmitted for approval by AQD. The existing approved plan shall apply until any revision is approved. **(R 336.1213(3))**

Footnotes:

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

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

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

**FG-GASTANKS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any existing or future emission unit that emits air contaminants that are exempt from the requirements of R 336.1201 pursuant to R 336.1284(2)(g)(i). This flexible group currently includes six (6) underground gasoline storage tanks for Wet Fuels Building, eighteen (18) underground gasoline storage tanks at the South Tank Farm and three (3) underground gasoline storage tanks at the North Tank Farm.

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

Vapor balance system

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not load or allow the loading of gasoline from a delivery vessel into any new stationary vessel of more than 2,000-gallon capacity unless such stationary vessel is equipped with a permanent submerged fill pipe. **(R 336.1703, R 336.1607(1))**
2. The permittee shall not load or allow the loading of gasoline from a delivery vessel into a new stationary vessel of more than a 2,000-gallon capacity located at a new gasoline dispensing facility unless such stationary vessel is controlled by a vapor balance system or an equivalent control system approved by EGLE. The vapor balance system shall capture displaced gasoline vapor and air via a vapor tight collection line and shall be designed to return not less than 90 percent by weight of the displaced gasoline vapor from the stationary vessel to the delivery vessel. **(R 336.1703, R 336.1607(3))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The stationary vessel shall be equipped, maintained, or controlled with both of the following: **(R 336.1703, R 336.1607(4))**
 - a. An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any gasoline can be loaded.
 - b. A device to ensure that the vapor-tight collection line shall close upon disconnection so as to prevent release of gasoline vapor.
2. Any delivery vessel subject to the above requirement shall be vapor-tight and shall be filled only at a loading facility that is equipped with a system as required in R 336.1705 and R 336.1706. **(R 336.1703)**

V. TESTING/SAMPLING

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

NA

See Appendix 5-2

VI. MONITORING/RECORDKEEPING

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

1. For gasoline storage tanks with capacities greater than or equal to 10,566 gallons (40 m³) but less than 19,810 gallons (75 m³), the permittee shall keep on file, for the life of each vessel, a record indicating its dimensions and storage capacity. Except as specified above, gasoline storage tanks with capacities less than or equal to 19,810 gallons are exempt from the requirements of 40 CFR Part 60, Subpart A (General Provisions) and provisions of 40 CFR Part 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels). **(40 CFR 60.110(b)(a) & (b), 40 CFR 60.116(b)(a) & (b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall utilize a written procedure and checklist to ensure that the vapor tight collection line is connected before any gasoline is loaded into the storage tanks. **(R 336.1213(3))**
2. The permittee shall comply with all applicable provisions of R 336.1703. **(R 336.1703)**

Footnotes:

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

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

**FG-WETFUELSTEST
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Testing equipment in the wet fuels area. Process and process equipment are exempt pursuant to R 336.1283(2)(a)(ii)

Emission Units: EU-LOFLOVPRGNRTR, EU-HIFLOVPRGNRTR, EU-WETFUELGASTST, EU-WETFUELSMINSR

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The testing equipment used in the Wet Fuels Area shall not be used for any of the following: **(R 336.1283(2))**
 - a. The production of a product for sale unless such sale is only incidental to the use of the pilot process or process equipment.
 - b. The repetitive production of a product using the same process or process equipment design and operating parameters.
 - c. The production of a product for market testing or market development.
 - d. The treatment or disposal of waste which is designated, by listing or specified characteristic, as hazardous under federal regulations or state rules.
2. Notwithstanding the exemption listed in R 336.1283(2)(a), the requirements of R 336.1201(1) to obtain a permit to install applies to any process or process equipment installation, construction, reconstruction, relocation, alteration, or modification that satisfies any of the following conditions: **(R 336.1278)**
 - a. It is a major stationary source or major modification as defined in the prevention of significant deterioration regulations in 40 CFR 52.21. **(R 336.1278(a))**
 - b. It is a major offset source, or a major offset modification as defined in R 336.1113(c) and (b), respectively, for which volatile organic compounds, particulate matter, PM-10, carbon monoxide, nitrogen oxides, sulfur dioxide, or lead is a nonattainment air contaminant. **(R 336.1278(b))**
 - c. It has actual emissions of volatile organic compounds, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, or lead above the significance levels as defined in R 336.1119. **(R 336.1278(c))**
 - d. It is a major source as defined in the national emission standards for hazardous air pollutants for source categories, 40 CFR 63.2, and it is subject to the provisions of 40 CFR 63.40 through 63.44. **(R 336.1278(d))**

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))

1. For each equipment covered under this flexible group, the permittee shall record fuel usage on a monthly basis. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**FG-RULE331
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any existing or future emission units that emit air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1285(2)(l)(vi)(A) and R 336.1285(2)(l)(vi)(C). Flexible group includes any equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening or polishing metals, plastics, wood and wood products, and any exhaust system or collector exclusively serving the above equipment. Equipment is exhausted externally and used on a nonproduction basis.

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate	0.1 lb/1000 lb of exhaust gases	24 Hour	FG-RULE331	SC VI. 2	R 336.1331(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))

1. The permittee shall keep an updated record of all emission units subject to R 336.1331(a). (R 336.1213(3))
2. At least once per year, the permittee shall conduct and log all routine and scheduled preventative maintenance for the dust control equipment. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**FG-RULE290
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

Emission Units installed on or after December 20, 2016: EU-RULE290 and any future emission unit that meets the requirements of this flexible group.

Emission Units installed prior to December 20, 2016: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
2. Any emission unit for which CO2 equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**
 - a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(A))**
 - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(B))**
 - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(2)(a)(ii)(C))**
 - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(D))**
 - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all the following provisions are met: **(R 336.1290(2)(a)(iii))**

ROP No: MI-ROP-N1436-

[2018a2023](#) **Section 2 – Scientific Labs** Expiration Date: October 30,
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

- a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(2)(a)(iii)(A))**
- b. The visible emissions from the emission unit are not more than five percent opacity in accordance with the methods contained in Rule 303. **(R 336.1290(2)(a)(iii)(B))**
- c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(2)(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**
2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
 - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: **(R 336.1290(2)(b)(i), R 336.1910)**
 - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device.
 - ii. Wet scrubbers equipped with a liquid flow rate monitor.
 - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
 - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate. **(R 336.1290(2)(b)(ii), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

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 maintain records of the following information for each emission unit for each calendar month using the methods outlined in EGLE, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor. **(R 336.1213(3))**
 - a. Records identifying each air contaminant that is emitted. **(R 336.1213(3))**

- b. Records identifying if each air contaminant is controlled or uncontrolled. **(R 336.1213(3))**
 - c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. **(R 336.1213(3))**
 - d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii). **(R 336.1213(3))**
 - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor. **(R 336.1213(3), R 336.1290(2)(d))**
 - f. Records are maintained on file for the most recent two-year period and are made available to the department upon request. **(R 336.1213(3), R 336.1290(2)(e))**
2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. **(R 336.1213(3))**
- a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. **(R 336.1290(2)(c), R 336.1213(3))**
 - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

**FG-RULE287(2)(c)
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 287(2)(c). Emission units installed/modified before December 20, 2016, may show compliance with Rule 287 in effect at the time of installation/modification.

Emission Units installed on or after December 20, 2016: EU-RULE287(2)(c) and any future emission unit that meets the requirements of this flexible group.

Emission Units installed prior to December 20, 2016: EU-MAINTPAINTING, EU-PRODDSGNPAINT, EU-WOODSHOPPAINT

POLLUTION CONTROL EQUIPMENT

Fabric Filter

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/Operating Scenario	Equipment	Underlying Applicable Requirement
1. Coatings	200 Gallons/month (minus water as applied)	Calendar month	Each emission unit	R 336.1287(2)(c)(i)

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- Any exhaust system installed on or after December 20, 2016, that serves only coating spray equipment shall be equipped with a dry filter control or water wash control which is installed, maintained, and operated in accordance with the manufacturer's specifications, or the permittee develops a plan which provides to the extent practicable for the maintenance and operation of the equipment in a manner consistent with good air pollution control practices for minimizing emissions. All emission units installed before December 20, 2016, with an exhaust system that serves only coating spray equipment must have a properly installed and operated particulate control system. (R 336.1213(2), R 336.1287(2)(c)(ii), R 336.1910)

V. TESTING/SAMPLING

NA

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 maintain records of the following information for each emission unit for each calendar month using the methods outlined in EGLE, AQD Rule 287(2)(c), Permit to Install Exemption Record form (EQP 3562) or in a format acceptable to the AQD District Supervisor. (R 336.1213(3))
 - a. Volume of coating used, as applied, minus water, in gallons. (R 336.1287(2)(c)(iii))
 - b. For emission units installed on or after December 20, 2016, documentation of any filter replacements or maintenance of water wash control for exhaust systems serving coating spray equipment or other documentation included in a plan developed by the owner or operator of the equipment. For emission units installed before December 20, 2016, documentation that the exhaust system that serves only coating spray equipment is supplied with a properly installed and operating particulate control system. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

**FG-COLD CLEANERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

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

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

- 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

NA

VI. MONITORING/RECORDKEEPING

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

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

E. NON-APPLICABLE REQUIREMENTS

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

APPENDICES

Appendix 1-2. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO ₂ 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 Environment, Great Lakes, and Energy	°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 ₂ 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	Malfuction Abatement Plan	MW	Megawatts
EGLE	Michigan Department of Environment, Great Lakes, and Energy	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	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	%	Percent
RACT	Reasonable Available Control Technology	psia	Pounds per square inch absolute
ROP	Renewable Operating Permit	psig	Pounds per square inch gauge
SC	Special Condition	scf	Standard cubic feet
SCR	Selective Catalytic Reduction	sec	Seconds
SNCR	Selective Non-Catalytic Reduction	SO ₂	Sulfur Dioxide
SRN	State Registration Number	TAC	Toxic Air Contaminant
TEQ	Toxicity Equivalence Quotient	Temp	Temperature
USEPA/EPA	United States Environmental Protection Agency	THC	Total Hydrocarbons
VE	Visible Emissions	tpy	Tons per year
		µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

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

Appendix 2-2. Schedule of Compliance

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

Appendix 3-2. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG-CAMTO:

Elements of a CAM Plan

General – Keep records of maintenance inspections which include the dates, results of the inspections and the dates and reasons for repairs if made. The following items shall be inspected for each respective control device used to demonstrate compliance with applicable CO and VOC emissions limits.

TOs

- Annual (i.e., once each calendar year) validation of thermocouple accuracy or recalibration of each thermocouple. The thermocouple may be replaced in lieu of validation.
- Annual performance of a visual internal inspection*

RTOs

- Annual validation of thermocouple accuracy or recalibration of each thermocouple. The thermocouple may be replaced in lieu of validation.
- Annual performance of an inspection of heat exchange/heat transfer media*
- Annual performance of an inspection of the valve seals condition and verify valve timing/synchronization*

*The requirement to address this issue is satisfied if a performance test (i.e., stack test) has been performed on the control device within the current or prior calendar year.

Appendix 4-2. Recordkeeping

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in FG-CNTRLDCELLS. Alternative formats must be approved by the AQD District Supervisor.

Recordkeeping Provisions for Source Using Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2818 and R 336.2902 for five years after the emission unit(s) identified in Table C resume normal operations, and shall be made available to the Department upon request.

- A. Project Description: The project is to allow simulation testing in 9 test cells of the 46 test cells permitted under FG-CNTRLDCELLS. The simulation testing will require the construction of a bypass stack for each test cell and the ability to run a type of testing that is not controlled by a thermal oxidizer. The test cells will be able to switch between simulation testing and durability or transmission testing, which will be controlled by a thermal oxidizer. Multiple fuels are allowed in all testing types.
- B. Applicability Test Description: Minor modifications are not subject to PSD. Actual to projected actual applicability test as described in the table below will be used to demonstrate that PSD does not apply to these modifications.

C. Emission Limitations for FG-CNTRLDCELLS:

Table C

Emissions for FG-CNTRLDCELLS	NO _x	Reference
	tpy	
A. Baseline Actual Emissions ¹	119.23	MAERS data from 2012/2013, used for all pollutants
B. Capable of Accommodating ²	149.71	May 2013, ratioed to 30-days
C. Projected Actual Emissions ³	184.21	
D. Excluded Emissions (D=B-A)	30.48	
E. Total Project Increase (E=C-A-D)	34.51	

¹ Average actual annual emissions emitted from FG-CNTRLDCELLS during a 24-month consecutive time period.

² Emissions that FG-CNTRLDCELLS is capable of accommodating in the future. Must have been achieved during the baseline period.

³ Projected Actual Emissions based on new and existing fuel restrictions.

Appendix 5-2. Testing Procedures

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

Appendix 6-2. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N1436-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N1436-2013 is being reissued as Source-Wide PTI No. MI-PTI-N1436-[2018a2023](#).

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

ROP No: MI-ROP-N1436-
 Expiration Date: October 30,

[2018a2023](#) **Section 2 – Scientific Labs**
[20232028](#)

PTI No: MI-PTI-N1436-[2018a2023](#)

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP N1436-2018.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
155-18	202200058 / December 20, 2022	<p>Incorporate PTI No. 155-18 into the ROP, which was to add simulation testing capabilities to 9 test cells (11 test stands) and to change pound/gallon (lb/gallon) emission limits to pound/hour (pph) emission limits. A clarification of allowed fuels was also included in the processing.</p> <p>PTI No. 155-18 was not required to go through the public participation process, but it is incorporated into the ROP as a Significant Modification since the PTI included a fuel restriction to the material limits of FG-CNTRLDCELLS to keep emission below major modification levels.</p> <p>PTI No. 155-18 added optional scenarios to the Emission Limits and Material Limits and Monitoring/Recordkeeping requirements for FG-CNTRLDCELLS. One scenario contains the existing lb/gallon limits, and the other scenario contains new pph limits and the associated gallons/hour restriction.</p> <p>FG-UNCNTRLDCELLS is unaffected by the modification, it was only pulled in for some administrative changes.</p>	EU-CELL-B01, EU-CELL-B02, EU-CELL-B03, EU-CELL-B04, EU-CELL-B05, EU-CELL-B06, EU-CELL-B07, EU-CELL-B08, EU-CELL-B09, EU-CELL-B10, EU-CELL-B11, EU-CELL-B12, EU-CELL-B13, EU-CELL-B14, EU-CELL-B15, EU-CELL-B16, EU-CELL-B17, EU-CELL-B18, EU-CELL-C01, EU-CELL-C02, EU-CELL-C03, EU-CELL-C04, EU-CELL-C05, EU-CELL-C06, EU-CELL-C07, EU-CELL-C08, EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18, EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU-CELL-E01, EU-CELL-E02, EU-CELL-E03, EU-CELL-E04, EU-CELL-E05, EU-CELL-E06, EU-CELL-E07, EU-CELL-E08, EU-CELL-E09, EU-CELL-E10, EU-CELL-E11, EU-CELL-E12, EU-CELL-E13, EU-CELL-E14, EU-CELL-E15, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20, FG-CNTRLDCELLS, FG-UNCNTRLDCELLS

Appendix 7-2. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-ENGPAINSHOP:

The Material Safety Data Sheet (MSDS) and Technical Data Sheet should contain the information pertaining to the coating VOC content, pounds VOC/gallon of coating, less water.

If it is not given, then calculate the coating VOC content, pounds VOC/gallon of coating (less water, as received), **G**, from the pounds VOC/gallon of coating (with water, as received), **F**.

If volume fraction of water, **V**, is given, then

$$G = F/(1-V)$$

Where **F** = Coating VOC content, pounds VOC/gallon of coating (with water, as received)
V = Volume fraction of water

If weight fraction of water, **W**, is given, then, convert **W** to **V** by

$$V = WP_c/P_w$$

Where **P_w** = Density of water, 8.34 pounds per gallon
P_c = Density of coating, pounds per gallon

If no solvent reduction is done, or the coating is reduced with water, then the coating VOC content, less water, as received = coating VOC content, less water, as applied.

2.7.2. To calculate coating VOC content of reduced coating, pounds VOC/gallon of coating (less water, as applied), **X**, if the coating is reduced by a solvent:

$$x = \frac{(1-V)L M + N Q}{(1-V)L + N}$$

Where **V** = Volume fraction of water
L = Gallons of coating
M = Coating VOC content, pounds VOC/gallon of coating (less water)
N = Gallons of solvent reducer
Q = Density of solvent reducer, pounds/gallon

Appendix 8-2. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

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

B. Other Reporting

[2018a2023](#) **Section 2 – Scientific Labs** [20232028](#) ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

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.

**MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY
AIR QUALITY DIVISION**

EFFECTIVE DATE: October 30, ~~2018~~
~~REVISION DATE: December 20, 2022~~2023

ISSUED TO

FCA US LLC - Chrysler Technology Center

State Registration Number (SRN): N1436

LOCATED AT

800 Chrysler Drive, Auburn Hills, Michigan 48326-2757

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-N1436-~~2018a~~2023

Expiration Date: October 30, ~~2023~~2028

Administratively Complete ROP Renewal Application
Due Between April 30, ~~2022~~-2027 and April 30, ~~2023~~2028

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-N1436-~~2018a~~2023

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 Environment, Great Lakes, and Energy

Joyce Zhu, Southeast Michigan District Supervisor

2018a2023

20232028

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

TABLE OF CONTENTS

AUTHORITY AND ENFORCEABILITY	4
SECTION 1 – Facilities.....	5
A. GENERAL CONDITIONS.....	6
Permit Enforceability	6
General Provisions.....	6
Equipment & Design	7
Emission Limits.....	7
Testing/Sampling	7
Monitoring/Recordkeeping	8
Certification & Reporting	8
Permit Shield	9
Revisions	11
Reopenings.....	11
Renewals	12
Stratospheric Ozone Protection	12
Risk Management Plan	12
Emission Trading	12
Permit to Install (PTI)	13
B. SOURCE-WIDE CONDITIONS	14
C. EMISSION UNIT CONDITIONS	15
EMISSION UNIT SUMMARY TABLE.....	15
EU-12HWG-1.07.....	17
D. FLEXIBLE GROUP CONDITIONS.....	19
FLEXIBLE GROUP SUMMARY TABLE.....	19
FG-BOILERS	20
FG-BOILERMACT	23
FG-B/UP-TURBINES	30
FG-EMERGENCY-RICE	34
E. NON-APPLICABLE REQUIREMENTS	37
APPENDICES	38
Appendix 1-1. Acronyms and Abbreviations.....	38
Appendix 2-1. Schedule of Compliance	39
Appendix 3-1. Monitoring Requirements	39
Appendix 4-1. Recordkeeping.....	39
Appendix 5-1. Testing Procedures	39
Appendix 6-1. Permits to Install.....	39
Appendix 7-1. Emission Calculations	39
Appendix 8-1. Reporting	40
SECTION 2 – Scientific Labs.....	41

2018a2023

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

20232028

PTI No: MI-PTI-N1436-2018a2023

A. GENERAL CONDITIONS.....	42
Permit Enforceability	42
General Provisions.....	42
Equipment & Design	43
Emission Limits	43
Testing/Sampling	43
Monitoring/Recordkeeping	44
Certification & Reporting	44
Permit Shield	45
Revisions	47
Reopenings.....	47
Renewals	48
Stratospheric Ozone Protection	48
Risk Management Plan	48
Emission Trading	48
Permit to Install (PTI)	49
B. SOURCE-WIDE CONDITIONS	50
C. EMISSION UNIT CONDITIONS	51
EMISSION UNIT SUMMARY TABLE	51
EU-KIRKSITEFURN	66
D. FLEXIBLE GROUP CONDITIONS.....	68
FLEXIBLE GROUP SUMMARY TABLE	68
FG-TESTCELLSA.....	71
FG-ENGPAINSHOP	73
FG-CNTRLDCELLS.....	77
FG-CAMTO.....	90
FG-UNCNTRLDCELLS.....	93
FG-GASTANKS	98
FG-WETFUELSTEST	100
FG-RULE331	102
FG-RULE290	104
FG-RULE287(2)(c).....	108
FG-COLD CLEANERS.....	110
E. NON-APPLICABLE REQUIREMENTS	113
APPENDICES	114
Appendix 1-2. Acronyms and Abbreviations.....	114
Appendix 2-2. Schedule of Compliance	115
Appendix 3-2. Monitoring Requirements	115
Appendix 4-2. Recordkeeping	115
Appendix 5-2. Testing Procedures	116
Appendix 6-2. Permits to Install.....	116
Appendix 7-2. Emission Calculations	118
Appendix 8-2. Reporting	118

2018a2023

20232028

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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 Environment, Great Lakes, and Energy (EGLE) or his or her designee.

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

In accordance with Rule 213(2)(a), all underlying applicable requirements are identified for each ROP term or condition. All terms and conditions that are included in a PTI are streamlined, subsumed and/or is 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.

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

SECTION 1 – Facilities

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-~~2018a~~2023

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

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

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

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

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-~~2018a~~2023

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))**
- The date, location, time, and method of sampling or measurements.
 - The dates the analyses of the samples were performed.
 - The company or entity that performed the analyses of the samples.
 - The analytical techniques or methods used.
 - The results of the analyses.
 - The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
- 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).
 - 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.
 - 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.

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-~~2018a~~2023

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))**
- 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.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that; “based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete.” The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance, if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
 - 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:
- 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))**
 - 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))**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

- c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA.
(R 336.1213(6)(b)(iii))

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
 - a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

- d. If the department determines that the ROP must be revised to ensure compliance with the applicable requirements. **(R 336.1217(2)(a)(iv))**

Renewals

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

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82, and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-~~2018a~~2023

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

Permit to Install (PTI)

43. The process or process equipment included in this permit shall not be reconstructed, relocated, or modified unless a PTI authorizing such action is issued by the department, except to the extent such action is exempt from the PTI requirements by any applicable rule.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

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

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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.

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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
EU-12-HWG-1.01	Natural gas-fired boiler with a heat input of 10 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12-HWG-1.02	Natural gas-fired boiler with a heat input of 40 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12-HWG-1.03	Natural gas-fired boiler with a heat input of 40 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12-HWG-1.04	Natural gas-fired boiler with a heat input of 40 million BTU/hour with fuel oil No. 2 as back up.	01/01/1989	FG-BOILERS, FG-BOILERMACT
EU-12HWG-1.05	Natural gas-fired boiler with a heat input of 40 million BTU/hour.	03/01/1990	FG-BOILERS, FG-BOILERMACT
EU-12HWG-1.06	Natural gas-fired boiler with a heat input of 40 million BTU/hour.	06/01/1996	FG-BOILERS, FG-BOILERMACT
EU-12HWG-1.07	Natural gas-fired boiler with a heat input of 40 million BTU/hour.	11/01/2000	FG-BOILERMACT
EU-16-B-4.01	Natural gas-fired boiler with a heat input of 2.511 million BTU/hour.	10/29/1991	FG-BOILERS, FG-BOILERMACT
EU-16-B-4.02	Natural gas-fired boiler with a heat input of 2.511 million BTU/hour.	10/29/1991	FG-BOILERS, FG-BOILERMACT
EU-16-B-4.03	Natural gas-fired boiler with a heat input of 2.511 million BTU/hour.	10/29/1991	FG-BOILERS, FG-BOILERMACT
EU-PT-B-5.01	Exempt natural gas-fired boiler with a heat input of 8.37 million BTU/hour	1997	FG-BOILERMACT
EU-PT-B-5.02	Exempt natural gas-fired boiler with a heat input of 8.37 million BTU/hour	1997	FG-BOILERMACT
EU-B/UP-TURBINE1	Natural gas-fired turbine generator No. 1, with a heat input rating of approximately 237.8 million BTU/hour. The turbine generator is capable of producing 19.14 MW output at peak load and is utilized to provide supplemental electrical power during peak demand periods.	01/01/1995	FG-B/UP-TURBINES

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-B/UP-TURBINE2	Natural gas-fired turbine generator No. 2, with a heat input rating of approximately 237.8 million BTU/hour. The turbine generator is capable of producing 19.14 MW output at peak load and is utilized to provide supplemental electrical power during peak demand periods.	01/01/1995	FG-B/UP-TURBINES
EU-FIREPUMP-1	Diesel Fuel fired pump at the CEP to provide backup pumping capabilities for the building fire suppression system.	10/01/1986	FG-EMERGENCY-RICE
EU-FIREPUMP-2	Diesel Fuel fired pump at the west HQ to provide backup pumping capabilities for the building fire suppression system.	011/01/1995	FG-EMERGENCY-RICE

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

EU-12HWG-1.07 EMISSION UNIT CONDITIONS

DESCRIPTION

Natural gas-fired boiler with a heat input of 40 million BTU/hour. This boiler utilizes natural gas exclusively.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Low NOx Burners

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only fire pipeline quality natural gas in the boiler. **(R 336.1213(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))**

1. The permittee shall monitor and record the fuel usage for EU-12HWG-1.07 on a monthly basis in a manner and with instrumentation acceptable to the AQD District Supervisor. **(R 336.1213(3), 40 CFR 60.48c(g)(2))**
2. The permittee shall develop a boiler preventative maintenance program and log preventative maintenance. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR Part 60, Subpart A (General Provisions), 40 CFR Part 63, Subpart DDDDD (NESHAP Standards for Industrial, Commercial and Institutional Boilers and Process Heaters), and 40 CFR Part 60, Subpart Dc (Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units). **(40 CFR Part 63, Subpart DDDDD, 40 CFR 60, Subpart Dc)**

Footnotes:

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

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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
FG-BOILERS	Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and five (5) boilers using natural gas exclusively.	EU-12-HWG-1.01 EU-12-HWG-1.02 EU-12-HWG-1.03 EU-12-HWG-1.04 EU-12-HWG-1.05 EU-12-HWG-1.06 EU-16-B-4.01 EU-16-B-4.02 EU-16-B-4.03
FG-BOILERMACT	Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and eight (8) boilers using natural gas exclusively. This flexible group is applicable to the following emission units when operating as a "Unit designed to burn gas 1 subcategory." This includes gaseous fuel boilers that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year and gaseous fuel boilers that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration.	EU-12-HWG-1.01 EU-12-HWG-1.02 EU-12-HWG-1.03 EU-12-HWG-1.04 EU-12-HWG-1.05 EU-12-HWG-1.06 EU-12-HWG-1.07 EU-16-B-4.01 EU-16-B-4.02 EU-16-B-4.03 EU-PT-B-5.01 EU-PT-B-5.02
FG-B/UP-TURBINES	Two natural gas-fired turbine generators used for peaking.	EU-B/UP-TURBINE1 EU-B/UP-TURBINE2
FG-EMERGENCY-RICE	This flexible group includes existing emergency stationary reciprocating internal combustion engines (RICE) that have a maximum site rating of 500 brake horsepower (HP) and less than 30 liters per cylinder located at a major source of hazardous air pollutants (HAPs).	EU-FIREPUMP-1 EU-FIREPUMP-2

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

FG-BOILERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and five (5) boilers using natural gas exclusively.

Emission Units: EU-12-HWG-1.01, EU-12-HWG-1.02, EU-12-HWG-1.03, EU-12-HWG-1.04, EU-12-HWG-1.05, EU-12-HWG-1.06, EU-16-B-4.01, EU-16-B-4.02, and EU-16-B-4.03

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. SO ₂	104.7 lb/hr ²	Monthly Average	FG-BOILERS	SC V.1 SC VI.4	40 CFR 52.21(c) & (d)
2. SO ₂	232.9 tons/year ²	12-month rolling time as determined at the end of each calendar month	FG-BOILERS	SC V.1 SC VI.4	40 CFR 52.21(c) & (d)
3. SO ₂	0.50 pounds/million BTU heat input ²	24-hour period, when firing No. 2 fuel oil. This is equivalent to using fuel oil No. 2 with a 0.5% sulfur content, by weight, and a minimum heat content of 137,000 BTU/gallon of fuel oil	FG-BOILERS	SC V.1 SC VI.1	R 336.1402 40 CFR 60.42c(d)
4. NO _x	85.8 tons/year ²	12-month rolling time period as determined at the end of each calendar month	FG-BOILERS	SC VI.5	40 CFR 52.21(c) & (d)

The permittee shall use the applicable emission factors in Appendix 7-1 for calculating SO₂ and NO_x emission rates.

See Appendix 7-1

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	521.50 million cubic feet/ year ²	12-month rolling time period as determined at the end of each calendar month	FG-BOILERS	SC VI.2	R 336.1201(3)

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
2. Fuel Oil No. 2	6,415,000 gallons/year ²	12-month rolling time period as determined at the end of each calendar month	FG-BOILERS	SC VI.2	R 336.1201(3)

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall only fire pipeline quality natural gas in boiler numbers 12-HWG-1.05, 12-HWG-1.06, 16-B-4.01, 16-B-4.02 and 16-B-4.03.² (R 336.1201(3))
2. The permittee shall only fire pipeline quality natural gas or fuel oil No. 2 in boiler numbers 12-HWG-1.01, 12-HWG-1.02, 12-HWG-1.03 and 12-HWG-1.04.² (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))

1. The permittee shall determine the sulfur content of No. 2 fuel oil, by fuel supplier certification or fuel sample test data, for each delivery of fuel oil that will be used in any emission unit in FG-BOILERS. The certification or test data shall include the name of the oil supplier or laboratory and the sulfur content of the fuel oil. (R 336.1213(3))

VI. MONITORING/RECORDKEEPING

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

1. For each fuel oil No. 2 shipment, the permittee shall keep a record of the sulfur content in percent by weight, heat content in BTU/gallon and quantity of shipment received.² (R 336.1201(3))
2. The permittee shall monitor and record the quantity and type of each fuel used in each boiler on a monthly and 12-month rolling basis in a manner and with instrumentation acceptable to the AQD District Supervisor.² (40 CFR 60.48c)
3. The permittee shall monitor and record the boiler monthly hours of operation. (R 336.1213(3))
4. The permittee shall keep a record of the average hourly and monthly 12-month rolling emissions of SO₂. (R 336.1213(3))
5. The permittee shall keep a record of the monthly and 12-month rolling emissions of NO_x. (R 336.1213(3))
6. The permittee shall develop a boiler preventative maintenance program and log preventative maintenance. (R 336.1213(3))

See Appendix 7-1

VII. REPORTING

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-12-HWG-1.01	21 ²	100 ²	40 CFR 52.21(c) & (d)
2. SV-12-HWG-1.02	36 ²	100 ²	40 CFR 52.21(c) & (d)
3. SV-12-HWG-1.03	36 ²	100 ²	40 CFR 52.21(c) & (d)
4. SV-12-HWG-1.04	36 ²	100 ²	40 CFR 52.21(c) & (d)
5. SV-12-HWG-1.05	36 ²	100 ²	40 CFR 52.21(c) & (d)
6. SV-12-HWG-1.06	36 ²	100 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR 60 Subpart A (General Provisions), 40 CFR 63 Subpart DDDDD (NESHAP Standards for Industrial, Commercial and Institutional Boilers and Process Heaters), and 40 CFR 60 Subpart Dc (Performance Standards for Small Industrial-Commercial-Institutional Steam Generating Units).² **(40 CFR Part 63 Subpart DDDDD, 40 CFR 60, Subpart Dc)**

Footnotes:

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

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

FG-BOILERMACT FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Four (4) boilers using natural gas as primary fuel with fuel oil No. 2 as backup, and eight (8) boilers using natural gas exclusively. This flexible group is applicable to the following emission units when operating as a "Unit designed to burn gas 1 subcategory." This includes gaseous fuel boilers that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year and gaseous fuel boilers that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration.

Emission Units: EU-12-HWG-1.01, EU-12-HWG-1.02, EU-12-HWG-1.03, EU-12-HWG-1.04, EU-12-HWG-1.05, EU-12-HWG-1.06, EU-12-HWG-1.07, EU-16-B-4.01, EU-16-B-4.02, EU-16-B-4.03, EU-PT-B-5.01, and EU-PT-B-5.02

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall only burn fuels as allowed in the Unit designed to burn gas 1 subcategory definition in 40 CFR 63.7575, as stated in SC II.1.a below, unless as identified and in compliance with SC VII.9 and SC VII.10 and SC IX.6. **(40 CFR 63.7499(I), 40 CFR 63.7575)**
 - a. Unit designed to burn gas 1 subcategory includes any boiler or process heater that burns only natural gas, refinery gas, and/or other gas 1 fuels. Gaseous fuel boilers and process heaters that burn liquid fuel for periodic testing of liquid fuel, maintenance, or operator training, not to exceed a combined total of 48 hours during any calendar year, are included in this definition. Gaseous fuel boilers and process heaters that burn liquid fuel during periods of gas curtailment or gas supply interruptions of any duration are also included in this definition.

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee must meet the requirements in paragraphs (a)(1) and (3) of 40 CFR 63.7500, as listed below, except as provided in paragraphs (b) and (e) of 40 CFR 63.7500, stated in SC III.2. The permittee must meet these requirements at all times the affected unit is operating, except as provided in paragraph (f) of 40 CFR 63.7500, stated in SC III.4. **(40 CFR 63.7500(a))**
 - a. The permittee must meet each work practice standard in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies to the boiler or process heater, for each boiler or process heater at the source. **(40 CFR 63.7500(a)(1))**
 - b. At all times, the permittee must operate and maintain any affected source (as defined in 40 CFR 63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.7500(a)(3))**

2. As provided in 40 CFR 63.6(g), EPA may approve use of an alternative to the work practice standards. **(40 CFR 63.7500(b))**
3. The above standards apply at all times the affected unit is operating, except during periods of startup and shutdown. **(40 CFR 63.7500(f))**
4. For startup and shutdown, the permittee must meet the work practice standards according to items 5 and 6 of Table 3 of 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7540(d))**
5. The permittee must complete an initial tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through (vi), stated in SC IX.4, no later than the compliance date specified in 40 CFR 63.7495, stated in SC IX.1. The permittee must complete the one-time energy assessment specified in Table 3 of 40 CFR Part 63, Subpart DDDDD no later than the compliance date specified in 40 CFR 63.7495, stated in SC IX.1. **(40 CFR 63.7510(e))**
6. If the permittee is required to meet an applicable tune-up work practice standard, the permittee must conduct an annual performance tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.a; biennial performance tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.4.b; or five-year performance tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c. Each annual tune-up specified in 40 CFR 63.7540(a)(10) must be no more than 13 months after the previous tune-up. Each biennial tune-up specified in 40 CFR 63.7540(a)(11) must be conducted no more than 25 months after the previous tune-up. Each five-year tune-up specified in 40 CFR 63.7540(a)(12) must be conducted no more than 61 months after the previous tune-up. **(40 CFR 63.7515(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee must keep records according to paragraphs (a)(1) and (2) of 40 CFR 63.7555, as listed below. **(40 CFR 63.7555(a))**
 - a. A copy of each notification and report that the permittee submitted to comply with 40 CFR Part 63, Subpart DDDDD, including all documentation supporting any Initial Notification or Notification of Compliance Status or semiannual compliance report that the permittee submitted, according to the requirements in 40 CFR 63.10(b)(2)(xiv). **(40 CFR 63.7555(a)(1))**
 - b. Records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations as required in 40 CFR 63.10(b)(2)(viii). **(40 CFR 63.7555(a)(2))**
2. If the permittee uses an alternative fuel in any unit in FG-BOILERMACT, other than natural gas, refinery gas, gaseous fuel subject to another subpart under 40 CFR Part 63, other gas 1 fuel, or gaseous fuel subject to another subpart of 40 CFR Part 63 or Parts 60, 61, or 65, the permittee must keep records of the total hours per calendar year that alternative fuel is burned and the total hours per calendar year that the unit operated during periods of gas curtailment or gas supply emergencies. **(40 CFR 63.7555(h))**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

