From:	AMY KASA
To:	EGLE-ROP
Cc:	Jessica Alderton; Bognar, Adam (EGLE); Zhu, Joyce (EGLE); Liveson, Sam (EGLE)
Subject:	B4032-ROP Renewal Application
Date:	Thursday, August 29, 2024 5:36:00 PM
Attachments:	image001.png image002.png EQP6000-ROP-Renewal-Application-Form.pdf B4032_ROP_Mark-Up.docx AI Form_Part C.pdf PTE Summary Table.pdf CAM_CEES_07232024.pdf RTO O&M Plan_2022.pdf

Good Afternoon Joyce,

Attached is a copy of B4032-ROP Renewal Application package for General Motors LLC-Pontiac Engineering Center.

Package shipped via FedEx on 8/29/2024, tracking 8182 8516 9541

Please let me know if you have any questions or need anything else.

Thank you

Amy Kasa
Environmental Engineer
General Motors LLC
Pontiac Engineering Center
Pontiac Metal Center
Waterford & Pontiac CCA's
amy.kasa@gm.com tel: (313)727-6950

EGLE

RENEWABLE OPERATING PERMIT
RENEWAL APPLICATION FORM

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

GENERAL INSTRUCTIONS

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

PART A: GENERAL INFORMATION

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

SOURCE INFORMATION

SRN	SIC Code	NAICS Code	Existing ROP Number	Section Number (if applicable)
B4032	8734	541380	MI-ROP-B4032-2020a	1

Source Name: General Motors LLC – Pontiac Engineering Center

Street Address: 850 Glenwood Ave

City	State	ZIP Code	County
Pontiac	MI	48340	Oakland

Section/Town/Range (if address not available):

Source Description: Pontiac Engineering Center consists of two office buildings and an engine and transmission research and development (R&D) facility.

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

OWNER INFORMATION

Owner Name	Section Number (if applicable)
General Motors LLC	1

Mailing address (☐ check if same as source address): 300 Renaissance Center Drive

City	State	ZIP Code	County	Country
Detroit	MI	48265	Wayne	USA

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

SRN: B4032	Section Number (if applicable):

PART A: GENERAL INFORMATION (continued)

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

CONTACT INFORMATION

Contact 1 Name			Title	
Jessica Alderton			Staff Environmental Engineer	
Company Name & Mailing address (☐ check if same as source address)				
GM Warren Tech Center Cole Engineering Center – 29755 Louis Chevrolet Road				
City	State	ZIP Code	County	Country
Warren	MI	48093	Macomb	USA
Phone number		E-mail address		
586.863.8490		Jessica.alderton@gm.com		

Contact 2 Name (optional)			Title	
Amy Kasa			Environmental Engineer	
Company Name & Mailing address (☒ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		
313.727.6950		Amy.kasa@gm.com		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name			Title	
Cori Johnston			Operations Director, Pontiac Engineering Center	
Company Name & Mailing address (☒ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		
216.296.3459		cori.johnston@gm.com		

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

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

SRN: B4032	Section Number (if applicable):

PART B: APPLICATION SUBMITTAL and CERTIFICATION by Responsible Official

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

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

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

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

Cori Johnston - Operations Group Manager

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

Cori Johnston — 8/29/2024

Signature of Responsible Official **Date**

SRN: B4032	Section Number (if applicable):

PART C: SOURCE REQUIREMENT INFORMATION

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

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

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

SRN: B4032	Section Number (if applicable):

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

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

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

If No, go to Part E.

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

Emission Unit ID	Emission Unit Description	Rule 212(4) Citation [e.g. Rule 212(4)(c)]	Rule 201 Exemption Rule Citation [e.g. Rule 282(2)(b)(i)]
EU-CYLINDERS	Miscellaneous butane and propane cylinder usage	212(4)(d)	284(2)(b)
EU-FUELAST	550-gallon fuel tank for mobile equipment	212(4)(d)	284(2)(g)(ii)
EU-RACINGGASTANKS	4 small gasoline ASTs for the Racing. (3 - 250 gal tanks & 1-550 gal tank)	212(4)(d)	284(2)(g)(iii)
EU-WING3GASTANK	250-gallon gasoline tank for Wing 3	212(4)(d)	284(2)(g)(iii)
EU-HYDROGENTANK	One 17,150-gallon (1,944,810 CF) hydrogen tank and associated piping	212(4)(d)	284(2)(j)
EU-NITROGENTANKS	Two nitrogen tanks (960,000 ft3 each)	212(4)(d)	284(2)(j)
EU-SPANGAS	Miscellaneous span gas cylinders (hydrogen ammonia, nitrogen, argon, helium, air ethylene, oxygen, carbon monoxide mixtures. Pure materials and mixtures).	212(4)(d)	284(2)(j)
EU-CYLINDERS2	Miscellaneous gas cylinder storage (hydrogen ammonia, nitrogen, argon, helium, air ethylene, oxygen, carbon monoxide mixtures. Pure materials and mixtures).	212(4)(d)	284(2)(j)
EU-BLDGABOILERS	Natural gas boiler in building A.	212(4)(c)	282(2)(b)(i)
EU-BLDGBBOILERS	Miscellaneous natural gas boilers in building B.	212(4)(c)	282(2)(b)(i)
EU-BDGCBOILERS	Miscellaneous natural gas boilers in building C.	212(4)(c)	282(2)(b)(i)
EU-GASPUMP	Portable gasoline RICE used throughout the site for fluid transfer. Not subject to RICE MACT or NSPS Subpart JJJJ.	212(4)(e)	285(2)(g)

Comments:

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

SRN: B4032	Section Number (if applicable):

PART E: EXISTING ROP INFORMATION

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

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

Comments:
EU-BLDGA-GENERATOR, removed from facility in 2020.
EU-BLDGC-GENERATOR COMPUTERRM, dismantled in 2021

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

SRN: B4032	Section Number (if applicable):

PART F: PERMIT TO INSTALL (PTI) INFORMATION

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

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

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

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

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

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

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

Comments:

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

SRN: B4032	Section Number (if applicable):

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

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

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

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

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

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

Comments:

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

SRN: B4032	Section Number (if applicable):

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

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

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

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

SRN: B4032	Section Number (if applicable):

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

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

Clarification on recordkeeping for leaded fuels.

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

SRN: B4032	Section Number (if applicable):

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

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

Dismantled EU-BLDGC-GENERATOR COMPUTERRM

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-**

EGLE

RENEWABLE OPERATING PERMIT APPLICATION
AI-001: ADDITIONAL INFORMATION

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

	SRN:	Section Number (if applicable):

1. Additional Information ID
AI-

Additional Information

2. Is This Information Confidential? ☐ Yes ☐ No

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: B4032	Section Number (if applicable):

1. Additional Information ID
AI-Part C

Additional Information

2. Is This Information Confidential? ☐ Yes ☒ No

Part C Section C4 & C5- Potential to Emit:

The site has a synthetic minor permit for HAPs. The PTE is based on those limits and did not change in this renewal.

The Criteria Pollutant PTE summary is attached.

Part C.8 - See attached CAM Plan.

Part C.9 - See attached O&M Plan.

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

EFFECTIVE DATE: April 30, 2020
REVISION DATE: November 21, 2022

ISSUED TO

General Motors LLC - Pontiac Engineering Center

State Registration Number (SRN): B4032

LOCATED AT

850 Glenwood Avenue, Pontiac, Oakland County, Michigan 48340

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-B4032-2020a

Expiration Date: April 30,2025

Administratively Complete ROP Renewal Application
Due Between October 30, 2023 and October 30, 2024

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 Rule 210(1) of the administrative rules promulgated under Act 451, 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-B4032-2020a

This Permit to Install (PTI) is issued in accordance with and subject to Section 5505(1) of Act 451. Pursuant to Rule 214a of the administrative rules promulgated under Act 451, 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, Warren District Supervisor

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AUTHORITY AND ENFORCEABILITY

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

A. GENERAL CONDITIONS

Permit Enforceability

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

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

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

General Provisions

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

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

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

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

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

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

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

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

Equipment & Design

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

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

Emission Limits

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

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

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

Testing/Sampling

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

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

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

Monitoring/Recordkeeping

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

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

Certification & Reporting

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

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

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

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

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

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

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

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

Permit Shield

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

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

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

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

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

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

Revisions

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

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

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

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

Reopenings

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

Renewals

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

Stratospheric Ozone Protection

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

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

Risk Management Plan

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

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

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

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

Emission Trading

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

Permit to Install (PTI)

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

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

45. The terms and conditions of a PTI shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by the PTI. If a new owner or operator submits a written request to the department pursuant to Rule 219 and the department approves the request, this PTI will be amended to reflect the change of ownership or operational control. The request must include all of the information required by Subrules (1)(a), (b) and (c) of Rule 219. The written request shall be sent to the appropriate AQD District Supervisor, 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:
[1]This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).
[2]This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

B. SOURCE-WIDE CONDITIONS

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

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

SOURCE-WIDE CONDITIONS

DESCRIPTION

All emission units at the stationary source. This includes any emission unit covered by this or any other general permit or any permit to install issued pursuant to Rule 201, and any emission unit exempt from the requirement to obtain a permit to install.

POLLUTION CONTROL EQUIPMENT

All the engine dynamometers in EU-TESTCELLS (1-128), EU3RDWINGR&DTC(1-18), and EU3RDWINGR&DTCRM utilize four communal regenerative thermal oxidizers (RTO's)

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Each Individual HAP	0.8 tons per month[2]	Calendar Month	FG-FACILITY	SC VI.2 SC VI.3	**R 336.1205(3)**
2. Each Individual HAP	Less than 10.0 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2 SC VI.3	**R 336.1205(3)**
3. Aggregate HAPs	2.1 tons per month[2]	Calendar Month	FG-FACILITY	SC VI.2 SC VI.3	**R 336.1205(3)**
4. Aggregate HAPs	Less than 25.0 tpy[2]	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC VI.2 SC VI.3	**R 336.1205(3)**

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 determine the HAP content of any material as received and as applied, using manufacturer's formulation data or safety data sheets (SDS). Upon request of the AQD District Supervisor, the permittee shall verify the manufacturer's HAP formulation data using EPA Test Method 311.[2] **(R 336.1205(3))**

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 last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.[2] **(R 336.1205(3))**

2. The permittee shall calculate and keep Source-Wide information regarding the monthly and annual individual and aggregate HAP emissions from all sources including all combustion sources using emission factors acceptable to the AQD district supervisor**. (R336.1213(3))**

3. The permittee shall keep the following source-wide information on a monthly basis.[2] **(R 336.1213(3))**:
   a. Gallons or pounds of each HAP containing material used.
   b. Where applicable, gallons or pounds of each HAP containing material reclaimed.
   c. HAP content, in pounds per gallon or pounds per pound, of each HAP containing material used.
   d. Individual and aggregate HAP emission calculations determining the monthly emission rate of each in tons per calendar month.
   e. Individual and aggregate HAP emission calculations determining the cumulative emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month.

