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From:	Rebecca Payne <rebecca.payne@fcagroup.com></rebecca.payne@fcagroup.com>
Sent:	Wednesday, December 18, 2019 4:54 PM
То:	EGLE-ROP
Cc:	Chukwuemeka Bosah; Gregory Todd
Subject:	M4085 – ROP Renewal Application
Attachments:	M4085 MAEP ROP Renewal Form 121819 (1) FINAL.pdf; M4085 FINAL 11-17-15 MARK
	UP FOR ROP_12-18-2019.docx; M4085 Mack Ave ROP Tech Support Doc 121819
	_FINAL.pdf

Dear Sir/Madam:

Attached please find an electronic copy of FCA's Mack Avenue Engine Plant ROP Renewal Application. The attachments include the following:

- 1. ROP Renewal Application form for M4085 Mack Avenue Engine Plant (*file: M4085 MAEP ROP Renewal Form FINAL121819.pdf*)
- 2. ROP Mark-up, in MS Word (file: M4085 FINAL 11-17-15 MARK UP FOR ROP_12-18-2019.docx)
- 3. Supplemental Data/Technical Support Document (*file: M4085 Mack Ave ROP Tech Support Doc 121819 FINAL.pdf*)

A hard copy of the complete ROP Application, including the Responsible Official's signature page, was sent to the AQD Detroit District Office today, December 18, 2019.

Should you have any questions please do not hesitate to contact me via return email or at 313-423-4552.

Kind Regards -

Rebecca Payne

Detroit 2 Assembly Plant (D2AP)

Environment Lead

Environment Pillar Lead

Fiat Chrysler Automobiles

Rebecca.Payne@FCAGroup.com

Cell: 313-423-4552

Michigan Department of Environmental Quality - Air Quality Division



RENEWABLE OPERATING PERMIT RENEWAL APPLICATION FORM

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

GENERAL INSTRUCTIONS

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

PART A: GENERAL INFORMATION

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

SOURCE INFORMATION

SRN M4085	SIC Code 3465	NAICS Co 336370	de		g ROP Numbe OP-M4085-2			Section Number (if applicable)	
Source Name FCA Mack Avenu		000010			01 - 114000-2			<u> </u>	
Street Address 11570 Warren Av	enue East								
City Detroit			State MI	1	ZIP Code 18214	County Wayne	}		
Section/Town/Range	(if address not avai	lable)	<u> </u>			/			
Source Description Mack Avenue Pla as it transitions to Check here if on the marked	a new assemb any of the abov I-up copy of you	ly plant to re informa	produce	autorr	obiles and I	ight duty true	cks.		ncy engines only
Owner Name FCA USA LLC								Section Num	ber (if applicable)
Mailing address (□ c 1000 Chrysler Dr		irce address	5)					1	
City Auburn Hills			State MI	1	ZIP Code 48326	County Oaklar	ıd		Country 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: M4085 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				
Rebecca Payne			Environm	ental Specialist			
Mailing address (X check if same as sou	rce address)	r					
City	State	ZIP Code		County	Country		
Phone number		E-mail add	dress				
313-423-4552		[fcagroup.com			
]					
Contact 2 Name (optional)			Title				
Mailing address (check if same as sou	rce address)		<u></u>				
City	State	ZIP Cod	0	County	Country		
Phone number	e number E-mail a			address			
RESPONSIBLE OFFICIAL INFO	RMATION						
Responsible Official 1 Name			Title				
Michael Brieda			Plant Ma	anager			
Mailing address (X check if same as sou	rce address)						
City	State	ZIP Cod	e	County	Country		
Phone number			il address				
313-957-7310			ichael.brieda@fcagroup.com				
				>3·Fii			
Responsible Official 2 Name (optional)			Title				
Mailing address (check if same as sou	rce address)		1				
City	State	ZIP Cod	e	County	Country		
Phone number		E-mail a	ddress				

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

SRN: M4085 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.