3. The permittee's records must be in a form suitable and readily available for expeditious review, according to 40 CFR 63.10(b)(1). **(40 CFR 63.7560(a))**
4. As specified in 40 CFR 63.10(b)(1), the permittee must keep each record for five years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. **(40 CFR 63.7560(b))**
5. The permittee must keep each record on site, or they must be accessible from on-site (for example, through a computer network), for at least two years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to 40 CFR 63.10(b)(1). The permittee can keep the records off site for the remaining three years. **(40 CFR 63.7560(c))**

See Appendices 3-1 and 4-1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee must meet the notification requirements in 40 CFR 63.7545 according to the schedule in 40 CFR 63.7545, both stated in SC VII.7 through SC VII.9, and in Subpart A of 40 CFR 63. **(40 CFR 63.7495(d))**
5. The permittee must submit a signed statement in the Notification of Compliance Status report that indicates that the permittee conducted a tune-up of each unit in FG-BOILERMACT. **(40 CFR 63.7530(d))**
6. The permittee must include with the Notification of Compliance Status a signed certification that either the energy assessment was completed according to Table 3 of 40 CFR Part 63, Subpart DDDDD, and that the assessment is an accurate depiction of the facility at the time of the assessment. **(40 CFR 63.7530(e))**
7. The permittee must submit to the Administrator all of the notifications in 40 CFR 63.7(b) and (c), 40 CFR 63.8(e), (f)(4) and (6), and 40 CFR 63.9(b) through (h) that apply to the permittee by the dates specified. **(40 CFR 63.7545(a))**
8. As specified in 40 CFR 63.9(b)(2), if permittee starts up the affected source before January 31, 2013, the permittee must submit an Initial Notification not later than 120 days after January 31, 2013. **(40 CFR 63.7545(b))**
9. If the permittee intends to use a fuel other than natural gas, refinery gas, gaseous fuel subject to another subpart of 40 CFR Part 63, Part 60, Part 61, or Part 65, or other gas 1 fuel to fire the affected unit during a period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575, the permittee must submit a notification of alternative fuel use within 48 hours of the declaration of each period of natural gas curtailment or supply interruption, as defined in 40 CFR 63.7575. The notification must include the information specified in paragraphs (f)(1) through (5) of 40 CFR 63.7545, as listed below. **(40 CFR 63.7545(f))**
 - a. Company name and address. **(40 CFR 63.7545(f)(1))**
 - b. Identification of the affected unit. **(40 CFR 63.7545(f)(2))**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

- c. Reason the permittee is unable to use natural gas or equivalent fuel, including the date when the natural gas curtailment was declared, or the natural gas supply interruption began. **(40 CFR 63.7545(f)(3))**
 - d. Type of alternative fuel that the permittee intends to use. **(40 CFR 63.7545(f)(4))**
 - e. Dates when the alternative fuel use is expected to begin and end. **(40 CFR 63.7545(f)(5))**
10. If the permittee has switched fuels or made a physical change to the boiler or process heater and the fuel switch or physical change resulted in the applicability of a different subcategory, the permittee must provide notice of the date upon which the permittee switched fuels or made the physical change within 30 days of the switch/change. The notification must identify: **(40 CFR 63.7545(h))**
- a. The name of the owner or operator of the affected source, as defined in 40 CFR 63.7490, the location of the source, the boiler(s) and process heater(s) that have switched fuels, were physically changed, and the date of the notice. **(40 CFR 63.7545(h)(1))**
 - b. The currently applicable subcategory under 40 CFR Part 63, Subpart DDDDD. **(40 CFR 63.7545(h)(2))**
 - c. The date upon which the fuel switch or physical change occurred. **(40 CFR 63.7545(h)(3))**
11. The permittee must submit each report in Table 9 of 40 CFR Part 63, Subpart DDDDD that applies. **(40 CFR 63.7550(a))**
12. Unless the EPA Administrator has approved a different schedule for submission of reports under 40 CFR 63.10(a), the permittee must submit each report, according to paragraph (h) of 40 CFR 63.7550, stated in SC VII.15, by the date in Table 9 of 40 CFR Part 63, Subpart DDDDD and according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below. For units that are subject only to a requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC X.14.a, biennial tune-up according to 40 CFR 63.7540(a)(11), stated in SC IX.4.b, or five-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c, and not subject to emission limits or Table 4 operating limits, the permittee may submit only an annual, biennial, or five-year compliance report, as applicable, as specified in paragraphs (b)(1) through (4) of 40 CFR 63.7550, as listed below, instead of a semiannual compliance report. **(40 CFR 63.7550(b))**
- a. The first semiannual compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495, stated in SC IX.1, and ending on June 30 or December 31, whichever date is the first date that occurs at least 180 days after the compliance date that is specified for the source in 40 CFR 63.7495, stated in SC IX.1. If submitting an annual, biennial, or five-year compliance report, the first compliance report must cover the period beginning on the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495 and ending on December 31 within one, two, or five years, as applicable, after the January 31, 2016 compliance date. **(40 CFR 63.7550(b)(1))**
 - b. The first semiannual compliance report must be postmarked or submitted no later than July 31 or January 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for each boiler or process heater in 40 CFR 63.7495, stated in SC IX.1. The first annual, biennial, or five-year compliance report must be postmarked or submitted no later than January 31. **(40 CFR 63.7550(b)(2), (40 CFR 63.10(a)(5))**
 - c. Each subsequent semiannual compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31. Annual, biennial, and five-year compliance reports must cover the applicable one, two, or five-year periods from January 1 to December 31. **(40 CFR 63.7550(b)(3))**
 - d. Each subsequent semiannual compliance report must be postmarked or submitted no later than September 15 or March 15, whichever date is the first date following the end of the semiannual reporting

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

period. Annual, biennial, and five-year compliance reports must be postmarked or submitted no later than March 15. **(40 CFR 63.7550(b)(4), (40 CFR 63.10(a)(5))**

13. The first and subsequent compliance reports may be submitted according to the dates specified in SC VII.2 for semiannual ROP reporting. **(40 CFR 63.7550(b)(5))**
14. A compliance report must contain the following information depending on how the permittee chooses to comply with the limits set in this rule. **(40 CFR 63.7550(c))**
 - a. If the facility is subject to the requirements of a tune up, the permittee must submit a compliance report with the information in SC VII.14 (a)(i) through (iv) as follows: **(40 CFR 63.7550(c)(1))**
 - i. Company and Facility name and address. **(40 CFR 63.7550(c)(5)(i))**
 - ii. Process unit information, emissions limitations, and operating parameter limitations. **(40 CFR 63.7550(c)(5)(ii))**
 - iii. Date of report and beginning and ending dates of the reporting period. **(40 CFR 63.7550(c)(5)(iii))**
 - iv. Include the date of the most recent tune-up for each unit subject to only the requirement to conduct an annual tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.a, biennial tune-up according to 40 CFR 63.7540(a)(10), stated in SC IX.4.b, or five-year tune-up according to 40 CFR 63.7540(a)(12), stated in SC IX.4.c. Include the date of the most recent burner inspection if it was not done annually, biennially, or on a five-year period and was delayed until the next scheduled or unscheduled unit shutdown. **(40 CFR 63.7550(c)(5)(xiv))**
15. The permittee must submit the reports according to the procedures specified in paragraphs (h) of 40 CFR 63.7550, as listed below. **(40 CFR 63.7550(h))**
 - a. The permittee must submit all reports required by Table 9 of 40 CFR Part 63, Subpart DDDDD electronically to the EPA via the CEDRI (CEDRI can be accessed through the EPA's CDX). The permittee must use the appropriate electronic report in CEDRI for this subpart. Instead of using the electronic report in CEDRI for this subpart, the permittee may submit an alternate electronic file consistent with the XML schema listed on the CEDRI website (<http://www.epa.gov/ttn/chief/cedri/index.html>), once the XML schema is available. If the reporting form specific to 40 CFR Part 63, Subpart DDDDD is not available in CEDRI at the time that the report is due, the permittee must submit the report to the Administrator at the appropriate address listed in 40 CFR 63.13. The permittee must begin submitting reports via CEDRI no later than 90-days after the form become available in CEDRI. **(40 CFR 63.7550(h)(3))**

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee must comply with 40 CFR Part 63, Subpart DDDDD no later than January 31, 2016, except as provided in 40 CFR 63.6(i). **(40 CFR 63.7495(b))**
2. The permittee must be in compliance with the emission limits, work practice standards, and operating limits of 40 CFR Part 63, Subpart DDDDD. These emission and operating limits apply at all times when the affected unit is operating except for the periods noted in 40 CFR 63.7500(f), stated in SC III.3. **(40 CFR 63.7505(a))**
3. For affected sources (as defined in 40 CFR 63.7490) that have not operated since the previous compliance demonstration and more than one year has passed since the previous compliance demonstration, the permittee must complete a subsequent tune-up by following the procedures described in 40 CFR 63.7540(a)(10)(i) through

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

(vi), stated in SC IX.4.a, and the schedule described in 40 CFR 63.7540(a)(13), stated in SC IX.4.d, for units that are not operating at the time of their scheduled tune-up. **(40 CFR 63.7515(g))**

4. The permittee must demonstrate continuous compliance with the work practice standards in Table 3 of 40 CFR Part 63, Subpart DDDDD that applies according to the methods specified in paragraphs (a)(10) through (13) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a))**
 - a. If the boiler or process heater has a heat input capacity of 10 million Btu per hour or greater, the permittee must conduct an annual tune-up of the boiler or process heater to demonstrate continuous compliance as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540, as listed below. The tune-up must be conducted while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up. This frequency does not apply to units with continuous oxygen trim systems that maintain an optimum air to fuel ratio. **(40 CFR 63.7540(a)(10))**
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the permittee may perform the burner inspection any time prior to tune-up or delay the burner inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the burner inspection until the first outage, not to exceed 36 months from the previous inspection. At units where entry into a piece of process equipment or into a storage vessel is required to complete the tune-up inspections, inspections are required only during planned entries into the storage vessel or process equipment. **(40 CFR 63.7540(a)(10)(i))**
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available. **(40 CFR 63.7540(a)(10)(ii))**
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (the permittee may delay the inspection until the next scheduled unit shutdown). Units that produce electricity for sale may delay the inspection until the first outage, not to exceed 36 months from the previous inspection. **(40 CFR 63.7540(a)(10)(iii))**
 - iv. Optimize total emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_x requirement to which the unit is subject. **(40 CFR 63.7540(a)(10)(iv))**
 - v. Measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer. **(40 CFR 63.7540(a)(10)(v))**
 - vi. Maintain on-site and submit, if requested by the Administrator, a report containing the information in paragraphs (a)(10)(vi)(A) through (C) of 40 CFR 63.7540, as listed below. **(40 CFR 63.7540(a)(10)(vi))**
 - A. The concentrations of CO in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater. **(40 CFR 63.7540(a)(10)(vi)(A))**
 - B. A description of any corrective actions taken as a part of the tune-up. **(40 CFR 63.7540(a)(10)(vi)(B))**
 - C. The type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel used by each unit. **(40 CFR 63.7540(a)(10)(vi)(C))**
 - b. If the boiler or process heater has a heat input capacity of less than 10 million Btu per hour (except as specified in paragraph (a)(12) of 40 CFR 63.7540), the permittee must conduct a biennial tune-up of the

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-~~2018a~~2023

boiler or process heater as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. **(40 CFR 63.7540(a)(11))**

- c. If the boiler or process heater has a continuous oxygen trim system that maintains an optimum air to fuel ratio, or a heat input capacity of less than or equal to five million Btu per hour and the unit is in the units designed to burn gas 1 subcategory, the permittee must conduct a tune-up of the boiler or process heater every five years as specified in paragraphs (a)(10)(i) through (vi) of 40 CFR 63.7540 to demonstrate continuous compliance. The permittee may delay the burner inspection specified in paragraph (a)(10)(i) of 40 CFR 63.7540 until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. If an oxygen trim system is utilized on a unit without emission standards to reduce the tune-up frequency to once every five years, set the oxygen level no lower than the oxygen concentration measured during the most recent tune-up. **(40 CFR 63.7540(a)(12))**
- d. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. **(40 CFR 63.7540(a)(13))**
5. Table 10 of 40 CFR Part 63, Subpart DDDDD shows which parts of the General Provisions in 40 CFR 63.1 through 63.15 applies to the permittee. **(40 CFR 63.7565)**
6. If the permittee has switched fuels or made a physical change to the boiler or process heater that resulted in the applicability of a different subcategory after the compliance date of this subpart, the permittee must be in compliance with the applicable existing source provisions of this subpart on the effective date of the fuel switch or physical change. **(40 CFR 63.7495 (h))**

Footnotes:

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

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

**FG-B/UP-TURBINES
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Two natural gas-fired turbine generators used for peaking.

Emission Units: EU-B/UP-TURBINE1, EU-B/UP-TURBINE2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	89.29 pph ²	Monthly average, for each of the turbines.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	R 336.1205, 40 CFR 52.21(c) & (d)
2. NOx	35.72 tons/ year ²	Total combined for the two turbines, based on a 12-month rolling time period as determined at the end of each calendar month.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	R 336.1205, 40 CFR 52.21(c) & (d)
3. CO	16.23 pph ²	Monthly average, for each of the turbines.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	40 CFR 52.21(d)
4. CO	6.50 tons/ year ²	Total combined for the two turbines, based on a 12-month rolling time period as determined at the end of each calendar month.	FG-B/UP-TURBINES	SC VI.1 SC VI.3	40 CFR 52.21(d)
5. Sulfur	0.8%	By weight sulfur in natural gas.	FG-B/UP-TURBINES	SC VI.2	40 CFR 60.333(b)

The permittee shall use the applicable emission factors in Appendix 7-1 for calculating NOx and CO emission rates.

See Appendix 7-1

II. MATERIAL LIMIT(S)

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Natural gas	190.20 million cubic feet/year, total combined for the two turbines. ²	12-month time period	FG-B/UP-TURBINES	SC VI.1	R 336.1205

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall operate the units only when the necessary power is not being supplied by the local utility or as a backup emergency generator to the utility grid.² (R 336.1205)
2. The permittee shall only fire pipeline quality natural gas, as defined in 40 CFR 72.2, in the turbines. (R 336.1213(3))
3. The permittee shall not operate each turbine for more than 400 hours based on a rolling 12-month time period. (R 336.1213(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))

1. The permittee shall monitor and record the monthly hours of operation of each turbine. (R 336.1213(3))
2. The permittee shall keep records of the 12-month rolling fuel consumption of each turbine.² (R 336.1201(3))
3. The permittee shall keep a record of the monthly 12-month rolling emissions of NOx and CO. (R 336.1213(3))
4. The permittee shall develop a turbine preventative maintenance program and log preventative maintenance. (R 336.1213(3))

See Appendix 7-1

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. 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))

[2018a2023](#)

[20232028](#)

Section 1 – Facilities

See Appendix 8-1

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-[2018a2023](#)

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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
1. SV-TURBINE1	168 ²	27.6 ²	40 CFR 52.21(c) & (d)
2. SV-TURBINE2	168 ²	27.6 ²	40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

FG-EMERGENCY-RICE FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group includes existing emergency stationary reciprocating internal combustion engines (RICE) that have a maximum site rating of 500 brake horsepower (HP) and less than 30 liters per cylinder located at a major source of hazardous air pollutants (HAPs).

Emission Units: EU-FIREPUMP-1, EU-FIREPUMP-2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. There is no limit on the use of FG-EMERGENCY-RICE units in emergency situations. **(40 CFR 63.6640(f)(1))**
2. The permittee must operate and maintain the stationary RICE according to the manufacturer's emission-related written instructions. Alternatively, the permittee may develop a maintenance plan which provides to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 63.6625(e)(2))**
3. The permittee must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to each engine at all times. **(40 CFR 63.6605(b))**
4. The permittee shall operate and maintain, at all times, any affected CI RICE, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.6605(b))**
5. The permittee shall comply with the following requirements, except during periods of startup:
 - a. Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.5.
 - b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
 - c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6602, Table 2c to 40 CFR Part 63, Subpart ZZZZ)**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Note: If the emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in SC III.4, the work practice should be performed as soon as practicable after the emergency has ended.

6. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement in 40 CFR 63.6602 and as listed in SC III 4(a). If utilized, the oil analysis program must be part of the maintenance plan for the engine. The oil analysis program must be performed at the same frequency as oil changes are required. The analysis program must analyze the parameters and keep records as required in 40 CFR 63.6625(i). **(40 CFR 63.6625(i))**
7. The permittee must minimize each engine's time spent at idle during startup and minimize each engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d of 40 CFR Part 63, Subpart ZZZZ. **(40 CFR 63.6625(h))**
8. The permittee shall not allow the CI engine(s) to exceed 100 hours for maintenance checks and readiness testing. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. **(40 CFR 63.6640(f)(2)(ii))**
9. The permittee shall not allow the CI engine(s) to operate more than 50 hours per year for non-emergency situations, as allowed in 40 CFR 63.6640(f)(2). **(40 CFR 63.6640(f)(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install a non-resettable hour meter to each engine, if one is not already installed. **(R 36.1213(3), 40 CFR 63.6625(f))**

V. TESTING/SAMPLING

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

1. If using the oil analysis program for CI Engine(s), the permittee shall test for Total Base Number, viscosity and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. **(40 CFR 63.6625(i))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee must keep records of the hours of operation of each engine that is recorded through the non-resettable hour meter. The permittee must document:
 - a. How many hours are spent for emergency operation?
 - b. What classified the operation as emergency?
 - c. How many hours are spent for non-emergency operation, including routine testing and readiness?
 - d. If the engines are used for demand response operation, the permittee must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response. **(40 CFR 63.6655(f), 40 CFR 63.6660)**
2. The permittee shall keep records for each CI engine of the occurrence and duration of each malfunction of operation (i.e., process equipment) or the air pollution control and monitoring equipment. **(40 CFR 63.6655(a)(2), 40 CFR 63.6660)**

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

3. The permittee shall keep records of actions taken during periods of malfunction to minimize emissions in accordance with 63.6605(b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. **(40 CFR 63.6655(a)(5), 40 CFR 63.6660)**
4. The permittee must keep records of the parameters that are analyzed as part of the oil analysis program, the results of the analysis, and the oil changes for the engine. The records shall be kept for five years. **(40 CFR 63.6625(i))**
5. The permittee shall keep the RICE maintenance records required in 40 CFR 63.6655(d) and 63.6655(e). The records shall be kept for five years. **(40 CFR 63.6655(d), 40 CFR 63.6655(e), 40 CFR 63.6660)**
6. The permittee shall keep records of the sulfur content of the diesel fuel oil used in FG-EMERGENCY-RICE. **(R 336.1402)**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-1

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subparts A-General Provisions and ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. **(R 336.1213, 40 CFR Part 63, Subparts A and ZZZZ)**
2. If all of the condemning limits specified in SC V.1 are not exceeded, the permittee is not required to change the oil. If any of the limits are exceeded, the permittee must change the oil within two days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the permittee must change the oil within two days or before commencing operation, whichever is later. **(40 CFR 63.6625(i))**

Footnotes:

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

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

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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).