   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. **(R 336.1205(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

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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

C. EMISSION UNIT SPECIAL 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-COLDCLEANERS	Small parts degreasers. Each has less than 10 ft^2 interface and is exempted from Rule 201 pursuant to Rule 281(2)(h) or Rule 285(2)(r)(iv). The units are subject to Rule 707.	07/01/1979	FG-COLDCLEANERS
EU-BLDGA-NGGENERATOR	Existing SI generator < 250 HP.	06/12/2006	FG-EXISTEMERGRICEMACT
EU-PLT49FIREPUMP#3	Diesel fired fire pump #3 (compression ignition, 300 HP).	08/01/2008	NA
~~EU-BLDGA-GENERATOR~~	~~Diesel fired emergency generator (existing compression ignition, 155 HP).~~	~~06/27/2000 (constructed) and 2006 relocated to the site~~	~~FG-EXISTEMERGRICEMACT~~
EU-BLDGB-GENERATOR	Diesel fired emergency generator (existing compression ignition, 536 HP).	01/13/2002	FG-EXISTEMERGRICEMACT
EU-BLDGC-GENERATOR	Diesel fired emergency generator (existing compression ignition, 167.5 HP).	12/07/2005	FG-EXISTEMERGRICEMACT
~~EU-BLDGC-GENERATOR-COMPUTERRM~~	~~Diesel fired emergency generator (compression ignition, 2680 HP) subject to 40 CFR 60 Subpart IIII.~~	~~02/01/2006~~	~~NA~~
EU-BLDGD-GENERATOR	Diesel fired emergency generator (existing compression ignition, 800 HP).	09/01/2001 (constructed) and 8/2007 relocated to the site	FG-EXISTEMERGRICEMACT
EU-BLDGBFIREPUMP	Diesel fired fire pump (existing compression ignition, 170.2 HP).	06/01/2002	FG-EXISTEMERGRICEMACT
EU-TANKS(1-25)	Underground fuel storage tanks, consisting of 11 tanks at 15,000-gallon capacity and 14 tank compartments at 6,000-gallon capacity.	04/10/2008	FG-TANKS
EU-EMOTOR-BOOTH	Coating booth is for electric motor development. The coating process emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and Rule 290.	10/2015 (modified 4/2016)	FG-RULE290

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-WING3-ERGGEN	~~Up to 1000~~755 hp Diesel fired emergency generator (compression ignition) subject to 40 CFR 60 Subpart IIII.	2014	NA
EU-CEP-BOILER#1	40 MMBTU/HR Johnston boiler with oxygen trim system (Natural gas fired).	01/01/2011	FG-BOILERS
EU-CEP-BOILER#2	40 MMBTU/HR Johnston boiler with oxygen trim system (Natural gas fired).	01/01/2011	FG-BOILERS
EU-CEP-BOILER#3	40 MMBTU/HR Johnston boiler with oxygen trim system (Natural gas fired).	12/18/2014	FG-BOILERS
EU3RDWINGR&DTC (1-18)	Engine dynamometer test cell used for development and testing of internal combustion engines. The engine size will vary, up to 750 horsepower. The engines tested will be fueled by diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, ethanol, natural gas, methanol, propane, and hydrogen. The exhaust will be controlled by four communal regenerative thermal oxidizers. These four oxidizers control the other engine dynamometers in FG-3RDWINGR&DTCS and the engine dynamometers in EU-TESTCELLS (1-91).	12/8/2016	FG-TESTCELLS
EU-FUELCELLCOATER	Coating process which is associated with fuel cell development emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and Rule 287(2)(c).	2015	FG-287(2)(c)
EU-SEALERS	Application of miscellaneous sealers throughout the R&D process.	2008	FG-287(2)(c)
EU-FUELSTORAGE	Multi-compartment fuel storage tank with 2 tank compartments at 2,000-gallon compacity and 2 tank compartments at 1,000-gallon compacity,	05/2015	FG-TANKS
EU-TESTCELLS (1-91)	91 engine test cells with a total heat input capacity of 303.33 MMBtu/hr; using diesel, gasoline, ethanol, methanol, natural gas, propane, liquefied petroleum gas, and hydrogen fuels; internal combustion engines are controlled by four regenerative thermal oxidizers (RTOs) fired by natural gas.	2009, 05/19/16	FG-TESTCELLS
EU-FUELCELLS	Testing of hydrogen fuel cells and not internal combustion engines. No fuel reformer may be used for the hydrogen fuel cells.	05/19/16	NA
EU-INJSPRAYTSTS	Fuel spray tests chambers for injector pump.	12/2015 (modified 5/2016)	FG-RULE290

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU3RDWINGR&DTCRM	Radiometric engine test cell and laboratory for the development and testing of internal combustion engines. The engine size will vary up to 750 horsepower. The radiometric test cell will utilize special radioactive materials that are added to the engine oil. The exhaust will be controlled by four communal regenerative thermal oxidizers. These four oxidizers control all of the internal combustion engine dynamometers in Wings 1, 2, & 3 of FG-TESTCELLS.	2014	FG-TESTCELLS
EU-RACINGTC1	Engine dynamometer test cell used for the testing of internal combustion high performance engines for automotive motor vehicles. The engine size will vary, up to 1,600 horsepower. The engines tested will be fueled by diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, leaded gasoline, ethanol, natural gas, methanol and propane. Hydrogen will be used as a fuel for fuel cell testing	03/03/2016	FG-RACINGTCS
EU-RACINGTC2	Engine dynamometer test cell used for the testing of internal combustion high performance engines for automotive motor vehicles. The engine size will vary, up to 1,600 horsepower. The engines tested will be fueled by diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, leaded gasoline, ethanol, natural gas, methanol and propane. Hydrogen will be used as a fuel for fuel cell testing.	03/03/2016	FG-RACINGTCS
EU-RACINGTC3	Engine dynamometer test cell used for the testing of internal combustion high performance engines for automotive motor vehicles. The engine size will vary, up to 1,600 horsepower. The engines tested will be fueled by diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, leaded gasoline, ethanol, natural gas, methanol and propane. Hydrogen will be used as a fuel for fuel cell testing.	03/03/2016	FG-RACINGTCS

EU-BLDGC-GENERATOR-COMPUTERRM
EMISSION UNIT CONDITIONS

DESCRIPTION

Diesel fired emergency generator (compression ignition, 2680 HP) subject to 40 CFR 60 Subpart IIII.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	6.9 g/hp-hr[2] 9.2 g/kw-hr[2]	Hourly	EU-BLDGC-GENERATOR-COMPUTERRM	SC V. 1 SC VI. 5	**40 CFR 60.4205(a)**
2. CO	8.5 g/hp-hr[2] 11.4 g/kw-hr[2]	Hourly	EU-BLDGC-GENERATOR-COMPUTERRM	SC V. 1 SC VI. 5	**40 CFR 60.4205(a)**
3. PM	0.40 g/hp-hr[2] 0.54 g/kw-hr[2]	Hourly	EU-BLDGC-GENERATOR-COMPUTERRM	SC V. 1 SC VI. 5	**40 CFR 60.4205(a)**
4. HC	1.0 g/hp-hr[2] 1.3 g/kw-hr[2]	Hourly	EU-BLDGC-GENERATOR-COMPUTERRM	SC V. 1 SC VI. 5	**40 CFR 60.4205(a)**

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in EU-BLDGC-GENERATOR-COMPUTERRM.[1] **(R 336.1224, R 336.1225)**

2. The permittee shall not burn diesel fuel with sulfur content greater than 0.0015 percent by weight in EU-BLDGC-GENERATOR-COMPUTERRM.[2] **(40 CFR 60.4207, 40 CFR 80.510(b), R 336.1402(1))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee may operate EU-BLDGC-GENERATOR-COMPUTERRM for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. The permittee may petition the AQD District Supervisor 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 internal combustion engines beyond 100 hours per calendar year. EU-BLDGC-GENERATOR-COMPUTERRM may be operated up to 50 hours per calendar year in non-emergency situations, as described in 40 CFR 60.4211(f)(1) through (3), but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f))**

2. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, Subpart IIII, for the same model year, the permittee shall meet the following requirements for EU-BLDGC-GENERATOR-COMPUTERRM.

   a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
   b. Change only those emission related settings that are permitted by the manufacturer, and
   c. Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as it applies to you.

   If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine.[2] **(40 CFR 60.4211(a))**

3. The permittee shall install, maintain, and operate EU-BLDGC-GENERATOR-COMPUTERRM to meet the emission standards as required by SC I.1 - I.4, over the entire life of the engine. **(40 CFR 60.4206 and 60.4208)**

4. The permittee shall operate and maintain EU-BLDGC-GENERATOR-COMPUTERRM in accordance with manufacturer's emission related written instructions or procedures developed by the permittee and approved by the manufacturer.[2] **(40 CFR 60.4211(a))**

5. The permittee shall only operate EU-BLDGC-GENERATOR-COMPUTERRM as an emergency stationary internal combustion engine as defined in 40 CFR 60.4219.[2] **(40 CFR 60.4219)**

6. The permittee shall not operate EU-BLDGC-GENERATOR-COMPUTERRM for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month.[2] **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), R 336.2803 and R 336.2804)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. If the permittee is an owner or operator of an emergency stationary CI internal combustion engine, the permittee must install a non-resettable hour meter prior to startup of the engine.[2] **(40 CFR 60.4209(a))**

2. The total capacity from EU-BLDGC-GENERATOR-COMPUTERRM shall not exceed two megawatts.[2] **(R 336.1205(1)(a))**

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 an initial performance test for EU-BLDGC-GENERATOR-COMPUTERRM within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 (c), unless the engines have been certified by the manufacturer as required by 40 CFR Part 60 Subpart IIII and the permittee maintains the engine as required by 40 CFR 60.4211. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 60.4205(c), 40 CFR 60.4211(g), 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**

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 records of the hours of operation for EU-BLDGC-GENERATOR-COMPUTERRM. The records of the hours of operation shall include a separate record for both emergency and non-emergency situations. The records shall be kept on file for a period of at least five years and be made available to the Air Quality Division upon request.[2] **(40 CFR 63.6590(c)(1)) (R 336.1205(1)(a))**

2. The permittee shall monitor and record, in a satisfactory manner, monthly and 12-month rolling time period fuel use records for EU-BLDGC-GENERATOR-COMPUTERRM. The records must indicate the total amount of fuel

used in EU-BLDGC-GENERATOR-COMPUTERRM.[2] **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702(a))**

3. The permittee shall keep records of the fuel oil sulfur content, in percent by weight.[2] **(R 336.1205, R 336.1402)**

4. The permittee shall keep, in a satisfactory manner, diesel fuel records, demonstrating that the fuel sulfur content meets the requirement of 40 CFR 80.510(b). The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4207, 40 CFR 80.510(b), and R336.1402)**

5. The permittee shall demonstrate compliance under 40 CFR Part 60, Subpart IIII, Section 60.4211 according to one of the following methods:[2] **(40 CFR 60.4211(b))**

   a. Purchasing an engine certified according to 40 CFR Part 89 or Part 94, as applicable, for the same engine model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
   b. Keeping records of performance test results for each pollutant for a test conducted on EU-BLDGC-GENERATOR-COMPUTERRM. The test must have been conducted correctly and using the same methods specified in 40 CFR Part 60, Subpart IIII.
   c. Keeping records of engine manufacturer data indicating compliance with these standards.
   d. Keeping records of control device vendor data indicating compliance with these standards.

6. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EU-BLDGC-GENERATOR-COMPUTERRM: **(R 336.1213(3)**

   a. If certified: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that EU-BLDGC-GENERATOR-COMPUTERRM has been maintained according to the manufacturer's emission-related written instructions.
   b. If non-certified: The permittee shall keep records of a maintenance plan, as required by 40 CFR 60.4243 and maintenance activities.

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. If the permittee is contractually obligated to be available to operate EU-BLDGC-GENERATOR-COMPUTERRM for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii) or operates for the purposes specified in 40 CFR 60.4211(f)(3)(i), the permittee must submit an annual report according to the requirements below: **(40 CFR 60.4214(d))**

   a. The report must contain the following information:
      i. Company name and address where the engine is located.
      ii. Date of the report and beginning and ending dates of the reporting period.
      iii. Engine site rating and model year.
      iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
      v. Hours operated for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii).

      vi. Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii).

vii. Hours spent for operation for the purposes specified in 40 CFR 60.4211(f)(3)(i), including the date, end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

b. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

c. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-GEN1	12[2]	13.2[2]	40 CFR 52.21 (c) and (d)

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 and ZZZZ, as they apply to EU-BLDGC-GENERATOR-COMPUTERRM. The permittee may choose an alternative compliance method not listed in EU-BLDGC-GENERATOR-COMPUTERRM by providing the appropriate notifications required under 40 CFR Part 63.9(j), 40 CFR Part 70.6(9), and by comply with all applicable provisions required by Subpart ZZZZ for the compliance option chosen. **(40 CFR Part 70.6(9), 40 CFR Part 63.9(j), 40 CFR Part 63 Subparts A and ZZZZ)**

2. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. **(40 CFR Part 60 Subparts A and IIII)**

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

EU-WING3-ERGGEN
EMISSION UNIT CONDITIONS

DESCRIPTION

Up to 1000 hp Diesel fired emergency generator (compression ignition) subject to 40 CFR 60 Subpart IIII.

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NMHC + NOx	6.4 g/kW-hr	Hourly	EU-WING3-ERGGEN	SC V. 1 SC VI. 1	**40 CFR 60.4205(b)** **40 CFR 60.4202(a)(2)** **40 CFR 89.112(a)**
2. CO	3.5 g/kw-hr	Hourly	EU-WING3-ERGGEN	SC V. 1 SC VI. 1	**40 CFR 60.4205(b)** **40 CFR 60.4202(a)(2)** **40 CFR 89.112(a)**
3. PM	0.2 g/kw-hr	Hourly	EU-WING3-ERGGEN	SC V. 1 SC VI. 1	**40 CFR 60.4205(b)** **40 CFR 60.4202(a)(2)** **40 CFR 89.112(a)**

II. MATERIAL LIMIT(S)

1. The permittee shall not burn diesel fuel with sulfur content greater than 0.0015 percent by weight in EU-WING3-ERGGEN. **(40 CFR 60.4207, 40 CFR 80.510(b), R 336.1402(1))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee may operate EU-WING3-ERGGEN for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. The permittee may petition the AQD District Supervisor 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 internal combustion engines beyond 100 hours per calendar year. EU-WING3-ERGGEN may be operated up to 50 hours per calendar year in non-emergency situations, as described in 40 CFR 60.4211(f)(1) through (3), but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f))**

2. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60, Subpart IIII, for the same model year, the permittee shall meet the following requirements for EU-WING3-ERGGEN.

   a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
   b. Change only those emission related settings that are permitted by the manufacturer, and
   c. Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as it applies to the permittee.

If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. **(40 CFR 60.4211(a))**

3. The permittee shall install, maintain, and operate EU-WING3-ERGGEN to meet the emission standards as required by SC I.1 - I.3, over the entire life of the engine. **(40 CFR 60.4206 and 60.4208)**

4. The permittee shall operate and maintain EU-WING3-ERGGEN in accordance with manufacturer's emission related written instructions or procedures developed by the permittee and approved by the manufacturer. **(40 CFR 60.4211(a))**

5. The permittee shall only operate EU-WING3-ERGGEN as an emergency stationary internal combustion engine as defined in 40 CFR 60.4219. **(40 CFR 60.4219)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. If the permittee is an owner or operator of an emergency stationary CI internal combustion engine, the permittee must install a non-resettable hour meter prior to startup of the engine. **(40 CFR 60.4209(a))**

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 an initial performance test for EU-WING3-ERGGEN within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 (c), unless the engines have been certified by the manufacturer as required by 40 CFR Part 60 Subpart IIII and the permittee maintains the engine as required by 40 CFR 60.4211. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 60.4205(c), 40 CFR 60.4211(g), 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**

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 demonstrate compliance under 40 CFR Part 60, Subpart IIII, Section 60.4211 according to one of the following methods: **(40 CFR 60.4211(b))**

   a. Purchasing an engine certified according to 40 CFR Part 89 or Part 94, as applicable, for the same engine model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.
   b. Keeping records of performance test results for each pollutant for a test conducted on EU-WING3-ERGGEN. The test must have been conducted correctly and using the same methods specified in 40 CFR Part 60, Subpart IIII.
   c. Keeping records of engine manufacturer data indicating compliance with these standards.
   d. Keeping records of control device vendor data indicating compliance with these standards.

2. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EU-WING3-ERGGEN:

   a. If certified: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that EU-WING3-ERGGEN has been maintained according to the manufacturer's emission-related written instructions.
   b. If non-certified: The permittee shall keep records of a maintenance plan, as required by 40 CFR 60.4243 and maintenance activities. **(R 336.1213(3)**

3. The permittee shall keep records of the fuel oil sulfur content, in percent by weight. **(R 336.1205, 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))**

4. If the permittee is contractually obligated to be available to operate EU-WING3-ERGGEN for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii) or operates for the purposes specified in 40 CFR 60.4211(f)(3)(i), the permittee must submit an annual report according to the requirements below: **(40 CFR 60.4214(d))**

   a. The report must contain the following information:
      i. Company name and address where the engine is located.
      ii. Date of the report and beginning and ending dates of the reporting period.
      iii. Engine site rating and model year.
      iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
      v. Hours operated for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii).
      vi. Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii).
      vii. Hours spent for operation for the purposes specified in 40 CFR 60.4211(f)(3)(i), including the date, end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

   b. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

   c. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

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

See Appendix 8

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 and ZZZZ, as they apply to EU-WING3-ERGGEN. The permittee may choose an alternative compliance method not listed in EU-WING3-ERGGEN by providing the appropriate notifications required under 40 CFR Part 63.9(j), 40 CFR Part 70.6(9), and by comply with all applicable provisions required by Subpart ZZZZ for the compliance option chosen. **(40 CFR Part 70.6(9), 40 CFR Part 63.9(j), 40 CFR Part 63 Subparts A and ZZZZ)**

2. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. **(40 CFR Part 60 Subparts A and IIII)**

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

EU-PLT49FIREPUMP#3
EMISSION UNIT CONDITIONS

DESCRIPTION

300 horsepower emergency diesel fired fire pump with an installation date of August 1, 2008. This fire pump is classified as "New" for RICE MACT and NSPS applicability. The internal engine that is exempt from Rule 201 pursuant to Rule 285(g) and subject to the RICE NSPS 40 CFR Part 60, Subpart A and IIII, and the RICE NESHAP 40 CFR Part 63, Subpart A and Subpart ZZZZ.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NMHC + NOx	10.5 g/kW-hr (7.8 g/hp-hr)	Hourly	EU-PLT49FIREPUMP#3	SC V.1 SC VI.1	**40 CFR 60.4205(c), Table 4 of Part 60 Subpart IIII**
2. CO	3.5 g/kW-hr (2.6 g/hp-hr)	Hourly	EU-PLT49FIREPUMP#3	SC V.1 SC VI.1	**40 CFR 60.4205(c), Table 4 of Part 60 Subpart IIII**
3. PM	0.54 g/kW-hr (0.40 g/hp-hr)	Hourly	EU-PLT49FIREPUMP#3	SC V.1 SC VI.1	**40 CFR 60.4205(c), Table 4 of Part 60 Subpart IIII**

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel in EU-PLT49FIREPUMP#3 with the maximum sulfur content of 15 ppm (0.0015 percent) by weight. **(40 CFR 60.4207, 40 CFR 80.510(b), R 336.1205(1)(a) & (3), and R 336.1402(1))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee may not operate EU-PIT49FIREPUMP#3 for more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the AQD District Supervisor 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 internal combustion engines beyond 100 hours per calendar year. EU-PLT49FIREPUMP#3 may be operated up to 50 hours per calendar year in non-emergency situations, as described in 40 CFR 60.4211(f)(1) through (3), but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. The 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f))**

2. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year, the permittee shall meet the following requirements for EU-PLT49FIREPUMP#3.

   a. Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
   b. Change only those emission related settings that are permitted by the manufacturer, and
   c. Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as it applies to you.

