Ramsey, Marguerita (DEQ)

From: Streight, Robert (R.R.) <rstreigh@ford.com>
Sent: Monday, February 29, 2016 10:47 AM
To: DEQ-ROP
Cc: Albright, Adam (A.A.); Russell, David (D.G.)
Subject: M4734 - ROP Renewal Application Submittal - Ford Motor Company, Automatic Transmission New Product Center (ATNPC)
Attachments: Ford Motor Company ATNPC (M4734) ROP Renewal Application Form - 2-23-2016.docx; Ford-ATNPC ROP Permit Renewal Mark-Up (M4734 Final 9-27-11) - 2-23-2016.doc; Ford-ATNPC Malfunction Abatement Plan 8-21-2014.pdf; Ford-ATNPC ROP Renewal Application Signed Form 2-26-2016.pdf; 68-12A.pdf

As required per the Michigan Department of Environmental Quality (MDEQ) Renewable Operating Permit Renewal Application Instructions, Ford Motor Company is submitting the attached application and supporting documentation to renew the Title V Renewable Operating Permit for its Automatic Transmission New Product Center (ATNPC) (SRN: M4734). The attached documents include:

1. ROP Application Forms

2. ROP mark-up (Microsoft Word version)

3. Plans referenced in the ROP

4. PTI 68-12A

5. Signed Copy of the Application Form

A hard copy of the complete application, including the signed application form, is being mailed to the attention of the Detroit District Office-Detroit Office Air Quality Division (AQD) District Supervisor at:

Ms. Wilhemina McLemore
Detroit District Supervisor
Air Quality Division
Michigan Department of Environmental Quality
Cadillac Place, Suite 2-300
3058 West Grand Blvd.
Detroit, MI 48202-6058

If you have questions or concerns regarding this application, please feel free to contact me. Thanks.

Rob Streight
Permit Manager
Ford Motor Company
Environmental Quality Office
Fairlane Plaza North, Suite 800
290 Town Center Drive
Dearborn, MI 48126
Phone: (313) 845-8364
Fax: (313) 248-5030
E-Mail: rstreigh@ford.com

RENEWABLE OPERATING PERMIT
RENEWAL APPLICATION FORM

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

GENERAL INSTRUCTIONS

This application form should be submitted as part of an administratively complete application package for renewal of a Renewable Operating Permit (ROP). This application form consists of nine parts. Parts A – H must be completed for all applications and must also be completed for each section of a sectioned ROP. Answer all questions in all parts of the form unless directed otherwise. Detailed instructions for this application form can be found at www.michigan.gov/deq.

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)
M4734	8731	541712	MI-ROP-M4734-2011	NA

Source Name: Ford Motor Company – Automatic Transmission New Product Center

Street Address: 35500 Plymouth Road

City	State	ZIP Code	County
Livonia	MI	48150	Wayne

Section/Town/Range (if address not available)

Source Description

☐ 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)
Ford Motor Company	

Mailing address (☐ check if same as source address)

One American Road

City	State	ZIP Code	County	Country
Dearborn	MI	48126	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: M4734	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	
Robert Streight			Permit Manager	
Mailing address (☐ check if same as source address) 290 Town Center Drive, Suite 800				
City Dearborn	State MI	ZIP Code 48126	County Wayne	Country USA
Phone number 313-845-8364		E-mail address rstreigh@ford.com		

Contact 2 Name (optional)			Title	
Adam Albright			Plant Environmental Control Engineer	
Mailing address (☒ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number		E-mail address		

RESPONSIBLE OFFICIAL INFORMATION

Responsible Official 1 Name			Title	
Cheryl Thompson			Global Prototype Manager	
Mailing address (☒ check if same as source address)				
City	State	ZIP Code	County	Country
Phone number 313-322-0005		E-mail address cthomps3@ford.com		

Responsible Official 2 Name (optional)			Title	
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: M4734	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	
☒ Completed ROP Renewal Application Form (required)	☐ Compliance Plan/Schedule of Compliance
☒ Mark-up copy of existing ROP (required)	☐ Compliance Assurance Monitoring (CAM) Plan
☒ Copies of all Permit(s) to Install that have not been incorporated into existing ROP (required)	☐ Acid Rain Permit Initial/Renewal Application
☒ Additional Information (AI-001) Forms	☐ Clean Air Interstate Rule (CAIR) Permit Initial/Renewal Application(s)
☐ MAERS Forms (to report emissions not previously submitted)	☐ Confidential Information
☐ Greenhouse Gas Emissions information (if applicable)	☐ Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP
☐ Stack information	☐ Other, explain:
☒ Paper copy of all documentation provided (required)	☒ Electronic documents provided

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)

Cheryl Thompson, Global Prototype Manager

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

Signature of Responsible Official **Date**

SRN: M4734	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 not reported in MAERS in the comments field below or on an AI-001 form. Applicable MAERS form(s) for unreported emission units must be included with this application.	☐ 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 Prevention of Accidental Releases regulations? (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. Does this stationary source have the potential to emit 100,000 tons per year or more of CO_2e and 100 tons per year or more of greenhouse gases on a mass basis?	☐ Yes ☒ No
If Yes, provide emissions information on an AI-001 form. *See instructions*	
C5. Are any emission units subject to the Clean Air Interstate Rule (CAIR)? If Yes, identify the specific emission unit(s) subject to CAIR in the comments area below or on an AI-001 form.	☐ Yes ☒ No
Is a CAIR Permit Renewal Application included with this application?	☐ Yes ☐ No
C6. Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the Federal Acid Rain Program in the comments field or on an AI-001 form.	☐ Yes ☒ No
Is an Acid Rain Permit Renewal Application included with this application?	☐ Yes ☐ No
C7. Does the source have any plans such as a malfunction abatement plan, fugitive dust plan, operation/maintenance plan, or any other monitoring plan that is referenced in an existing ROP, Permit to Install requirement, or any other applicable requirement?	☒ Yes ☐ No
If "Yes", then a copy must be submitted as part of the ROP renewal application.	

Comments:

Potential greenhouse gas emissions (CO2e) are less than 100,000 tons per year based on potential fuel usage for Phase 2, Phase 3, and Phase 3A along with 53.15 mmBTU/hr heat input capacity of natural gas-fired heating equipment.

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

SRN: M4734	Section Number (if applicable):

PART D: 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. exempt Storage Tanks).

Emission Unit ID	**Emission Unit Description**	**Rule 201 Exemption** [e.g. Rule 282(b)(i)]	**Rule 212(4) Exemption** [e.g. Rule 212(4)(b)]
EU-TANKFARM68-12	Fuel Tank Farm installed as part of PTI 68-12.	Rule 284(g)(i)	Rule 212(4)(c)
EU-RTACU	Rooftop heating units. Total design capacity of all natural gas fired heating units ~53.15 MMBTU/hr with an Individual heat input of 4.2 MMBTU/hr	Rule 282(b)(i)	Rule 212(4)(b)
EU-EXEMPTMACHINING	Machining equipment and any associated coolant collectors	Rule 285(l)(vi)	Rule 212(4)(d)

Comments:

Tank Farm included in PTI68-12 application for purposes of demonstrating less than significant emissions increase in PTI permitting process. No permit applications apply to the Tank Farm.

EU-UST1 and EU-UST2A have been removed from the facility and were formerly included in FG-GASOLINE DISPENSING 10,000 and < 100,000/MONTH.

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

SRN: M4734	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 were not reported on applicable MAERS form(s).	☐ Yes ☒ No
E3. 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 in the comment area below or on an AI-001 form. If a CAM plan has not been previously submitted to the MDEQ, one must be included with the ROP renewal application on an AI-001 form. Is a CAM plan included with this application?	☐ Yes ☒ No ☐ Yes ☐ No
E4. Do any emission units identified in the existing ROP emit regulated fugitive emissions? If Yes, identify the specific emission unit(s) in the comment area below or on an AI-001 form.	☐ Yes ☒ No
E5. Have any emission units identified in the existing ROP been modified or reconstructed that would have required a PTI? If Yes, complete Part F with the appropriate information.	☐ Yes ☒ No
E6. Have any emission units identified in the existing ROP been dismantled? If Yes, identify the emission unit(s) and the dismantle date in the comment area below or on an AI-001 form.	☐ Yes ☒ No

Comments:

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

SRN: M4734	Section Number (if applicable):

PART F: PERMIT TO INSTALL INFORMATION

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

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

Permit to Install Number	Emission Units/Flexible Group ID(s)	Description (*Include Process Equipment and Control Devices*)	Date of Installation/ Modification/ Reconstruction
68-12	FG-PHASE3	Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	Replaced by PTI 68-12A
68-12A	FG-PHASE3	Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	3/6/2015
68-12A	FG-PHASE3A	Two dynamometers housed in the same building as the Phase 3 dynamometers, which were installed at a later date. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	3/6/2015

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

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

F3. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes, identity the stack(s) that were not reported on the applicable MAERS form(s). ☐ Yes ☒ No

F4. Are any emission units in the PTI(s) subject to compliance assurance monitoring (CAM)?

If Yes, identify the specific emission unit(s) subject to CAM in the comments area below or on an AI-001 form. A CAM plan must be submitted as part of the ROP renewal application on an AI-001 form. ☐ Yes ☒ No

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

F6. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs? If Yes, describe the changes on an AI-001 form. ☒ Yes ☐ No

Comments:
FG-PHASE3A consisting of EU-PHASE3-21 and EU-PHASE3-22 has been added to the permit using the descriptions from PTI 68-12A.

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

SRN: M4734	Section Number (if applicable):

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

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

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

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

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

Origin of Applicable Requirements	**Emission Unit Description – *Provide Emission Unit ID and process equipment/control device descriptions***	**Installation Date(s)**
☐ Rule 281(h) or 285(r)(iv) cleaning operation		
☐ Rule 287(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:

SRN: M4734	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.

H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	☒ Yes ☐ No
H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in a mark-up of the Emission Unit Summary Table in the existing ROP.	☒ Yes ☐ No
H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in parts F or G? If Yes, identify and describe the emission unit names, process description, and control device(s) in a mark-up of the Emission Unit Summary Table in the existing ROP.	☐ Yes ☒ No
H4. Does the source propose to make any additions, changes or deletions to terms, conditions and underlying applicable requirements in the existing ROP? If Yes, identify each emission unit/flexible group subject to the addition, change or deletion and identify the high level citation for <u>each</u> state or federal underlying applicable requirement that the emission unit/flexible group is subject to. Removal of references to catalytic oxidizers in all conditions where option of thermal oxidizers or catalytic oxidizers is given. Catalytic oxidizers are no longer installed at the facility.	☒ Yes ☐ No
H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not cited in the existing ROP? If Yes, list the CO/CJ number(s) below and add, change and/or delete the applicable requirements in the mark-up of the existing ROP.	☐ Yes ☒ No
H6. Does the source propose to add, change and/or delete **source-wide** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H7. Does the source propose to add, change and/or delete **emission limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No
H8. Does the source propose to add, change and/or delete **material limit** requirements? If Yes, identify the addition/change/deletion in a mark-up of the corresponding section of the ROP and provide a justification below.	☐ Yes ☒ No

SRN: M4734	Section Number (if applicable):

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

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

Removal of references to catalytic oxidizers in all conditions where option of thermal oxidizers or catalytic oxidizers is given. Catalytic oxidizers are no longer installed at the facility.

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

Removal of references to catalytic oxidizers in all conditions where option of thermal oxidizers or catalytic oxidizers is given. Catalytic oxidizers are no longer installed at the facility.

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

Removal of references to catalytic oxidizers in all conditions where option of thermal oxidizers or catalytic oxidizers is given. Catalytic oxidizers are no longer installed at the facility.

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

Removal of references to catalytic oxidizers in all conditions where option of thermal oxidizers or catalytic oxidizers is given. Catalytic oxidizers are no longer installed at the facility.

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

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

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

Chassis dynamometers have been classified as mobile sources and are no longer regulated as stationary sources by MDEQ and USEPA. References to chassis dynamometers have been removed from FG-PHASE2.

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

SRN: M4734	Section Number (if applicable):

Michigan Department of Environmental Quality - Air Quality Division

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.

Form Type **AI-001**	SRN

1. Operator's Additional Information ID
AI

Additional Information

2. Is This Information Confidential? ☐ Yes ☐ No

3. Narrative

Page of

SRN:	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	
☒ Completed ROP Renewal Application Form (required)	☐ Compliance Plan/Schedule of Compliance
☒ Mark-up copy of existing ROP (required)	☐ Compliance Assurance Monitoring (CAM) Plan
☒ Copies of all Permit(s) to Install that have not been incorporated into existing ROP (required)	☐ Acid Rain Permit Initial/Renewal Application
☒ Additional Information (AI-001) Forms	☐ Clean Air Interstate Rule (CAIR) Permit Initial/Renewal Application(s)
☐ MAERS Forms (to report emissions not previously submitted)	☐ Confidential Information
☐ Greenhouse Gas Emissions information (if applicable)	☐ Copies of all Consent Order/Consent Judgments that have not been incorporated into existing ROP
☐ Stack information	☐ Other, explain:
☒ Paper copy of all documentation provided (required)	☒ Electronic documents provided

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)

Cheryl Thompson, Global Prototype 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.

Cheryl Thompson — **Signature of Responsible Official**

2-26-16 — **Date**

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

EFFECTIVE DATE: ~~September 27, 2011~~TBD

ISSUED TO

Ford Motor Company - Automatic Transmission New Product Center

State Registration Number (SRN): M4734

LOCATED AT

35500 Plymouth Road, Livonia, Michigan 48150

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-M4734-~~2011~~2016

Expiration Date: ~~September 27, 2016~~TBD

Administratively Complete ROP Renewal Application Due Between
~~March 27, 2015~~TBD and ~~March 27, 2016~~TBD

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

SOURCE-WIDE PERMIT TO INSTALL

Permit Number: MI-PTI-M4734-~~2011~~2016

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

Michigan Department of Environmental Quality

_____

Chris Ethridge, ~~Acting~~ Southeast Michigan District Supervisor

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AUTHORITY AND ENFORCEABILITY

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

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

In accordance with Rule 213(2)(a), all underlying applicable requirements will be identified for each ROP term or condition. All terms and conditions that are included in a PTI, are streamlined or subsumed, or 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 federally enforceable Source- wide PTI No. MI-PTI-M4734-2011 pursuant to Rule 201(2)(c) are designated by footnote two. **(R 336.1213(5)(b), R 336.1214a(3))**

General Provisions

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

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

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

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

5. The permittee shall furnish to the department, within a reasonable time, any information the department may request, in writing, to determine whether cause exists for modifying, revising, or revoking the ROP or to determine compliance with this ROP. Upon request, the permittee shall also furnish to the department copies of any records that are required to be kept as a term or condition of this ROP. For information which is claimed by the permittee to be confidential, consistent with the requirements of the 1976 PA 442, MCL §15.231 et seq.,

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

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

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

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

Equipment & Design

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

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

Emission Limits

11. Except as provided in Subrules 2, 3, and 4 of Rule 301, states in part; "a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of Rule 301(1)(a) or (b) unless otherwise specified in this ROP." The grading of visible emissions shall be determined in accordance with Rule 303. **(R 336.1301(1) in pertinent part)**:
    a. A 6-minute average of 20 percent opacity, except for one 6-minute average per hour of not more than 27 percent opacity.
    b. A limit specified by an applicable federal new source performance standard.