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

APPENDICES

Appendix 1-1. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	°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 ₂ 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
EGLE	Michigan Department of Environment, Great Lakes, and Energy	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	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	%	Percent
RACT	Reasonable Available Control Technology	psia	Pounds per square inch absolute
ROP	Renewable Operating Permit	psig	Pounds per square inch gauge
SC	Special Condition	scf	Standard cubic feet
SCR	Selective Catalytic Reduction	sec	Seconds
SNCR	Selective Non-Catalytic Reduction	SO ₂	Sulfur Dioxide
SRN	State Registration Number	TAC	Toxic Air Contaminant
TEQ	Toxicity Equivalence Quotient	Temp	Temperature
USEPA/EPA	United States Environmental Protection Agency	THC	Total Hydrocarbons
VE	Visible Emissions	tpy	Tons per year
		µg	Microgram
		µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
		yr	Year

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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

Appendix 2-1. Schedule of Compliance

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

Appendix 3-1. Monitoring Requirements

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

Appendix 4-1. Recordkeeping

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

Appendix 5-1. Testing Procedures

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 6-1. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N1436-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N1436-2013 is being reissued as Source-Wide PTI No. MI-PTI-N1436-2018.

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

Appendix 7-1. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-BOILERS:

In calculating the sulfur dioxide, SO₂ emission rate for the boilers in FG-BOILERS, use the following emission factors:

FUEL	SO ₂ EMISSION FACTOR
------	---------------------------------

2018a2023

20232028

Section 1 – Facilities

ROP No: MI-ROP-N1436-

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Natural gas	0.60 pounds/MM ft ³
No. 2 fuel oil	72 pounds/1000 gallons

In calculating the nitrogen oxides, NOx emission rate for the boilers in FG-BOILERS, use the following emission factors:

FUEL	NOx EMISSION FACTOR
Natural gas	100 pounds/MM ft ³
No. 2 fuel oil	20 pounds/1000 gallons

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-B/UP-TURBINES:

In calculating the NOx and CO emission rates for the turbines in FG-B/UP-TURBINES, use the following emission factors:

POLLUTANT	EMISSION FACTOR
NOx	375 pounds/MM ft ³ of natural gas
CO	68 pounds/MM ft ³ of natural gas

Appendix 8-1. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

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

B. Other Reporting

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

Section 2 – Scientific Labs
~~2023~~2028

ROP No: MI-ROP-N1436-2018a

Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a

SECTION 2 – Scientific Labs

A. GENERAL CONDITIONS

Permit Enforceability

- All conditions in this permit are both federally enforceable and state enforceable unless otherwise noted. **(R 336.1213(5))**
- Those conditions that are hereby incorporated in a state-only enforceable Source-Wide PTI pursuant to Rule 201(2)(d) are designated by footnote one. **(R 336.1213(5)(a), R 336.1214a(5))**
- Those conditions that are hereby incorporated in a federally enforceable Source-Wide PTI pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

1. The permittee shall comply with all conditions of this ROP. Any ROP noncompliance constitutes a violation of Act 451, and is grounds for enforcement action, for ROP revocation or revision, or for denial of the renewal of the ROP. All terms and conditions of this ROP that are designated as federally enforceable are enforceable by the Administrator of the United States Environmental Protection Agency (USEPA) and by citizens under the provisions of the federal Clean Air Act (CAA). Any terms and conditions based on applicable requirements which are designated as "state-only" are not enforceable by the USEPA or citizens pursuant to the CAA. **(R 336.1213(1)(a))**
2. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this ROP. **(R 336.1213(1)(b))**
3. This ROP may be modified, revised, or revoked for cause. The filing of a request by the permittee for a permit modification, revision, or termination, or a notification of planned changes or anticipated noncompliance does not stay any ROP term or condition. This does not supersede or affect the ability of the permittee to make changes, at the permittee's own risk, pursuant to Rule 215 and Rule 216. **(R 336.1213(1)(c))**
4. The permittee shall allow the department, or an authorized representative of the department, upon presentation of credentials and other documents as may be required by law and upon stating the authority for and purpose of the investigation, to perform any of the following activities: **(R 336.1213(1)(d))**
 - a. Enter, at reasonable times, a stationary source or other premises where emissions-related activity is conducted or where records must be kept under the conditions of the ROP.
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the ROP.
 - c. Inspect, at reasonable times, any of the following:
 - i. Any stationary source.
 - ii. Any emission unit.
 - iii. Any equipment, including monitoring and air pollution control equipment.
 - iv. Any work practices or operations regulated or required under the ROP.
 - d. As authorized by Section 5526 of Act 451, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the ROP or applicable requirements.
5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq., and known as the Freedom of Information Act, the person may also be required to furnish the records directly to the USEPA together with a claim of confidentiality. **(R 336.1213(1)(e))**

6. A challenge by any person, the Administrator of the USEPA, or the department to a particular condition or a part of this ROP shall not set aside, delay, stay, or in any way affect the applicability or enforceability of any other condition or part of this ROP. **(R 336.1213(1)(f))**
7. The permittee shall pay fees consistent with the fee schedule and requirements pursuant to Section 5522 of Act 451. **(R 336.1213(1)(g))**
8. This ROP does not convey any property rights or any exclusive privilege. **(R 336.1213(1)(h))**

Equipment & Design

9. Any collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2).² **(R 336.1370)**
10. Any air cleaning device shall be installed, maintained, and operated in a satisfactory manner and in accordance with the Michigan Air Pollution Control rules and existing law. **(R 336.1910)**

Emission Limits

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

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

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

Testing/Sampling

13. The department may require the owner or operator of any source of an air contaminant to conduct acceptable performance tests, at the owner's or operator's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001(1).² **(R 336.2001)**
14. Any required performance testing shall be conducted in accordance with Rule 1001(2), Rule 1001(3) and Rule 1003. **(R 336.2001(2), R 336.2001(3), R 336.2003(1))**
15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(5))**

Monitoring/Recordkeeping

16. Records of any periodic emission or parametric monitoring required in this ROP shall include the following information specified in Rule 213(3)(b)(i), where appropriate. **(R 336.1213(3)(b))**
- The date, location, time, and method of sampling or measurements.
 - The dates the analyses of the samples were performed.
 - The company or entity that performed the analyses of the samples.
 - The analytical techniques or methods used.
 - The results of the analyses.
 - The related process operating conditions or parameters that existed at the time of sampling or measurement.
17. All required monitoring data, support information and all reports, including reports of all instances of deviation from permit requirements, shall be kept and furnished to the department upon request for a period of not less than 5 years from the date of the monitoring sample, measurement, report or application. Support information includes all calibration and maintenance records and all original strip-chart recordings, or other original data records, for continuous monitoring instrumentation and copies of all reports required by the ROP. **(R 336.1213(1)(e), R 336.1213(3)(b)(ii))**

Certification & Reporting

18. Except for the alternate certification schedule provided in Rule 213(3)(c)(iii)(B), any document required to be submitted to the department as a term or condition of this ROP shall contain an original certification by a Responsible Official which states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. **(R 336.1213(3)(c))**
19. A Responsible Official shall certify to the appropriate AQD District Office and to the USEPA that the stationary source is and has been in compliance with all terms and conditions contained in the ROP except for deviations that have been or are being reported to the appropriate AQD District Office pursuant to Rule 213(3)(c). This certification shall include all the information specified in Rule 213(4)(c)(i) through (v) and shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the certification are true, accurate, and complete. The USEPA address is: USEPA, Air Compliance Data - Michigan, Air and Radiation Division, 77 West Jackson Boulevard, Chicago, Illinois 60604-3507. **(R 336.1213(4)(c))**
20. The certification of compliance shall be submitted annually for the term of this ROP as detailed in the special conditions, or more frequently if specified in an applicable requirement or in this ROP. **(R 336.1213(4)(c))**
21. The permittee shall promptly report any deviations from ROP requirements and certify the reports. The prompt reporting of deviations from ROP requirements is defined in Rule 213(3)(c)(ii) as follows, unless otherwise described in this ROP. **(R 336.1213(3)(c))**
- 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).
 - 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.
 - 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))**
- 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.
 - Submitting, within 30 days following the end of a calendar month during which one or more prompt reports of deviations from the emissions allowed under the ROP were submitted to the department pursuant to Rule 213(3)(c)(ii), a certification by a Responsible Official which states that: "based on information and belief formed after reasonable inquiry, the statements and information contained in each of the reports submitted during the previous month were true, accurate, and complete." The certification shall include a listing of the reports that are being certified. Any report submitted pursuant to Rule 213(3)(c)(ii) that will be certified on a monthly basis pursuant to this paragraph shall include a statement that certification of the report will be provided within 30 days following the end of the calendar month.
23. Semiannually for the term of the ROP as detailed in the special conditions, or more frequently if specified, the permittee shall submit certified reports of any required monitoring to the appropriate AQD District Office. All instances of deviations from ROP requirements during the reporting period shall be clearly identified in the reports. **(R 336.1213(3)(c)(i))**
24. On an annual basis, the permittee shall report the actual emissions, or the information necessary to determine the actual emissions, of each regulated air pollutant as defined in Rule 212(6) for each emission unit utilizing the emissions inventory forms provided by the department. **(R 336.1212(6))**
25. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the appropriate AQD District Office. The notice shall be provided not later than two business days after the start-up, shutdown, or discovery of the abnormal conditions or malfunction. Notice shall be by any reasonable means, including electronic, telephonic, or oral communication. Written reports, if required under Rule 912, must be submitted to the appropriate AQD District Supervisor within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal conditions or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² **(R 336.1912)**

Permit Shield

26. Compliance with the conditions of the ROP shall be considered compliance with any applicable requirements as of the date of ROP issuance if either of the following provisions is satisfied. **(R 336.1213(6)(a)(i), R 336.1213(6)(a)(ii))**
- The applicable requirements are included and are specifically identified in the ROP.
 - 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:
- 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))**
 - 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))**
 - The applicable requirements of the acid rain program, consistent with Section 408(a) of the CAA. **(R 336.1213(6)(b)(iii))**

2018a2023 **Section 2 – Scientific Labs** ROP No: MI-ROP-N1436-
20232028 Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

- d. The ability of the USEPA to obtain information from a source pursuant to Section 114 of the CAA. **(R 336.1213(6)(b)(iv))**
28. The permit shield shall not apply to provisions incorporated into this ROP through procedures for any of the following:
- a. Operational flexibility changes made pursuant to Rule 215. **(R 336.1215(5))**
 - b. Administrative Amendments made pursuant to Rule 216(1)(a)(i)-(iv). **(R 336.1216(1)(b)(iii))**
 - c. Administrative Amendments made pursuant to Rule 216(1)(a)(v) until the amendment has been approved by the department. **(R 336.1216(1)(c)(iii))**
 - d. Minor Permit Modifications made pursuant to Rule 216(2). **(R 336.1216(2)(f))**
 - e. State-Only Modifications made pursuant to Rule 216(4) until the changes have been approved by the department. **(R 336.1216(4)(e))**
29. Expiration of this ROP results in the loss of the permit shield. If a timely and administratively complete application for renewal is submitted not more than 18 months, but not less than 6 months, before the expiration date of the ROP, but the department fails to take final action before the end of the ROP term, the existing ROP does not expire until the renewal is issued or denied, and the permit shield shall extend beyond the original ROP term until the department takes final action. **(R 336.1217(1)(c), R 336.1217(1)(a))**

Revisions

30. For changes to any process or process equipment covered by this ROP that do not require a revision of the ROP pursuant to Rule 216, the permittee must comply with Rule 215. **(R 336.1215, R 336.1216)**
31. A change in ownership or operational control of a stationary source covered by this ROP shall be made pursuant to Rule 216(1). **(R 336.1219(2))**
32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(10))**
33. Pursuant to Rule 216(1)(b)(iii), Rule 216(2)(d) and Rule 216(4)(d), after a change has been made, and until the department takes final action, the permittee shall comply with both the applicable requirements governing the change and the ROP terms and conditions proposed in the application for the modification. During this time period, the permittee may choose to not comply with the existing ROP terms and conditions that the application seeks to change. However, if the permittee fails to comply with the ROP terms and conditions proposed in the application during this time period, the terms and conditions in the ROP are enforceable. **(R 336.1216(1)(c)(iii), R 336.1216(2)(d), R 336.1216(4)(d))**

Reopenings

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

Renewals

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

Stratospheric Ozone Protection

36. If the permittee is subject to Title 40 of the Code of Federal Regulations (CFR), Part 82 and services, maintains, or repairs appliances except for motor vehicle air conditioners (MVAC), or disposes of appliances containing refrigerant, including MVAC and small appliances, or if the permittee is a refrigerant reclaimer, appliance owner or a manufacturer of appliances or recycling and recovery equipment, the permittee shall comply with all applicable standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F.
37. If the permittee is subject to 40 CFR Part 82 and performs a service on motor (fleet) vehicles when this service involves refrigerant in the MVAC, the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed by the original equipment manufacturer. The term MVAC as used in Subpart B does not include the air-tight sealed refrigeration system used for refrigerated cargo or an air conditioning system on passenger buses using Hydrochlorofluorocarbon-22 refrigerant.

Risk Management Plan

38. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall register and submit to the USEPA the required data related to the risk management plan for reducing the probability of accidental releases of any regulated substances listed pursuant to Section 112(r)(3) of the CAA as amended in 40 CFR 68.130. The list of substances, threshold quantities, and accident prevention regulations promulgated under 40 CFR Part 68, do not limit in any way the general duty provisions under Section 112(r)(1).
39. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall comply with the requirements of 40 CFR Part 68, no later than the latest of the following dates as provided in 40 CFR 68.10(a):
- June 21, 1999,
 - Three years after the date on which a regulated substance is first listed under 40 CFR 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.² **(R 336.1201(1))**
44. The department may, after notice and opportunity for a hearing, revoke PTI terms or conditions if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of the PTI or is violating the department's rules or the CAA.² **(R 336.1201(8), Section 5510 of Act 451)**
45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, EGLE.² **(R 336.1219)**
46. If the installation, reconstruction, relocation, or modification of the equipment for which PTI terms and conditions have been approved has not commenced within 18 months of the original PTI issuance date, or has been interrupted for 18 months, the applicable terms and conditions from that PTI, as incorporated into the ROP, shall become void unless otherwise authorized by the department. Furthermore, the person to whom that PTI was issued, or the designated authorized agent, shall notify the department via the Supervisor, Permit Section, EGLE, AQD, P. O. Box 30260, Lansing, Michigan 48909, if it is decided not to pursue the installation, reconstruction, relocation, or modification of the equipment allowed by the terms and conditions from that PTI.² **(R 336.1201(4))**

Footnotes:

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

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

2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
20232028

ROP No: MI-ROP-N1436-

PTI No: MI-PTI-N1436-2018a2023

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.

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.