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

Compliance Statement

This source is in compliance with <u>all</u> 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) species existing ROP, Permits to Install that have not yet been incorporated into that ROP, and all other application of 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 spinumber(s) or applicable requirement for which the source is or will be out of compliance at the time of i ROP renewal on an AI-001 Form. Provide a compliance plan and schedule of compliance on an AI-00	issuance o	

Name and Title of the Responsible Official (Print or Type)	
Michael Brieda	
As a Responsible Official, I certify that, based on informat the statements and information in this application are true	
Signature of Responsible Official	Date

PART C: SOURCE REQUIREMENT INFORMATION

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

-		10000	
C1.	Actual emissions and associated data from <u>all</u> 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 <u>not</u> been reported in MAERS for the most recent emissions reporting year? If Yes, identify the emission unit(s) that was/were not reported in MAERS on an AI-001 Form. Applicable MAERS form(s) for unreported emission units must be included with this application.	🗌 Yes	🖾 No
C2.	Is this source subject to the federal regulations on ozone-depleting substances? (40 CFR Part 82)	🛛 Yes	🗌 No
C3.	Is this source subject to the federal Chemical Accident Prevention Provisions? (Section 112(r) of the Clean Air Act Amendments, 40 CFR Part 68)	🗌 Yes	🛛 No
	If Yes, a Risk Management Plan (RMP) and periodic updates must be submitted to the USEPA. Has an updated RMP been submitted to the USEPA?	🗌 Yes	🗆 No
C4.	Does the source belong to one of the source categories that require quantification of fugitive emissions?	🗌 Yes	🛛 No
	If Yes, identify the category on an AI-001 Form and include the fugitive emissions in the PTE calculations for the source. See ROP Renewal Application instructions.		
C5.	Does this stationary source have the potential to emit (PTE) of 100 tons per year or more of any criteria pollutant (PM-10, PM 2.5, VOC, NOx, SO ₂ , CO, lead)? If Yes, include potential emission calculations for each identified pollutant on an AI-001 Form.	🗌 Yes	🛛 No
C6.	Does this stationary source emit any hazardous air pollutants (HAPs) regulated by the federal Clean Air Act, Section 112?	🗌 Yes	🛛 No
	If Yes, include potential and actual emission calculations for HAPs on an AI-001 Form. Fugitive emissions must be included in HAP calculations.		
C7.	Are any emission units subject to the Cross State Air Pollution Rule (CSAPR)? If Yes, identify the specific emission unit(s) subject to CSAPR on an AI-001 Form.	🗌 Yes	🖾 No
C8.	Are any emission units subject to the federal Acid Rain Program? If Yes, identify the specific emission unit(s) subject to the Federal Acid Rain Program on an AI-001 Form.	🗋 Yes	🖾 No
	Is an Acid Rain Permit Renewal Application included with this application?	🗌 Yes	🗌 No
C9.	Are any emission units identified in the existing ROP subject to compliance assurance monitoring (CAM)?	🗌 Yes	🖾 No
	If Yes, identify the specific emission unit(s) subject to CAM on an Al-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 Al-001 Form.		
	Is a CAM plan included with this application?	🗌 Yes	🛛 No
C10.	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.		
C11.	Are there any specific requirements that the source proposes to be identified in the ROP as non-applicable?	🗌 Yes	🛛 No
	If Yes, then a description of the requirement and justification must be submitted as part of the ROP renewal application on an AI-001 Form.		
	Check here if an AI-001 Form is attached to provide more information for Part C. Enter AI-001 For	m ID: A	I-PTE

SRN: M4085	Section Number	(if applicable):
		(in applicable).

PART D: PERMIT TO INSTALL (PTI) EXEMPT EMISSION UNIT INFORMATION Review all emission units at the source and answer the question below.

empt Storage Tar		Rule 201 Exemption	Rule 212(4) Citation
mission Unit ID	Emission Unit Description	Rule Citation [e.g. Rule 282(2)(b)(i)]	[e.g. Rule 212(4)(c)]
			1
			1
omments:	1		

SRN: M4085	Section Number (if applica	ahle)
	ocodon number (n approc	

PART E: EXISTING ROP INFORMATION

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

E1. Does the source propose to make any add underlying applicable requirements as they	🛛 Yes	□ No				
If Yes, identify changes and additions on P						
E2. For each emission unit(s) identified in the eare to be reported in MAERS. Are there are unit(s) identified in the existing ROP that w year? If Yes, identity the stack(s) that was	🗋 Yes	🛛 No				
E3. Have any emission units identified in the ex required a PTI?	kisting ROP been modified or	reconstructed that	🗌 Yes	🛛 No		
If Yes, complete Part F with the appropriate	e information.					
E4. Have any emission units identified in the exemission unit(s) and the dismantle date in			🛛 Yes	🗌 No		
Comments:						
There are several emission units and associated flexible groups in the existing ROP which have been dismantled, and marked for deletion in the redline ROP, as follows:						
Dismantled Emission Unit	Associated Flexible Group (proposed for deletion)					
EU-DYNO1, EU-DYNO2, EU-DYNO3	FG-DYNOS					
EU-HOTTEST1S, EU-HOTTEST2S	FG-HOTTEST					
EU-HEAD_LOCT, EU-	FG-RULE290					
EU-BLOCK_LOCT, EU-MARKINGINK, EU-IPA.						
EU-STA_RTV_400, EU-STA_RTV_700						
EU-UST1, EU-UST2	FG-GAS DISP					
EU-RULE331 MACH FG-RULE331						
A detailed explanation of dismantled emission units is provided in the associated Technical Support Document						
Check here if an Al-001 Form is attached	to provide more information t	for Part E. Enter Al-001 Fo	rm ID:			