12. The permittee shall not cause or permit the emission of an air contaminant or water vapor in quantities that cause, alone or in reaction with other air contaminants, either of the following:
    a. Injurious effects to human health or safety, animal life, plant life of significant economic value, or property.[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). **(R 336.2001)**

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

15. Any required test results shall be submitted to the Air Quality Division (AQD) in the format prescribed by the applicable reference test method within 60 days following the last date of the test. **(R 336.2001(4))**

Monitoring/Recordkeeping

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

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

Certification & Reporting

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

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

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

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

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

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

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

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

Permit Shield

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

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

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

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

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

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

Revisions

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

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

32. For revisions to this ROP, an administratively complete application shall be considered timely if it is received by the department in accordance with the time frames specified in Rule 216. **(R 336.1210(9))**

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

Reopenings

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

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. **(R 336.1210(7))**

Stratospheric Ozone Protection

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

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

Risk Management Plan

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

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

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

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

Emission Trading

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

Permit To Install (PTI)

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

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

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

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

For the purpose of the contiguous site being a synthetic minor for HAPs, certain Source-Wide Terms and Conditions encompass all process equipment at the site, including equipment covered by other permits, grand-fathered equipment and exempt equipment. For these Conditions, the term Source-Wide comprises two stationary sources: Ford Motor Company, Livonia Transmission Plant (SRN A8645) and Ford Motor Company, Automatic Transmission New Product Center (SRN: M4734).

SOURCE-WIDE CONDITIONS

POLLUTION CONTROL EQUIPMENT

1. NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Each individual HAP	Less than 10.0 tpy	12-month rolling time period as determined at the end of each calendar month	SOURCE-WIDE	SCVI. 1	**R336.1213(2)**
2. Aggregate HAP's	Less than 25.0 tpy	12-month rolling time period as determined at the end of each calendar month	SOURCE-WIDE	SCVI. 1	**R336.1213(2)**
For the purpose of the limits at I.1 and I.2, Source-Wide comprises of the total and individual HAP emissions from the M4734 and A8645 contiguous sites.					

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING

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

1. NA

See Appendix 5

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 the following information on a monthly basis:
   a. Individual and aggregate HAP emissions calculations determining the monthly emissions rate of each in tons per calendar month from SOURCE-WIDE. For the purpose of this condition, SOURCE-WIDE comprises the individual and total HAP emissions from the Ford Motor Company A8645 and M4734 contiguous sites. Alternatively for bulk chemical usage which has quarterly records data, usage shall be prorated to each month using hours of operations or production data.

b. Individual and aggregate HAP emission calculations determining the annual emission rate of each in tons per 12-month rolling time period as determined at the end of each calendar month from SOURCE-WIDE. For the purpose of this condition, SOURCE-WIDE comprises the individual and total HAP emissions from the Ford Motor Company A8645 and M4734 contiguous sites. Alternatively for bulk chemical usage which has quarterly records data, usage shall be prorated to each month using hours of operations or production data.

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. (**R336.1213(3))**

See Appendices 4 and 7

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
1. NA	NA	NA	**NA**

IX. OTHER REQUIREMENT(S)

1. 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 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-PHASE3	Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.~~Dynamometer testing facilities that include 22 engine driven dynamometer test cells. Three catalytic thermal oxidizers or three regenerative thermal oxidizers control hydrocarbon and carbon monoxide emissions from the test cells.~~	1-1-1995/NA	FG-PHASE3
EU-PHASE3-21	Dynamometer fueled with gasoline, alcohol blends/gasoline fuel blend, diesel, kerosene, hydrogen, LPG, and natural gas. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	TBA	FG-PHASE3A
EU-PHASE3-22	Dynamometer fueled with gasoline, alcohol blends/gasoline fuel blend, diesel, kerosene, hydrogen, LPG, and natural gas. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	TBA	FG-PHASE3A
EU-COLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979.	NA	FG-COLDCLEANERS
EU-EEF1	Dynamometer testing facilities that include 7 test cells.	12-01-1990/NA	FGPHASE2
EU-EEF2	Dynamometer testing facilities that include 6 test cells.	12-01-1990/NA	FGPHASE2

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-EEF3	Dynamometer testing facilities that include 5 test cells.	12-01-1990/NA	FGPHASE2
EU-EEF4	Dynamometer testing facilities that include 3 test cells.	12-01-1990/NA	FGPHASE2
~~EU-CHASSISROLLS~~	~~Vehicle chassis rolls used to put miles on test vehicles for purposes of vehicle certification required Title II of the Clean Air Act.~~	~~12-01-1990/NA~~	~~FG-PHASE2~~
EU-VEHICLEREFUEL	Vehicle refueling of test and Ford vehicles	12-01-1990/NA	FG-GASDISPENSING
~~EU-UST1~~	~~20,000-Gallon gasoline underground storage tank~~	~~12-01-1990/NA~~	~~FG-GASDISPENSING~~
~~EU-UST2A~~	~~6,000-Gallon gasoline underground storage tank (adjoins 14,000-gallon diesel storage tank)~~	~~12-01-1990/NA~~	~~FG-GASDISPENSING~~
EU-TANKFARM68-12	Four 16,000 gallon tanks with three of the tanks divided into 10,000 and 6,000 gallon sections identified as Tanks 1 through 7. Tank 1 contains premium unleaded gasoline. Tank 2 contains low sulfur diesel. Tank 3 contains CAT aging fuel. Tank 4 contains Regular unleaded gasoline. Tanks 5-7 are flexible storage which may vary between different fuel blends depending on the testing needs.	12-3-2014	FG-GASDISPENSING
EU-GASDISPENSING	6,000 & 20,000-gallon gasoline storage tanks (Tanks serve the dynamometer cells, vehicle chassis rolls, vehicle on-road and test track calibration and transmission testing operations)	12-01-1990/NA	FG-GASDISPENSING

D. FLEXIBLE GROUP CONDITIONS

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

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

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGPHASE2	Dynamometer testing facilities that include 21 engine driven dynamometer test cells, Phase 2, that are exempt from Rule 201 pursuant to R285(g). All dynamometers and chassis rolls in Phase 2 that are exempt from Rule 201 pursuant to R285(g). Total maximum design capacity of all dynamometers in Phase 2 is 3,312,000 BTU/hr.	EU-EEF1, EU-EEF2, EU-EEF3, EU-EEF4 EU-CHASSISROLLS
FG-PHASE3	Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.Dynamometer testing facilities that include 22 engine driven dynamometer test cells. Three catalytic thermal oxidizers or three regenerative thermal oxidizers control hydrocarbon and carbon monoxide emissions from the test cells.	EU-PHASE3
FG-PHASE3A	Two dynamometers housed in the same building as the Phase 3 dynamometers, which were installed at a later date. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	EU-PHASE3-21, EU-PHASE3-22
FG-COLDCLEANERS	Any cold cleaner that is grandfathered or exempt from Rule 201 pursuant to Rule 278 and Rule 281(h) or Rule 285(r)(iv). Existing cold cleaners were placed into operation prior to July 1, 1979. New cold cleaners were placed into operation on or after July 1, 1979	EU-COLDCLEANERS
FG-RULE 287(c)	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 287(c).	FG-RULE 290
FG-RULE 290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.	FG-RULE 290

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-GASOLINE DISPENSING ≥10,000 AND <100,000/MONTH	Gasoline dispensing operation <100,000 gallons per month and ≥ 10,000 gallons per month subject to 40 CFR 63 Subpart CCCCCC.	EU-GASDISPENSING EU-UST1 EU-UST2A EU-VEHICLEREFUEL EU-EEF1, EU-EEF2, EU-EEF3, EU-EEF4 EU-CHASSISROLLS EU-PHASE3 EU-PHASE3-21 EU-PHASE3-22 EU-TANKFARM68-12

FG – PHASE2
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Dynamometer testing facilities that include 21 engine driven dynamometer test cells ~~and chassis rolls~~, Phase 2, that are exempt from Rule 201 pursuant to R285(g). ~~Total maximum design capacity of all dynamometers in Phase 2 is 3,312,000 BTU/hr.~~

Emission Units: EU-EEF1, EU-EEF2, EU-EEF3, EU-EEF4, ~~EU-CHASSISROLLS~~

POLLUTION CONTROL EQUIPMENT

1. NA

I. EMISSION LIMIT(S)

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

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Fuel	1,750,000 gallons total	Per Year (12 month rolling time period as determined at the end of each calendar month)	EU-EEF1, EU-EEF2, EU-EEF3, EU-EEF4 ~~EU-CHASSISROLLS~~	SC VI.1 SC VI.2	**(R336.1213(2)(d))***

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING

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

1. NA

See Appendix 5

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 the following records, in a manner acceptable to the Department:
   a. Type of fuel used (e.g., diesel, unleaded gasoline, or leaded gasoline)
   b. Fuel usage rate. See Appendix 4 and 7

(R336.1213(3)(b)(ii))

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
1. NA	NA	NA	**NA**

IX. OTHER REQUIREMENT(S)

1. 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 – PHASE3

EMISSION UNIT CONDITIONS

DESCRIPTION

Dynamometer testing facilities that include 22 engine driven dynamometer test cells. Three catalytic thermal oxidizers or three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the test cells.

Emission Unit ID: **EU-PHASE3**

POLLUTION CONTROL EQUIPMENT

Catalytic Thermal Oxidizer 5, Catalytic Thermal Oxidizer 6, Catalytic Thermal Oxidizer 7 or

Regenerative Thermal Oxidizer 5, Regenerative Thermal Oxidizer 6, Regenerative Thermal Oxidizer 7

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. NOx	**3801.6[2] Pounds**	**Per Day (prorated from monthly)**	**FG-PHASE3**	**V. 1,2,5,6,7,8** **VI. 1,2,3**	40 CFR 52.21
2. NOx	**98.2[2] tpy**	**12-month rolling time period as determined at the end of each calendar month**	**FG-PHASE3**	**V. 1,2,5,6,7,8** **VI. 1,2,3**	40 CFR 52.21

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Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
3. SO2	506.88[2] Pounds	Per Day (prorated from monthly)	FG-PHASE3	V. 3,4 VI. 1,3	R336.1201(3)
4. SO2	13.1[2] tpy	12-month rolling time period as determined at the end of each calendar month	FG-PHASE3	V. 3,4 VI. 1,3	R336.1201(3)
5. VOC	139.2[2] Pounds[2]	Per Day (prorated from monthly)	FG-PHASE3	V. 1,2,3,5,6,7,8 VI. 1,2,3	R336.1702(c)
6. VOC	3.6[2] tpy	12-month rolling time period as determined at the end of each calendar month	FG-PHASE3	V. 1,2,3,5,6,7,8 VI. 1,2,3	R336.1702(c)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Monitoring/ Testing Method	Underlying Applicable Requirements
1. Fuel	12672 Gallons[2]	Per Day (prorated from monthly)	FG-PHASE3	VI. 1,3	R336.1201(3)
2. Fuel	652500 Gallons[2]	Per Year (12 month rolling time period as determined at the end of each calendar month)	FG-PHASE3	VI. 1,3	R336.1201(3)
3. Lead	7.0 kilograms[2]	Per Week, when using leaded fuel	FG-PHASE3	V. 4; VI. 1,3	R336.1201(3)

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III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate any of the test cells unless a minimum inlet temperature of 600 degrees Fahrenheit in the associated catalytic thermal oxidizer, or a minimum retention time of 0.5 seconds and a minimum chamber temperature of 1400 degrees Fahrenheit (based on a 3-hour average) for the regenerative thermal oxidizer(s) being utilized to control emissions from the cell, is maintained[2]. (R336.1910)

IV. DESIGN/EQUIPMENT PARAMETER(S)

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1.The permittee shall not operate Banks 5, 6, and/or 7 of internal combustion engine test cells with associated dynamometers, hereafter "test cell", unless the associated catalytic oxidizer for Bank 5, 6, and/or 7, or sufficient regenerative thermal oxidizer capacity, is installed and operating properly[2]. (R336.1910)

V. TESTING/SAMPLING

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

1. Verification of the VOC and Nitrogen oxides emission rates from a representative regenerative thermal oxidizers, by testing, at owner's expense, is required within 365 days of issuance of this permit if an acceptable VOC and Nitrogen oxides test has not been conducted within 5 years prior to the issuance of the ROP, unless the permittee has submitted an acceptable demonstration that the most recent acceptable test remains valid and representative. Verification of the VOC and Nitrogen oxides emission rates include the submittal of a complete report of the test results. No less than 30 days prior to testing, a complete testing plan must be submitted to the AQD. The final plan must be approved by the AQD prior to testing. No less than 7 days before any tests are conducted, the permittee shall notify the AQD District Supervisor, in writing, of the time and place of the test and who will be conducting it. (R336.1213(3), R336.2001(3))

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2.If the existing Catalytic Thermal Oxidizers (CTO) are brought back on line, the following parameters shall be tested/recorded for one of the catalytic thermal oxidizers within 12 months of restart of the CTO unit(s):

a.**Nitrogen oxides**

b.**VOC**

A different catalytic thermal oxidizer shall be tested every five years. (R336.1213(3))

3.**The permittee shall determine the maximum sulfur content and lead content (when leaded fuel is used) in each fuel using an ASTM-approved method or fuel supplier certification. See Appendix 7.** (R336.1213(3))

4.**The Permittee shall use the following methods when testing the above parameters[2]:**

a.**EPA-approved method such as Federal Reference Test Method 7e** ((R336.2004(a))

b.**EPA-approved method such as Federal Reference Test Method 25a** ((R336.2004(a))

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

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

2.**The permittee shall monitor and record the following parameters either electronically, using a strip chart recorder, or by manual logging:**

a.**For catalytic thermal oxidizers—the exhaust gas temperature immediately before and after the catalytic bed**

b.**For regenerative thermal oxidizers—the temperature of the exhaust gas in the chamber**

Temperature readings shall be recorded at least once every 15 minutes (4 per hour). For the regenerative thermal oxidizers, temperature readings shall be averaged over each successive 3-hour block time period when the temperature drops below 1400ºF. (R336.1213(3)(b)(ii))

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3.The permittee shall maintain the following records, in a manner acceptable to the Department:

a.Days of operation per month

b.Type of fuel used (e.g., diesel, unleaded gasoline, or leaded gasoline)

c.Fuel usage rate. See Appendix 4 and 7

d.When leaded fuel is used, Lead content of fuels used, pounds per gallon

e.Sulfur content of fuels used, pounds per gallon

f.Weekly lead usage rate when using leaded fuel, kilograms

g.Emissions testing results for nitrogen oxides and VOC

h.NOx, SO2, and VOC emissions calculations per day and per year as outlined in Table I

i.Temperature readings for the oxidizers as described in S.C. VI 2.

(R336.1213(3)(b)(ii))

See Appendices 4 & 7

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
1. SVRTO5	**44[2]**	**68.5[2]**	R336.1201(3)
2. SVRTO6	**44[2]**	**68.5[2]**	R336.1201(3)
3. SVRTO7	**44[2]**	**68.5[2]**	R336.1201(3)

IX. OTHER REQUIREMENT(S)

1.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).

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FG – PHASE3
EMISSION UNIT CONDITIONS

DESCRIPTION: Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.