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
EU-KIRKSITEFURN	Electrically heated melting furnace. Kirksite is a zinc-based metal casting formulation. Casting operation utilizes Pep Set sand mold.	10/28/1991	NA
EU-WINGATESTCELL- (1-14)	Fourteen (14) engine dynamometer test cells (performance test cells) located at Wing A. At the time of installation, these test cells were exempt from the requirements of R 336.1201 pursuant to R 336.1285(d) (currently R 336.1285(2)(g)).	10/1990	FG-TESTCELLSA
EU-SPOVEN1	Paint spray booth/oven combination No. 1	10/28/1991 11/01/2000	FG-ENGPAINSHOP
EU-SPOVEN2	Paint spray booth/oven combination No. 2	10/28/1991 11/01/2000	FG-ENGPAINSHOP
EU-SPOVEN3	Paint spray booth/oven combination No. 3	11/01/2000	FG-ENGPAINSHOP
EU-SPOVEN4	Paint spray booth/oven combination No. 4	11/01/2000	FG-ENGPAINSHOP
EU-HIBAKE	High bake oven	10/28/1991	FG-ENGPAINSHOP
EU-PB/MIX	Paint spray booth and mix bench	10/28/1991	FG-ENGPAINSHOP
EU-BATCH	Batch oven	10/28/1991	FG-ENGPAINSHOP
EU-LOFLOVPRGNRTR	Low flow vapor generator utilized to create gas vapors for testing and developing refueling emission canisters.	04/02/1991	FG-WETFUELSTEST
EU-HIFLOVPRGNRTR	High flow vapor generator utilized to create gas vapors for testing and developing refueling emission canisters.	04/02/1991	FG-WETFUELSTEST
EU-WETFUELGASTST	Wet fuels gasoline test equipment consisting of a twenty-four (24) station fuel pump test stand, one hundred (100) station fuel injector endurance test stand and a gasoline tank purge operation.	04/02/1991	FG-WETFUELSTEST
EU-WETFUELSMINSR	Wet fuels mineral spirits testing equipment for fuel injector performance, electrical fuel pump and fuel filter tests.	04/02/1991	FG-WETFUELSTEST
EU-MAINTPAINTING	Paint booth located in the maintenance area.	01/01/1999	FG-RULE287(2)(c)
EU-PRODDSGNPAINT	Paint booth located in the product design area.	01/01/1999	FG-RULE287(2)(c)
EU-WOODSHOPPAINT	Paint booth located in the wood shop.	01/01/1999	FG-RULE287(2)(c)

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-B01	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B02	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B03	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B04	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B05	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B06	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B07	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-B08	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B09	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B10	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B11	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B12	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B13	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B14	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-B15	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B16	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B17	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-B18	One performance test cell located in Wing B. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C01	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C02	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C03	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-C04	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C05	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C06	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C07	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C08	One performance test cell located in Wing C. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from this test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-C09	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-C10	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C11	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C12	One durability/transmission test cell located in Wing C; it can also perform simulation tests. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C13	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C14	One durability/transmission test cell located in Wing C; it can also perform simulation tests. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

ROP No: MI-ROP-N1436-

2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
20232028

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-C15	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C16	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C17	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C18	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C19	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-C20	One durability/transmission test cell located in Wing C. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive related drive train components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D01	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D02	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D03	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D04	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D05	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D06	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D07	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D08	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D09	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D10	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D11	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D12	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D13	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D14	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D15	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D16	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D17	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D18	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-D19	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D20	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D21	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-D22	One durability test cell located in Wing D. The test cell contains two test stands (A & B) used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP for each test stand.	12/1998	FG-CNTRLDCELLS
EU-CELL-E01	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E02	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E03	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E04	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E05	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E06	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E07	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E08	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer; except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E09	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E10	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E11	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E12	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E13	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E14	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E15	One performance test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are uncontrolled. The maximum size dynamometer that is used for testing is 1,200 HP.	06/1998	FG-UNCNTRLDCELLS
EU-CELL-E16	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E17	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E18	One durability test cells One durability test cell located in Wing E. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS
EU-CELL-E19	One durability test cells One durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer, except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.	12/1998	FG-CNTRLDCELLS

2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
 20232028

ROP No: MI-ROP-N1436-

PTI No: MI-PTI-N1436-2018a2023

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-CELL-E20	<p>One durability test cellsOne durability test cell located in Wing E; it can also perform simulation tests. The test cell contains one test stand used for testing internal combustion engines and other automotive drive train related components. Emissions from the test cell are controlled with a thermal oxidizer; except during simulation testing. The maximum size dynamometer that is used for testing is 1,200 HP.</p>	12/1998	FG-CNTRLDCELLS

**EU-KIRKSITEFURN
EMISSION UNIT CONDITIONS**

DESCRIPTION

Electrically heated melting furnace. Kirksite is a zinc-based metal casting formulation. Casting operation utilizes Pep Set sand mold. Processing of the mold and core is exempt under R 336.1282(2)(a)(iv).

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))**

1. The permittee shall conduct and record visible emission readings, using USEPA Method 9, once during each 5-year period to demonstrate compliance with the visible emission limit. **(R 336.1213(3))**

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)(c))**

2018a2023
20232028

Section 2 – Scientific Labs

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

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.

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
FG-TESTCELLSA	Fourteen (14) engine dynamometer test cells (performance test cells) located at Wing A. At the time of installation, these test cells were exempt from the requirements of R 336.1201 pursuant to R 336.1285(d) (currently R 336.1285(2)(g)).	EU-WINGATESTCELL- (1-14)
FG-ENGPAINSHOP	Surface coating and associated auxiliary coating equipment located at the engineering paint shop.	EU-SPOVEN1 EU-SPOVEN2 EU-SPOVEN3 EU-SPOVEN4 EU-HIBAKE EU-PB/MIX EU-BATCH
FG-CNTRLDCELLS	Forty-six (46) engine dynamometer test cells located in Wing C, Wing D and Wing E (durability, transmission and simulation test cells). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands. Emissions from these test cells are controlled with thermal oxidizers, except when performing simulation testing. During simulation testing, the emissions are controlled with a catalytic converter and also a diesel particulate filter if burning diesel.	EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18,

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-CNTRLDCELLS (cont.)		EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E10, EU-CELL-E12, EU-CELL-E14, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20
FG-UNCNTRLDCELLS	Thirty-four (34) engine dynamometer test cells (performance test cells) located in Wings B, C and E. The 34 engine dynamometer test cells house a total of 34 engine dynamometer test stands. Performance test cells do not have emission control equipment.	EU-CELL-B01, EU-CELL-B02, EU-CELL-B03, EU-CELL-B04, EU-CELL-B05, EU-CELL-B06, EU-CELL-B07, EU-CELL-B08, EU-CELL-B09, EU-CELL-B10, EU-CELL-B11, EU-CELL-B12, EU-CELL-B13, EU-CELL-B14, EU-CELL-B15, EU-CELL-B16, EU-CELL-B17, EU-CELL-B18, EU-CELL-C01, EU-CELL-C02, EU-CELL-C03, EU-CELL-C04, EU-CELL-C05, EU-CELL-C06, EU-CELL-C07, EU-CELL-C08, EU-CELL-E01, EU-CELL-E03, EU-CELL-E05, EU-CELL-E07, EU-CELL-E09, EU-CELL-E11, EU-CELL-E13, EU-CELL-E15

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-CAMTO	Eleven (11) natural gas fired thermal oxidizers serving forty-six (46) dynamometer test cells used to describe the monitoring procedures, methods and/or specifications for operating and maintaining carbon monoxide (CO) and volatile organic compounds (VOC) control devices for FG-CNTRLDCELLS at the Chrysler Technology Center (CTC). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands.	NA
FG-GASTANKS	Any existing or future emission unit that emits air contaminants that are exempt from the requirements of R 336.1201 pursuant to R 336.1284(2)(g)(i). The FG currently includes six (6) underground storage tanks for Wet Fuel Building, eighteen (18) underground gasoline storage tanks at the South Tank Farm, and three (3) underground gasoline storage tanks at the North Tank Farm.	NA
FG-WETFUELSTEST	Testing equipment in the wet fuels area. Process and process equipment are exempt from the provisions of R 336.1201 pursuant to R 336.1283(2)(a)(ii).	EU-LOFLOVPRGNRTR EU-HIFLOVPRGNRTR EU-WETFUELGASTST EU-WETFUELSMINSPR
FG-RULE331	Any existing or future emission units that emit air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1285(2)(l)(vi)(A) and R 336.1285(2)(l)(vi)(C). Flexible group includes any equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening or polishing metals, plastics, wood and wood products, and any exhaust system or collector exclusively serving the above equipment. Equipment is exhausted externally and used on a non-production basis	NA
FG-RULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	NA
FG-RULE287(2)(c)	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 287(2)(c). Emission units installed/modified before December 20, 2016, may show compliance with Rule 287 in effect at the time of installation/modification.	EU-MAINTPAINTING EU-PRODDSGNPAIN EU-WOODSHOPPAINT
FG-COLDCLEANERS	Any new cold solvent cleaner placed into operation after 07/01/79 that is exempt from the requirements of R 336.1201 pursuant to R 336.1281(2)(h) and R 336.1285(2)(r)(iv).	NA

**FG-TESTCELLSA
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Fourteen (14) engine dynamometer test cells (performance test cells) located at Wing A. At the time of installation, these test cells were exempt from the requirements of R 336.1201 pursuant to R 336.1285(d) (currently R 336.1285(2)(g)).

Emission Unit: EU-WINGATESTCELL-(1-14)

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. SO ₂	1.7 lb/MMBTU heat input of fuel oil ²	When fired by fuel oil	Each engine of EU-WINGATESTCELL-(1-14)	SC VI.1 SC VI.3	R 336.1402(1)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))**

1. When fired by fuel oil, the permittee shall maintain a record of the fuel specifications for the fuel oil used. **(R 336.1213(3))**
2. The permittee shall maintain a record of the date of installation for each engine test cell. **(R 336.1213(3))**
3. The permittee shall record the types and amounts of fuel used per calendar year. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**FG-ENGPAINSHOP
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Surface coating and associated auxiliary coating equipment located at the engineering paint shop.

Emission Units: EU-SPOVEN1, EU-SPOVEN2, EU-SPOVEN3, EU-SPOVEN4, EU-HIBAKE, EU-PB/MIX, EU-BATCH

POLLUTION CONTROL EQUIPMENT

Dry Filters

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. VOC	1185.6 pounds/day ²	Monthly averaging	FG-ENGPAINSHOP	SC VI	R 336.1702(d)
2. VOC	30.3 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month	FG-ENGPAINSHOP	SC VI	R 336.1205 R 336.1702(d)
3. VOC	6.60 lb/gallon, minus water, as applied ²	Calendar day weighted average	Top Coat (basecoat and clearcoat) painting process	SC VI	R 336.1702(d)
4. VOC	5.44 lb/gallon, minus water, as applied ²	Calendar day weighted average	Prime painting process	SC VI	R 336.1702(d)
5. VOC	5.16 lb/gallon, minus water, as applied ²	Calendar day weighted average	Primer/surfacer painting process	SC VI	R 336.1702(d)
6. VOC	3.6 lb/gallon, minus water, as applied ²	Calendar day weighted average	Plastic parts painting process	SC VI	R 336.1702(d)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- The permittee shall not operate any paint spray booths unless the associated filters are installed and operating in a satisfactory manner.² (R 336.1224, R 336.1301, R 336.1331, R 336.1910)
- The permittee shall collect and store waste coatings and solvents in closed containers to minimize the release of air contaminants.² (R 336.1370, R 336.1702(d))

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))

1. The VOC content of any coating as applied and as received shall be determined using federal Reference Test Method 24. Upon prior approval of the AQD District Supervisor, VOC content may alternatively be determined from manufacturer's formulation data.² (R 336.1205, R 336.1225, R 336.1702(a))

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 keep a record of the identity of each coating and the coating category to which it belongs.² (R 336.1205, R 336.1225, R 336.1702(d))
2. The permittee shall keep a daily usage rate, in gallons, for each coating.² (R 336.1205, R 336.1225, R 336.1702(d))
3. The permittee shall keep a record of the VOC content of each coating, in pounds VOC/gallon of coating, minus water, as applied.² (R 336.1205, R 336.1225, R 336.1702(d))
4. The permittee shall keep a record of the VOC content of each coating, in pounds VOC/gallon of coating, with water, as applied.² (R 336.1205, R 336.1225, R 336.1702(d))
5. For each raw coating, the permittee shall keep a record of the VOC content of the raw coating, in pounds VOC/gallon of coating, with water as received and in pounds VOC/gallon of coating, minus water, as received, and the VOC content of each reducer added. (R 336.1213(3))
6. The permittee shall keep a record of the daily mass VOC emissions and yearly mass VOC emissions from FG-ENGPAINSHOP. Yearly emissions shall be determined at the end of each calendar month based on a rolling 12-month time period.² (R 336.1205, R 336.1225, R 336.1702(d))
7. The VOC content of each coating, minus water, as applied, shall be determined using EPA Reference Test Method 24. As an alternative, the VOC content may be determined from formulation data. If the Method 24 and formulation values should differ, then the Method 24 results shall be used to determine compliance. (R 336.1213(3))

See Appendix 7-2

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8-2

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
1. SV-SPOVEN1	36 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
2. SV-SPOVEN2	36 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
3. SV-SPOVEN3-1 (Spray booth stack)	50 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
4. SV-SPOVEN3-2 (Oven stack)	14 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
5. SV-SPOVEN4-1 (Spray booth stack)	60 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
6. SV-SPOVEN4-2 (Oven stack)	12 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
7. SV-HIBAKE	18 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
8. SV-PB/MIX	18 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)
9. SV-BATCH	14 ²	72 ²	R 336.1224 R 336.1225 R 336.1901 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

2018a2023 **Section 2 – Scientific Labs** ROP No: MI-ROP-N1436-
20232028 Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

**FG-CNTRLDCELLS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Forty-six (46) engine dynamometer test cells located in Wing C, Wing D and Wing E (durability, transmission and simulation test cells). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands. Emissions from these test cells are controlled with thermal oxidizers, except when performing simulation testing. During simulation testing, the emissions are controlled with a catalytic converter and also a diesel particulate filter if burning diesel.

Emission Units: EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18, EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E10, EU-CELL-E12, EU-CELL-E14, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20

POLLUTION CONTROL EQUIPMENT

Eleven (11) thermal oxidizers for durability and transmission test cells. Three-way catalytic converters for simulation test cells, with diesel particulate filters if burning diesel.

I. EMISSION LIMITS

Scenario A: This emission limit table is effective until the notification specified in SC VII.5 is submitted to the AQD:

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	0.1049 lb/gallon ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC-V.1,	40 CFR 52.21(j)
2. NO _x	218.2 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	40 CFR 52.21(j)
3. CO	0.01 lb/gallon ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC-V.1	40 CFR 52.21(j)
4. CO	20.8 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC-VI.6	40 CFR 52.21(j)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
5. CO	17.57 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing simulation testing in all listed below, combined: EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC-VI.6	R 336.1205(1)(a)&(3), 40-CFR 52.21(d)
6. VOC	0.006 lb/gallon ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC-V.1	40-CFR 52.21(j)
7. VOC	12.5 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	40-CFR 52.21(j)
8. Lead	0.58 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	40-CFR 52.21(j)
9. PM10	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R 336.1205(1)(a)&(3), 40-CFR 52.21(c)&(d)
10. PM2.5	0.0186 pph per test stand ²	Hourly ^A	While performing simulation testing in all listed below, combined: EU-CELL-C12 ^B , EU-CELL-C14 ^B , EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC-V.2	R 336.1205(1)(a)&(3), 40-CFR 52.21(c)&(d)
11. PM2.5	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R 336.1205(1)(a)&(3), 40-CFR 52.21(c)&(d)

^A If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements.

^B EU-CELL-C12 and EU-CELL-C14 each have 2 test stands, so the overall pph out of their stack would be doubled.

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
Default emission factors shall be used unless otherwise approved by the AQD District Supervisor:					
Durability and Transmission Testing NO _x = 0.1049 lb/gallon CO = 0.01 lb/gallon VOC = 0.006 lb/gallon Lead, leaded fuel = 0.0075 lb/gallon Lead, unleaded fuel = 0.00011 lb/gallon PM10/PM2.5, all other fuels = 0.0062 lb/gallon PM10/PM2.5, ultra-low sulfur diesel = 0.012 lb/gallon			Simulation Testing NO _x = 0.0052 lb/gallon CO = 0.13 lb/gallon VOC = 0.0082 lb/gallon Lead, leaded fuel = 0.0075 lb/gallon Lead, unleaded fuel = 0.00011 lb/gallon PM10/PM2.5 = 0.0062 lb/gallon		

Scenario B: This emission limit table is effective after the notification specified in SC VII.5 is submitted to the AQD:

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	10.45 pph per thermal oxidizer ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1	40 CFR 52.21(j)
2. NO _x	218.2 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
3. CO	1 pph per thermal oxidizer ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1	40 CFR 52.21(j)
4. CO	20.8 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
5. CO	17.57 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing simulation testing in all listed below, combined: EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(d)
6. VOC	0.64 pph per thermal oxidizer ²	Hourly ^A	While performing durability or transmission testing in FG-CNTRLDCELLS	SC V.1	40 CFR 52.21(j)

ROP No: MI-ROP-N1436-

~~2018a2023~~ **Section 2 – Scientific Labs** Expiration Date: October 30,

~~20232028~~

PTI No: MI-PTI-N1436-~~2018a2023~~

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
7. VOC	12.5 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
8. Lead	0.58 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
9. PM10	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)
10. PM2.5	0.0186 pph per test stand ²	Hourly ^A	While performing simulation testing in all listed below, combined: EU-CELL-C12 ^B , EU-CELL-C14 ^B , EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC V.2	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)
11. PM2.5	15.91 tpy ²	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	R 336.1205(1)(a)&(3), 40 CFR 52.21(c)&(d)

^A If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements.

^B EU-CELL-C12 and EU-CELL-C14 each have 2 test stands, so the overall pph out of their stack would be doubled.

Default emission factors shall be used unless otherwise approved by the AQD District Supervisor:

Durability and Transmission Testing	Simulation Testing
NO _x = 0.1049 lb/gallon	NO _x = 0.0052 lb/gallon
CO = 0.01 lb/gallon	CO = 0.13 lb/gallon
VOC = 0.006 lb/gallon	VOC = 0.0082 lb/gallon
Lead, leaded fuel = 0.0075 lb/gallon	Lead, leaded fuel = 0.0075 lb/gallon
Lead, unleaded fuel = 0.00011 lb/gallon	Lead, unleaded fuel = 0.00011 lb/gallon
PM10/PM2.5, all other fuels = 0.0062 lb/gallon	PM10/PM2.5 = 0.0062 lb/gallon
PM10/PM2.5, ultra-low sulfur diesel = 0.012 lb/gallon	

II. MATERIAL LIMITS

Scenario A: This material limit table is effective until the notification specified in SC VII.5 is submitted to the AQD:

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total Fuel	4,160,700 gallons/yr ^{2,C}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R-336.1225, R-336.1702(a), 40 CFR 52.21(c), (d), & (j)
1a. Ultra-low sulfur diesel fuel	1,040,175 gallons/yr ^{2,D}	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC-VI.6	R-336.1205(1)(a)&(3), R-336.1225, R-336.1702(a), 40 CFR 52.21(c)&(d)
1b. Total Fuel	265,000 gallons/yr ^{2,D}	12-month rolling time period as determined at the end of each calendar month.	While performing assimilation testing in all listed below, combined: EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC-VI.6	R-336.1205(1)(a)&(3), R-336.1225, R-336.1702(a), 40 CFR 52.21(c)&(d)
1c. Leaded Gasoline	95,000 gallons/yr ^{2,D,E}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS & FG-UNCNTRLDCELLS	SC-VI.2, SC-VI.6	40 CFR 52.21(d)
2. Total Fuel	26,311 gallons/day ^{2,C}	Average calendar day as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC-VI.6	R-336.1225, R-336.1702(a), 40 CFR 52.21(c), (d), & (j)

Formatted: Justified

Formatted: Justified

Formatted: Justified, Indent: Left: 0", First line: 0"

Formatted: Justified

Formatted: Justified

Formatted: Justified, Indent: Left: 0", First line: 0"

Formatted: Justified

Formatted: Justified

Formatted: Justified, Indent: Left: 0", First line: 0"

^CGaseous fuels must be converted to Gasoline Gallon Equivalents (GGE) for demonstrations of compliance with this material limits. One GGE of natural gas is equal to 125 ft³.