   If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine. **(40 CFR 60.4211(a))**

3. The permittee shall install, maintain, and operate EU-PLT49FIREPUMP#3 to meet the emission standards as required by SC I.1 – I.3, over the entire life of the engine. **(40 CFR 60.4206 and 60.4208)**

4. The permittee shall not operate EU-PLT49FIREPUMP#3 for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month**. (R336.2803 and R336.2804)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install a non-resettable hour-meter. **(40 CFR 63.6625(f) and 40 CFR 60.4209)**

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 an initial performance test for EU-PLT49FIREPUMP#3 within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 (c), unless the engines have been certified by the manufacturer as required by 40 CFR Part 60 Subpart IIII and the permittee maintains the engine as required by 40 CFR 60.4211. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(40 CFR 60.4205(c), 40 CFR 60.4211(g), 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**

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, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that each engine meets the applicable emission limitations contained in the federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subpart IIII. If any engine becomes uncertified then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211(g))**

2. The permittee shall keep, in a satisfactory manner, diesel fuel records, demonstrating that the fuel sulfur content meets the requirement of 40 CFR 80.510(b). The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211, 40 CFR 80.510(b), and R336.1402)**

3. The permittee shall keep in a satisfactory manner, records of the amount of fuels used in the emergency generators per calendar year. **(R 336.1213(3)(b)(i))**

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. If the permittee is contractually obligated to be available to operate EU-PLT49FIREPUMP#3 for more than 15 hours per calendar year for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii) or operates for the purposes specified in 40 CFR 60.4211(f)(3)(i), the permittee must submit an annual report according to the requirements below: **(40 CFR 60.4214(d))**

   a. The report must contain the following information:
      i. Company name and address where the engine is located.
      ii. Date of the report and beginning and ending dates of the reporting period.
      iii. Engine site rating and model year.
      iv. Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.
      v. Hours operated for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii).
      vi. Number of hours the engine is contractually obligated to be available for the purposes specified in 40 CFR 60.4211(f)(2)(ii) and (iii).
      vii. Hours spent for operation for the purposes specified in 40 CFR 60.4211(f)(3)(i), including the date, end time for engine operation for the purposes specified in 40 CFR 60.4211(f)(3)(i). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

   b. The first annual report must cover the calendar year 2015 and must be submitted no later than March 31, 2016. Subsequent annual reports for each calendar year must be submitted no later than March 31 of the following calendar year.

   c. The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (www.epa.gov/cdx). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in 40 CFR 60.4.

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Compression Internal Combustion Engines as specified in 40 CFR Part 60 Subpart A and Subpart IIII. **(40 CFR Part 60 Subparts A and IIII)**

2. The permittee shall comply with all applicable provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines by the initial compliance date. **(40 CFR 63.6595, 40 CFR Part 63, Subparts A and ZZZZ)**

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

EU-FUELCELLS
EMISSION UNIT CONDITIONS

DESCRIPTION

Testing of hydrogen fuel cells and not internal combustion engines. No fuel reformer may be used for the hydrogen fuel cells.

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)

1. The permittee shall not operate any hydrogen fuel cell in EU-FUELCELLS if the fuel cell has a designed internal operating temperature of more than 1000 degrees Celsius.[2] **(R 336.2803, R 336.2804)**

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 maintain a record of the designed operating temperature of all fuel cells tested in EU-FUELCELLS. If no design data is available, the permittee shall monitor and record the operating temperature using a method approved by the AQD District Supervisor.[2] **(R 336.2803, R 336.2804)**

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

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

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

D. FLEXIBLE GROUP SPECIAL 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-COLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278, Rule 278a and Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	EU-COLDCLEANERS
FG-TESTCELLS	91 engine dynamometer test cells combined in Wings 1 and 2 with a total heat input capacity of 303.33 MMBtu/hr; using diesel, gasoline, ethanol, methanol, natural gas, propane, liquefied petroleum gas, and hydrogen fuels. 19 engine dynamometer test cells in Wing 3 used for development and testing of internal combustion engines. The engine sizes in Wing 3 will vary, up to 750 horsepower, and will be fueled by diesel, and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, ethanol, natural gas, methanol, and propane. Hydrogen will be used as a fuel for fuel cell testing. All internal combustion engines tested in the engine dynamometer test cells in Wings 1, 2, and 3 are controlled by four regenerative thermal oxidizers (RTOs) fired by natural gas.	EU-TESTCELLS (1-91) EU3RDWINGR&DTC(1-18) EU3RDWINGR&DTCRM
FG-RACINGTCS	Three engine dynamometer test cells used for the testing of internal combustion high performance engines for automotive motor vehicles. The engine sizes will vary, up to 1,600 horsepower. The engines tested will be fueled by diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, leaded gasoline, ethanol, natural gas, methanol, and propane. Hydrogen will be used as a fuel for fuel cell testing.	EU-RACINGTC1 EU-RACINGTC2 EU-RACINGTC3
FG-BOILERS	Three 40 MMBTU/HR Johnston boiler's with oxygen trim system subject to 40 CFR 60, Subpart Dc.	EU-CEP-BOILER#1 EU-CEP-BOILER#2 EU-CEP-BOILER#3
FG-RULE287(2)(c)	Paint spray booths that emits air contaminants and are exempt from the requirements of Rule 201 pursuant to Rules 278 and Rule 287(2)(c). The booths are located in the Powertrain Division.	EU-FUELCELLCOATER EU-SEALERS

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-RULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 290. Emission units installed/modified before December 20, 2016, may show compliance with Rule 290 in effect at the time of installation/modification.	EU-EMOTOR-BOOTH EU-INJSPRAYTSTS
FG-TANKS	Underground fuel storage tanks, consisting of 11 tanks at 15,000-gallon capacity and 14 tank compartments at 6,000-gallon capacity, 2 tank compartments at 2,000-gallon capacity, and 2 tank compartments at 1,000-gallon capacity.	EU-TANKS(1-25) EU-FUELSTORAGE
FG-EXISTEMERGRICEMACT	Existing emergency reciprocating internal combustion engines (RICE) - subject to 40 CFR 63 Subpart ZZZZ (the RICE MACT), but not subject to the RICE NSPS (40 CFR 63, Subpart IIII or 40 CFR 63, Subpart JJJJ)	~~EU-BLDGA-GENERATOR~~ EU-BLDGA-NGGENERATOR EU-BLDGBFIREPUMP EU-BLDGB-GENERATOR EU-BLDGC-GENERATOR EU-BLDGD-GENERATOR

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FG-COLDCLEANERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

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

Emission Unit: EU-COLDCLEANERS

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

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

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

IV. DESIGN/EQUIPMENT PARAMETER(S)

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

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

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

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

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

b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**
c. The cold cleaner must be controlled by a carbon adsorption system, condensation system, or other method of equivalent control approved by the AQD. **(R 336.1707(2)(c))**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

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

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

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

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

VII. REPORTING

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

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

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

See Appendix 8

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FG-TESTCELLS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Ninety-one engine dynamometer test cells combined in Wings 1 and 2 with a total heat input capacity of 303.33 MMBtu/hr; using diesel, gasoline, ethanol, methanol, natural gas, propane, liquefied petroleum gas, and hydrogen fuels. Nineteen engine dynamometer test cells in Wing 3 used for development and testing of internal combustion engines. The engine sizes in Wing 3 will vary, up to 750 horsepower, and will be fueled by diesel, and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, ethanol, natural gas, methanol, and propane. Hydrogen will be used as a fuel for fuel cell testing. All internal combustion engines tested in the engine dynamometer test cells in Wings 1, 2, and 3 are controlled by four regenerative thermal oxidizers (RTOs) fired by natural gas.

Emission Units: EU-TESTCELLS (1-91) EU3RDWINGR&DTC1 EU3RDWINGR&DTC2 EU3RDWINGR&DTC3 EU3RDWINGR&DTC4 EU3RDWINGR&DTC5 EU3RDWINGR&DTC6 EU3RDWINGR&DTC7 EU3RDWINGR&DTC8 EU3RDWINGR&DTC9 EU3RDWINGR&DTC10 EU3RDWINGR&DTC11 EU3RDWINGR&DTC12 EU3RDWINGR&DTC13 EU3RDWINGR&DTC14 EU3RDWINGR&DTC15 EU3RDWINGR&DTC16 EU3RDWINGR&DTC17 EU3RD`WINGR&DTC18 EU3RDWINGR&DTCRM

POLLUTION CONTROL EQUIPMENT

Internal Combustion engines are controlled by four regenerative thermal oxidizers (RTOs) fired by natural gas.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO_x	24.5 pph[2]	Hourly	Combined for all dynamometers in Wing 3 of FG-TESTCELLS	SC V.2	**40 CFR 52.21(c) & (d)**
2. NO_x	425.6 tpy[2]	12-month rolling time period as determined at the end of each calendar month	Wings 1 and 2 of FG-TESTCELLS	SC II.2 SC II.2a SC VI.2	**R 336.1205(1)(a) & (b)** **40 CFR 52.21(c) & (d)** **40 CFR 52.21(j)**
3. NO_x	23.5 tpy[2]	12-month rolling time period as determined at the end of each calendar month	Wing 3 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b)** **40 CFR 52.21(c) & (d)**
4. NO_x	1.38 lb/MMBTU for spark-ignited fuels, and 2.2 lb/MMBTU for diesel[2]	Hourly	Prior to the RTOs of Wings 1, 2, and 3 of FG-TESTCELLS	SC V.1	**R 336.1205(1)(a) & (b)** **40 CFR 52.21(j)**
5. NO_x	1.38 lb/MMBTU for natural gas fuel[2]	Hourly	Prior to the RTOs of Wings 1, 2, and 3 of FG-TESTCELLS	SC V.3	**R 336.1205(1)(a) & (b)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
6. CO	299.3 pph[2]	Hourly	Wings 1 & 2 of FG-TESTCELLS	SC II.1 SC IV.1 SC IV.2 SC V.1	**R 336.1205(1)(a) & (b)** **40 CFR 52.21(d)** **40 CFR 52.21(j)**
7. CO	285.1 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	Wings 1 & 2 of FG-TESTCELLS	SC II.2 SC II.2a SC IV.1 SC IV.2 SC VI.2 SC VI.4	**R 336.1205(1)(a) & (b)** **40 CFR 52.21(j)**
8. CO	0.96 lb/MMBTU[2]	Hourly	Wings 1 & 2 of FG-TESTCELLS	SC V.1 SC VI.5 SC VI.12	**R 336.1205(1)(a) & (b),** **40 CFR 52.21(j)**
9. CO	14.4 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	Wing 3 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b)**
10. PM10	29.5 tpy[A2]	12-month rolling time period as determined at the end of each calendar month.	Wings 1 & 2 of FG-TESTCELLS	SC II.2 SC II.2a SC V.1 SC VI.2	**R 336.1205(1)(a) & (b)**
11. Lead	0.597 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	Wings 1 & 2 of FG-TESTCELLS	SC II.2 SC II.2b SC VI.2 SC VI.14	**R 336.1205(1)(a) & (b)**

[A] The permittee shall calculate gasoline PM10 emissions from Wings 1 and 2 of FG-TESTCELLS based on the worst-case gasoline emission factor from either testing per SC V.1 or the emission factor of 0.048 lb PM10/MMBtu gasoline. The permittee shall calculate diesel PM10 emissions from Wings 1 and 2 of FG-TESTCELLS based on the worst-case diesel emission factor from either testing per SC V.1 or the emission factor of 0.31 lb PM10/MMBtu diesel.