Emission Units: EU-PHASE3

POLLUTION CONTROL EQUIPMENT: Regenerative Thermal Oxidizer 5, Regenerative Thermal Oxidizer 6, Regenerative Thermal Oxidizer 7

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	2027.5 lb/day	Calendar Day (prorated from monthly).	FG-PHASE3	SC VI.5	40 CFR 52.21
2. NO_x	52.2 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
3. NO_x	84.5 pph	Test Protocol*	FG-PHASE3	SC V.1	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
4. NO_x	544.0 lb/MMcf	Test Protocol*	FG-PHASE3	SC V.2	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
5. SO_2	507.1 lbs/day	Calendar Day (prorated from monthly.	FG-PHASE3	SC VI.5, SC VI.7	40 CFR 52.21
6. SO_2	10.8 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4, SC VI.7	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
7. VOC	228.1 lb/day	Calendar Day (prorated from monthly)	FG-PHASE3	SC VI.5	R 336.1702(c), 40 CFR 52.21

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
8. VOC	5.9 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2802(4)(d), 40 CFR 52.21(a)(2)(iv)(d)
9. VOC	9.5 pph	Test Protocol*	FG-PHASE3	SC V.1	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2802(4)(d), 40 CFR 52.21(a)(2)(iv)(d)
10. CO	128.5 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(d)
11. CO	208.0 pph	Test Protocol*	FG-PHASE3	SC V.1	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(d)
12. PM10	11.7 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
13. PM2.5	11.7 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)

*Test protocol shall specify averaging time

Controlled Emission Factors with thermal oxidizer control

Worst case for all fuels other than natural gas for NO_x	Natural Gas
NO_x – 0.16 lb/gallon SO_2 – 0.29 lb/MMBtu for diesel and 0.084 lb/MMBtu for gasoline VOC – 0.018 lb/gallon CO – 0.394 lb/gallon PM10 – 0.0425 lb/gallon PM2.5 – 0.31 lb/MMBtu for diesel and 0.1 lb/MMBtu for gasoline	NO_x – 544.0 lb NO_x/MMcf of natural gas

Where: 0.125 MMBtu/gallon for gasoline, 0.138 MMBtu/gallon for diesel 1,028 Btu/cf for natural gas, and 121.5 cf natural gas equivalent to 1 gallon of gasoline

II. MATERIAL LIMITS

1. The fuel usage for FG-PHASE3 shall not exceed 12,672 gallons per calendar day. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The fuel usage for FG-PHASE3 shall not exceed 652,500 gallons per year based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

3. The fuel usage for FG-PHASE3 shall not exceed 500,000 gallons of diesel and diesel-like fuels of the 652,500 gallons total fuel restriction per year based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

4. The permittee shall burn only gasoline, alcohol blends/gasoline fuel blend (up to 100% ethanol), diesel (all variations, including European, Asian, South American, etc.), kerosene, hydrogen, LPG (or propane), and natural gas in FG-PHASE3. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1901, R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

5. The permittee shall not use leaded gasoline in FG-PHASE3. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-PHASE3 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the Regenerative Thermal Oxidizers, has been submitted within 60 days of Permit 68-12A issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP to the AQD District Supervisor for review and approval. For any amendments to the MAP relating to requirements of Rule 911(2), the permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate Banks 5, 6, or 7 of FG-PHASE3 unless the sufficient regenerative thermal oxidizer capacity, is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum temperature of 1400^{o} F and a minimum retention time of 0.5 second in the associated regenerative thermal oxidizer. **(R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, temperature monitoring devices in the thermal oxidizers in appropriate locations to monitor and record the temperature on a continuous basis as specified in SC VI.2, during operation of FG-PHASE3. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the daily natural gas usage rate, on a continuous basis, in cubic feet per day for the fuels used in the cells in FG-PHASE3. **(R 336.1205, R 336.2802, 40 CFR 52.21)**

V. TESTING/SAMPLING

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

1. Once every five years, the following parameters shall be tested/recorded for the worst-case fuel for one of the regenerative thermal oxidizers:
   a. NOx
   b. VOC
   c. CO
   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. Testing may be coordinated with the RO permit renewal issuance and testing shall continue to be completed for one of the regenerative thermal oxidizers once every five years. A different regenerative thermal oxidizer shall be tested every five years. **(R 336.1702(a), R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. Within 180 days after commencement of trial operation of operating natural gas fueled engines for purposes of testing natural gas fueled engines or engine systems, the permittee shall verify the natural gas NOx emission factor from FG-PHASE3, 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. **(R 336.2001, R 336.2003, R 336.2004, R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record the temperatures of the exhaust gas in the regenerative thermal oxidizer chambers either electronically, using a strip chart recorder, or by manual logging. Temperature readings shall be recorded at least once every 15 minutes (4 per hour), and shall be averaged over each successive 3-hour block time period when the temperature drops below 1400ºF. **(R 336.1225, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

3. The permittee shall monitor and record, in a satisfactory manner, the daily natural gas usage rate in cubic feet per day for FG-PHASE3. 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, R 336.2802, 40 CFR 52.21)**

4. The permittee shall keep the following information on a monthly basis for FG-PHASE3:
   a. A record of the days of operation.
   b. Gallons of each fuel used per month and 12-month rolling time period.
   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. SO_2 emission calculations determining the monthly emission rate in tons per calendar month.
   f. SO_2 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   g. VOC emission calculations determining the monthly emission rate in tons per calendar month.
   h. VOC emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   i. CO emission calculations determining the monthly emission rate in tons per calendar month.
   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.
   k. PM10 emission calculations determining the monthly emission rate in tons per calendar month.
   l. PM10 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   m. PM2.5 emission calculations determining the monthly emission rate in tons per calendar month.
   n. PM2.5 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   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(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

5. The permittee shall keep the following information on a monthly basis for FG-PHASE3:
   a. Daily fuel use calculations based upon the monthly fuel use divided by the number of days FG-PHASE3 operated during the calendar month.
   b. Daily NOx emission calculations based upon the monthly NOx emissions divided by the number of days FG-PHASE3 operated during the calendar month.
   c. Daily SO_2 emission calculations based upon the monthly SO_2 emissions divided by the number of days FG-PHASE3 operated during the calendar month.
   d. Daily VOC emission calculations based upon the monthly VOC emissions divided by the number of days FG-PHASE3 operated during the 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(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

6. The permittee shall keep, in a satisfactory manner, records of the temperature in the thermal oxidizer in appropriate locations on a continuous basis, as required by SC VI.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

7. The permittee shall determine the maximum sulfur content in each fuel using an ASTM-approved method or fuel supplier certification. See Appendix 7. **(R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

See Appendices 4 & 7

VII. REPORTING

1. Within 30 days after beginning to operate a natural gas fueled engine for purposes of testing natural gas fueled engines or engine systems in FG-PHASE3 as authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the beginning of the activity. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRTO5	44	68.5	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. SVRTO6	44	68.5	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
3. SVRTO7	44	68.5	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

N/A

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

FG – PHASE3A
EMISSION UNIT CONDITIONS

DESCRIPTION: Two dynamometers housed in the same building as the Phase 3 dynamometers, which were installed at a later date. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.

Emission Units: EU-PHASE3-21, EU-PHASE3-22

POLLUTION CONTROL EQUIPMENT: Regenerative Thermal Oxidizer 5, Regenerative Thermal Oxidizer 6, Regenerative Thermal Oxidizer 7

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	33.7 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3A	SC VI.3	R 336.1205(1)(a) & (3)
3. CO	82.9 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3A	SC VI.3	R 336.1205(1)(a) & (3)

Controlled Emission Factors with thermal oxidizer control	
Worst case for all fuels other than natural gas for NO_x NO_x – 0.16 lb/gallon CO – 0.394 lb/gallon	Natural Gas NO_x – 544.0 lb NO_x/MMcf of natural gas
Where: 0.125 MMBtu/gallon for gasoline, 0.138 MMBtu/gallon for diesel 1,028 Btu/cf for natural gas, and 121.5 cf natural gas equivalent to 1 gallon of gasoline	

II. MATERIAL LIMITS

1. The permittee shall burn only gasoline, alcohol blends/gasoline fuel blend (up to 100% ethanol), diesel (all variations, including European, Asian, South American, etc.), kerosene, hydrogen, LPG (or propane), and natural gas in FG-PHASE3. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))**

2. The permittee shall not use leaded gasoline in FG-PHASE3. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-PHASE3A unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the Regenerative Thermal Oxidizers, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP to the AQD District Supervisor for review and approval. For any amendments to the MAP relating to requirements of Rule 911(2), the permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FG-PHASE3A unless the sufficient regenerative thermal oxidizer capacity, is maintained and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum temperature of 1400° F and a minimum retention time of 0.5 second in the associated regenerative thermal oxidizer. **(R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, temperature monitoring devices in the thermal oxidizers in appropriate locations to monitor and record the temperature on a continuous basis as specified in SC VI.2, during operation of FG-PHASE3A. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the daily natural gas usage rate, on a continuous basis, in cubic feet per day. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record the temperatures of the exhaust gas in the regenerative thermal oxidizer chambers either electronically, using a strip chart recorder, or by manual logging. Temperature readings shall be recorded at least once every 15 minutes (4 per hour), and shall be averaged over each successive 3-hour block time period when the temperature drops below 1400ºF. **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

3. The permittee shall keep the following information on a monthly basis for FG-PHASE3A:
   a. Usage of each fuel per month and 12-month rolling time period.
   b. NO_x emission calculations determining the monthly emission rate in tons per calendar month.
   c. 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.
   d. CO emission calculations determining the monthly emission rate in tons per calendar month.
   e. 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.

   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(1)(a) & (3), 40 CFR 52.21(c) & (d))**

4. The permittee shall keep, in a satisfactory manner, records of the temperature in the thermal oxidizer in appropriate locations on a continuous basis, as required by SC VI.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

5. The permittee shall determine the maximum sulfur content in each fuel using an ASTM-approved method or fuel supplier certification. See Appendix 7. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

See Appendix 7

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FG-PHASE3A. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRTO5	44	68.5	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVRTO6	44	68.5	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVRTO7	44	68.5	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

N/A

Footnotes:

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

FG-COLDCLEANERS
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

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

Emission Unit: EU-COLDCLEANERS

I. EMISSION LIMIT(S)

1. 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(h))**

   b. The cold cleaner is used for cleaning metal parts and the emissions are released to the general in-plant environment. **(R 336.1285(r)(iv))**

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

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

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

5. If the Reid vapor pressure of any solvent used in a new cold cleaner is greater than 0.6 psia; or, if any solvent used in a new cold cleaner is heated above 120 degrees Fahrenheit, then the cold cleaner must comply with at least one of the following provisions:

   a. The cold cleaner must be designed such that the ratio of the freeboard height to the width of the cleaner is equal to or greater than 0.7. **(R 336.1707(2)(a))**

b. The solvent bath must be covered with water if the solvent is insoluble and has a specific gravity of more than 1.0. **(R 336.1707(2)(b))**

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

V. TESTING/SAMPLING

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

1. 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(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)

1. NA

IX. OTHER REQUIREMENT(S)

1. NA

FGRULE 287(c)
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 287(c).

Emission Unit: EU-RULE 287(c)

POLLUTION CONTROL EQUIPMENT

I. EMISSION LIMIT(S)

1. NA

II. MATERIAL LIMIT(S)

Material	Limit	Time Period/ Operating Scenario	Equipment	Underlying Applicable Requirement
1. Coatings	200 gallons	Per month, as applied, minus water, per emission unit	NA	**R 336.1287(c)(i)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Any exhaust system that serves only coating spray equipment shall be equipped with a properly installed and operating particulate control system. **(R 336.1287(c)(ii))**

V. TESTING/SAMPLING

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

1. 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 DEQ, AQD Rule 287(c), Permit to Install Exemption Record form (EQP 3562) or an alternative format that is ~~approved by~~acceptable to the AQD District Supervisor. **(R 336.1213(3))**

   a. Volume of coating used, as applied, minus water, in gallons. **(R 336.1287(c)(iii))**

   b. Documentation of any filter replacements for exhaust systems serving coating spray equipment. **(R 336.1213(3))**

See Appendix 4

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)

1. NA

IX. OTHER REQUIREMENT(S)

1. NA

FGRULE 290
FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.

Emission Unit: EU-RULE 290

POLLUTION CONTROL EQUIPMENT

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(a)(i))**

2. Each emission unit that the total uncontrolled or controlled emissions of 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(a)(ii))**

   a. For noncarcinogenic 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 2.0 micrograms per cubic meter, the uncontrolled or controlled emissions shall not exceed 1,000 or 500 pounds per month, respectively. **(R 336.1290(a)(ii)(A))**

   b. For noncarcinogenic 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 microgram 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(a)(ii)(B))**

   c. For carcinogenic 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(a)(ii)(C))**

   d. The emission unit shall not emit any 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(a)(ii)(D))**

3. Each emission unit that emits only noncarcinogenic particulate air contaminants and other air contaminants that are exempted under Rule 290(a)(i) and/or Rule 290(a)(ii), if all of the following provisions are met: **(R 336.1290(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 an exhaust gas flow rate more than 30,000 actual cubic feet per minute. **(R 336.1290(a)(iii)(A))**

b. The visible emissions from the emission unit are not more than 5 percent opacity in accordance with the methods contained in Rule 303. **(R 336.1290(a)(iii)(B))**
c. The initial threshold screening level for each particulate air contaminant, excluding nuisance particulate, is more than 2.0 micrograms per cubic meter. **(R 336.1290(a)(iii)(C))**

II. MATERIAL LIMIT(S)

1. 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)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. NA

V. TESTING/SAMPLING

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

1. 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 DEQ, AQD Rule 290, Permit to Install Exemption Record form (EQP 3558) or an alternative format that is ~~approved by~~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(a)(ii) and (iii). **(R 336.1213(3))**

   e. 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. **(R 336.1213(3), R 336.1290(c))**

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(b), R 336.1213(3))**

   b. For each emission unit that emits noncarcinogenic particulate air contaminants pursuant to Rule 290(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(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))**

See Appendix 4

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)

1. NA

IX. OTHER REQUIREMENT(S)

1. NA

FG-GASOLINE DISPENSING ≥10,000 AND <100,000/MONTH FLEXIBLE GROUP CONDITIONS

DESCRIPTION

This flexible group includes existing and new/reconstructed stationary gasoline dispensing facilities (GDFs) that have a maximum monthly gasoline throughput of at least 10,000 gallons and no more than 100,000 gallons and located at an area source of hazardous air pollutants (HAPs). GDF means any stationary source which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine use solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment. The equipment used for the refueling of motor vehicles is not covered by this subpart (63.11112)

Emission Unit: EU-GASDISPENSING, EU-TANKFARM68-12, ~~EU-UST1, EU-UST2A,~~ EU-VEHICLEREFUEL, EU-EEF1, EU-EEF2, EU-EEF3, EU-EEF4, EU-PHASE3

POLLUTION CONTROL EQUIPMENT

I. EMISSION LIMIT(S)

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

II. MATERIAL LIMIT(S)

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

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to the following:

   a) Minimize gasoline spills. **(40 CFR 63.11116(a)(1))**
   b) Clean up spills as expeditiously as practicable. **(40 CFR 63.11116(a)(2))**
   c) Cover all pen gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use. **(40 CFR 63.11116(a)(3))**
   d) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. **(40 CFR 63.11116(a)(4))**
   e) Portable gasoline containers that meet the requirements of 40 CFR part 59 Subpart F, are considered acceptable for compliance with SC III.1(c) above. **(40 CFR 63.11116(d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall only load gasoline into storage tanks by utilized submerged filling as specified below: **(40 CFR 63.11117(b))**

   a) Submerged fill pipes installed on or before November 9, 2006 must be no more than 12 inches from the bottom of the storage tank. **(40 CFR 63.11117(b)(1))**

b) Submerged fill pipes installed after November 9, 2006 must be no more than 6 inches from the bottom of the storage tank. **(40 CFR 63.11117(b)(2))**
c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to have submerged fill requirements. **(40 CFR 63.11117(b)(3))**

V. TESTING/SAMPLING

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

1. NA

See Appendix 5

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 monthly throughput of gasoline through each GDF. Records of the monthly throughput must be available within 24 hours of a request by the administrator to document your gasoline throughput. **(40 CFR 63.11116(b))**

VII. REPORTING

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

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

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

4. The permittee shall submit an initial notification that your are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in 63.11117, unless you meet the requirements in SC VII.6 below. The initial notification must contain the following information: **(40 CFR 63.11124(a)(1))**

   a) The name and address of the owner and the operator.
   b) the address (i.e., physical location) of the GDF.
   c) A statement that the notification is being submitted in response to this subpart (Gasoline Distribution Area MACT, 40 CFR 63 Subpart CCCCCC) and identifying the requirements in paragraphs (a), (b), and (c)(1) or paragraph (c)(2) of 63.11117 that apply to you.

   The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in 63.13.

5. The permittee shall Submit a Notification of Compliance Status to the applicable USEPA Regional Office and the delegated state authority, as specified in 63.13, in accordance with the schedule specified in 63.9(h), unless you meet the requirements in SC VII.6 below. **40 CFR 63.11124(a)(2))**

6. If prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in 63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under SC VII.4 or SC VII.5 listed above. **(40 CFR 63.11117(a)(3))**

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
1. NA	NA	NA	**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 CCCCCC, for Gasoline Dispensing Facilities. **(40 CFR, Part 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).