^DThese material limits are subsets of SC II.1 and are not in addition to SC II.1. They must be included in the total fuel calculation to demonstrate compliance.

^EThis material limit is a combined limit for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS.

Scenario B: This material limit table is effective after the notification specified in SC VII.5 is submitted to the AQD:

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total Fuel	4,160,700 gallons/yr ^{2,C}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.7	R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d),&(j)
1a. Ultra-low sulfur diesel fuel	1,040,175 gallons/yr ^{2,D}	12-month rolling time period as determined at the end of each calendar month.	While performing durability or transmission testing in FG-CNTRLDCELLS	SC VI.7	R 336.1205(1)(a)&(3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d)
1b. Total Fuel	265,000 gallons/yr ^{2,D}	12-month rolling time period as determined at the end of each calendar month.	While performing simulation testing in all listed below, combined: EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20	SC VI.7	R 336.1205(1)(a)&(3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d)
1c. Leaded Gasoline	95,000 gallons/yr ^{2,D,E}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS and FG-UNCNTRLDCELLS	SC VI.2, SC VI.8	40 CFR 52.21(d)
2. Total Fuel	1,096.3 gallons/hr ^{2,C}	Average hour as determined at the end of each calendar day.	While performing any type of testing in FG-CNTRLDCELLS	SC VI.8	R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d),&(j)

^C Gaseous fuels must be converted to Gasoline Gallon Equivalents (GGE) for demonstrations of compliance with this material limits. One GGE of natural gas is equal to 125 ft³.

^D These material limits are subsets of SC II.1 and are not in addition to SC II.1. They must be included in the total fuel calculation to demonstrate compliance.

^E This material limit is a combined limit for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS.

3. The permittee shall only burn the following fuels on test stands in FG-CNTRLDCELLS:² (R 336.1205(1)(a)&(3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c)&(d))
- a. Durability and transmission testing: unleaded gasoline (with ethanol contents less than 20 percent), various ethanol and unleaded gasoline blends (with ethanol contents from 20 to 85 percent by volume), ethanol fuel (fuel with an ethanol content of at least 85 percent by volume), leaded gasoline ultra-low sulfur diesel, and compressed natural gas.
 - b. Simulation testing: unleaded gasoline (with ethanol contents less than 20 percent), various ethanol and gasoline blends (with ethanol contents from 20 to 85 percent by volume), ethanol fuel (fuel with an ethanol content of at least 85 percent by volume), leaded gasoline, and ultra-low sulfur diesel.
 - c. Ultra-low sulfur diesel shall have a maximum sulfur content of 15 ppm (0.0015 percent) by weight.

III. PROCESS/OPERATIONAL RESTRICTION

1. The permittee shall not operate the durability and transmission test cells unless the associated thermal oxidizers are installed, maintained and operated in a satisfactory manner. Proper operation of the thermal oxidizers includes maintaining a minimum temperature of the greater of the following for each oxidizer:² **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c), (d) & (j))**
 - a. 1400°F averaged over any consecutive three-hour period and a minimum retention time of 0.5 second.
 - b. The thermal oxidizer temperature averaged over any consecutive three-hour period during AQD approved testing that demonstrated compliance with the NOx, CO, and VOC emission rates.
2. The permittee shall submit, implement, and maintain an updated malfunction abatement plan (MAP) as described in Rule 911(2) for FG-CNTRLDCELLS. The MAP shall, at a minimum, specify the following new requirements:
 - a. How the test cells will be switched between the simulation testing and durability or transmission testing.
 - b. How the permittee will assure that the thermal oxidizer is properly reconnected to a test cell that was previously doing simulation testing.

The MAP will continue to include the optimum operating parameters for the thermal oxidizers, maintenance and inspection schedules, monitoring equipment, and corrective action plans for equipment failure. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP 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.² **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

3. The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits.² **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))**
 - a. The approved Fuel Usage Monitoring Plan includes measures that will be taken to insure the quality of the data, such as meter calibration procedures.
 - b. The approved written plan shall be an enforceable requirement of this permit.
 - c. The plan may be revised and resubmitted for approval by AQD. The permittee shall revise the plan within 45 days after the notification specified in SC VII.5 is submitted to the AQD.
 - d. The existing approved plan shall apply until any revision is approved.

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))**

1. The permittee shall verify NOx, CO, VOC, PM10, and PM2.5 emission rates from a thermal oxidizer that is controlling a representative number of durability, and transmission test cells in FG-CNTRLDCELLS, by testing at owner's expense, in accordance with Department requirements, unless the permittee has submitted an acceptable demonstration that the most recent acceptable test remains valid and representative per pollutant. A representative number of test cells means several test cells operating in various testing modes. The permittee

must complete the required testing once every five years of operation, thereafter. Testing shall be based on an average of three 1-hour or longer test runs performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. 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, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test in a format approved by the AQD.² (R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))

- The permittee shall verify NO_x, CO, VOC, PM10, and PM2.5 emission rates from simulation test cells in FG-CNTRLDCELLS, by testing at owner's expense, in accordance with Department requirements. Testing may be conducted on representative test cells if approved by the AQD District Supervisor. The permittee must complete the required testing once every five years of operation, thereafter, unless the permittee has submitted an acceptable demonstration that the most recent acceptable test remains valid and representative per pollutant. Testing shall be based on an average of three 1-hour or longer test runs performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A
PM10/PM2.5	40 CFR Part 51, Appendix M

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD-approved Test Protocol. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. Emission rate results may be compared to the following:

Pollutant	lb/gallon	Typically higher emitting fuel
NO _x	0.0052	Ultra-low sulfur diesel
CO	0.13	Gasoline
VOCs	0.0082	Gasoline
PM10/PM2.5	0.0062	Gasoline, if ultra-low sulfur diesel has diesel particulate filter

The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test.² (R 336.1205(1)(a) & (3), R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))

- The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days before testing of the time and place performance tests will be conducted. (R 336.1213(3), R 336.2001(4))

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 complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(1)(a) & (3), 40 CFR 52.21(j))
2. The permittee shall keep, in a satisfactory manner, records of the maximum lead content in each fuel. The permittee shall keep all records on file and make them available to the Department upon request.² (40 CFR 52.21(d))
3. The permittee shall keep, in a satisfactory manner, records of the maximum sulfur content in the ultra-low sulfur diesel fuel. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))
4. The permittee shall install, calibrate, maintain and operate on a continuous basis and in a satisfactory manner, during engine testing operations, a device to monitor the temperature in the thermal oxidizers near the combustion chamber outlet. On a continuous basis, during engine testing operations, the permittee shall keep records of the temperature averaged over any consecutive three-hour period.² (R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c), (d) & (j))
5. The permittee shall calculate and keep records of the annual emissions of NO_x from FG-CNTRLDCELLS, described in Appendix A, in tons per calendar year. Calculations and record keeping shall begin the month in which regular operations of FG-CNTRLDCELLS resume and shall continue for five (5) calendar years. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.2818, R 336.2902)
6. ~~Scenario A: This monitoring/recordkeeping condition is effective until the notification specified in SC VII.5 is submitted to the AQD. The permittee shall keep the following information on a monthly basis for FG-CNTRLDCELLS:~~
 - a. ~~A record of the days of operation for each test cell operating during the calendar month.~~
 - b. ~~Gallons of each fuel used per month in each test cell for each type of testing (routed to a thermal oxidizer or simulation).~~
 - c. ~~Daily fuel use calculations based upon a calendar month fuel use for each test cell divided by the number of days each respective test cell operated during the calendar month. This is a combination of all test types for each test cell. This calculation shall be performed for each of the 46 test cells and then added together to determine the total daily fuel usage rate.~~
 - d. ~~Ultra-low sulfur diesel fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells when routed to the thermal oxidizers in FG-CNTRLDCELLS.~~
 - e. ~~Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for simulation testing for EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20 in FG-CNTRLDCELLS combined.~~
 - f. ~~Leaded gasoline fuel use calculations determining the annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS combined.~~
 - g. ~~Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells in FG-CNTRLDCELLS and all testing types combined.~~
 - h. ~~NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the monthly emission rate in tons per calendar month.~~
 - i. ~~CO emission calculations determining the monthly emission rate in tons per calendar month for durability and transmission testing combined and for simulation testing.~~

Formatted: Indent: Left: 0", Don't hyphenate

~~j. NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.~~

~~k. CO emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for durability and transmission testing combined and for simulation testing.~~

Formatted: Indent: Left: 0", Space After: 6 pt, Don't hyphenate

~~The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))~~

Formatted: Normal, Indent: Hanging: 0.25", Space After: 6 pt, Don't hyphenate, Tab stops: Not at 0.5"

~~67. Scenario B: This monitoring/recordkeeping condition is effective after the notification specified in SC-VII.5 is submitted to the AQD.~~—The permittee shall keep the following information on a monthly basis for FG-CNTRLDCELLS:

- a. Gallons of each fuel used per month in each test cell for each type of testing (routed to a thermal oxidizer or simulation).
- b. Ultra-low sulfur diesel fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells when routed to the thermal oxidizers in FG-CNTRLDCELLS.
- c. Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for simulation testing for EU-CELL-C12, EU-CELL-C14, EU-CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E17, EU-CELL-E19, EU-CELL-E20 in FG-CNTRLDCELLS combined.
- d. Leaded gasoline fuel use calculations determining the annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS combined.
- e. Total fuel use calculations determining the monthly and annual usage rate in gallons per 12-month rolling time period as determined at the end of each calendar month for all test cells in FG-CNTRLDCELLS and all testing types combined.
- f. NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the monthly emission rate in tons per calendar month.
- g. CO emission calculations determining the monthly emission rate in tons per calendar month for durability and transmission testing combined and for simulation testing.
- h. NO_x, VOC, lead, PM10, and PM2.5 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
- i. CO emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for durability and transmission testing combined and for simulation testing.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))

~~78. Scenario B: This monitoring/recordkeeping condition is effective after the notification specified in SC-VII.5 is submitted to the AQD.~~—The permittee shall keep the following information on a daily basis for FG-CNTRLDCELLS:

- a. A record of hours of operation for each test cell operating during the calendar day.
- b. Gallons of each fuel used per day in each test cell for all types of testing combined.

- c. Hourly fuel use calculations based upon a calendar day fuel use for each test cell divided by the number of hours each respective test cell operated during the calendar day. This is a combination of all test types for each test cell. This calculation shall be performed for each of the 80 test stands and then added together to determine the total hourly fuel usage rate.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))

- ~~89.~~ The permittee shall maintain a record of the size of the dynamometer used for each test stand in each test cell in an acceptable format. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD. (R 336.1213(3)(c), R 336.2001(5))
- ~~5. The permittee shall notify the AQD District Supervisor, in writing, of the intent to change from Scenario A to Scenario B, which affects the applicability of emission limits, material limits, and monitoring and recordkeeping conditions. All affected requirements are designated as Scenario A or Scenario B. If there is no designation of Scenario in the Special Condition, then the condition is applicable regardless of the operating scenario.³ (40 CFR 52.21(j))~~
- ~~56.~~ The permittee shall submit records of the annual actual emissions of NO_x from FG-CNTRLDCELLS, described in Appendix 4, in tons per calendar year, to the AQD Permit Section Supervisor within 60 days following the end of each reporting year if both the following occur:
 - a. The calendar year actual emissions of NO_x exceed the baseline actual emissions (BAE) by a significant amount (as defined by R 336.2801 and R 336.2901), and
 - b. The calendar year actual emissions differ from the pre-construction projection.

The report shall contain the name, address, and telephone number of the facility (major stationary source); the annual emissions as calculated pursuant to SC VI.5, and any other information the owner or operator wishes to include (i.e., an explanation why emissions differ from the pre-construction projection).² (R 336.2818, R 336.2902)

See Appendices 4-2 and 8-2

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 Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-WC-TC-C12A&B ^E	16 ²	59-56²	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-WC-TC-C14A&B ^E	16 ²	59-56²	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-WC-TC-C16A&B ^F	16 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-WC-TO-91-4.01	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-WC-TO-91-4.02	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-WC-TO-91-4.03	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
7. SV-WD-TO-92-4.01	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
8. SV-WD-TO-92-4.02	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
9. SV-WD-TO-92-4.03	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
10. SV-WD-TO-92-4.04	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
11. SV-WD-TO-92-4.05	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
12. SV-WD-TO-92-4.06	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
13. SV-WE-TO-93-4.01	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
14. SV-WE-TO-93-4.02	24 ²	59 ²	R 336.1225, 40 CFR 52.21(c) & (d)
15. SV-WE-TC-E02	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
16. SV-WE-TC-E04	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
17. SV-WE-TC-E06	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
18. SV-WE-TC-E08	12²	56²	R 336.1225, 40 CFR 52.21(c) & (d)
19. 18. SV-WE-TC-E17	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
20. 19. SV-WE-TC-E19	12 ²	56 ²	R 336.1225, 40 CFR 52.21(c) & (d)
21. 20. SV-WE-TC-E20	12²	56²	R 336.1225, 40 CFR 52.21(c) & (d)

^F Stacks are abandoned and not connected to engine test stands.

Formatted: Font: 10 pt
 Formatted: Normal, No bullets or numbering

Formatted: Font: 10 pt
 Formatted: Normal, No bullets or numbering

2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
20232028

ROP No: MI-ROP-N1436-

PTI No: MI-PTI-N1436-2018a2023

IX. OTHER REQUIREMENT(S)

1. Special conditions that are effective until the notification specified in SC VII.5 is submitted to the AQD will become obsolete upon submittal of the notification.² **(40 CFR 52.21(j))**
2. The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits. The approved Fuel Usage Monitoring Plan includes measures that will be taken to ensure the quality of the data, such as meter calibration procedures. The approved written plan shall be an enforceable requirement of this permit. The plan may be revised and resubmitted for approval by AQD. The existing approved plan shall apply until any revision is approved. **(R 336.1213(3))**

Footnotes:

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

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

**FG-CAMTO
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Eleven (11) natural gas fired thermal oxidizers serving forty-six (46) dynamometer test cells used to describe the monitoring procedures, methods and and/or specifications for operating and maintaining carbon monoxide (CO) and volatile organic compounds (VOC) control devices for FG-CNTRLDCELLS at the Chrysler Technology Center (CTC). The 46 engine dynamometer test cells house a total of 80 engine dynamometer test stands.

Emission Units: EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18, EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU CELL-E02, EU-CELL-E04, EU-CELL-E06, EU-CELL-E08, EU-CELL-E10, EU-CELL-E12, EU-CELL-E14, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20

POLLUTION CONTROL EQUIPMENT

Eleven (11) thermal oxidizers for durability and transmission test cells.

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))

1. The permittee shall continuously monitor combustion chamber temperature and record every 15 minutes for a 3-hour average as an indicator of proper operation of the thermal oxidizer. The indicator range is maintaining a minimum temperature of the greater of the following for each oxidizer: **(40 CFR 64.6(c)(1)(i) and (ii))**
 - a. 1400°F averaged over any consecutive three-hour period and a minimum retention time of 0.5 second.
 - b. The thermal oxidizer temperature averaged over any consecutive three-hour period established during AQD approved testing that demonstrated compliance with the CO and VOC emission rates in FG-CNTRLDCELLS.