Emission Factors for internal combustion engines, unless otherwise accepted by the AQD District Supervisor:

Diesel	Spark-ignited fuels
NO_x: 2.20 lb/MMBTU CO with control: 0.96 lb/MMBTU PM10: 0.31 lb/MMBTU	NO_x: 1.38 lb/MMBTU CO with control: 0.96 lb/MMBTU PM10: 0.048 lb/MMBTU Lead: 0.00085 lb/MMBTU from unleaded gasoline variants 0.0577 lb/MMBTU from leaded gasoline OR as determined from lead content in fuel deliveries

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Total Fuel	7,280 MMBTU/day[2]	Calendar day.	Wings 1 & 2 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b) R 336.1225 R 336.1702(a) 40 CFR 52.21(c) & (d) 40 CFR 52.21(j)**
2. Total Fuel	520,000 MMBTU/yr[2]	12-month rolling time period as determined at the end of each calendar month.	Wings 1 & 2 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b) R 336.1225 R 336.1702(a) 40 CFR 52.21(c) & (d) 40 CFR 52.21(j)**
2a. Diesel Fuel	114,400 MMBTU/yr[A 2]	12-month rolling time period as determined at the end of each calendar month.	Wings 1 & 2 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b) R 336.1225 R 336.1702(a) 40 CFR 52.21(c) & (d) 40 CFR 52.21(j)**
2b. Leaded Gasoline Fuel	13,260 MMBTU/yr[A 2]	12-month rolling time period as determined at the end of each calendar month.	Wings 1 & 2 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b)**
3. Diesel Fuel	6,732 MMBTU/yr[2]	12-month rolling time period as determined at the end of each calendar month.	Wing 3 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b) R 336.1225 R 336.1702(a) 40 CFR 52.21(c) & (d)**
4. Spark-ignited Fuel	23,312 MMBTU/yr[2]	12-month rolling time period as determined at the end of each calendar month.	Wing 3 of FG-TESTCELLS	SC VI.2	**R 336.1205(1)(a) & (b) R 336.1225 R 336.1702(a) 40 CFR 52.21(c) & (d)**

[A] This material limit is a subset of SC II.2 and is not in addition to SC II.2. It must be included in the total fuel calculation to demonstrate compliance.

5. The permittee shall burn only diesel and the following spark-ignited fuels: unleaded gasoline, leaded gasoline, ethanol, natural gas, methanol, and propane in each dynamometer of Wings 1 and 2 of FG-TESTCELLS. Hydrogen may be used as a fuel for fuel cell testing.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

6. The permittee shall burn only diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, ethanol, natural gas, methanol, and propane in each dynamometer of Wing 3 of FGTESTCELLS. Hydrogen may be used as a fuel for fuel cell testing.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall develop and submit an Operation and Maintenance Plan (O&M Plan) for the thermal oxidizers that control the engine dynamometer test cells in Wings 1, 2, and 3 of FG-TESTCELLS within 90 days of permit issuance. The O&M Plan shall be implemented and maintained. The O&M Plan shall contain these minimum requirements:

   a. In general, records must be kept of maintenance inspections which include the dates, results of the inspections and the dates and reasons for repairs if made.

   b. The following items shall be inspected for each respective add-on control device used to demonstrate compliance with applicable VOC emissions limits:

      i Validation of thermocouple accuracy or recalibration of each thermocouple a minimum of once every 12 months. The thermocouple can be replaced in lieu of validation.
      ii Perform a heat exchange/heat transfer media inspection a minimum of once every 18 months.*
      iii Perform an inspection of the valve seals condition and verify valve timing/synchronization a minimum of once every 18 months.*

      *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 prior 18-month period.

   c. The air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables as determined during stack testing, and a description of the method of monitoring or surveillance procedures. At a minimum, variables shall include a minimum combustion temperature.

   d. The calculation, based upon the temperature determined during the most recent stack testing, demonstrating that the minimum retention time meets the requirements of SC IV.1.

2. The O&M Plan shall be updated as necessary to reflect changes in equipment and monitoring to implement corrective actions and to address malfunctions within 45 days of the update trigger. Changes in the O&M Plan shall be submitted to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the O&M Plan or amended O&M Plan shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. All records and activities associated with the O&M Plan shall be made available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) and (d), 40 CFR 52.21(j))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any internal combustion engine in dynamometer test cells in Wings 1, 2, and 3 of FG-TESTCELLS unless it is connected to a thermal oxidizer that is installed, maintained and operated in a satisfactory manner or the operation is consistent with the O&M Plan. Satisfactory operation of the thermal oxidizers includes a minimum carbon monoxide (CO) destruction efficiency of 96 percent (by weight) or a maximum CO outlet concentration of 20 ppmvd corrected to 15 percent O_2 concentration, and maintaining the three-hour average combustion temperature at or above the temperature limit established during the most recent stack test and outlined in the O&M Plan with a minimum retention time of 0.5 second.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) and (d), 40 CFR 52.21 (j))**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a temperature monitoring device in the combustion chamber of each thermal oxidizer to monitor and record the temperature on a

continuous basis, during operation of any internal combustion engine in dynamometer test cells in Wings 1, 2, and 3 of FG-TESTCELLS. Temperature data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) and (d), 40 CFR 52.21(j))**

3. The permittee shall install, calibrate, maintain, and operate in a satisfactory manner a differential pressure monitoring device(s) on the central engine exhaust system (CEES) and record the pressure on a continuous basis, during operation of any internal combustion engine in dynamometer test cells in Wings 1, 2, and 3 of FG-TESTCELLS. Pressure drop data recording shall consist of measurements made at equally spaced intervals, not to exceed 15 minutes per interval. **(40 CFR 64.4(e))**

4. Before burning natural gas in any dynamometer test cell in Wing 3 of FG-TESTCELLS, the permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage of Wing 3 of FG-TESTCELLS on a continuous basis.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

5. Before burning natural gas in any dynamometer test cell in Wing 3 of FG-TESTCELLS, the permittee shall verify the accuracy of the device to monitor and record the natural gas usage of Wing 3 of FG-TESTCELLS. Accuracy of the monitoring device will be demonstrated by having a recent calibration test on file. Recent is defined as occurring within three months prior to burning natural gas.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

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 CO, NOx, and PM10 emission rates of FG-TESTCELLS and the associated operating parameters and destruction efficiencies for the thermal oxidizers of FG-TESTCELLS, by testing at owner's expense, in accordance with Department requirements, according to the following schedule:

   a. Within five years of the previously acceptable test, unless the permittee has submitted an acceptable demonstration that the most recent acceptable test remains valid and representative.
   b. Within 180 days of making any changes in operating conditions which necessitate reevaluation of the emission rate tests.

   Testing shall be performed under representative engine testing conditions using an approved EPA Method listed below:

Pollutant	Test Method Reference
CO	40 CFR Part 60, Appendix A
NO_x	40 CFR Part 60, Appendix A
PM10	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. 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) and (b), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(d), 40 CFR 52.21(j))**

2. The permittee shall verify NOx emission rates in terms of pph from a minimum of one representative dynamometer of Wing 3 of FG-TESTCELLS, by testing at owner's expense, in accordance with Department requirements. This testing shall be conducted once every three years. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The test plan must include, at a minimum, an

   explanation of how the emissions from the tested dynamometers are to be equated to emissions from all 19 dynamometers in Wing 3 of FG-TESTCELLS. The AQD must approve the final plan prior to testing. Verification

of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

3. Within 180 days after burning a total of 330 MMBTU of natural gas as fuel in Wing 3 of FG-TESTCELLS and FG-RACINGTCS combined, the permittee shall verify NO_x emission rates in terms of lb/MMBTU of natural gas from one representative dynamometer of Wing 3 of FG-TESTCELLS and FG-RACINGTCS each, by testing at the owner's expense, in accordance with Department requirements. If natural gas has not yet been used as a fuel in Wing 3 of FG-TESTCELLS, then testing in Wing 3 of FG-TESTCELLS may be postponed to within 180 days of the initial use of natural gas as a fuel in Wing 3 of FG-TESTCELLS. Testing shall be performed using an approved EPA Method listed in 40 CFR Part 60, Appendix A. An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol. 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. 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) and (b), R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. All required calculations shall be completed in a format acceptable to the AQD District Supervisor and made available by the final day of the calendar month, for the previous calendar month, unless otherwise specified in any recordkeeping, reporting or notification special condition.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 52.21(j))**

2. The permittee shall keep the following information on a monthly basis for FG-TESCELLS:
   a. A record of the days of operation.
   b. Records of each fuel used per month for Wings 1 and 2 combined and for Wing 3 separately and the corresponding MMBTU content.
   c. Calculations determining the fuel usage rates in MMBTU per month for each type of fuel burned and for the total fuel burned for Wings 1 and 2 combined.
   d. Calculations determining the fuel usage rates in MMBTU per 12-month rolling time period as determined at the end of each calendar month for each type of fuel burned and for the total fuel burned for Wings 1 and 2 combined.
   e. Calculations determining the fuel usage rates in MMBTU per month for each type of fuel burned and for the total spark-ignited fuel burned for Wing 3.
   f. Calculations determining the fuel usage rates in MMBTU per 12-month rolling time period as determined at the end of each calendar month for each type of fuel burned and for the total spark-ignited fuel burned for Wing 3.
   g. NO_x emission calculations determining the monthly emission rate in tons per calendar month for Wings 1 and 2 combined and for Wing 3 separately.
   h. NO_x 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 Wings 1 and 2 combined and for Wing 3 separately.
   i. CO emission calculations determining the monthly emission rate in tons per calendar month for Wings 1 and 2 combined and for Wing 3 separately.
   j. 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 Wings 1 and 2 combined and for Wing 3 separately.
   k. PM10 emission calculations determining the monthly emission rate in tons per calendar month for Wings 1 and 2 combined.
   l. PM10emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month for Wings 1 and 2 combined.
   m. Lead emission calculations determining the monthly emission rate in tons per calendar month for Wings 1 and 2 combined.

n. Lead 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 Wings 1 and 2 combined.