E. NON-APPLICABLE REQUIREMENTS

At the time of the ROP issuance, the AQD has determined that the requirements identified in the table below are not applicable to the specified emission unit(s) and/or flexible group(s). This determination is incorporated into the permit shield provisions set forth in the General Conditions in Part A pursuant to Rule 213(6)(a)(ii). If the permittee makes a change that affects the basis of the non-applicability determination, the permit shield established as a result of that non-applicability decision is no longer valid for that emission unit or flexible group.

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
EUPHASE3	40 CFR 64.2 - CAM plan applicability	Requirements for CAM plan applicability: a) The unit is subject to an emissions limitation or standard for the applicable regulated air pollutant b) The unit uses a control device to achieve compliance with any such limitation or standard ATNPC uses a control device (CTO or RTO) for CO and hydrocarbon emissions. However, this source is not subject to a CO limitation in the existing RO permit nor is it subject to BACT requirements for CO. Although there is a control device and emissions limitation in the RO permit for VOC's, the potential to emit does not exceed any major source thresholds. Therefore, this source is not subject to a CAM plan.
EURTACU	40 CFR 63 – Subpart JJJJJJ NESHAPs for Industrial, Commercial, and Institutional Boilers	U.S. EPA promulgated Subpart JJJJJJ effective May 20, 2011. Those final rules exclude all gas-fired boilers at area sources. ATNPC does not have any boilers that would be classified as combusting a fuel (e.g., oil, coal, biomass) other than gas, therefore Subpart JJJJJJ does not apply to ATNPC.
EU-COLDCLEANERS	40 CFR 63 Subpart T – NESHAPs for Halogenated Solvent Cleaning	According to 40 CFR 63.460(a), this standard applies to units that use solvents with concentrations of 5% of more by weight of halogenated compounds. In the current ROP, there is a condition limiting halogenated compound concentrations to 5% or less by weight. Therefore, this standard does not apply.
SOURCE-WIDE	40 CFR Part 63, Subpart PPPPP – NESHAPs for Engine Test Cells/Stands	According to 40 CFR 63.9285(a), an engine test cell is any apparatus used for testing uninstalled stationary or uninstalled mobile engines. Engines are not tested at ATNPC; they are used to drive the transmissions for transmission testing. Therefore, this unit is not subject to the Engine Test Cell MACT standards. Also, this facility is considered an existing source under the MACT and according to 63.9285(b) "existing sources do not have to meet the requirements of this subpart or subpart A of this part."

Emission Unit/Flexible Group ID	Non-Applicable Requirement	Justification
	40 CFR Part 63, Subpart PPPP – NESHAPs for Engine Test Cells/Stands	40 CFR Part 63, Subpart PPPP establishes emission limits for new engine test cells at a source that is major for hazardous air pollutants (HAPs). ATNPC is not major for HAPs as constrained by the source-wide conditions contained in this ROP.
SOURCE-WIDE	40 CFR Part 63, Subpart ZZZZ – NESHAPs for Reciprocating Internal Combustion Engines, 40 CFR Part 60, Subparts IIII and JJJJ for Compression Ignition and Spark Ignition Internal Combustion Engines	The engines used in the test cells are used for research and developmental purposes and are not stationary internal combustions engines subject to the RICE MACT (40 CFR Part 63, Subpart ZZZZ) or the CI ICE NSPS (40 CFR Part 60, Subpart IIII) or the SI ICE NSPS (40 CFR Part 60, Subpart JJJJ). The facility does not operate emergency RICE or any other stationary RICE.
SOURCE-WIDE	40 CFR 63, Subpart HHHHHH	ATNPC does not use manual spray-application equipment to apply coatings to parts and products.
SOURCE-WIDE	40 CFR 63, Subpart XXXXXX	ATNPC is not one of the "Nine Metal Fabrication and Finishing Source Categories" identified in 40 CFR 63.11514 of Subpart XXXXXX as listed in Table 1 of the preamble. See Federal Register, Vol. 73, No. 142, July 23, 2008, p. 42979.

APPENDICES

Appendix 1. Abbreviations and Acronyms

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

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

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

Appendix 2. Schedule of Compliance

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

Appendix 3. Monitoring Requirements

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

Appendix 4. Recordkeeping

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in FG-PHASE3. Alternative formats or procedures must be approved by the AQD District Supervisor.

1. Fuel usage rate, gallons, prorated per Appendix 7:
   - daily

2. Fuel usage rate, gallons, non-prorated:
   - monthly
   - rolling 12-month time period

Should the prorated daily fuel usage rate exceed 90% of the daily limit, the permittee shall commence daily recordkeeping for a minimum of two months until the prorated rate falls below 90% of the weekly limit as calculated at the end of the month.

~~The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in EUPHASE3. Alternative formats or procedures must be approved by the AQD District Supervisor.~~

~~1. Fuel usage rate, gallons, prorated per Appendix 7:~~
   - ~~daily~~

~~2. Fuel usage rate, gallons, non-prorated:~~
   - ~~monthly~~
   - ~~rolling 12-month time period~~

~~Should the prorated daily fuel usage rate exceed 90% of the daily limit, the permittee shall commence daily recordkeeping for a minimum of two months until the prorated rate falls below 90% of the weekly limit as calculated at the end of the month.~~

~~Should the prorated weekly lead usage rate exceed 90% of the weekly limit, the permittee shall commence weekly recordkeeping for a minimum of two months until the prorated rate falls below 90% of the daily limit as calculated at the end of the month.~~

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The permittee shall use the DEQ Rule 287(c) Permit to Install Exemption Record form or an alternative format acceptable to the AQD District Supervisor to document monthly records as required by R 336.1287(c) and FGRULE287(c).

RULE 287(c) PERMIT TO INSTALL EXEMPTION RECORD: SURFACE COATING EQUIPMENT

This record is provided as a courtesy for businesses by the Michigan Department of Environmental Quality (MDEQ), Environmental Assistance Division, Clean Air Assistance Program, and is not required to be returned or submitted to the MDEQ unless specifically requested.

Applicable Rule: Rule 287(c) of the Michigan Air Pollution Control Rules

NOTE: Rule 287(c) of the Michigan Air Pollution Control Rules exempts surface coating operations from the Permit to Install program as long as the following conditions are met:

1. The coating use rate shall not be more than 200 gallons, as applied, minus water, per month;
2. Any exhaust system that serves only coating spray equipment is supplied with a properly installed and operating particulate control system; and
3. Monthly coating usage records are maintained on file for the most recent two-year period and are made available to the MDEQ Air Quality Division upon request. (ROP-subject sources must keep records for five years.)

Please print or type all information.

COMPLETE THE MONTHLY COATING USAGE LOG FOR EACH SURFACE COATING LINE USING THE EXEMPTION IN RULE 287(c).	
INSTRUCTIONS FOR COMPLETING THE MONTHLY COATING USAGE LOG:	
Columns	
Columns (a) and (b):	Identify the name of the coating manufacturer and the product identification number. This information can be obtained from the coating container or the MSDS.
Column (c):	List the coating type. This may include but not be limited to the following: precoat, primer/primer surfacer, primer sealer, topcoat, thinners, and reducers.
Column (d):	Record the volume of coating used, as applied, minus water, in gallons. At the end of the month, total the quantities in column (d). This total should not exceed 200 gallons. [To find the volume as applied, minus water, multiply the amount used by 1 minus the volume fraction of water in the coating. For example, if you use 5 gallons of a coating that is 40% water by volume, multiply 5 by (1-0.40). This calculation yields a coating usage of 3 gallons, as applied, minus water.]
Column (e)	Initials of operator or owner.
Column (f)	Record the volume of cleanup solvents used in gallons. Even though Rule 287(c) does not address cleanup solvent usage, it is advisable to keep track of this usage. Facilities that receive Michigan Air Pollution Reporting Forms should include their usage of cleanup solvent on the forms.

SOURCE NAME:
MONTH/YEAR:

Manufacturer (a)	Product ID Number (b)	Coating Type (c)	Coating Usage (gal) (d)	Operator's Initials (e)	Cleanup Solvent Usage (gal) (f)

		Total coating used (gal) <200 gal/month		Total cleanup solvent used (gal)	

RULE 290 PERMIT TO INSTALL EXEMPTION: SOURCES WITH LIMITED EMISSIONS RECORD

This record is provided as a courtesy for businesses by the Michigan Department of Environmental Quality (MDEQ), Environmental Science and Services Division, Clean Air Assistance Program, and is not required to be returned or submitted to the MDEQ.

Applicable Rule: Rule 290 of the Michigan Air Pollution Control Rules

NOTE:

- Rule 290 of the Michigan Air Pollution Control Rules exempts an emission unit with limited emissions from having to apply for Permit to Install. Rule 201 requires sources to obtain a Permit to Install prior to the installation, construction, reconstruction, relocation, and modification of an emission unit. Sources using this exemption must not meet any of the criteria in Rule 278 and must be able to demonstrate compliance with the various emission limits contained in Rule 290.

- Utilization of this form is not the sole method of demonstrating compliance with the requirements of Rule 290, unless required by a permit such as a Renewable Operating Permit (ROP). For example, an alternative method of demonstrating compliance could be determining the emissions of air contaminants from a single unit of production and recording the number of production units generated per month.

- ROP subject sources – This document may be used to track emissions unless an alternate format is acceptable to the District Supervisor or an alternate format is cited in the ROP.

- An emission unit that emits an air contaminant, excluding noncarcinogenic Volatile Organic Compounds (VOCs) and noncarcinogenic, non-ozone forming materials listed in Rule 122(f), which has an Initial Threshold Screening Level (ITSL) or Initial Risk Screening Level (IRSL) less than 0.04 micrograms per cubic meter (ug/m3) cannot use Rule 290.

- For all emission units exempt pursuant to Rule 290 with particulate emissions which have an ITSL equal to or less than 2.0 ug/m3 and greater than or equal 0.04 ug/m3, the particulate emissions must be included in Section 2.

- For all emission units exempt pursuant to Rule 290 with particulate emissions which have an IRSL equal to or less than 0.04 ug/m3, the particulate emissions must be included in Section 3.

- Perchloroethylene is the only non-ozone forming material listed in Rule 122(f) that is a carcinogen. Two of the stabilizers in Rule 122(f) Table 11, tertiary butyl alcohol and 1,2-butylene oxide, are carcinogenic and are ozone forming materials.

- If an emission unit is equipped with a control device (i.e., equipment that captures and/or destroys air contaminants) and the control device is not vital to production of the normal product of the process or to its normal operation, then there are two options of recording emissions in Sections 2, 3, and 4:
  1. record all uncontrolled emissions of air contaminants (i.e., all air contaminants entering the control device); or
  2. record all controlled emissions of air contaminants (all air contaminants leaving the control device).

  Whatever option is chosen, make sure that option is used consistently throughout Sections 2, 3, 4, and 5.

- If the emission unit is not equipped with a control device or the control device is vital to production of the normal product of the process or to its normal operation, then the quantity of each emission of air contaminant identified in Sections 2, 3, 4, and 5 should be recorded as uncontrolled emissions.

- Monthly emission records are required to be maintained on file for the most recent two-year period and made available to the MDEQ, Air Quality Division upon request. (ROP subject sources must keep records for the most recent five year period.)

Please print or type all information.

1. COMPLETE FOR EACH EMISSION UNIT USING THE EXEMPTION IN RULE 290.
SOURCE NAME:
MONTH/YEAR:
DESCRIPTION OF EMISSION UNIT (including control devices):

2. RECORD EMISSIONS OF NONCARCINOGENIC AIR CONTAMINANTS (EXCLUDING NONCARCINOGENIC VOCS AND NONCARCINOGENIC, NON-OZONE FORMING MATERIALS LISTED IN RULE 122(f)) (see Appendix A)

ITSL ≥ 2.0 ug/m3

(The emissions of noncarcinogenic particulate air contaminants with an ITSL > 2.0 ug/m3 do not have to be recorded in this table as long as the emission unit is in compliance with the requirements in Section 6.)

CAS #	Chemical Name	Uncontrolled Emissions (lbs/month)	Controlled Emissions (lbs/month)
Monthly Total		①	②

2.0 ug/m3 > ITSL ≥ 0.04 ug/m3

CAS #	Chemical Name	Uncontrolled Emissions (lbs/month)	Controlled Emissions (lbs/month)
Monthly Total		③	④

Compliance Criteria:

- The total in Box ① must be ≤ 1,000 pounds or the total in Box ② must be ≤ 500 pounds. If the total in Box ① or in Box ② is greater than the respective emission limitations, contact your local district office.
- The total in Box ③ must be ≤ 20 pounds or the total in Box ④ must be ≤ 10 pounds. If the total in Box ③ or in Box ④ is greater than the respective emission limitations, contact your local district office.

3. RECORD EMISSIONS OF CARCINOGENIC AIR CONTAMINANTS

IRSL ≥ 0.04 ug/m3

(The emissions of carcinogenic particulate air contaminants with an IRSL ≥ 0.04 ug/m3 must be recorded in this table even though it is also exempt under Section 6.)

CAS #	Chemical Name	Uncontrolled Emissions (lbs/month)	Controlled Emissions (lbs/month)
Monthly Total		⑤	⑥

Compliance Criteria:

- The total in Box ⑤ must be ≤ 20 pounds or the total in Box ⑥ must be ≤ 10 pounds. If the total in Box ⑤ or in Box ⑥ is greater than the respective emission limitations, contact your local district office.

4. RECORD EMISSIONS OF ALL NONCARCINOGENIC VOCS AND NONCARCINOGENIC, NON-OZONE FORMING MATERIALS LISTED IN RULE 122(f) (see Appendix A)

CAS #	Chemical Name	Uncontrolled Emissions (lbs/month)	Controlled Emissions (lbs/month)
Monthly Total		⑦	⑧

Compliance Criteria:

- The total in Box ⑦ must be ≤ 1,000 pounds or the total in Box ⑧ must be ≤ 500 pounds. If the total in Box ⑦ or in Box ⑧ is greater than the respective emission limitations, contact your local district office.

5. RECORD TOTAL MONTHLY EMISSIONS

	lbs/month
Total uncontrolled emissions (Box ① + Box ③ + Box ⑤ + Box ⑦)	
Total controlled emissions (Box ② + Box ④ + Box ⑥ + Box ⑧)	

Compliance Criteria:

- The total uncontrolled emissions (Box ① + Box ③ + Box ⑤ + Box ⑦) must be ≤ 1,000 pounds. If the total uncontrolled emissions are greater than 1,000 pounds, contact your local district office; or
- The total controlled emissions (Box ② + Box ④ + Box ⑥ + Box ⑧) must be ≤ 500 pounds. If the total controlled emissions are greater than 500 pounds, contact your local district office.

6. NONCARCINOGENIC PARTICULATE AIR CONTAMINANTS

The emission unit may emit noncarcinogenic particulate air contaminants provided that the emission unit is in compliance with the following:

Y	N	
☐	☐	Are the particulate emissions 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 pounds of particulate per 1,000 pounds of exhaust gases and which do not have an exhaust gas flow rate of more than 30,000 actual cubic feet per minute?
☐	☐	Are the visible emissions from the emission unit not more than 5% opacity in accordance with the methods contained in Rule 303?
☐	☐	Is the Initial Threshold Screening Level (ITSL) for each particulate air contaminant, excluding nuisance particulate > 2.0 ug/m3?

Notes:

- Quantities of particulates being emitted from an emission unit complying with the requirements in this Section should not be included in Section 2.
- Quantities of noncarcinogenic particulates with an ITSL ≤ 2.0 ug/m3 and ≥ 0.04 ug/m3 must be included in Section 2.
- Quantities of carcinogenic particulates > 0.04 ug/m3 must be included in Section 3.

Compliance Criteria:

- If any of the preceding questions concerning noncarcinogenic particulate air contaminants are answered “No”, contact your local district office.

7. OTHER REQUIREMENTS

- Attach emission calculations to demonstrate compliance with the emission limits identified in Sections 2, 3, 4, and 5.
- Keep this record on file for a minimum of 2 years, if not required for a longer period from other requirements, i.e. ROP.