2. The permittee shall inspect and maintain the thermal oxidizers to ensure the proper operation of the thermal oxidizer. The inspections and maintenance shall be conducted annually as specified in the CAM plan. **(40 CFR 64.6(c)(1)(i))**
3. For each control device in operation, the permittee shall conduct bypass monitoring for each bypass line such that the valve or closure method cannot be opened without creating an alarm condition for which a record shall be made. Records of the bypass line that was opened and the length of time the bypass line was opened shall be kept on file. **(40 CFR 64.3(a)(2))**
4. The temperature monitor shall continuously monitor combustion chamber temperature. The averaging period is 3-hour. The monitor shall be calibrated annually or according to manufacturer recommendations, which is more frequent. **(40 CFR 64.6(c)(1)(iii))**
5. An excursion is a 3-hr average temperature below the indicator range specified in SC VI.1. **(40 CFR 64.6(c)(2))**
6. Upon detecting an excursion or exceedance, the owner or operator shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). The engine dynamometer test stands connected to a specific oxidizer receive an electronic "ready" status signal from the oxidizer control system upon that oxidizer achieving an outlet temperature greater than the temperature at which compliance was last demonstrated, minus 50°F. Upon failure of the thermal oxidizer, the "ready" status signal is removed. The engine dynamometer test stands cannot operate without a "ready" status signal from the oxidizer. **(40 CFR 64.7(d))**
7. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the owner or operator shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this part, including data averages and calculations or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions. **(40 CFR 64.6(c)(3), 40 CFR 64.7(c))**
8. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**
9. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan and any activities undertaken to implement a quality improvement plan, and other information such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions. **(40 CFR 64.9(b)(1))**

See Appendix 3-2

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**

3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. Each semiannual report of monitoring and deviations shall include summary information on the number, duration and cause of excursions and/or exceedances and the corrective actions taken. If there were no excursions and/or exceedances in the reporting period, then this report shall include a statement that there were no excursions and/or exceedances. **(40 CFR 64.9 (a)(2)(i))**
5. Each semiannual report of monitoring and deviations shall include summary information on monitor downtime. If there were no periods of monitor downtime in the reporting period, then this report shall include a statement that there were no periods of monitor downtime. **(40 CFR 64.9 (a)(2)(ii))**
6. Each semiannual report of monitoring and deviations shall include a description of the actions taken to implement a Quality Improvement Plan (QIP) during the reporting period (if appropriate). If a QIP has been completed, the report shall include documentation that the plan has been implemented and if it has reduced the likelihood of excursions or exceedances. **(40 CFR 64.9(a)(2)(iii))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. For the purposes of Compliance Assurance Monitoring (CAM), excursions will be defined as follows: **(40 CFR 64.6(c)(2))**
 - a. A temperature excursion is defined as a confirmed three-hour period during which the average fails to meet the specified temperature requirements in SC VI.1.
 - b. A CAM excursion is defined as a failure to properly monitor as required in SC VI.1 and SC VI.2. **(40 CFR 64.3(b)(4))**
2. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 64)**
3. If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the AQD and if necessary, submit a proposed modification of the ROP and CAM Plan to address the necessary monitoring changes. Such a modification may include but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters. **(40 CFR 64.7(e))**
4. The permittee shall submit a QIP, if six (6) excursions occur in any three-month period. **(40 CFR 64.8(a))**

**FG-UNCNTRLDCELLS
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Thirty-four (34) engine dynamometer test cells (performance test cells) located in Wings B, C and E. The 34 engine dynamometer test cells house a total of 34 engine dynamometer test stands. Performance test cells do not have emission control equipment.

Emission Units: EU-CELL-B01, EU-CELL-B02, EU-CELL-B03, EU-CELL-B04, EU-CELL-B05, EU-CELL-B06, EU-CELL-B07, EU-CELL-B08, EU-CELL-B09, EU-CELL-B10, EU-CELL-B11, EU-CELL-B12, EU-CELL-B13, EU-CELL-B14, EU-CELL-B15, EU-CELL-B16, EU-CELL-B17, EU-CELL-B18, EU-CELL-C01, EU-CELL-C02, EU-CELL-C03, EU-CELL-C04, EU-CELL-C05, EU-CELL-C06, EU-CELL-C07, EU-CELL-C08, EU-CELL-E01, EU-CELL-E03, EU-CELL-E05, EU-CELL-E07, EU-CELL-E09, EU-CELL-E11, EU-CELL-E13, EU-CELL-E15

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	0.20 lb/gal ²	Hourly ^A	FG-UNCNTRLDCELLS	SC V.2	40 CFR 52.21(j)
2. NOx	32.1 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.2 lb NOx/ gal of fuel	FG-UNCNTRLDCELLS	SC VI.7	40 CFR 52.21(j)
3. CO	3.12 lb/gal ²	Hourly ^A	FG-UNCNTRLDCELLS	SC V.2	40 CFR 52.21(j)
4. CO	501 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 3.12 lb CO/gal of fuel	FG-UNCNTRLDCELLS	SC VI.8	40 CFR 52.21(j)
5. VOC	0.16 lb/gal ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.16 lb VOC/ gal of fuel	FG-UNCNTRLDCELLS	SC V.2	R336.1225, R336.1702(a)
6. VOC	25.7 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.16 lb VOC/ gal of fuel	FG-UNCNTRLDCELLS	SC VI.9	R336.1225, R336.1702(a)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
7. Lead	0.37 tons/year ²	Rolling 12-month time period calculated at the end of each calendar month, and an emission factor of 0.0075 lb Lead/gal of leaded fuel and 0.00011 for unleaded fuel	FG-UNCNTRLDCELLS	SC VI.10	40 CFR 52.21(j)

^A If a stack test is used to demonstrate compliance with this emission limit, the hourly emission rate during testing shall be determined by the average of the acceptable test runs performed in accordance with the method requirements.

Default emission factors shall be used unless otherwise approved by the AQD District Supervisor:

NO_x = 0.20 lb/gallon

CO = 3.12 lb/gallon

VOC = 0.16 lb/gallon

Lead, leaded fuel = 0.0075 lb/gallon

Lead, unleaded fuel = 0.00011 lb/gallon

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total Fuel	320,952 gallons/yr ²	12-month rolling time period as determined at the end of each calendar month.	FG-UNCNTRLDCELLS	SC VI.1, SC VI.4	R 336.1225, R 336.1702(a), 40 CFR 52.21(c) (d),&(j)
1a. Leaded Gasoline	95,000 gallons/yr ^{2,c,d}	12-month rolling time period as determined at the end of each calendar month.	While performing any type of testing in FG-CNTRLDCELLS and FG-UNCNTRLDCELLS	SC VI.1, SC VI.5, SCVI.6	40 CFR 52.21(d)
2. Total Fuel	2,362 gallons/day ²	Calendar day	FG-UNCNTRLDCELLS	SC VI.1, SC VI.2, SC VI.3, SC VI.4	R 336.1225, R 336.1702(a), 40 CFR 52.21(c) (d),&(j)

^CThis material limit is a subset of SC II.1 and is not in addition to SC II.1. It must be included in the total fuel calculation to demonstrate compliance.

^PThis material limit is a combined limit for FG-CNTRLDCELLS and FG-UNCNTRLDCELLS.

III. PROCESS/OPERATIONAL RESTRICTION

- The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits. The approved Fuel Usage Monitoring Plan includes measures that will be taken to ensure the quality of the data, such as meter calibration procedures. The approved written plan shall be an enforceable requirement of this permit. The plan may be revised and resubmitted for approval by AQD. The existing approved plan shall apply until any revision is approved.² (**R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j)**)

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))**

1. All testing, sampling, analytical and calibration procedures used for this test program shall be performed in accordance with 40 CFR Part 60, Appendix A, Methods 2, 7E, 10 and 25A, or other acceptable reference methods approved by the AQD. All test methods must be approved by AQD prior to testing. Not less than 60 days prior to the anticipated test date, the permittee shall submit a complete test plan to the AQD.² **(R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))**
2. Verification of NO_x, CO, and VOC emission rates from a representative number of performance test cells in FG-UNCNTRLDCELLS, by testing at owner's expense, in accordance with Department requirements, is required within 365 days of issuance of this permit if an acceptable emissions test has not been conducted within five years prior to the issuance of this ROP, unless the permittee has submitted and acceptable demonstration that the most recent acceptable test remains valid and representative. A representative number of test cells means several test cells operating in various testing modes. No less than 60 days prior to testing, a complete stack-testing plan must be submitted to the Air Quality Division. The final plan must be approved by the Division prior to testing. Verification of emission rates includes the submittal of a complete report of the test results within 60 days following the last day of testing.² **(R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))**
3. Additional testing shall be conducted, at a minimum, every five years from the date of the last test.² **(R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(j))**
4. The permittee shall notify the AQD Technical Programs Unit Supervisor and the District Supervisor not less than 7 days before testing of the time and place performance tests will be conducted. **(R 336.1213(3), R 336.2001(4))**

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 monitor and record the fuel usage from each test stand on a monthly basis.² **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d) & (j))**
2. The permittee shall monitor and record the number of days each test stand operated during each calendar month.² **(R 336.1702(a), 40 CFR 52.21(c), (d) & (j))**
3. Within 30 days of the end of the calendar month, the permittee shall calculate daily fuel usage rate based upon a calendar month fuel use for each test stand divided by the number of days each respective test stand operated during the calendar month. This calculation shall be performed for each of the 34 test stands and then added together to determine the total daily fuel usage rate.² **(R 336.1702(a), 40 CFR 52.21(c), (d) & (j))**
4. The permittee shall keep a record of total monthly and 12-month rolling time period fuel use for all test stands included in FG-UNCNTRLDCELLS.² **(R 336.1225, R 336.1702(a), 40 CFR 52.21(c), (d), & (j))**
5. The permittee shall keep a record of the total combined monthly leaded fuel usage for all test cells included in FG-CNTRLDCELLS and in FG-UNCNTRLDCELLS combined for the purpose of compliance demonstration.² **(40 CFR 52.21(d))**
6. The permittee shall keep records of the maximum lead content for each type of fuel used. **(40 CFR 52.21(d))**
7. The permittee shall keep monthly and previous 12-month NO_x emission calculation records for the purpose of compliance demonstration.² **(40 CFR 52.21(j))**
8. The permittee shall keep monthly and previous 12-month CO emission calculation records for the purpose of compliance demonstration.² **(40 CFR 52.21(j))**

~~2018a2023~~
~~20232028~~

Section 2 – Scientific Labs

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-~~2018a2023~~

9. The permittee shall keep monthly and previous 12-month VOC emission calculation records for the purpose of compliance demonstration.² **(R 336.1225, R 336.1702(a))**
10. The permittee shall keep monthly and previous 12-month lead emission calculation records for the purpose of compliance demonstration.² **(40 CFR 52.21(d))**
11. The permittee shall maintain a record of the size of the dynamometer used for each test stand in each test cell in an acceptable format. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**
4. The permittee shall submit any performance test reports to the AQD Technical Programs Unit and District Office, in a format approved by the AQD.² **(R 336.2001(5))**

See Appendix 8-2

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
1. SV-WINGB-PERF	10 ²	56 ²	R 336.1225 40 CFR 52.21(c) & (d)
2. SV-WINGC-PERF	16 ²	56 ²	R 336.1225 40 CFR 52.21(c) & (d)
3. SV-WINGE-PERF	10 ²	56 ²	R 336.1225 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the approved written plan for the collection, analysis, and recording of data used to determine compliance with the fuel use limits. The approved Fuel Usage Monitoring Plan includes measures that will be taken to ensure the quality of the data, such as meter calibration procedures. The approved written plan shall be an enforceable requirement of this permit. The plan may be revised and resubmitted for approval by AQD. The existing approved plan shall apply until any revision is approved. **(R 336.1213(3))**

Footnotes:

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

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

2018a2023 **Section 2 – Scientific Labs** ROP No: MI-ROP-N1436-
20232028 Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

**FG-GASTANKS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any existing or future emission unit that emits air contaminants that are exempt from the requirements of R 336.1201 pursuant to R 336.1284(2)(g)(i). This flexible group currently includes six (6) underground gasoline storage tanks for Wet Fuels Building, eighteen (18) underground gasoline storage tanks at the South Tank Farm and three (3) underground gasoline storage tanks at the North Tank Farm.

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

Vapor balance system

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not load or allow the loading of gasoline from a delivery vessel into any new stationary vessel of more than a 2,000-gallon capacity unless such stationary vessel is equipped with a permanent submerged fill pipe. **(R 336.1703, R 336.1607(1))**
2. The permittee shall not load or allow the loading of gasoline from a delivery vessel into a new stationary vessel of more than a 2,000-gallon capacity located at a new gasoline dispensing facility unless such stationary vessel is controlled by a vapor balance system or an equivalent control system approved by EGLE. The vapor balance system shall capture displaced gasoline vapor and air via a vapor tight collection line and shall be designed to return not less than 90 percent by weight of the displaced gasoline vapor from the stationary vessel to the delivery vessel. **(R 336.1703, R 336.1607(3))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The stationary vessel shall be equipped, maintained, or controlled with both of the following: **(R 336.1703, R 336.1607(4))**
 - a. An interlocking system or procedure to ensure that the vapor-tight collection line is connected before any gasoline can be loaded.
 - b. A device to ensure that the vapor-tight collection line shall close upon disconnection so as to prevent release of gasoline vapor.
2. Any delivery vessel subject to the above requirement shall be vapor-tight and shall be filled only at a loading facility that is equipped with a system as required in R 336.1705 and R 336.1706. **(R 336.1703)**

V. TESTING/SAMPLING

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

NA

See Appendix 5-2

VI. MONITORING/RECORDKEEPING

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

1. For gasoline storage tanks with capacities greater than or equal to 10,566 gallons (40 m³) but less than 19,810 gallons (75 m³), the permittee shall keep on file, for the life of each vessel, a record indicating its dimensions and storage capacity. Except as specified above, gasoline storage tanks with capacities less than or equal to 19,810 gallons are exempt from the requirements of 40 CFR Part 60, Subpart A (General Provisions) and provisions of 40 CFR Part 60, Subpart Kb (Standards of Performance for Volatile Organic Liquid Storage Vessels). **(40 CFR 60.110(b)(a) & (b), 40 CFR 60.116(b)(a) & (b))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall utilize a written procedure and checklist to ensure that the vapor tight collection line is connected before any gasoline is loaded into the storage tanks. **(R 336.1213(3))**
2. The permittee shall comply with all applicable provisions of R 336.1703. **(R 336.1703)**

Footnotes:

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

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

**FG-WETFUELSTEST
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Testing equipment in the wet fuels area. Process and process equipment are exempt pursuant to R 336.1283(2)(a)(ii)

Emission Units: EU-LOFLOVPRGNRTR, EU-HIFLOVPRGNRTR, EU-WETFUELGASTST, EU-WETFUELSMINSR

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The testing equipment used in the Wet Fuels Area shall not be used for any of the following: **(R 336.1283(2))**
 - a. The production of a product for sale unless such sale is only incidental to the use of the pilot process or process equipment.
 - b. The repetitive production of a product using the same process or process equipment design and operating parameters.
 - c. The production of a product for market testing or market development.
 - d. The treatment or disposal of waste which is designated, by listing or specified characteristic, as hazardous under federal regulations or state rules.
2. Notwithstanding the exemption listed in R 336.1283(2)(a), the requirements of R 336.1201(1) to obtain a permit to install applies to any process or process equipment installation, construction, reconstruction, relocation, alteration, or modification that satisfies any of the following conditions: **(R 336.1278)**
 - a. It is a major stationary source or major modification as defined in the prevention of significant deterioration regulations in 40 CFR 52.21. **(R 336.1278(a))**
 - b. It is a major offset source, or a major offset modification as defined in R 336.1113(c) and (b), respectively, for which volatile organic compounds, particulate matter, PM-10, carbon monoxide, nitrogen oxides, sulfur dioxide, or lead is a nonattainment air contaminant. **(R 336.1278(b))**
 - c. It has actual emissions of volatile organic compounds, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, or lead above the significance levels as defined in R 336.1119. **(R 336.1278(c))**
 - d. It is a major source as defined in the national emission standards for hazardous air pollutants for source categories, 40 CFR 63.2, and it is subject to the provisions of 40 CFR 63.40 through 63.44. **(R 336.1278(d))**

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))

1. For each equipment covered under this flexible group, the permittee shall record fuel usage on a monthly basis. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. (R 336.1213(3)(c)(ii))
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. (R 336.1213(3)(c)(i))
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. (R 336.1213(4)(c))

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**FG-RULE331
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any existing or future emission units that emit air contaminants which are exempt from the requirements of R 336.1201 pursuant to R 336.1285(2)(l)(vi)(A) and R 336.1285(2)(l)(vi)(C). Flexible group includes any equipment for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening or polishing metals, plastics, wood and wood products, and any exhaust system or collector exclusively serving the above equipment. Equipment is exhausted externally and used on a nonproduction basis.

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Particulate	0.1 lb/1000 lb of exhaust gases	24 Hour	FG-RULE331	SC VI. 2	R 336.1331(a)

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

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))

1. The permittee shall keep an updated record of all emission units subject to R 336.1331(a). (R 336.1213(3))
2. At least once per year, the permittee shall conduct and log all routine and scheduled preventative maintenance for the dust control equipment. (R 336.1213(3))

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

**FG-RULE290
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.

Emission Units installed on or after December 20, 2016: EU-RULE290 and any future emission unit that meets the requirements of this flexible group.