3. The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 52.21(j))**

4. The permittee shall calculate the daily fuel usage rate based upon monthly recordkeeping prorated to a daily rate. Should the prorated daily rate exceed 90 percent of the daily limit, the permittee shall commence daily recordkeeping for a minimum of two months until the daily rate falls below 90 percent of the daily limit. All records shall be kept on file for a period of at least five years and made available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d), 40 CFR 52.21(j))**

5. The permittee shall monitor, record and keep, in a satisfactory manner, the following information for FG-TESTCELLS:
   a. Records of the temperature measurements of the combustion chamber for each thermal oxidizer on a continuous basis as required by SC IV.1.
   b. The records shall be at equally spaced intervals, not to exceed 15 minutes per interval, as required by SC IV.2.
   c. All records shall be created and kept as outlined in the O&M Plan, as required by SC III.1. The records shall be kept in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), R 336.1702(a), 40 CFR 52.21(j))**

6. The temperature measurements specified in SC VI.5 of this section shall be used to calculate and record a three-hour rolling average RTO combustion temperature for each combustion chamber. An excursion is defined as a three-hour rolling average RTO temperature below the minimum temperature determined in the most recent performance test. **(40 CFR 64.6(c)(2)) (40 CFR 64.6(c)(1)(i) and (ii))**

7. The permittee shall evaluate the capture efficiency of the central engine exhaust system (CEES) by monitoring the differential pressure across the enclosure. This shall be recorded continuously at 15-minute intervals on a data acquisition system or other method. This data shall be used to calculate and record a three-hour rolling average differential pressure reading. An excursion from proper operation is defined as a three-hour rolling average pressure drop greater than -2 inches water column. **(40 CFR 64.3(a)(2)) (40 CFR 64.6(c)(2))**

8. 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 permittee shall document the corrective actions taken. Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action, or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable. **(40 CFR 64.7(d))**

9. 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))**

10. The permittee shall properly maintain the monitoring system, including keeping necessary parts for routine repair of the monitoring equipment. **(40 CFR 64.7(b))**

11. 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))**

12. The permittee shall keep, in a satisfactory manner, all test reports for FG-TESTCELLS, as required by SC V.1, on file at the facility and make them available to the Department upon request. As part of the test report, the permittee shall calculate and keep a demonstration of compliance for the CO lb/MMBTU emission limit specified in SC I.8, based upon a standard uncontrolled emission factor of 3.12 lb/gallon of CO, the BTU/gallon conversion for the fuel tested, and the tested destruction efficiency. If specific data is not known, default conversion factors are 0.138 MMBTU/gallon for diesel, 0.125 MMBTU/gallon for gasoline, and 0.075 MMBTU/gallon for ethanol.[2] **(R 336.1205(1)(a) and (b), R 336.2001, 40 CFR 52.21(d), 40 CFR 52.21(j))**

13. The permittee shall keep, in a satisfactory manner, records of the verification of the accuracy of the device to monitor the natural gas usage in Wing 3 of FG-TESTCELLS. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

14. The permittee shall keep, in a satisfactory manner, records of the maximum lead content in the leaded gasoline for each ~~delivery~~leaded gasoline fuel type. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), 40 CFR 52.21(d), 40 CFR 52.21(j))**

15. 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 open and the length of time the bypass was open shall be kept on file. **(40 CFR 64.3(a)(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. Within 30 days after commencement of the burning of compressed natural gas in Wing 3 of FG-TESTCELLS, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the commencement of the activity.[2] **(R 336.1201(7)(a))**

5. 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))**

6. 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))**

7. 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))**

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-RTO1	44[2]	70[2]	**R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)**
2. SV-RTO2	44[2]	70[2]	**R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)**
3. SV-RTO3	44[2]	70[2]	**R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)**
4. SV-RTO4	44[2]	70[2]	**R 336.1225 R 336.2803 R 336.2804 40 CFR 52.21(c) & (d)**

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all applicable requirements of 40 CFR Part 64. **(40 CFR Part 64)**

2. 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))**

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

FG-RACINGTCS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three engine dynamometer test cells used for the testing of internal combustion high performance engines for automotive motor vehicles. The engine sizes will vary, up to 1,600 horsepower. The engines tested will be fueled by diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, leaded gasoline, ethanol, natural gas, methanol, and propane. Hydrogen will be used as a fuel for fuel cell testing.

Emission Units: EU-RACINGTC1, EU-RACINGTC2, EU-RACINGTC3

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO_x	3.3 tpy[2]	12-month rolling time period as determined At the end of each calendar month.	FG-RACINGTCS	SC VI.2	**R 336.1205(1)(a) & (b) 40 CFR 52.21(c) & (d)**
2. NO_x	73.9 pph[2]	Hourly	Combined for all dynamometers in FG-RACINGTCS	SC V.1	**40 CFR 52.21(c) & (d)**
3. NO_x	2.20 Lb/mmBTU for diesel fuel[2]	Hourly	FG-RACINGTCS	SC V.2	**R 336.1205(1)(a) & (b) 40 CFR 52.21(c) & (d)**
4. NO_x	1.38 Lb/mmBTU for spark ignited fuels[2]	Hourly	FG-RACINGTCS	SC V.3	**R 336.1205(1)(a) & (b) 40 CFR 52.21(c) & (d)**
5. NO_x	1.38 lb/MMBTU for natural gas fuel[2]	Hourly	FG-RACINGTCS	SC V.4	**R 336.1205(1)(a) & (b)**
6. CO	52.6 tpy[2]	12-month rolling time period as determined at the end of each calendar month.	FG-RACINGTCS	SC VI.2	**R 336.1205(1)(a) & (b)**

Emission Factors for internal combustion engines, unless otherwise accepted by the AQD District Supervisor:

Diesel	All other fuels
NO_x: 2.20 lb/MMBTU O: 24 lb/MMBTU	NO_x: 1.38 lb/MMBTU CO: 24 lb/MMBTU

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel and the following spark-ignited fuels: unleaded gasoline, unleaded gasoline blends, leaded gasoline, ethanol, natural gas, methanol, and propane in each dynamometer of FG-RACINGTCS. Hydrogen may be used as a fuel for fuel cell testing.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

2. The total combined diesel fuel usage for FG-RACINGTCS shall not exceed 767 MMBTU per 12-month rolling time period as determined at the end of each calendar month.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

3. The total combined spark-ignited fuel usage for FG-RACINGTCS shall not exceed 3,616 MMBTU per 12-month rolling time period as determined at the end of each calendar month. Of the 3,616 MMBTU, the permittee shall not burn more than 767 MMBTU of leaded gasoline per 12-month rolling time period as determined at the end of each calendar month.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Before burning natural gas in any test cell, the permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage of FG-RACINGTCS on a continuous basis.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

2. Before burning natural gas in any test cell, the permittee shall verify the accuracy of the device to monitor and record the natural gas usage of FG-RACINGTCS. Accuracy of the monitoring device will be demonstrated by having a recent calibration test on file. Recent is defined as occurring within 3 months prior to burning natural gas.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

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

1. Within three years of a previously accepted test, the permittee shall verify NOx emission rates in terms of pph from a minimum of one representative dynamometer of FG-RACINGTCS, by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.2001, R 336.2003, R 336.2004)**

2. Within 180 days after burning diesel fuel in the racing dynamometers, the permittee shall verify the NOx emission factor for diesel in terms of lb/MMBTU from a minimum of one representative dynamometer of FGRACINGTCS, by testing at owner's expense, in accordance with Department requirements. Thereafter, testing shall be conducted if requested by the AQD District Supervisor. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205(1)(a) and (b), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

3. Upon request by the AQD District Supervisor, the permittee shall verify the NOx emission factor for gasoline in terms of lb/MMBTU from a minimum of one representative dynamometer of FG-RACINGTCS, by testing at owner's expense, in accordance with Department requirements. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing.

Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205(1)(a) and (b), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) and (d))**

4. Within 180 days after burning a total of 330 MMBTU of natural gas as fuel in FG-3RDWINGR&DTCS and FG-RACINGTCS combined, the permittee shall verify the NOx emission rate in terms of lb/MMBTU of natural gas from one representative dynamometer of FG-3RDWINGR&DTCS and FG-RACINGTCS each, by testing at owner's expense, in accordance with Department requirements. If natural gas has not yet been used as a fuel in FG-RACINGTCS, then testing in FG-RACINGTCS may be postponed to within 180 days of the initial use of natural gas as a fuel in FG-RACINGTCS. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test.[2] **(R 336.1205(1)(a) and (b), R 336.2001, R 336.2003, R 336.2004)**

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 last 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) and (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

2. The permittee shall keep the following information on a monthly basis for FG-RACINGTCS: a. A record of the days of operation.
   a. Records of each fuel used per month and the corresponding MMBTU content.
   b. Calculations determining the fuel usage rates in MMBTU per 12-month rolling time period as determined at the end of each calendar month for each type of fuel burned and for the total spark-ignited fuel burned.
   c. NO_x emission calculations determining the monthly emission rate in tons per calendar month.
   d. NO_x emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   e. CO emission calculations determining the monthly emission rate in tons per calendar month.
   f. 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.

3. 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) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

4. The permittee shall keep, in a satisfactory manner, records of the verification of the accuracy of the device to monitor the natural gas usage. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

5. The permittee shall keep, in a satisfactory manner, records of the maximum lead content in all leaded gasoline varieties for each ~~delivery~~leaded gasoline fuel type. The permittee shall keep all records on file and make them available to the Department upon request.[2] **(R 336.1205(1)(a) and (b), 40 CFR 52.21(d))**

Commented [JA1]: We would like to propose clarification of the tracking requirement to provide this information for only leaded fuels and on a per type basis, not individual delivery.

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. Within 30 days after commencement of the burning of diesel fuel, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the commencement of the activity.[2] **(R 336.1201(7)(a))**

6. Within 30 days after commencement of the burning of compressed natural gas, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the commencement of the activity.[2] **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-RCCELL	48[2]	70[2]	**R 336.1225, 40 CFR 52.21(c) & (d)**

IX. OTHER REQUIREMENT(S)

NA

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

FG-BOILERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three 40 MMBTU/HR natural gas fired Johnston boiler's with oxygen trim system subject to 40 CFR 60, Subpart Dc

Emission Units: EU-CEP-BOILER#1, EU-CEP-BOILER#2, EU-CEP-BOILER#3

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))**

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 record the amount of fuel combusted in the boilers each calendar month. **(40 CFR 60, Subpart Dc, Section 60.48c(g))**

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

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
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable requirements of 40 CFR Part 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. **(40 CFR Part 60 Subpart Dc)**

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

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 Rule 278, Rule 278a and Rule 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: NA

Emission Units installed prior to December 20, 2016: EU-FUELCELLCOATER, EU-SEALERS

POLLUTION CONTROL EQUIPMENT

Filters

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)

1. 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

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 maintain records of the following information for each emission unit for each calendar month using the methods outlined in the 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. 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. **(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

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FG-RULE290
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rule 278, Rule 278a and Rule 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: NA

Emission Units installed prior to December 20, 2016: EU-EMOTOR-BOOTH, EU-INJSPRAYTSTS

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 5% 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

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 maintain records of the following information for each emission unit for each calendar month using the methods outlined in the 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 2-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

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

FG-TANKS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Underground fuel storage tanks, consisting of 11 tanks at 15,000-gallon capacity, 14 tank compartments at 6,000-gallon capacity, 2 tank compartments at 2,000-gallon capacity, and 2 tank compartments at 1,000-gallon capacity.