APPENDIX for Rule 290

R 336.1122 Definitions; V.

Rule 122. As used in these rules:

(f) "**Volatile organic compound**" means any compound of carbon or mixture of compounds of carbon that participates in photochemical reactions, excluding the following materials, all of which have been determined by the United States environmental protection agency to have negligible photochemical reactivity:

(i) Carbon monoxide.

(ii) Carbon dioxide.

(iii) Carbonic acid.

(iv) Metallic carbides or carbonates.

(v) Boron carbide.

(vi) Silicon carbide.

(vii) Ammonium carbonate.

(viii) Ammonium bicarbonate.

(ix) Methane.

(x) Ethane.

(xi) The methyl chloroform portion of commercial grades of methyl chloroform, if all of the following provisions are complied with:

(A) The commercial grade of methyl chloroform is used only in a surface coating or coating line that is subject to the requirements of part 6 or 7 of these rules.
(B) The commercial grade of methyl chloroform contains no stabilizers other than those listed in table 11.
(C) Compliance with the applicable limits specified in part 6 or 7 of these rules is otherwise not technically or economically reasonable.
(D) All measures to reduce the levels of all organic solvents, including the commercial grade of methyl chloroform, from the surface coating or coating line to the lowest reasonable level will be implemented.
(E) The emissions of the commercial grade of methyl chloroform do not result in a maximum ambient air concentration exceeding any of the allowable ambient air concentrations listed in table 11.
(F) The use of the commercial grade of methyl chloroform is specifically identified and allowed by a permit to install, permit to operate, or order of the department.
(G) Table 11 reads as follows:

TABLE 11

Commercial grade of methyl chloroform --
Allowable ambient air concentrations

Compound	**ppm[1]**	**Time[2]**
Methyl chloroform	3.5	1 hour
Tertiary butyl alcohol[3]	1.0	1 hour
Secondary butyl alcohol[3]	1.0	1 hour
Methylal[3]	10.0	1 hour
1,2-butylene oxide[3]	0.028 and 0.00041	1 hour annual

(xii) The methyl chloroform portion of commercial grades of methyl chloroform that contain any other stabilizer not listed in table 11 of this rule, if all of the following provisions are complied with:

(A) The commercial grade of methyl chloroform is used only in a surface coating or coating line that is subject to the requirements of part 6 or 7 of these rules.
(B) Compliance with the applicable limits specified in part 6 or 7 of these rules is otherwise not technically or economically reasonable.
(C) All measures to reduce the levels of all organic solvents, including the commercial grade of methyl chloroform, from the surface coating or coating line to the lowest reasonable level will be implemented.
(D) The emissions of any compound in the commercial grade of methyl chloroform that is listed in table 11 of this rule do not result in a maximum ambient air concentration exceeding any of the allowable ambient air concentrations listed in table 11.
(E) The emission of all compounds in the commercial grade of methyl chloroform that are not listed in table 11 is demonstrated to comply with R 336.1901.

1. Parts per million, by volume
2. Averaging time period
3. This compound is a stabilizer

(F) The use of the commercial grade of methyl chloroform is specifically identified and allowed by a permit to install, permit to operate, or order of the department.

(xiii) Acetone.

(xiv) Cyclic, branched, or linear completely methylated siloxanes.

(xv) Parachlorobenzotrifluoride.

(xvi) Perchloroethylene.

(xvii) Trichlorofluoromethane (CFC-11).

(xviii) Dichlorodifluoromethane (CFC-12).

(xix) 1,1,2-trichloro-1,2,2-trifluoroethane (CFC-113).

(xx) 1,2-dichloro 1,1,2,2-tetrafluoroethane (CFC-114).

(xxi) Chloropentafluoroethane (CFC-115).

(xxii) 1,1-dichloro 1-fluoroethane (HCFC-141b).

(xxiii) 1,chloro 1,1-difluoroethane (HCFC-142b).

(xxiv) Chlorodifluoromethane (HCFC-22).

(xxv) 1,1,1-trifluoro 2,2-dichloroethane (HCFC-123).

(xxvi) 2-chloro-1,1,1,2-tetrafluoroethane (HCFC-124).

(xxvii) Trifluoromethane (HFC-23).

(xxviii) Pentafluoroethane (HFC-125).

(xxix) 1,1,2,2-tetrafluoroethane (HFC-134).

(xxx) 1,1,1,2-tetrafluoroethane (HFC-134a).

(xxxi) 1,1,1-trifluoroethane (HFC-143a).

(xxxii) 1,1-difluoroethane (HFC-152a).

(xxxiii) 3,3-dichloro-1, 1,1,2,2-pentafluoropropane (HCFC-225ca).

(xxxiv) 1,3-dichloro-1,1,2,2,3-pentafluoropropane (HCFC-225cb).

(xxxv) 1,1,1,2,3,4,4,5,5,5-decafluoropentane (HFC 43-10mee).

(xxxvi) Difluoromethane (HFC-32).

(xxxvii) Ethyl fluoride (HFC-161).

(xxxviii) 1,1,1,3,3,3-hexafluoropropane (HFC-236fa).

(xxxix) 1,1,2,2,3-pentafluoropropane (HFC-245ca).

(xl) 1,1,2,3,3- pentafluoropropane (HFC-245ea).

(xli) 1,1,1,2,3- pentafluoropropane (HFC-245eb).

(xlii) 1,1,1,3,3- pentafluoropropane (HFC-245fa).

(xliii) 1,1,1,2,3,3-hexafluoropropane (HFC-236ea).

(xliv) 1,1,1,3,3-pentafluorobutane (HFC365mfc).

(xlv) Chlorofluoromethane (HCFC-31).

(xlvi) 1,2-dichloro-1,1,2-trifluoroethane (HCFC-123a).

(xlvii) 1-chlor-1-fluoroethane (HCFC-151a).

(xlviii) 1,1,1,2,2,3,3,4,4-nonafluoro-4-methoxybutane.

(xlix) 2-(difluoromethoxymethyl)-1,1,1,2,3,3,3-heptafluoropropane.

(l) 1-ethoxy-1,1,2,2,3,3,4,4,4-nonafluorobutane.

(li) 2-(ethoxydifluoromethyl)-1,1,1,2,3,3,3-heptafluoropropane.

(lii) Methyl acetate.

(liii) Perfluorocarbon compounds that fall into the following classes:

(A) Cyclic, branched, or linear, completely fluorinated alkanes.
(B) Cyclic, branched, or linear, completely fluorinated ethers with no unsaturations.
(C) Cyclic, branched, or linear, completely fluorinated tertiary amines with no unsaturations.
(D) Sulfur-containing perfluorocarbons with no unsaturations and with sulfur bonds only to carbon and fluorine.

(liv) Methylene chloride.

The methods described in R 336.2004 and R 336.2040 shall be used for measuring volatile organic compounds for purposes of determining compliance with emission limits. Where such a method also measures compounds with negligible photochemical reactivity, these negligibly-photochemical reactive compounds may be excluded as volatile organic compounds if the amount of such compounds is accurately quantified and such exclusion is approved by the department.

Appendix 5. Testing Procedures

There are no specific testing requirement plans or procedures for this ROP. Therefore, this appendix is not applicable.

Appendix 6. Permits to Install

The following table lists any PTIs issued since the effective date of previously issued ROP No. MI-ROP-M4734-2011.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)

Appendix 7. Emission Calculations

FG-PHASE3
The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-PHASE3. Alternative calculations must be approved by the AQD District Supervisor.

Prorated daily fuel usage, gallons = (Monthly fuel usage in gallons) / (days of operation per month).

Daily SO_2 emissions, pounds = (Prorated daily fuel usage in gallons) x (sulfur content of fuel, pounds per gallon) x (2 pounds SO_2 / pound sulfur) summed for each fuel (e.g., diesel, unleaded gasoline) used.

Annual SO_2 emissions, tons = (Annual fuel usage in gallons) x (sulfur content of fuel, pounds per gallon) x (2 pounds SO_2 / pound sulfur) x (ton / 2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Daily NOx emissions, pounds = (Prorated daily fuel usage in gallons) * (NOx emission factor, pounds per gallon) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual NOx emissions, tons = (Annual fuel usage in gallons) * (NOx emissions factor, pounds per gallon) * (ton/2000 lbs) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Daily VOC emissions, pounds = (Prorated daily fuel usage in gallons) * (VOC emission factor, pounds per gallon) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual VOC emissions, tons = (Annual fuel usage in gallons) * (VOC emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual CO emissions, tons = (Annual fuel usage in gallons) * (CO emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual PM10 emissions, tons = (Annual fuel usage in gallons) * (PM10 emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual PM2.5 emissions, tons = (Annual fuel usage in gallons) * (PM2.5 emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

FG-PHASE3A
The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-PHASE3A. Alternative calculations must be approved by the AQD District Supervisor.

Annual NOx emissions, tons = (Annual fuel usage in gallons) * (NOx emissions factor, pounds per gallon) * (ton/2000 lbs) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual CO emissions, tons = (Annual fuel usage in gallons) * (CO emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

~~The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in EU-PHASE3. Alternative calculations must be approved by the AQD District Supervisor.~~

~~Prorated daily fuel usage, gallons = (Monthly fuel usage in gallons) / (days of operation per month).~~

~~Prorated weekly lead usage, pounds = (Prorated daily fuel usage in gallons) x (lead content of fuel, pounds per gallon) x (7 days/week).~~

~~Daily Sulfur dioxide emissions, pounds = (Prorated daily fuel usage in gallons) x (sulfur content of fuel, pounds per gallon) x (2 pounds sulfur dioxide / pound sulfur) summed for each fuel (e.g., diesel, unleaded gasoline, leaded gasoline) used.~~

~~Annual Sulfur dioxide emissions, tons = (Annual fuel usage in gallons) x (sulfur content of fuel, pounds per gallon) x (2 pounds sulfur dioxide / pound sulfur) x (ton / 2000 pounds).~~

~~Daily Nitrogen Oxide emissions, pounds = (Prorated daily fuel usage in gallons) * (NOx emission factor, pounds per gallon) summed for each fuel (e.g. diesel, unleaded gasoline, leaded gasoline) used.~~

~~Annual Nitrogen Oxides emissions, tons = (Annual fuel usage in gallons) * (NOx emissions factor, pounds per gallon) * (ton/2000 lbs) summed for each fuel (e.g. diesel, unleaded gasoline, leaded gasoline) used.~~

Daily Volatile Organic Compounds (VOC) emissions, pounds = (Prorated daily fuel usage in gallons) * (VOC emission factor, pounds per gallon) summed for each fuel (e.g. diesel, unleaded gasoline, leaded gasoline) used.

Annual Volatile Organic Compounds (VOC) emissions, tons = (Annual fuel usage in gallons) * (VOC emission factor, pounds per gallon) * (ton/2000 pounds) summed for each duel (e.g. diesel, unleaded gasoline, leaded gasoline) used.

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

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

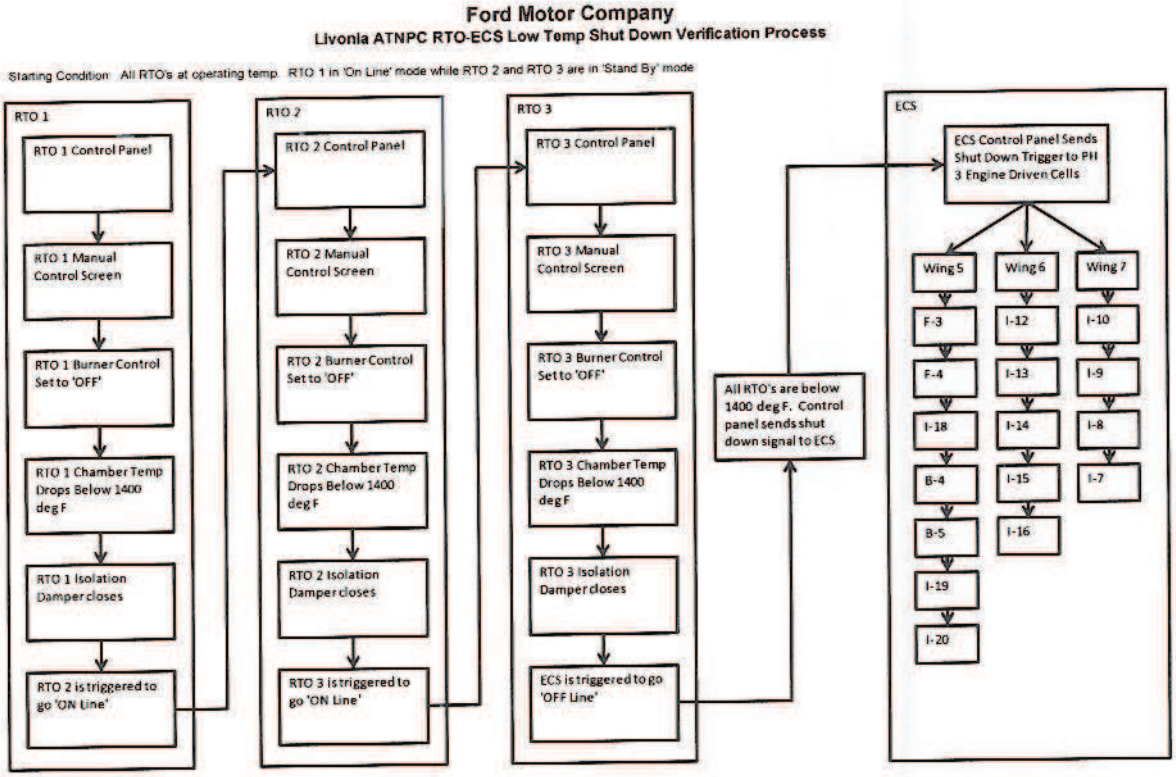
B. Other Reporting

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.

Ford Motor Company – Automatic Transmission New Product Center
MI-ROP-M4734-2011
Malfunction Abatement Plan
August 21, 2014 (Updated)

Michigan Air Rule	ATNPC Malfunction Abatement Plan	Enclosure
R 336.1911 Malfunction abatement plans. Rule 911. (1) Upon request of the department, a person responsible for the operation of a source of an air contaminant shall prepare a malfunction abatement plan to prevent, detect, and correct malfunctions or equipment failures resulting in emissions exceeding any applicable emission limitation. (2) A malfunction abatement plan required by subrule (1) of this rule shall be in writing and shall, at a minimum, specify all of the following: (a) A complete preventative maintenance program, including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement. (b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures. (c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits. (3) A malfunction abatement plan required by subrule (1) of this rule shall be submitted to the department and shall be subject to review and approval by the department. If, in the opinion of the commission, the plan does not adequately carry out the objectives as set forth in subrules (1) and (2) of this rule, then the department may disapprove the plan, state its reasons for disapproval, and order the preparation of an amended plan within the time period specified in the order. If, within the time period specified in the order, an amended plan is submitted which, in the opinion of the department, fails to meet the objective, then the department, on its own initiative, may *amend the plan* to cause it to meet the objective. (4) Within 180 days after the department approves a malfunction abatement plan, a person responsible for the preparation of a malfunction abatement plan shall implement the malfunction abatement plan required by subrule (1) of this rule.	The FG-PHASE3 Dynamometer testing facility is currently comprised of engine driven dynamometer test cells ducted through an Exhaust Control System (ECS) to three regenerative thermal oxidizers (RTOs). The RTOs provide emission incineration of hydrocarbon (VOC) and carbon monoxide (CO) emissions from each test cell. Under all existing test cell operating scenarios, one RTO has the capacity to control emissions from all of the engine driven test cells simultaneously, if required. The two adjacent RTOs are operated in standby mode in the event of a primary RTO malfunction. The RTO system Programmable Logic Controller (PLC) automatically switches between RTOs, if the operating RTO system encounters abnormal operating conditions (e.g., combustion chamber temperature loss, hydraulic system damper failure, loss of ECS, etc.). The facility does not operate the engine driven test cells unless a minimum RTO chamber temperature of 1400 degrees Fahrenheit is maintained. In addition, interlocks between the test cells and the abatement equipment are in place to safely terminate all test cell operations in the event of a RTO system-wide (RTO 1, 2 & 3) malfunction or ECS failure that would jeopardize the incineration process of hydrocarbon and carbon monoxide emissions. The facility has a comprehensive abatement equipment maintenance program consisting of daily visual inspections and repairs performed by plant forces and local personnel under the supervision of Tom Masacek, ATDL facilities supervisor. Additionally, quarterly and annual inspection and repair activity is performed by an engineering firm specializing in emission control systems. A Service Report/Check List of the inspected items and recommended	Low Temperature Flowchart Diagram Inspection Report Binder

	replacement parts are included in the Vendor's inspection report binder. Items identified in the report as "critical" to the operation/performance of the system are replaced immediately by the vendor at the time of inspection, or if the parts are unavailable, the affected RTO is shut down until the hardware can be ordered and replaced. The emissions control system for the FG-PHASE3 Dynamometer testing facility is designed with built-in redundancy. There are two complete "spare" RTOs which can immediately be brought on-line in the event of primary RTO malfunction. No written list of spare parts is maintained, as the two back up RTO's are kept operational and serve as a complete set of spare parts. RTO malfunctions or other abnormal operating conditions are reported to Dynamometer Operations Management and the Plant Environmental Engineer, Adam Albright. As previously described, sensors and interlocks ensure emission control is maintained during test cell operation. Malfunctions or abnormal operating conditions that would prevent compliance with the applicable emission limits would automatically shut down test cell operations until control system repairs are completed.	