Emission Units installed prior to December 20, 2016: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

1. Each emission unit that emits only noncarcinogenic volatile organic compounds or noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, if the total uncontrolled or controlled emissions of air contaminants are not more than 1,000 or 500 pounds per month, respectively. **(R 336.1290(2)(a)(i))**
2. Any emission unit for which CO2 equivalent emissions are not more than 6,250 tons per month and for which the total uncontrolled or controlled emissions of all other air contaminants are not more than 1,000 or 500 pounds per month, respectively, and all the following criteria listed below are met: **(R 336.1290(2)(a)(ii))**
 - a. For toxic air contaminants, excluding noncarcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with initial threshold screening levels greater than or equal to 0.04 micrograms per cubic meter and less than 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(A))**
 - b. For toxic air contaminants with initial risk screening levels greater than or equal to 0.04 microgram per cubic meter, the uncontrolled or controlled emissions shall not exceed 20 or 10 pounds per month, respectively. **(R 336.1290(2)(a)(ii)(B))**
 - c. The emission unit shall not emit any toxic air contaminants, excluding non-carcinogenic volatile organic compounds and noncarcinogenic materials which are listed in Rule 122(f) as not contributing appreciably to the formation of ozone, with an initial threshold screening level or initial risk screening level less than 0.04 microgram per cubic meter. **(R 336.1290(2)(a)(ii)(C))**
 - d. For total mercury, the uncontrolled or controlled emissions shall not exceed 0.01 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(D))**
 - e. For lead, the uncontrolled or controlled emissions shall not exceed 16.7 pounds per month from emission units installed on or after December 20, 2016. **(R 336.1290(2)(a)(ii)(E))**
3. Any emission unit that emits only particulate air contaminants without initial risk screening levels and other air contaminants that are exempted under Rule 290(2)(a)(i) or Rule 290(2)(a)(ii), if all the following provisions are met: **(R 336.1290(2)(a)(iii))**

- a. The particulate emissions are controlled by an appropriately designed and operated fabric filter collector or an equivalent control system which is designed to control particulate matter to a concentration of less than or equal to 0.01 pound of particulate per 1,000 pounds of exhaust gases and which does not have exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(2)(a)(iii)(A))**
- b. The visible emissions from the emission unit are not more than five percent opacity in accordance with the methods contained in Rule 303. **(R 336.1290(2)(a)(iii)(B))**
- c. The initial threshold screening level for each particulate toxic air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(2)(a)(iii)(C))**

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The provisions of Rule 290 apply to each emission unit that is operating pursuant to Rule 290. **(R 336.1290)**
2. The following requirements apply to emission units installed on or after December 20, 2016, utilizing control equipment:
 - a. An air cleaning device for volatile organic compounds shall be installed, maintained, and operated in accordance with the manufacturer's specifications. Examples include the following: **(R 336.1290(2)(b)(i), R 336.1910)**
 - i. Oxidizers and condensers equipped with a continuously displayed temperature indication device.
 - ii. Wet scrubbers equipped with a liquid flow rate monitor.
 - iii. Dual stage carbon absorption where the first canister is monitored for breakthrough and replaced if breakthrough is detected.
 - b. An air cleaning device for particulate matter shall be installed, maintained, and operated in accordance with the manufacturer's specifications or the permittee shall develop a plan that provides to the extent practicable for the maintenance and operation of the equipment in the manner consistent with good air pollution control practices for minimizing emissions. It shall also be equipped to monitor appropriate indicators of performance, for example, static pressure drop, water pressure, and water flow rate. **(R 336.1290(2)(b)(ii), R 336.1910)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

NA

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 maintain records of the following information for each emission unit for each calendar month using the methods outlined in EGLE, AQD Rule 290; Permit to Install Exemption Record form (EQP 3558) or in a format that is acceptable to the AQD District Supervisor. **(R 336.1213(3))**
 - a. Records identifying each air contaminant that is emitted. **(R 336.1213(3))**

- b. Records identifying if each air contaminant is controlled or uncontrolled. **(R 336.1213(3))**
 - c. Records identifying if each air contaminant is either carcinogenic or non-carcinogenic. **(R 336.1213(3))**
 - d. Records identifying the ITSL and IRSL, if established, of each air contaminant that is being emitted under the provisions of Rules 290(2)(a)(ii) and (iii). **(R 336.1213(3))**
 - e. Records of material use and calculations identifying the quality, nature, and quantity of the air contaminant emissions in sufficient detail to demonstrate that the actual emissions of the emission unit meet the emission limits outlined in this table and Rule 290. Volatile organic compound emissions from units installed on or after December 20, 2016, shall be calculated using mass balance, generally accepted engineering calculations, or another method acceptable to the AQD District Supervisor. **(R 336.1213(3), R 336.1290(2)(d))**
 - f. Records are maintained on file for the most recent two-year period and are made available to the department upon request. **(R 336.1213(3), R 336.1290(2)(e))**
2. The permittee shall maintain an inventory of each emission unit that is exempt pursuant to Rule 290. This inventory shall include the following information. **(R 336.1213(3))**
- a. The permittee shall maintain a written description of each emission unit as it is maintained and operated throughout the life of the emission unit. **(R 336.1290(2)(c), R 336.1213(3))**
 - b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall maintain a written description of the control device, including the designed control efficiency and the designed exhaust gas flow rate. **(R 336.1213(3))**
3. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(2)(a)(iii), the permittee shall perform a monthly visible emission observation of each stack or vent during routine operating conditions. This observation need not be performed using Method 9. The permittee shall keep a written record of the results of each observation. **(R 336.1213(3))**

VII. REPORTING

- 1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
- 2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
- 3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

2018a2023 **Section 2 – Scientific Labs** ROP No: MI-ROP-N1436-
20232028 Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

**FG-RULE287(2)(c)
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278, 278a and 287(2)(c). Emission units installed/modified before December 20, 2016, may show compliance with Rule 287 in effect at the time of installation/modification.

Emission Units installed on or after December 20, 2016: EU-RULE287(2)(c) and any future emission unit that meets the requirements of this flexible group.

Emission Units installed prior to December 20, 2016: EU-MAINTPAINTING, EU-PRODDSGNPAINT, EU-WOODSHOPPAINT

POLLUTION CONTROL EQUIPMENT

Fabric Filter

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/Operating Scenario	Equipment	Underlying Applicable Requirement
1. Coatings	200 Gallons/month (minus water as applied)	Calendar month	Each emission unit	R 336.1287(2)(c)(i)

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

- Any exhaust system installed on or after December 20, 2016, that serves only coating spray equipment shall be equipped with a dry filter control or water wash control which is installed, maintained, and operated in accordance with the manufacturer's specifications, or the permittee develops a plan which provides to the extent practicable for the maintenance and operation of the equipment in a manner consistent with good air pollution control practices for minimizing emissions. All emission units installed before December 20, 2016, with an exhaust system that serves only coating spray equipment must have a properly installed and operated particulate control system. (R 336.1213(2), R 336.1287(2)(c)(ii), R 336.1910)

V. TESTING/SAMPLING

NA

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 maintain records of the following information for each emission unit for each calendar month using the methods outlined in EGLE, AQD Rule 287(2)(c), Permit to Install Exemption Record form (EQP 3562) or in a format acceptable to the AQD District Supervisor. **(R 336.1213(3))**
 - a. Volume of coating used, as applied, minus water, in gallons. **(R 336.1287(2)(c)(iii))**
 - b. For emission units installed on or after December 20, 2016, documentation of any filter replacements or maintenance of water wash control for exhaust systems serving coating spray equipment or other documentation included in a plan developed by the owner or operator of the equipment. For emission units installed before December 20, 2016, documentation that the exhaust system that serves only coating spray equipment is supplied with a properly installed and operating particulate control system. **(R 336.1213(3))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

**FG-COLD CLEANERS
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

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

Emission Unit: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. Cleaned parts shall be drained for no less than 15 seconds or until dripping ceases. **(R 336.1611(2)(b), R 336.1707(3)(b))**
2. The permittee shall perform routine maintenance on each cold cleaner as recommended by the manufacturer. **(R 336.1213(3))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The cold cleaner must meet one of the following design requirements:
 - a. The air/vapor interface of the cold cleaner is no more than ten square feet. **(R 336.1281(2)(h))**
 - b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(2)(r)(iv))**
2. The cold cleaner shall be equipped with a device for draining cleaned parts. **(R 336.1611(2)(b), R 336.1707(3)(b))**
3. All new and existing cold cleaners shall be equipped with a cover and the cover shall be closed whenever parts are not being handled in the cold cleaner. **(R 336.1611(2)(a), R 336.1707(3)(a))**
4. The cover of a new cold cleaner shall be mechanically assisted if the Reid vapor pressure of the solvent is more than 0.3 psia or if the solvent is agitated or heated. **(R 336.1707(3)(a))**
5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:

- a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**
- b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
- c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

NA

VI. MONITORING/RECORDKEEPING

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

1. For each new cold cleaner in which the solvent is heated, the solvent temperature shall be monitored and recorded at least once each calendar week during routine operating conditions. **(R 336.1213(3))**
2. The permittee shall maintain the following information on file for each cold cleaner: **(R 336.1213(3))**
 - a. A serial number, model number, or other unique identifier for each cold cleaner.
 - b. The date the unit was installed, manufactured or that it commenced operation.
 - c. The air/vapor interface area for any unit claimed to be exempt under Rule 281(2)(h).
 - d. The applicable Rule 201 exemption.
 - e. The Reid vapor pressure of each solvent used.
 - f. If applicable, the option chosen to comply with Rule 707(2).
3. The permittee shall maintain written operating procedures for each cold cleaner. These written procedures shall be posted in an accessible, conspicuous location near each cold cleaner. **(R 336.1611(3), R 336.1707(4))**
4. As noted in Rule 611(2)(c) and Rule 707(3)(c), if applicable, an initial demonstration that the waste solvent is a safety hazard shall be made prior to storage in non-closed containers. If the waste solvent is a safety hazard and is stored in non-closed containers, verification that the waste solvent is disposed of so that not more than 20 percent, by weight, is allowed to evaporate into the atmosphere shall be made on a monthly basis. **(R 336.1213(3), R 336.1611(2)(c), R 336.1707(3)(c))**

VII. REPORTING

1. Prompt reporting of deviations pursuant to General Conditions 21 and 22 of Part A. **(R 336.1213(3)(c)(ii))**
2. Semiannual reporting of monitoring and deviations pursuant to General Condition 23 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for reporting period July 1 to December 31 and September 15 for reporting period January 1 to June 30. **(R 336.1213(3)(c)(i))**
3. Annual certification of compliance pursuant to General Conditions 19 and 20 of Part A. The report shall be postmarked or received by the appropriate AQD District Office by March 15 for the previous calendar year. **(R 336.1213(4)(c))**

2018a2023
20232028

Section 2 – Scientific Labs

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

See Appendix 8-2

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

2018a2023 **Section 2 – Scientific Labs** Expiration Date: October 30,
20232028

ROP No: MI-ROP-N1436-

PTI No: MI-PTI-N1436-2018a2023

E. NON-APPLICABLE REQUIREMENTS

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

APPENDICES

Appendix 1-2. Acronyms and Abbreviations

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO _{2e}	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	°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 ₂ 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
EGLE	Michigan Department of Environment, Great Lakes, and Energy	NMOC	Non-methane Organic Compounds
MSDS	Material Safety Data Sheet	NO _x	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	%	Percent
RACT	Reasonable Available Control Technology	psia	Pounds per square inch absolute
ROP	Renewable Operating Permit	psig	Pounds per square inch gauge
SC	Special Condition	scf	Standard cubic feet
SCR	Selective Catalytic Reduction	sec	Seconds
SNCR	Selective Non-Catalytic Reduction	SO ₂	Sulfur Dioxide
SRN	State Registration Number	TAC	Toxic Air Contaminant
TEQ	Toxicity Equivalence Quotient	Temp	Temperature
USEPA/EPA	United States Environmental Protection Agency	THC	Total Hydrocarbons
VE	Visible Emissions	tpy	Tons per year
		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.

2018a2023
20232028

Section 2 – Scientific Labs

ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

Appendix 2-2. Schedule of Compliance

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

Appendix 3-2. Monitoring Requirements

The following monitoring procedures, methods, or specifications are the details to the monitoring requirements identified and referenced in FG-CAMTO:

Elements of a CAM Plan

General – Keep records of maintenance inspections which include the dates, results of the inspections and the dates and reasons for repairs if made. The following items shall be inspected for each respective control device used to demonstrate compliance with applicable CO and VOC emissions limits.

TOs

- Annual (i.e., once each calendar year) validation of thermocouple accuracy or recalibration of each thermocouple. The thermocouple may be replaced in lieu of validation.
- Annual performance of a visual internal inspection*

RTOs

- Annual validation of thermocouple accuracy or recalibration of each thermocouple. The thermocouple may be replaced in lieu of validation.
- Annual performance of an inspection of heat exchange/heat transfer media*
- Annual performance of an inspection of the valve seals condition and verify valve timing/synchronization*

*The requirement to address this issue is satisfied if a performance test (i.e., stack test) has been performed on the control device within the current or prior calendar year.

Appendix 4-2. Recordkeeping

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in FG-CNTRLDCELLS. Alternative formats must be approved by the AQD District Supervisor.

Recordkeeping Provisions for Source Using Actual to Projected-Actual Applicability Test

All information in this Appendix shall be maintained pursuant to R 336.2818 and R 336.2902 for five years after the emission unit(s) identified in Table C resume normal operations, and shall be made available to the Department upon request.

- A. Project Description: The project is to allow simulation testing in 9 test cells of the 46 test cells permitted under FG-CNTRLDCELLS. The simulation testing will require the construction of a bypass stack for each test cell and the ability to run a type of testing that is not controlled by a thermal oxidizer. The test cells will be able to switch between simulation testing and durability or transmission testing, which will be controlled by a thermal oxidizer. Multiple fuels are allowed in all testing types.
- B. Applicability Test Description: Minor modifications are not subject to PSD. Actual to projected actual applicability test as described in the table below will be used to demonstrate that PSD does not apply to these modifications.

C. Emission Limitations for FG-CNTRLDCELLS:

Table C

Emissions for FG-CNTRLDCELLS	NO _x	Reference
	tpy	
A. Baseline Actual Emissions ¹	119.23	MAERS data from 2012/2013, used for all pollutants
B. Capable of Accommodating ²	149.71	May 2013, ratioed to 30-days
C. Projected Actual Emissions ³	184.21	
D. Excluded Emissions (D=B-A)	30.48	
E. Total Project Increase (E=C-A-D)	34.51	

- ¹ Average actual annual emissions emitted from FG-CNTRLDCELLS during a 24-month consecutive time period.
- ² Emissions that FG-CNTRLDCELLS is capable of accommodating in the future. Must have been achieved during the baseline period.
- ³ Projected Actual Emissions based on new and existing fuel restrictions.

Appendix 5-2. Testing Procedures

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

Appendix 6-2. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-N1436-2013. Those ROP revision applications that are being issued concurrently with this ROP renewal are identified by an asterisk (*). Those revision applications not listed with an asterisk were processed prior to this renewal.

Source-Wide PTI No MI-PTI-N1436-2013 is being reissued as Source-Wide PTI No. MI-PTI-N1436-2018a2023.

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

2018a2023 **Section 2 – Scientific Labs** 20232028
 ROP No: MI-ROP-N1436- Expiration Date: October 30,
 PTI No: MI-PTI-N1436-2018a2023

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP N1436-2018.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
155-18	202200058 / December 20, 2022	<p>Incorporate PTI No. 155-18 into the ROP, which was to add simulation testing capabilities to 9 test cells (11 test stands) and to change pound/gallon (lb/gallon) emission limits to pound/hour (pph) emission limits. A clarification of allowed fuels was also included in the processing.</p> <p>PTI No. 155-18 was not required to go through the public participation process, but it is incorporated into the ROP as a Significant Modification since the PTI included a fuel restriction to the material limits of FG-CNTRLDCELLS to keep emission below major modification levels.</p> <p>PTI No. 155-18 added optional scenarios to the Emission Limits and Material Limits and Monitoring/Recordkeeping requirements for FG-CNTRLDCELLS. One scenario contains the existing lb/gallon limits, and the other scenario contains new pph limits and the associated gallons/hour restriction.</p> <p>FG-UNCNTRLDCELLS is unaffected by the modification, it was only pulled in for some administrative changes.</p>	EU-CELL-B01, EU-CELL-B02, EU-CELL-B03, EU-CELL-B04, EU-CELL-B05, EU-CELL-B06, EU-CELL-B07, EU-CELL-B08, EU-CELL-B09, EU-CELL-B10, EU-CELL-B11, EU-CELL-B12, EU-CELL-B13, EU-CELL-B14, EU-CELL-B15, EU-CELL-B16, EU-CELL-B17, EU-CELL-B18, EU-CELL-C01, EU-CELL-C02, EU-CELL-C03, EU-CELL-C04, EU-CELL-C05, EU-CELL-C06, EU-CELL-C07, EU-CELL-C08, EU-CELL-C09, EU-CELL-C10, EU-CELL-C11, EU-CELL-C12, EU-CELL-C13, EU-CELL-C14, EU-CELL-C15, EU-CELL-C16, EU-CELL-C17, EU-CELL-C18, EU-CELL-C19, EU-CELL-C20, EU-CELL-D01, EU-CELL-D02, EU-CELL-D03, EU-CELL-D04, EU-CELL-D05, EU-CELL-D06, EU-CELL-D07, EU-CELL-D08, EU-CELL-D09, EU-CELL-D10, EU-CELL-D11, EU-CELL-D12, EU-CELL-D13, EU-CELL-D14, EU-CELL-D15, EU-CELL-D16, EU-CELL-D17, EU-CELL-D18, EU-CELL-D19, EU-CELL-D20, EU-CELL-D21, EU-CELL-D22, EU-CELL-E01, EU CELL-E02, EU-CELL-E03, EU-CELL-E04, EU-CELL-E05, EU-CELL-E06, EU-CELL-E07, EU-CELL-E08, EU-CELL-E09, EU-CELL-E10, EU-CELL-E11, EU-CELL-E12, EU-CELL-E13, EU-CELL-E14, EU-CELL-E15, EU-CELL-E16, EU-CELL-E17, EU-CELL-E18, EU-CELL-E19, EU-CELL-E20, FG-CNTRLDCELLS, FG-UNCNTRLDCELLS

Appendix 7-2. Emission Calculations

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-ENGPAINSHOP:

The Material Safety Data Sheet (MSDS) and Technical Data Sheet should contain the information pertaining to the coating VOC content, pounds VOC/gallon of coating, less water.

If it is not given, then calculate the coating VOC content, pounds VOC/gallon of coating (less water, as received), **G**, from the pounds VOC/gallon of coating (with water, as received), **F**.

If volume fraction of water, **V**, is given, then

$$G = F/(1-V)$$

Where **F** = Coating VOC content, pounds VOC/gallon of coating (with water, as received)

V = Volume fraction of water

If weight fraction of water, **W**, is given, then, convert **W** to **V** by

$$V = WP_c/P_w$$

Where **P_w** = Density of water, 8.34 pounds per gallon

P_c = Density of coating, pounds per gallon

If no solvent reduction is done, or the coating is reduced with water, then the coating VOC content, less water, as received = coating VOC content, less water, as applied.

2.7.2. To calculate coating VOC content of reduced coating, pounds VOC/gallon of coating (less water, as applied), **X**, if the coating is reduced by a solvent:

$$x = \frac{(1-V)LM + NQ}{(1-V)L + N}$$

Where **V** = Volume fraction of water

L = Gallons of coating

M = Coating VOC content, pounds VOC/gallon of coating (less water)

N = Gallons of solvent reducer

Q = Density of solvent reducer, pounds/gallon

Appendix 8-2. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

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

B. Other Reporting

2018a2023 **Section 2 – Scientific Labs** 20232028 ROP No: MI-ROP-N1436-
Expiration Date: October 30,

PTI No: MI-PTI-N1436-2018a2023

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.