Emission Units: EU-TANKS (1-25) and EU-FUELSTORAGE

POLLUTION CONTROL EQUIPMENT

Vapor balance system and submerged fill pipes

I. EMISSION LIMIT(S)

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

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not fill any gasoline tank or tank compartment of FG-TANKS with more than a 2,000-gallon capacity unless the vapor balance system is installed, maintained and operated in a satisfactory manner as follows:

   a. The vapor-tight collection line shall be connected to the delivery vessel before any gasoline is transferred. **(R 336.1703(a))**
   b. The vapor-tight collection line shall close upon disconnection so as to prevent release of gasoline vapor. **(R 336.1703(b))**

2. The permittee shall develop written procedures for the operation of all the control measures described above, and such procedures shall be available in an accessible location near the transfer equipment.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), R 336.1703)**

3. The permittee shall not load any gasoline into any tank or tank compartment of FG-TANKS with more than a 2,000-gallon capacity at the facility unless the tank or tank compartment is equipped with submerged fill piping.[2] **(R 336.1205(1)(a) and (b), R 336.1225, R 336.1702(a), 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

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 records of the dimension and an analysis showing the capacity of each underground storage tank included in FG-TANKS. All records shall be readily accessible and kept for the life of the source.[2] **(R 336.1702(a))**

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

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
NA	NA	NA	NA

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with the applicable provisions of the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63, Subpart A and Subpart CCCCCC, by the dates specified in 40 CFR 63.11113. **(40 CFR 63 Subparts A and CCCCCC)**

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

FG-EXISTEMERGRICEMACT
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Existing emergency reciprocating internal combustion engines (RICE) - subject to 40 CFR 63 Subpart ZZZZ (the RICE MACT), but not subject to the RICE NSPS (40 CFR 63, Subpart IIII or 40 CFR 63, Subpart JJJJ)

Emission Units: ~~EU-BLDGA-GENERATOR~~, EU-BLDGA-NGGENERATOR, EU-BLDGBFIREPUMP, EU-BLDGB-GENERATOR, EU-BLDGC-GENERATOR, and EU-BLDGD-GENERATOR

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POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

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

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall change oil and filter every 500 hours of operation or annually, whichever comes first, or utilize the prescribed oil analysis program (at the same frequency) to extend the specified oil changing requirements. **(40 CFR 63.6603, 40 CFR 63, Subpart ZZZZ, Table 2d))**

2. The permittee shall inspect air cleaner (compression ignition units) or spark plugs (spark ignition units) every 1,000 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6603, Table 2d to Subpart ZZZZ of Part 63))**

3. The permittee shall inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary. **(40 CFR 63.6603, Table 2d to Subpart ZZZZ of Part 63))**

4. The permittee shall minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes. **(40 CFR 63.6625(h))**

5. Emergency engines may operate up to 50 hours per calendar year in non-emergency situations and 100 hours per calendar year for maintenance and testing; however, the 50 hours of non-emergency operation counts towards the annual 100-hour maintenance and testing limit. **(40 CFR 63.6640(f))**

6. The permittee must operate and maintain any affected source and any associated air pollution control equipment in a manner consistent with safety and good air pollution control practices for minimizing emissions. **(40 CFR 63.6605(b))**

7. The permittee shall not operate emergency engines for more than 500 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. **(R 336.2803 and R 336.2804)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install a non-resettable hour-meter for each engine in FG-EXISTEMERRICEMACT. **(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 engines, the permittee must at a minimum analyze the following three parameters: 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. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within two business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within two business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. **(40 CFR 63.6625(i))**

2. If using the oil analysis program from SI engines, the permittee must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid 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. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within two business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within two business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine. **(40 CFR 63.6625(j))**

VI. MONITORING/RECORDKEEPING

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

1. For each engine in the FG-EXISTEMERGRICEMACT, the permittee shall keep in a satisfactory manner, records of the occurrence and duration of each malfunction of operation or the air pollution control monitoring equipment, if installed. The permittee shall keep all records on file and make them available to the department upon request. **(40 CFR 63.6655(a)(2), 40 CFR 63.6660)**

2. For each engine in the FG-EXISTEMERGRICEMACT, the permittee shall keep in a satisfactory manner, records of actions taken during periods of malfunction to minimize emissions, including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation. The permittee shall keep all records on file and make them available to the department upon request. **(40 CFR 63.6655(a)(5), 40 CFR 63.6660)**

3. For each engine in the FG-EXISTEMERGRICEMACT, the permittee shall keep in a satisfactory manner, records of the maintenance conducted to demonstrate that the engine and after-treatment control device (if any) were operated and maintained according to the developed maintenance plan. The permittee shall keep all records on file and make them available to the department upon request. **(40 CFR 63.6655(e), 40 CFR 63.6660)**

4. For each engine in the FG-EXISTEMERGRICEMACT, the permittee shall keep in a satisfactory manner, records of hours of operation recorded through the non-resettable hour meter on a monthly basis. The permittee shall document the following: **(40 CFR 63.6655(f), 40 CFR 63.6660)**

   a. How many hours were spent during emergency operation?
   b. What classified the operation as emergency?
   c. How many hours were spent during non-emergency operation.?
   d. If the engines were used for demand response operation, the permittee shall keep records of the notification of the emergency situation and the time the engine was operated as part of demand response.

5. The permittee shall keep records of the diesel fuel oil sulfur content used in the CI engines. (**R 336.1402)**

6. The permittee shall keep the 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. **(40 CFR 63.6625(i))**

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

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, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines by the initial compliance date. **(40 CFR 63.6595, 40 CFR Part 63, Subparts A and ZZZZ)**

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

E. NON-APPLICABLE REQUIREMENTS

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

APPENDICES

Appendix 1. 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
CEMS	Continuous Emission Monitoring System	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
COM	Continuous Opacity Monitoring	°F	Degrees Fahrenheit
Department/ department	Michigan Department of Environment, Great Lakes, and Energy	gr	Grains
		HAP	Hazardous Air Pollutant
EGLE	Michigan Department of Environment, Great Lakes, and Energy	Hg	Mercury
		hr	Hour
EU	Emission Unit	HP	Horsepower
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallons of Applied Coating Solids	kW	Kilowatt
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	m	Meter
HVLP	High Volume Low Pressure*	mg	Milligram
ID	Identification	mm	Millimeter
IRSL	Initial Risk Screening Level	MM	Million
ITSL	Initial Threshold Screening Level	MW	Megawatts
LAER	Lowest Achievable Emission Rate	NMOC	Non-methane Organic Compounds
MACT	Maximum Achievable Control Technology	NO_x	Oxides of Nitrogen
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	Particulate Matter equal to or less than 10 microns in diameter
NA	Not Applicable		
NAAQS	National Ambient Air Quality Standards	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NESHAP	National Emission Standard for Hazardous Air Pollutants	pph	Pounds per hour
		ppm	Parts per million
NSPS	New Source Performance Standards	ppmv	Parts per million by volume
NSR	New Source Review	ppmw	Parts per million by weight
PS	Performance Specification	%	Percent
PSD	Prevention of Significant Deterioration	psia	Pounds per square inch absolute
PTE	Permanent Total Enclosure	psig	Pounds per square inch gauge
PTI	Permit to Install	scf	Standard cubic feet
RACT	Reasonable Available Control Technology	sec	Seconds
ROP	Renewable Operating Permit	SO_2	Sulfur Dioxide
SC	Special Condition	TAC	Toxic Air Contaminant
SCR	Selective Catalytic Reduction	Temp	Temperature
SNCR	Selective Non-Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TEQ	Toxicity Equivalence Quotient	µg	Microgram
USEPA/EPA	United States Environmental Protection Agency	µm	Micrometer or Micron
		VOC	Volatile Organic Compounds
VE	Visible Emissions	yr	Year

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

Appendix 2. Schedule of Compliance

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

Appendix 3. Monitoring Requirements

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

Appendix 4. Recordkeeping

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

Appendix 5. Testing Procedures

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

Appendix 6. Permits to Install

The following table lists any PTIs issued or ROP revision applications received since the effective date of the previously issued ROP No. MI-ROP-B4032-2014. 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-B4032-2014e is being reissued as Source-Wide PTI No. MI-PTI-B4032-2020a.

Permit to Install Number	ROP Revision Application Number	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
~~198-18*~~	~~201900124~~	~~Modification of permit conditions to remove major source NESHAP requirements.~~	~~FG-TESTCELLS~~ ~~FG-RACINGTCS~~
~~33-04C~~	~~201600106~~	~~Incorporate PTI 33-04C into Section 2 of the ROP, which included changes to the Emission Unit and Flexible Group Summary Tables, added a new Emission Unit (EU-FUELCELLS), and modified language to FG-TESTCELLS.~~	~~EU-FUELCELLS~~ ~~EU-TESTCELLS (1-91)~~ ~~EU3RDWINGR&DTC(1-18)~~ ~~EU3RDWINGR&DTCRM~~ ~~FG-3RDWINGR&DTCS~~ ~~FG-TESTCELLMACT~~ ~~FG-TESTCELLS~~

The following table lists the ROP amendments or modifications issued after the effective date of ROP No. MI-ROP-B4032-2020.

Permit to Install Number	ROP Revision Application Number - Issuance Date	Description of Equipment or Change	Corresponding Emission Unit(s) or Flexible Group(s)
~~NA~~	~~202200158 / November 21, 2022~~	~~Removed Special Condition IX.1 which stated "The permittee shall not purchase from the adjacent OneH2 Pontiac location greater than 49% of its annual hydrogen production based on a 12-month rolling period. This compliance demonstration will begin 12 months after OneH2 begins hydrogen production. **(R 336.1119(r))**" This Condition is no longer applicable and is considered obsolete.~~	~~EU-FUELCELLS~~

Appendix 7. Emission Calculations

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

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

The permittee shall use 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.

GENERAL MOTORS PONTIAC ENGINEERING CENTER
CAM PLAN DESCRIPTION - TESTCELLS
Revision Date: July 23, 2024

I. BACKGROUND

A. Emission Unit

Description: FG-TESTCELLS consist of a total of 91 engine dynamometer test cells combined in Wings 1 and 2 and 19 engine dynamometer test cells in Wing 3. Exhaust is captured from the engine test cells by the Central Engine Exhaust System (CEES) and transferred to four (4) regenerative thermal oxidizers (RTOs) for Carbon Monoxide (CO) destruction.