Ford Motor Company
Livonia ATNPC RTO-ECS Low Temp Shut Down Verification Process
Starting Condition: All RTO's at operating temp. RTO 1 in 'On Line' mode while RTO 2 and RTO 3 are in 'Stand By' mode
RTO 1
RTO 1 Control Panel
RTO 1 Manual Control Screen
RTO 1 Burner Control Set to 'OFF'
RTO 1 Chamber Temp Drops Below 1400 deg F
RTO 1 Isolation Damper closes
RTO 2 is triggered to go 'ON Line'
RTO 2
RTO 2 Control Panel
RTO 2 Manual Control Screen
RTO 2 Burner Control Set to 'OFF'
RTO 2 Chamber Temp Drops Below 1400 deg F
RTO 2 Isolation Damper closes
RTO 3 is triggered to go 'ON Line'
RTO 3
RTO 3 Control Panel
RTO 3 Manual Control Screen
RTO 3 Burner Control Set to 'OFF'
RTO 3 Chamber Temp Drops Below 1400 deg F
RTO 3 Isolation Damper closes
ECS is triggered to go 'OFF Line'
All RTO's are below 1400 deg F. Control panel sends shut down signal to ECS
ECS
ECS Control Panel Sends Shut Down Trigger to PH 3 Engine Driven Cells
Wing 5
F-3
F-4
I-18
B-4
B-5
I-19
I-20
Wing 6
I-12
I-13
I-14
I-15
I-16
Wing 7
I-10
I-9
I-8
I-7

Annual Inspection:

GIFFIN RTO INSPECTION CHECKSHEET

Customer:	
Address:	
Contact:	
Phone:	
E-Mail:	
Type of Unit:	
Inspection Date:	
Technical Engineers:	

Inspection Checklist		
Burners:		**Comments:**
1.	Check high and low gas pressure switches for proper operation and settings.	
2.	Check screens and valve seats, and test for freedom of valve movement.	
3.	Inspect and clean the burner as needed.	
4.	Inspect and replace igniters if required. Verify gap and cleanliness. Clean and gap if needed.	
5.	Inspect the gas train integrity and general condition.	
6.	Check and reset main gas pressure regulator.	
7.	Check and test main gas safety shut-off valves.	
8.	Check and test main gas vent valves.	
9.	Check UV detectors and its flame intensity signal; clean or replace, if defective.	
10.	Check and test pilot gas shut-off valve.	
11.	Check and verify main and pilot gas pressure gauges are operating.	
12.	Inspect combustion air blower. Filter cleanliness and lubrication.	
13.	Inspect PLC PID settings for proper operation. (Verify during start-up on trending chart.)	
14.	Inspect and recalibrate temperature transmitters.	
15.	Inspect thermocouples and replace as necessary. (Verify Type matches wire.)	
16.	Check combustion air and gas ratios. Profile Burner, Adjust actuator motors, linkage and valves as necessary. Check and set pilot gas pressure regulator. (Except Canada, CSA Certified personnel required to complete burner adjustment. See attached report.)	
17.	Ignite burners and observe proper sequencing of purge and ignition systems; correct if necessary.	

Pneumatic/Hydraulic System:		
1.	Request PM's for filter replacement schedule and replace if needed.	
2.	Check system fluids for level and condition, top off fluid as needed. Test Hydraulic level switch for proper operation.	
3.	Inspect fittings, valves, and hoses for leaks and damage.	
4.	Check and Verify all hydraulic system pressure, temperature, and flow switches. Test hydraulic low pressure switch and adjust if necessary.	
5.	Check hydraulic operating pressure.	
6.	Inspect and verify operation of the hydraulic accumulator system. Verify Charged to 50% of operating pressure.	
7.	Check Motor Amperage under load conditions.	
8.	Check and adjust valve speeds and cushions as required.	
9.	Check stand-by pump for proper operation. (If equipped.)	
System Fan(s):		
1.	Check fan controls and safeties including air flow switches, etc.	
2.	Visually inspect the bearings and shafts for any signs of damage or potential failure.	
3.	Verify fan belt tension and alignment per design.	
4.	Check motor and bearing thermocouples if equipped.	
5.	Check fan motor loads and speeds during normal operation.	
6.	Request fan lubrication system PM's for filter changes and replace filters as needed.	
7.	Verify Lubrication system operation of all temperature, pressure, and flow switches.	
8.	Check lubrication unit fluid levels and top-off as necessary.	
9.	Check the condition of the purge/burnout fan and heat return fan and make adjustment if necessary.	
10.	Check the switching operation of the purge return and bake-out dampers and make necessary adjustments if required.	

Oxidizer Inlet & Outlet Ducting & Shell:		
1.	Check the exterior of the unit for hot spots, rust, and corrosion.	
2.	Check the operation of the heat exchanger bypass and heat return system and make adjustment if necessary.	
3.	Inspect the ductwork, cladding, and access hatches.	
4.	Inspect the bypass damper for operation and lubrication.	
5.	Check the operation of the vacuum relief valve and adjust if required.	
6.	Verify all valve sequencing and valve timing.	
7.	Inspect all system thermocouple wells for general integrity and heat damage.	
8.	Inspect plenums, dampers, and damper seats. Clean seats if necessary.	
9.	Review any lubrication or part replacement required with plant maintenance.	
10.	Inspect oxidizer and fan expansion joints.	
11.	Inspect all valve actuators and linkages, adjust as necessary.	
12.	Inspect fresh air and process isolation dampers.	
13.	Inspect and relieve all pipe drain and petcocks.	
14.	Test (Leak test) safety shutoff valves for tightness of closure.	
Electrical System:		
1.	Check and prove safety limits (high temp. limit, high/low gas pressure, etc.)	
2.	Verify proper operation and programming of chart recorder.	
3.	Verify parameters and operation of variable frequency system.	
4.	Verify operation of pressure and volume control system.	
5.	Recalibrate pressure transmitters.	
6.	Check source damper operation and annunciation, adjust actuators as necessary.	
7.	Test all push buttons.	
8.	Check pressure transmitters and sampling lines.	
9.	Check all terminals for tightness.	
10.	Check high-temperature limit operation for reliability and verify alarm.	
11.	Review fault logs.	
12.	Check annunciation of faults for proper operation.	
13.	Check all safety systems.	
14.	Verify system operation as compared to original start-up data if available.	
15.	Make two back-up copies of PLC program, One-SSI, One-Customer.	
16.	Document current operating parameters.	

Upper Chamber:		
1.	Inspect the insulation, cladding and general vessel condition.	
2.	Inspect the combustion chamber general condition – media, insulation, burner.	
3.	Check for general cleanliness.	
4.	Check refractory for excessive damage/cracking. (Burner sleeve)	
5.	Check insulation (Pyro-Bloc) for separation.	
6.	Check media for excessive breakage.	
7.	Check access door gaskets for damage and leaks.	
8.	Check thermocouples for accuracy and associated wiring, Replace thermocouples if necessary.	
	Lower Chamber:	
1.	Check access door gaskets for damage and leaks.	
2.	Check ceramic media support beams for sagging. (Verify Core 10 material prior to conducting a bake-out)	
3.	Inspect the insulation, cladding and general vessel condition.	
4.	Check oxidizers canister damper seals to assure tight seals. Adjust if necessary. Tad-pole gaskets should be checked for damage and wear.	
5.	Check thermocouples for accuracy and associated wiring, Replace thermocouples if necessary.	
6.	Check insulation (Pyro-Bloc) for separation.	

Inspection Report:

Prepare a written report to provide customer with the following information:

- Details on the general internal and/or external condition of the oxidizer.
- Details on the work performed.
- Recommendation of spare/replacement parts needed.
- Recommendation will be make for any work to be done to avoid identified potential problems.
- Recommendations to be considered to bring the oxidizer into optimum operating conditions.

Quarterly Inspection:

Combustion Safety, Inc.
Designated 3rd Party Resource

Combustion Safety Checklist

INCINERATORS / THERMAL OXIDIZERS

June 25, 2010 Version

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Frequency: A = Annual, S/A = Semi-Annual, Q = Quarterly, M = Monthly

Site/Plant:		**Btuh Input (See Note 5)**	
Location / Line #:		**Incoming Gas Pressure (Upstream of 1st Regulator):**	
Equipment Number:		**BMS Manufacturer & Model #**	
Manufacturer:		**Test Date:**	
Zones:		**Auditor:**	
Burner Manufacturer:		**Last Design Compliance Verification (DCV) Completed**	
Catalyst in Use:	**Yes / No**	**Type:**	REGENERATIVE / AFTERBURNER

Solenoid Data Collection: Send cover page only via e-mail to solenoids@combustionsafety.com (or fax to 216-398-8403)

Location	**Manufacturer - Model #**	**Orientation**	**Date Code**	Notes

1.			Horz. / Vert.			
2.						
3.						
4.						
	Support documents at www.ohs.ford.com/gfe					
R / New = Updated in 2010						
Pre-Post Testing/Inspection Notes						
1	**Review "15 Minutes To Save Your Life" Pre-Test Document from Ford OHS website, Combustion Safety Pages.**					
2	**Review burner management system action matrix to define proper shut-downs and manual reset requirements. Also, obtain all proper setpoints and purge time specifications.**					
3	**Verify that all new gas equipment and/or major modifications are reviewed by your Independent Fire Protection and Property Loss Prevention Consultant. This review should be done and approvals received in the system design/specification phase if possible**					
4	**Create an ACTION PLAN by hitting the Combustion Safety logo macro button with your mouse arrow on the screen. This will expand the spreadsheet to add action plan columns.**					
5	**Review oven/control drawings to verify proper interlocks exist. This checklist is a guide, customize as needed.**					
6	**A Design Compliance Verification (DCV) review of the installed components shall only be required once every three (3) years once 100% compliant with questions contained within the DCV tab. Refer to the DCV tab within the Excel checklist for the questions.**					
7	**All items answered N/A (Not Applicable) shall be explained in a note with the question.**					
8	**Question numbers are not consecutive due to some of the questions being moved to the design compliance verification (DCV) section/tab.**					

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Interlock / Combustion Related Components - Testing

	Safety Device Name	Status/ Note	Set Value	Test Value	Pass Fail N/A	Frequency	Priority
	Equipment Condition:						
	TESTING W/UNIT NOT OPERATING						
1	Testing of automatic valves for tightness and closing time for SSOV/BV (see leak rate guidance chart at reference Item #7). Two automatic valves in series exist on the main gas train (i.e. both SSOV and BV exist).		N/A	N/A		A	M
	a. Pilot Solenoid Valve Tightness Tests.		N/A	≤ 15 BPM		A	C
	b. Safety Shut-Off and Blocking Valve test for slow closing.		N/A	1 SEC		A	C
	c. Safety Shut-Off and Blocking Valve Tightness test.		N/A	≤ 15 BPM		A	C
	d. Vent Valve Tightness Test.		N/A	No pressure loss on gauge/ Manometer		A	C

-	f. Actuator Hydraulic Fluid Leakage.		N/A	N/A		A	M
	g. Verify that no solenoid type valves exist that are more than 12 years old.			-		A	M
-	h. Test Automatic Valve Proving System for proper operation per manufacturer instructions (if it exists).					A	C
	Equipment Condition:						
	TESTING W/UNIT @ PURGING/LIGHT-OFF						
2	a. Main Gas Low Pressure Switch Functions.					Q	C
3	Verify that documentation exists to identify proper work chamber purge times (depending on the units design this could include the burner purge time and or timing of an external purge air fan).					A	M
	a. Verify that the purge timer or timers (if applicable) are set correctly to documented values and that the timers time accurately.					Q	C
4	DELETED (08).						
5	a. Main Gas High Pressure Switch Functions.					Q	C
6	Flame Supervision (Scanner/Flame Rod) Denote scanner or flame rod and type of test (Maximum 4 second shut down).						
	a. Self-Checking UV Scanner.					A	C
	b. Non Self-Checking UV Scanner.					Q	C
	c. Flame Rod.					Q	C
7	Pilot and Main Ignition Timer Proper Timing and Accuracy (Maximum 15 seconds).		N/A	N/A		Q	C
-	b. Verify that manual reset functions (Interlocks themselves can either have a manual reset or/and one on the BMS system for the unit).		N/A	N/A		Q	C

8	Verify pilot signal strength and pilot stability/location (preferrably by utilitzing the burner management system's "Run/Test" mode switch). Pilot turndown test by qualified personnel only. Do turndown test if new pilot or pilot adjustment is required.					A	C
9	Pilot Spark Pick Up.					A	C
10	Main Ignition Timer (Proper Timing and Accuracy). (Maximum 15 seconds) (See Item #7).		N/A	N/A		Q	C
11	Purge Airflow Switch functions if provided by original equipment manufacturer (this could be related to the burner or to an external purge air fan or both depending on the units design).		N/A	N/A		Q	C
12	Burner or combustion air pressure switch functions (if provided by original equipment manufacturer).		N/A	N/A		Q	C
13	Low Fire Fuel Interlock Switch Functions (if designed in by original equipment manufacturer).		N/A	N/A		A	C
Other Stops / Alarms Section - Gap Analysis							
	Equipment Condition:						
	TESTING W/UNIT@ LOW-FIRE						
14	Proof of Closure Switch.						
	a. Safety Shut-Off Valve.		N/A	N/A		A	C
	b. Blocking Valve.		N/A	N/A		A	C
15	a. Local Burner Stop/Emergency Stop Functions.		N/A	N/A		A	C
17	Work Chamber Excess Temperature High Limit Functions.					Q	C
	a. Work chamber burner set point controller functions.					Q	A
19	Fresh Air Damper Limit Switch for purging work chamber, if present functions.					Q	C

20	A differential pressure high limit switch (if required) shall be provided to measure across the catalyst bed (if required/recommended by catalyst manufacturer). Operation of this differential pressure switch shall interrupt fuel to the burner and the source of fumes.					Q	C
21	Position Switches– Air Flow Dampers, including Inlet/Outlet Dampers and dampers for chamber switching. If present, functions.		N/A	N/A		Q	C

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#	Inspection/Audit Items	Status/Note	Frequency	Priority	Further Action Required (Y/N)
	General / Administrative - Gap Analysis				
31	Verify that ambient temperatures surrounding gas train and interlock components do not exceed manufacturer's recommendations.		A	M	
	PLC Control Issues - Gap Analysis (Note: These apply only to all PLC's used in this service are to meet the requirements of Ford manufacturing standard EL3. (See Ford OHS website Combustion Safety Page).				

32	Verify that a document exists that states that the system was installed per the combustion safety service PLC listing or that is complies with all the requirements of NFPA 86 (2007 Edition Sections 8.33.2.1 through 8.3.3.2.3). Note: Only for equipment installed after January 1, 2007.		A	M	
34	Any changes to PLC hardware or software shall be documented, approved and maintained in a separate file at the site.		A	M	
35	Deleted.		A	M	
39	a. If a battery exists, verify it's still charged properly and functions.		A	M	
Other Control Issues - Gap Analysis					
41	A failure to provide required purge airflow shall cause the purge timer to reset.		A	C	
47	Conveyors and/or sources of flammable or combustible materials shall be interlocked to shut down on excess temperature or if either the exhaust or recirculation fans were to fail.		A	C	
48	Incinerators heated by any means, including electricity, shall have the exhaust fan motor starter and airflow switches interlocked in such a manner as to prevent operation of the heating units unless the exhaust fans are running.		A	C	
49	Check ignition spark electrodes for proper gap and operation.		A	M	

50	Flame quality observation (program exists to regularly check flame quality).		A	M	
51	Motor starters on equipment required for the combustion systems shall be interlocked into the safety circuitry.		A	M	
52	Failure of the excess temperature controller-sensing element shall cause the same response as an excess temperature condition. The excess temperature set point should be at least 100°F below the auto ignition temperature of the flammable material being processed through the oven or 50°F above the oven temperature, whichever is applicable to the material being processed.		A	C	
Fuel Systems - Gap Analysis					
53	Fuel Train Venting Issues.				
	f. Verify that no gas is coming through any of the vent line terminations that might indicate a failure. Odor (not flow) could mean normal main bleed operation. Constant flow indicates component failure such as: block/bleed valve failure, regulator diaphragm failure (pilot or main), gas relief valve leakage/failure, gas train maintenance vent or pet cocks leaking/open.		A	C	
55	Review the main and pilot gas train regulator installations.				
	d. Verify stable regulator outputs (Pilot and main).		A	M	
-	e. DELETED (08).		Every 3 yrs	C	

	f. If the regulator has a downstream sensing line with a valve in it, verify it is and can be secured open.		A	M	
56	Gas Train Shut-Offs/Blanking.				
	b. Verify that the main shut-off cock does not leak through when in the shut-off position.		A	M	
	c. Verify that one person can move the main shut-off valve (i.e. plug cock not binding).		A	M	
	e. If the main equipment shut-off (G-1) is a lubricated plug valve verify it is sealed/serviced.		A	M	
	f. Verify that handles are installed on main gas valves.		A	M	
57	a. Review for damage and/or gas train being vulnerable to traffic/material handling damage.		A	M	
58	Verify that all fuel trains have been leak tested for exterior leaks (Note: Not all gas leaks are critical. See guidance at Reference Worksheet Item #4, process to screen gas leaks for their priority).		A	As Noted	
R59j.	**j. Verify that pins/set screws on air/fuel control systems are secure (full pin, ball joints not eroded).**		**A**	**M**	
63	Separate wrenches (handles) shall remain affixed to each valve and shall be oriented such that they are properly oriented to the valve port position.		A	M	
Calibration / Preventive Maintenance - Gap Analysis					
68	Verify that gages/monitoring instruments and safety/control components operate accurately		S/A	M	

	and at proper set points.				
69	Provide evidence that burner combustion setting is done annually to adjust proper fuel/air ratios. Note that only trained personnel should perform this work.		A	M	
	g. Verify that vent valve is fused with at least the first automatic safety shutoff valve.		A	M	
72	Verify that all instrument setpoints and purge timing are as per documented proper settings and that setpoints are marked on components (Program exists).		A	M	
Firebox Internals Evaluation - Gap Analysis					
73	Conduct an internal inspection with the unit out of service. Verify that anyone entering the unit wears a hard hat and follows all confined space/lockout procedures. If an internal inspection is not possible see Item 74c.		A	M	
External Issues - Gap Analysis					
74	Carefully review exterior conditions including the following:				
	a. Identify any bulging plates and/or peeling paint.		S/A	M	
	b. Review for broken or sagging stays/supports.		S/A	M	
	c. Screen for hot spots. Document and track them if found (see Item #73 if significant hot spots exist).		A	M	
75	Review the condition of firebox latches/doors.				

	a. Verify that fasteners are tight.		A	M	
	b. Verify that fasteners/hold downs are as specified by the manufacturer.		A	A	
	c. Verify that all doors seal tight and hold firebox pressure.		S/A	M	
Electrical - Gap Analysis					
76	Verify that the panel disconnect is intact, securely mounted, closes, and functions.		A	M	
77	Verify that all the panel lights work.		A	M	
78	Verify that no safety components are electrically jumpered out or bypassed (junction boxes, switches, terminal strips, etc).		A	C	
79	Verify that wiring covers are on.		A	M	

Combustion Safety, Inc.
Designated 3rd Party Resource

Combustion Safety Checklist

INCINERATORS / THERMAL OXIDIZERS

June 25, 2010 Version

Priority Level: C = Critical (Shutdown), M = Mandatory (Corrective Action Plan), A = Awareness Items

Frequency: A = Annual, S/A = Semi-Annual, Q = Quarterly, M = Monthly

#	Inspection/Audit Items	Status/Note	Frequency	Priority	Further Action Required (Y/N)
General / Administrative - DCV					
1	e. Two pilot solenoid valves in series exists.		Every 3 Yrs	M	
2	Main Gas Low Pressure Switch Exists.		Every 3 Yrs	M	
3	b. If adjustable purge timers exist, consider locking covers or retrofit with new BMS system.		Every 3 Yrs	A	
5	Main Gas High Pressure Switch Exists.		Every 3 Yrs	M	
7	Verify that a manual reset is required before the unit is allowed to reset. Manual reset can occur at the interlock device and/or at the burner management system for the unit.		Every 3 Yrs	M	
14	Proof of Closure Switch – (Exists for at least one of SSOV or BV if burner is over 400,000 Btuh input).		Every 3 Yrs	M	

15	Local Burner Stop/Emergency Stop Exists.		Every 3 Yrs	M	
16	DELETED (03).				
17	Work Chamber Excess Temperature High Limit Exists.		Every 3 Yrs	M	
18	DELETED (02).				
22	ECPL (Energy Control and Power Lockout) program review.				
	a. Verify the unit has been ECPL placarded and the ECPL placarding shown is correct.		Every 3 Yrs	M	
	b. Verify that confined spaces (if they exist) are labeled.		Every 3 Yrs	M	
23	Procedures/Documentation.				
-	a. Start-up/shut down procedures exits and are readily accessible by boilerhouse personnel (See OHS Website for samples).		Every 3 Yrs	M	
	b. Start-up/shut-down procedures are in QPS format.		Every 3 Yrs	A	
-	c. Fuel switching procedures.		Every 3 Yrs	M	
-	d. Verify that piping/instrumentation drawings exist.		Every 3 Yrs	M	
-	e. Verify that manufacturer's installation/operating manual is available (or cut sheets for instruments).		Every 3 Yrs	M	
24	Verify that the unit does not contain surfaces/exposed piping over 140°F that is less than 7' above the finished floor or maintenance platform that may expose operators or those with casual access to burn hazards.		Every 3 Yrs	M	

25	A clearly worded and prominently displayed safety design data form or manufacturer's nameplate shall be provided that contains manufacturer's safe operating conditions for which the furnace or oven was designed, built, or altered for.		Every 3 Yrs	M	
26	A warning label shall be provided by the manufacturer stating that the equipment shall be operated and maintained according to instructions.		Every 3 Yrs	M	
27	Dampers that can control airflow critical to the safe purge, exhaust, or operation of the oven/furnace that can be closed off in a maximum position to an unsafe condition must be modified (cut away, limit stops, and/or limit switch interlocks) such that a safe minimum airflow can be maintained.		Every 3 Yrs	M	
28	Bursting discs, panels, mixer openings and/or other parts of the furnace/oven from which hot gases could be discharged shall be located or guarded to prevent injury from personnel (if this is impractical, warning signage must be installed).		Every 3 Yrs	M	
29	Verify that combustion air volume provided to unit meets code requirements; (if incinerator systems are outside this item is not applicable).		Every 3 Yrs	M	
30	All combustion safety circuitry contacts required shall be arranged in series with the safety shut off valve without interposing relays, a) unless connected load exceeds the		Every 3 Yrs	M	

	rating of available safety interlocks, b) interposing relay is configured to revert to safe condition upon loss of power, c) or the relay serves no more than one safety interlock device.				
PLC Control Issues - DCV (Note: These apply only to all PLC's used in this service are to meet the requirements of Ford manufacture).					
33	All PLC based control systems shall have a separate manual emergency switch independent of the programmable controller that initiates a safe shutdown.		Every 3 Yrs	M	
34	a. Verify that a security system requiring passwords/keys exists for making software changes.		Every 3 Yrs	M	
36	DELETED.		Every 3 Yrs	M	
37	Each PLC system shall have dedicated PLC output that initiates a safety shutdown for faults detected by the PLC (this is commonly done utilizing an external watchdog timer).		Every 3 Yrs	M	
38	PLC system operation shall be tested and verified for compliance with the conditions identified in this checklist and relevant codes whenever it is replaced, repaired, or updated.		Every 3 Yrs	M	
39	PLC software shall reside in some form of non-volatile memory.		Every 3 Yrs	M	
40	Deleted.		Every 3 Yrs	M	
Other Control Issues - DCV					
42	No oven/furnace can be purged into an operating fume incinerator unless it can be demonstrated that the flammable vapor concentration		Every 3 Yrs	M	

	entering the fume incinerator cannot exceed 50% of the LEL.				
43	Airflow pressure switches shall not be used to prove airflow where dampers downstream of a pressure switch can be closed to the point of reducing flow to an unsafe operating level.		Every 3 Yrs	M	
44	Air suction switches shall not be used to prove airflow where dampers upstream of the pressure switch can be closed to the point of reducing flow to an unsafe level.		Every 3 Yrs	M	
45	The operating temperature controller and its temperature sensing element shall not be used as the excess temperature controller.		Every 3 Yrs	M	
46	An additional excess temperature controller shall be located downstream from the discharge of the catalyst bed to protect the catalyst from oven temperature. Operation of the excess temperature controller shall interrupt fuel to the burner and the source of fumes.		Every 3 Yrs	M	
Fuel Systems - DCV					
53	Fuel Train Venting Issues.				
	a. Verify that each natural gas regulator and vented gas train component has a discharge piped to outside of the building. (main gas train, pilot, bleeds, maintenance vents, regulators, etc).		Every 3 Yrs	M	
	b. Verify that none of the gas line vents are run into flues or combustion air openings.		Every 3 Yrs	M	

	c. Verify that terminations are free and open (no insects/rodents/paint) and that they have vent termination protection.		Every 3 Yrs	M	
	d. Verify that the vent lines are of the proper size (full size from components and from support table on bleed lines).		Every 3 Yrs	M	
-	e. Verify that vent lines are not improperly combined (i.e. no double block and bleed vents or main regulators combined with other vents).		Every 3 Yrs	M	
54	Fuel Train Component Documentation/Screening.				
	a. Record all of the gas train component model number data using forms at the Ford OHS website, Combustion Safety Page.		Every 3 Yrs	A	
-	b. DELETED (08).		Every 3 Yrs	M	
	c. Verify that each of the components are rated for the pressure service they are in (See reference Item #8 for guidelines).		Every 3 Yrs	M	
	d. Screen to verify that all components are FM or UL listed and/or rated for gas train service. Note that reconditioned components are no longer FM or UL listed.		Every 3 Yrs	M	
	e. Verify that components are installed such that they are testable and accessible.		Every 3 Yrs	A	
	f. Screen the gas train components and their arrangement in the gas train for Ford Gas Train Specification 11575 compliance (Specification available at the Ford OHS website, Combustion		Every 3 Yrs	A	

	Safety Page).				
55	Review the main and pilot gas train regulator installations.				
	a. Verify that no bypasses are installed.		Every 3 Yrs	M	
	b. Verify that each regulator has a tag or some other indication of its operating range and capabilities.		Every 3 Yrs	A	
	c. Verify that each unit has its own regulator other than the main incoming utilities regulator.		Every 3 Yrs	M	
56	Gas Train Shut-Offs/Blanking.				
	a. Verify that each units pilot line is tapped off after the main shut-off cock.		Every 3 Yrs	M	
	d. DELETED (03).				
	g. Verify that blind/flange points exist for making the gas train safe for maintenance.		Every 3 Yrs	M	
	h. DELETED (03).				
	i. Verify that the plug cock/valves are of the indicating position type.		Every 3 Yrs	A	
	j. Verify that main gas train fuel shut off valve is within 6' of the regulator and is accessible.		Every 3 Yrs	M	
57	Verify that all gas/fuel piping is clearly marked.		Every 3 Yrs	M	
59	Gas Train Piping assembly.				
	a. Verify that no field installed retrofit bushings are used in the assembly of threaded fuel trains.		Every 3 Yrs	A	

	b. Verify that no Teflon tape is used in the assembly of threaded fuel trains (use Teflon paste).		Every 3 Yrs	A	
	c. Verify that fuel pressure gauges are installed and operating correctly (mark to show normal operating parameters).		Every 3 Yrs	M	
	d. Verify that unplugged pet cocks or openings are not installed on the fuel train.		Every 3 Yrs	M	
	e. Verify that Aluminum Tubing or Copper Tubing is not directly threaded or connected to an Iron/Steel Fitting/Pipe. Tubing must be connected through Brass/Bronze fittings or with dielectric isolation fittings to avoid corrosion. Verify that Aluminum Tubing is not used in an exterior location exposed to weather.		Every 3 Yrs	M	
	f. Verify that gate valves are not installed in the gas train piping.		Every 3 Yrs	A	
	g. Verify that gas train piping is adequately supported (mercury switches, or equivalent, level, piping is secure, supports are in place).		Every 3 Yrs	M	
	h. Verify that a drip leg exists. Drip legs are to be at least 3" long and have the same pipe diameter as the gas inlet piping.		Every 3 Yrs	A	
	i. Verify that strainers are installed.		Every 3 Yrs	A	
60	A remotely located shut-off valve should be provided to allow the fuel to be turned off in an emergency and shall be located such that fire or explosion does not prevent access to the valve.		Every 3 Yrs	A	

61	Manual fuel valves shall have permanently affixed visual indication of the valve position.		Every 3 Yrs	M	
62	Quarter turn fuel valves with removable wrenches shall not allow the wrench handle to be installed perpendicular to the fuel gas line when the valve is open.		Every 3 Yrs	M	
64	Local visual indication of safety shut off valve position shall be provided at each safety shut off valve to main burners in excess of 150,000 Btuh. Indirect position indication, such as by monitoring of voltage or pressure, shall not be permitted.		Every 3 Yrs	M	
65	Each pilot and main fuel gas burner system (unless part of a system with explosion resistant radiant tubes or open at one end) must have two safety shut off valves piped in series. Where the main or pilot fuel gas burner system capacity exceeds 400,000 Btuh, at least one of the two safety shut off valves shall prove closed and be interlocked with the pre-ignition purge interval.		Every 3 Yrs	M	
66	A permanent and ready means for making tightness checks of all safety shut off valves shall be provided.		Every 3 Yrs	A	
67	Each pilot and main burner shall be supervised independently. One flame sensor shall be permitted where an interrupted pilot (pilot on until main flame is established) or a self-piloted burner (pilot fuel issued from same ports as main burner or pilot and main flame form common flame		Every 3 Yrs	M	

	envelope/base) are used.				
	a. Verify that flame scanner is of the self-checking type whenever the equipment is routinely operated (on/burning) for over 24 hours continuously.		Every 3 Yrs	M	
Calibration / Preventive Maintenance - DCV					
69	a. Verify settings with a manometer, flue gas analyzer, or burner manufacturer recommended method.		Every 3 Yrs	A	
70	Verify that setpoint verification access has been provided in gas trains and instrument lines.		Every 3 Yrs	A	
71	Verify that if valves are installed in the gas or air switch flow sensing lines, the closed position makes for a fail safe (or tripped) condition that does not bypass or render the component incapable of operation. If instrument line valves do not meet this criteria they must be removed.		Every 3 Yrs	M	
Electrical - DCV					
80	Electrical leak test switches or automatic test systems (if installed) can improve maintenance efficiency and be used on new gas trains for safety shut-off valves and/or blocking valve testing.		Every 3 Yrs	A	
81	Verify that flame safety control circuit voltage is 120V or less, one side, grounded.		Every 3 Yrs	M	

82	Verify that the metal frames of furnaces are electrically grounded.		Every 3 Yrs	M	

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

March 6, 2015

PERMIT TO INSTALL
68-12A

ISSUED TO
Ford Motor Company – Automatic Transmission New Product Center

LOCATED AT
35500 Plymouth Road
Livonia, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
M4734

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **February 12, 2015**	
DATE PERMIT TO INSTALL APPROVED: **March 6, 2015**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO_2e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

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

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**

2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environmental Quality, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**

3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to R 336.1210, operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**

4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**

5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to R 336.1219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of R 336.1219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environmental Quality. **(R 336.1219)**

6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**

7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal conditions or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**

8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.