Identification: FG-TESTCELLS

Facility: General Motors LLC – Pontiac Engineering Center
850 Glenwood, Mail Code: 483-710-106
Pontiac, Michigan 48340

B. Applicable Regulation, Emission Limit, Monitoring Requirements

Permit Number: MI-ROP-B4032-2020a

Emission Limits:

Pollutant	Limit	Time Period / Operating Scenario	Underlying Applicable Requirements
FG-TESTCELLS			
1. CO	299.3 pph	Test Protocol	R 336.1205(1)(a) & (b), 40 CFR 52.21(d), 40 CFR 52.21 (j)
2. CO	285.1 tpy	12-month rolling time period as determined at the end of each calendar month	R 336.1205(1)(a) & (b), 40 CFR 52.21 (j)
3. CO	0.96 lb/Mmbtu	Test Protocol	R 336.1205(1)(a) & (b), 40 CFR 52.21 (j)

Monitoring Requirements: RTO combustion chamber temperature and CEES differential pressure.

Potential Pre-Control Emissions: FG-TESTCELLS: 7487.5 tons CO per year

C. Control Technology

The FG-TESTCELLS are connected to the CEES which is connected to four RTOs. CO from engine exhaust leaves the FG-TESTCELLS and travels through the CEES to the RTOs where it is destroyed. Based on the April 11-13, 2022, and April 28, 2022, stack test, the tested inlet flow rate of RTO 1 was 19,967 dscfm, RTO 2 was 18,664 dscfm, RTO 3 was 18,658 dscfm, and RTO 4 was 18,629 dscfm.

D. CAM Rule Applicability The sources FG-TESTCELLS that prior to control, could have potential CO emission greater than 100 tons and are thus subject to CAM under 40 CFR Part 64.

II. MONITORING APPROACH

CAM Requirement	RTO Temperature	CEES Pressure
A. Indicator of Performance	RTO combustion temperature is measured with two thermocouples, one per combustion chamber. The average of the two readings is used for compliance with the minimum temperature required by the permit. The temperatures are monitored continuously and recorded at equally spaced intervals at least once every 15 minutes.	Pressure drop across the CEES is measured with 9 differential pressure transducers located in the wings and main headers.
B. Indicator Range	The minimum temperature for each RTO is identified below: RTO 1: 1570°F RTO 2: 1571°F RTO 3: 1572°F RTO 4: 1570°F	An excursion is defined as a 3-hour rolling average pressure drop greater than -2 inches water column (wc).
C. Bypass System Detection	The permit flexible group, FG-TESTCELLS monitoring/ recordkeeping no. VI.11 requires 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.	

III. PERFORMANCE CRITERIA

CAM Requirement	RTO Temperature	CEES Pressure
A. Data Representativeness	Each RTO has two thermocouples (one thermocouple located in each combustion bed of the RTO)	CEES pressure is measured with 9 pressure transducers within the system to ensure air flow towards the RTOs.
B. Verification of Operational Status	N/A	N/A
C. QA/QC Practices and Criteria	The thermocouples are inspected and calibrated every 12 months.	The pressure transducers are inspected, verified reading correctly, and calibrated semi-annually.
D. Monitoring Frequency	Temperature is continuously monitored and recorded at equally spaced intervals at least once every 15 minutes.	Pressure is continuously monitored and recorded at equally spaced intervals at least once every 15 minutes.
E. Data Collection Procedures and Averaging Period; and excursion determination	Temperature data recording measurements are made at equally spaced intervals, not to exceed 15 minutes per interval. Excursions are defined as the following: a. A temperature excursion is defined as a confirmed three-hour period during which the average fails to meet the specified temperature requirements per FG-TESTCELLS SC IV.1. b. A monitoring excursion is defined as a failure to properly monitor as required per FG-TESTCELLS SC VI.1.	CEES pressure is continuously monitored and recorded equally spaced intervals, not to exceed 15 minutes per interval which is used to calculate the 3-hour rolling average.
F. Averaging Period	3 hour rolling	3 hour rolling

IV. Justification

A. Rationale for Selection of Performance Indicators and Ranges

The average RTO combustion chamber temperature was selected because it is indicative of the CO destruction occurring within the RTO and is a widely accepted method of monitoring. If the chamber temperature decreases significantly, then complete combustion may not occur, reducing the destruction efficiency. Therefore, the requirement to monitor temperature and maintain appropriate records is a justification for assuring CO destruction efficiency. Temperature monitoring is specifically identified in the monitoring/recordkeeping requirements under the current ROP flexible groups, FG-TESCELLS. The selected indicator for the RTOs is the minimum 3 hour rolling average combustion chamber temperature of 1570°F for RTO 1, 1571°F for RTO 2, 1572°F for RTO 3, and 1570 for °F for RTO 4 which is required to meet the 96% destruction efficiency requirement. The minimum temperature thresholds for each RTO were established from the most recent acceptable performance test on April 11-13, 2022 and April 28, 2022.

The exhaust from the engine test cells contains CO and is captured by the CEES which is transferred to the RTOs for destruction. Differential pressure was selected to represent the CEES operating because a negative pressure indicates that the engine emissions are being drawn towards the RTOs for destruction. It was determined that minimum differential pressure required to pull emissions through the CEES to the RTOs is -2 inches (wc).

B. Manufacturer's Recommendations

The temperature and pressure monitoring parameters identified above in Section IV.A are in alignment with the manufacturer's recommendations.

C. Performance Test

The last RTO Destruction Efficiency testing was performed on April 11-13, 2022, and April 28, 2022. The destruction efficiency for the RTOS was 97.9% for RTO 1, 97.5% for RTO 2, 97.8% for RTO 3, and 98.2% for RTO 4. This demonstrated compliance with the permit required minimum of 96%. A copy of the test report is attached.

Pontiac Engineering Center
RTO Operation and Maintenance Plan

General Requirements

All maintenance inspections including the dates, results of the inspections and the dates and reasons for the repairs if made shall remain on file with the maintenance department and/or with the environmental engineer as required by ILM retention period ENV016.

Regenerative Thermal Oxidizers

Pontiac Engineering Center (PEC) has four regenerative thermal oxidizers (RTO) used for Carbon Monoxide (CO) destruction. The following inspections are required:

1. A minimum of once every 12 months, the facility shall validate or replace the thermocouples on the RTOs.
2. A minimum of once every 18 months, the facility shall inspect the heat exchange/transfer media.
3. A minimum of once every 18 months, the facility shall inspect the valve seals condition and verify the valve timing/synchronization.

The requirements outlined in tasks 2 and 3 above can also be satisfied by the completion of a performance test on the RTOs within the prior 18 month period. The PEC RTOs were last tested on April 11-13, 2022 and April 28, 2022.

Operating Variables

The minimum combustion temperature of each RTO was established during the April 11-13, 2022 and April 28, 2022 stack test and is as follows:

RTO 1 – 1570°F RTO 2 – 1571°F RTO 3 – 1572°F RTO 4 – 1570°F

The normal operating temperature setpoint for each of the four RTOs is 1591°F. A low temperature alarm setpoint of 1585°F has been established to assist with detecting a malfunction or failure of any of the RTOs.

Minimum Retention Time Calculation

$$\text{Bed Volume Calculation} = (\text{Bed Length x Bed Width x Bed Height}) - \text{Interior Area}$$

	unit	RTO 1	RTO 2	RTO 3	RTO 4
Bed Length	ft	21.9	21.9	21.9	21.9
Bed Width	ft	11.5	11.5	11.5	11.5
Bed Height	ft	6.6	6.6	6.6	6.6
Interior Area	ft^3	63.88	63.88	63.88	63.88
Bed Volume	ft^3	1611.5	1611.5	1611.5	1611.5

$$\text{Flow Calculation} = (\text{average flow}) \text{ x } \frac{(\text{average test temperature} + 460)}{530}$$

	unit	RTO 1	RTO 2	RTO 3	RTO 4
Measured Inlet Flow by Montrose	scfm	19,967	18,664	18,658	18,629
Measured Outlet Flow by Montrose	scfm	21,021	19,647	21,698	20,835
Average Flow	scfm	20,494	19,156	20,178	19,732
Combustion Chamber – Average Test Temperature	°F	1570	1571	1572	1570
Flow	acfm	78,496	73,405	77,362	75,577

$$\text{Retention Time} = \left(\frac{\text{Bed Volume}}{\text{Flow}}\right) \text{ x } 60$$

	unit	RTO 1	RTO 2	RTO 3	RTO 4
Retention Time	seconds	1.23	1.32	1.25	1.28

O&M Plan Revisions

This O&M Plan shall be updated as necessary to reflect changes in equipment and monitoring, to implement corrective actions and to address malfunction, within 45 days of the update trigger. The updated O&M Plan shall be submitted to the AQD District Supervisor for review and approval. If the AQD does not notify GM within 90 days of submittal, the O&M Plan or amended O&M Plan shall be considered approved. Until an amended plan is approved, GM shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits.

PONTIAC ENGINEERING CENTER
2024 ROP RENEWAL PTE CALCULATION
REVISION DATE: 08-29-2024
REVISED BY: J. Alderton, Enviro. Engineer

General Motors LLC
Pontiac Engineering Center Potential to Emit (PTE) Summary Table

Line Number	Emission Source	Total Annual Potential Emissions (tons)						
		SO2	**NOx**	**CO**	**PM10**	**PM2.5**	**VOC**	**Lead**
1	Boilers	0.33	53.73	45.18	4.11	4.11	2.74	0.00
2	Misc. Units	0.19	30.91	25.99	2.37	2.37	1.58	0.00
3	Natural Gas RICE Engines (Emergency Gen)	0.00	0.28	0.55	0.01	0.01	0.14	-----
4	Diesel RICE Engines (Emergency Gen/Fire Pump)	1.40	4.51	3.91	0.23	0.23	1.71	-----
5	EU-TESTCELLS (Wing 1 & 2) - Gasoline	17.04	425.6	285.1	29.50	29.50	12.80	0.597
5	EU-TESTCELLS (Wing 1 & 2) - Diesel	16.59						-----
6	Wing 3 Testcells - Gasoline	0.75	23.5	14.4	0.56	0.56	0.57	0.01
6	Wing 3 Testcells - Diesel	0.98			1.04	1.04	0.17	-----
6	FG-Racing - Gasoline	0.12	3.3	52.6	0.09	0.09	2.22	0.02
6	FG-Racing - Diesel	0.11			0.12	0.12	0.47	-----
7	Gasoline USTs	-----	-----	-----	-----	-----	1.51	-----
8	Gasoline ASTs	-----	-----	-----	-----	-----	0.00	-----
9	FG-Rule 287(c) Coating Operations	-----	-----	-----	-----	-----	6	-----
10	FG-RULE290	-----	-----	-----	-----	-----	24	-----
11	Metalworking	-----	-----	-----	-----	-----	4.04	-----
12	Cold cleaners	-----	-----	-----	-----	-----	3.30	-----
		SO2	NOx	CO	PM10	PM2.5	VOC	Lead
Total Emissions (tons)		37.49	541.82	427.72	38.02	38.02	57.81	0.63