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

10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

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

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

13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with R 336.2001 and R 336.2003, under any of the conditions listed in R 336.2001. **(R 336.2001)**

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-PHASE3	Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	1-1-1995/NA	FG-PHASE3
EU-PHASE3-21	Dynamometer fueled with gasoline, alcohol blends/gasoline fuel blend, diesel, kerosene, hydrogen, LPG, and natural gas. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	TBA	FG-PHASE3A
EU-PHASE3-22	Dynamometer fueled with gasoline, alcohol blends/gasoline fuel blend, diesel, kerosene, hydrogen, LPG, and natural gas. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	TBA	FG-PHASE3A
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.			

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-PHASE3	Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	EU-PHASE3
FG-PHASE3A	Two dynamometers housed in the same building as the Phase 3 dynamometers, which were installed at a later date. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.	EU-PHASE3-21, EU-PHASE3-22

The following conditions apply to:
FG-PHASE3

DESCRIPTION: Dynamometer testing facilities that include 20 engine-driven and engine-only dynamometer test cells. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.

Emission Units: EU-PHASE3

POLLUTION CONTROL EQUIPMENT: Regenerative Thermal Oxidizer 5, Regenerative Thermal Oxidizer 6, Regenerative Thermal Oxidizer 7

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	2027.5 lb/day	Calendar Day (prorated from monthly).	FG-PHASE3	SC VI.5	40 CFR 52.21
2. NO_x	52.2 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
3. NO_x	84.5 pph	Test Protocol*	FG-PHASE3	SC V.1	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
4. NO_x	544.0 lb/MMcf	Test Protocol*	FG-PHASE3	SC V.2	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
5. SO_2	507.1 lbs/day	Calendar Day (prorated from monthly.	FG-PHASE3	SC VI.5, SC VI.7	40 CFR 52.21
6. SO_2	10.8 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4, SC VI.7	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
7. VOC	228.1 lb/day	Calendar Day (prorated from monthly)	FG-PHASE3	SC VI.5	R 336.1702(c), 40 CFR 52.21
8. VOC	5.9 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2802(4)(d), 40 CFR 52.21(a)(2)(iv)(d)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
9. VOC	9.5 pph	Test Protocol*	FG-PHASE3	SC V.1	R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2802(4)(d), 40 CFR 52.21(a)(2)(iv)(d)
10. CO	128.5 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(d)
11. CO	208.0 pph	Test Protocol*	FG-PHASE3	SC V.1	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(d)
12. PM10	11.7 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
13. PM2.5	11.7 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3	SC VI.4	R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d)
*Test protocol shall specify averaging time					
Controlled Emission Factors with thermal oxidizer control					
Worst case for all fuels other than natural gas for NO_x NO_x – 0.16 lb/gallon SO_2 – 0.29 lb/MMBtu for diesel and 0.084 lb/MMBtu for gasoline VOC – 0.018 lb/gallon CO – 0.394 lb/gallon PM10 – 0.0425 lb/gallon PM2.5 – 0.31 lb/MMBtu for diesel and 0.1 lb/MMBtu for gasoline			Natural Gas NO_x – 544.0 lb NO_x/MMcf of natural gas		
Where: 0.125 MMBtu/gallon for gasoline, 0.138 MMBtu/gallon for diesel 1,028 Btu/cf for natural gas, and 121.5 cf natural gas equivalent to 1 gallon of gasoline					

II. MATERIAL LIMITS

1. The fuel usage for FG-PHASE3 shall not exceed 12,672 gallons per calendar day. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The fuel usage for FG-PHASE3 shall not exceed 652,500 gallons per year based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

3. The fuel usage for FG-PHASE3 shall not exceed 500,000 gallons of diesel and diesel-like fuels of the 652,500 gallons total fuel restriction per year based on a 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

4. The permittee shall burn only gasoline, alcohol blends/gasoline fuel blend (up to 100% ethanol), diesel (all variations, including European, Asian, South American, etc.), kerosene, hydrogen, LPG (or propane), and natural gas in FG-PHASE3. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1901, R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

5. The permittee shall not use leaded gasoline in FG-PHASE3. **(R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1901, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-PHASE3 unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the Regenerative Thermal Oxidizers, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP to the AQD District Supervisor for review and approval. For any amendments to the MAP relating to requirements of Rule 911(2), the permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate Banks 5, 6, or 7 of FG-PHASE3 unless the sufficient regenerative thermal oxidizer capacity, is installed, maintained and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum temperature of 1400^{o} F and a minimum retention time of 0.5 second in the associated regenerative thermal oxidizer. **(R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, temperature monitoring devices in the thermal oxidizers in appropriate locations to monitor and record the temperature on a continuous basis as specified in SC VI.2, during operation of FG-PHASE3. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the daily natural gas usage rate, on a continuous basis, in cubic feet per day. **(R 336.1205, R 336.2802, 40 CFR 52.21)**

V. TESTING/SAMPLING

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

1. Once every five years, the following parameters shall be tested/recorded for the worst-case fuel for one of the regenerative thermal oxidizers:
   a. NOx
   b. VOC
   c. CO

   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. Testing may be coordinated with the RO permit renewal issuance and testing shall continue to be completed for one of the regenerative thermal oxidizers once every five years. A different regenerative thermal oxidizer shall be tested every five years. **(R 336.1702(a), R 336.2003, R 336.2004, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. Within 180 days after commencement of trial operation of operating natural gas fueled engines for purposes of testing natural gas fueled engines or engine systems, the permittee shall verify the natural gas NOx emission factor from FG-PHASE3, 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. **(R 336.2001, R 336.2003, R 336.2004, R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record the temperatures of the exhaust gas in the regenerative thermal oxidizer chambers either electronically, using a strip chart recorder, or by manual logging. Temperature readings shall be recorded at least once every 15 minutes (4 per hour), and shall be averaged over each successive 3-hour block time period when the temperature drops below 1400^{o}F. **(R 336.1225, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

3. The permittee shall monitor and record, in a satisfactory manner, the daily natural gas usage rate in cubic feet per day for FG-PHASE3. 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, R 336.2802, 40 CFR 52.21)**

4. The permittee shall keep the following information on a monthly basis for FG-PHASE3:
   a. A record of the days of operation.
   b. Gallons of each fuel used per month and 12-month rolling time period.
   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. SO_2 emission calculations determining the monthly emission rate in tons per calendar month.
   f. SO_2 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   g. VOC emission calculations determining the monthly emission rate in tons per calendar month.
   h. VOC emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   i. CO emission calculations determining the monthly emission rate in tons per calendar month.
   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.
   k. PM10 emission calculations determining the monthly emission rate in tons per calendar month.
   l. PM10 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.
   m. PM2.5 emission calculations determining the monthly emission rate in tons per calendar month.
   n. PM2.5 emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

   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(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

5. The permittee shall keep the following information on a monthly basis for FG-PHASE3:
   a. Daily fuel use calculations based upon the monthly fuel use divided by the number of days FG-PHASE3 operated during the calendar month.
   b. Daily NOx emission calculations based upon the monthly NOx emissions divided by the number of days FG-PHASE3 operated during the calendar month.
   c. Daily SO_2 emission calculations based upon the monthly SO_2 emissions divided by the number of days FG-PHASE3 operated during the calendar month.
   d. Daily VOC emission calculations based upon the monthly VOC emissions divided by the number of days FG-PHASE3 operated during the 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(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

6. The permittee shall keep, in a satisfactory manner, records of the temperature in the thermal oxidizer in appropriate locations on a continuous basis, as required by SC VI.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.1910, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))**

7. The permittee shall determine the maximum sulfur content in each fuel using an ASTM-approved method or fuel supplier certification. See Appendix 7. **(R 336.1205(1)(a) & (b), R 336.2802(4)(d), R 336.2803, R 336.2804, 40 CFR 52.21(a)(2)(iv)(d), 40 CFR 52.21(c) & (d))**

See Appendices 4 & 7

VII. REPORTING

1. Within 30 days after beginning to operate a natural gas fueled engine for purposes of testing natural gas fueled engines or engine systems in FG-PHASE3 as authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the beginning of the activity. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRTO5	44	68.5	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. SVRTO6	44	68.5	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
3. SVRTO7	44	68.5	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

N/A

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

The following conditions apply to:
FG-PHASE3A

DESCRIPTION: Two dynamometers housed in the same building as the Phase 3 dynamometers, which were installed at a later date. Three regenerative thermal oxidizers are used to control hydrocarbon and carbon monoxide emissions from the Phase 3 and Phase 3A test cells.

Emission Units: EU-PHASE3-21, EU-PHASE3-22

POLLUTION CONTROL EQUIPMENT: Regenerative Thermal Oxidizer 5, Regenerative Thermal Oxidizer 6, Regenerative Thermal Oxidizer 7

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	33.7 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3A	SC VI.3	R 336.1205(1)(a) & (3)
3. CO	82.9 tpy	12-month rolling time period as determined at the end of each calendar month.	FG-PHASE3A	SC VI.3	R 336.1205(1)(a) & (3)
Controlled Emission Factors with thermal oxidizer control					
Worst case for all fuels other than natural gas for NO_x NO_x – 0.16 lb/gallon CO – 0.394 lb/gallon			Natural Gas NO_x – 544.0 lb NO_x/MMcf of natural gas		
Where: 0.125 MMBtu/gallon for gasoline, 0.138 MMBtu/gallon for diesel 1,028 Btu/cf for natural gas, and 121.5 cf natural gas equivalent to 1 gallon of gasoline					

II. MATERIAL LIMITS

1. The permittee shall burn only gasoline, alcohol blends/gasoline fuel blend (up to 100% ethanol), diesel (all variations, including European, Asian, South American, etc.), kerosene, hydrogen, LPG (or propane), and natural gas in FG-PHASE3. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))**

2. The permittee shall not use leaded gasoline in FG-PHASE3. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate FG-PHASE3A unless a malfunction abatement plan (MAP) as described in Rule 911(2), for the Regenerative Thermal Oxidizers, has been submitted within 60 days of permit issuance, and is implemented and maintained. If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP to the AQD District Supervisor for review and approval. For any amendments to the MAP relating to requirements of Rule 911(2), the permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1331, R 336.1702(a), R 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETERS

1. The permittee shall not operate FG-PHASE3A unless the sufficient regenerative thermal oxidizer capacity, is maintained and operated in a satisfactory manner. Satisfactory operation includes maintaining a minimum temperature of 1400^{o} F and a minimum retention time of 0.5 second in the associated regenerative thermal oxidizer. **(R 336.1910)**

2. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, temperature monitoring devices in the thermal oxidizers in appropriate locations to monitor and record the temperature on a continuous basis as specified in SC VI.2, during operation of FG-PHASE3A. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

3. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the daily natural gas usage rate, on a continuous basis, in cubic feet per day. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee shall monitor and record the temperatures of the exhaust gas in the regenerative thermal oxidizer chambers either electronically, using a strip chart recorder, or by manual logging. Temperature readings shall be recorded at least once every 15 minutes (4 per hour), and shall be averaged over each successive 3-hour block time period when the temperature drops below 1400ºF. **(R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

3. The permittee shall keep the following information on a monthly basis for FG-PHASE3A:
   a. Usage of each fuel per month and 12-month rolling time period.
   b. NO_x emission calculations determining the monthly emission rate in tons per calendar month.
   c. 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.
   d. CO emission calculations determining the monthly emission rate in tons per calendar month.
   e. 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.

   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(1)(a) & (3), 40 CFR 52.21(c) & (d))**

4. The permittee shall keep, in a satisfactory manner, records of the temperature in the thermal oxidizer in appropriate locations on a continuous basis, as required by SC VI.2. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d))**

5. The permittee shall determine the maximum sulfur content in each fuel using an ASTM-approved method or fuel supplier certification. See Appendix 7. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d))**

See Appendix 7

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of FG-PHASE3A. **(R 336.1201(7)(a))**

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/ Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SVRTO5	44	68.5	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVRTO6	44	68.5	R 336.1225, 40 CFR 52.21(c) & (d)
3. SVRTO7	44	68.5	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

N/A

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

APPENDIX 4: Recordkeeping

The permittee shall use the following approved formats and procedures for the recordkeeping requirements referenced in FG-PHASE3. Alternative formats or procedures must be approved by the AQD District Supervisor.

1. Fuel usage rate, gallons, prorated per Appendix 7:
   - daily

2. Fuel usage rate, gallons, non-prorated:
   - monthly
   - rolling 12-month time period

Should the prorated daily fuel usage rate exceed 90% of the daily limit, the permittee shall commence daily recordkeeping for a minimum of two months until the prorated rate falls below 90% of the weekly limit as calculated at the end of the month.

APPENDIX 7: Emission Calculations

FG-PHASE3

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-PHASE3. Alternative calculations must be approved by the AQD District Supervisor.

Prorated daily fuel usage, gallons = (Monthly fuel usage in gallons) / (days of operation per month).

Daily SO_2 emissions, pounds = (Prorated daily fuel usage in gallons) x (sulfur content of fuel, pounds per gallon) x (2 pounds SO_2 / pound sulfur) summed for each fuel (e.g., diesel, unleaded gasoline) used.

Annual SO_2 emissions, tons = (Annual fuel usage in gallons) x (sulfur content of fuel, pounds per gallon) x (2 pounds SO_2 / pound sulfur) x (ton / 2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Daily NOx emissions, pounds = (Prorated daily fuel usage in gallons) * (NOx emission factor, pounds per gallon) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual NOx emissions, tons = (Annual fuel usage in gallons) * (NOx emissions factor, pounds per gallon) * (ton/2000 lbs) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Daily VOC emissions, pounds = (Prorated daily fuel usage in gallons) * (VOC emission factor, pounds per gallon) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual VOC emissions, tons = (Annual fuel usage in gallons) * (VOC emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual CO emissions, tons = (Annual fuel usage in gallons) * (CO emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual PM10 emissions, tons = (Annual fuel usage in gallons) * (PM10 emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual PM2.5 emissions, tons = (Annual fuel usage in gallons) * (PM2.5 emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.

FG-PHASE3A

The permittee shall use the following calculations in conjunction with monitoring, testing or recordkeeping data to determine compliance with the applicable requirements referenced in FG-PHASE3A. Alternative calculations must be approved by the AQD District Supervisor.

Annual NOx emissions, tons = (Annual fuel usage in gallons) * (NOx emissions factor, pounds per gallon) * (ton/2000 lbs) summed for each fuel (e.g. diesel, unleaded gasoline) used.

Annual CO emissions, tons = (Annual fuel usage in gallons) * (CO emission factor, pounds per gallon) * (ton/2000 pounds) summed for each fuel (e.g. diesel, unleaded gasoline) used.