SRN: M4085	Section	Number	(if	applicable):

PART F: PERMIT TO INSTALL (PTI) INFORMATION

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

	ated into the existing	where the applicable requirements from the PTI have not ROP? If Yes, complete the following table.	🗌 Yes 🖾 No					
Permit to Install NumberEmission Units/Flexible Group ID(s)Description (Include Process Equipment, Control Devices)Date Emission Unit was Instal Modified/ Reconstructed								
F2. Do any of the PTIs listed above change, add, or delete terms/conditions to established emission units in the existing ROP? If Yes, identify the emission unit(s) or flexible group(s) affected in the comments area below or on an AI-001 Form and identify all changes, additions, and deletions in a mark-up of the existing ROP.								
F3. Do any of the PTIs listed above identify new emission units that need to be incorporated into the ROP? If Yes, submit the PTIs as part of the ROP renewal application on an AI-001 Form, Yes No and include the new emission unit(s) or flexible group(s) in the mark-up of the existing ROP.								
F4. Are there any stacks with applicable requirements for emission unit(s) identified in the PTIs listed above that were not reported in MAERS for the most recent emissions reporting year? If Yes No Yes, identity the stack(s) that were not reported on the applicable MAERS form(s).								
F5. Are there any proposed administrative changes to any of the emission unit names, descriptions or control devices in the PTIs listed above for any emission units not already incorporated into Yes No the ROP? If Yes, describe the changes on an AI-001 Form.								
Comments:								
Check here i	f an Al-001 Form is a	Ittached to provide more information for Part F. Enter AI-001	Form ID: Al-					

SKN: M4005 Section Number (ii applicable):	SRN: M4085	Section Number	(if applicable):
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PART G: EMISSION UNITS MEETING THE CRITERIA OF RULES 281(2)(h), 285(2)(r)(iv), 287(2)(c), OR 290

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

	y new and/or existing emission units which do <u>not</u> already appear in ich meet the criteria of Rules 281(2)(h), 285(2)(r)(iv), 287(2)(c), or 290.		
If Yes, identify the emissi	ion units in the table below. If No, go to Part H.	🗌 Yes	🛛 No
	n units were installed under the same rule above, provide a description n/modification/reconstruction date for each.		
Origin of Applicable Requirements	Emission Unit Description – Provide Emission Unit ID and a description of Process Equipment, Control Devices and Monitoring Devices	Date Emis Unit was I Modified/ Reconstru	installed/
Rule 281(2)(h) or 285(2)(r)(iv) cleaning operation			
Rule 287(2)(c) surface coating line			
Rule 290 process with limited emissions			
Comments:			

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

	SRN: M4085	Section	Number	(if	applicable):
1				<i></i>	

PART H: REQUIREMENTS FOR ADDITION OR CHANGE

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

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

1	H1. Are there changes that need to be incorporated into the ROP that have not been identified in Parts F and G? If Yes, answer the questions below.	Yes	No 🛛
	H2. Are there any proposed administrative changes to any of the existing emission unit names, descriptions or control devices in the ROP? If Yes, describe the changes in questions H8 – H16 below and in the affected Emission Unit Table(s) in the mark-up of the ROP.	🗌 Yes	🛛 No
	H3. Does the source propose to add a new emission unit or flexible group to the ROP not previously identified in Parts F or G? If Yes, identify and describe the emission unit name, process description, control device(s), monitoring device(s) and applicable requirements in questions H8 – H16 below and in a new Emission Unit Table in the mark-up of the ROP. See instructions on how to incorporate a new emission unit/flexible group into the ROP.	☐ Yes	No No
1	H4. Does the source propose to add new state or federal regulations to the existing ROP?	🗌 Yes	🛛 No
	If Yes, on an AI-001 Form, identify each emission unit/flexible group that the new regulation applies to and identify each state or federal regulation that should be added. Also, describe the new requirements in questions H8 – H16 below and add the specific requirements to existing emission units/flexible groups in the mark-up of the ROP, create a new Emission Unit/Flexible Group Table, or add an AQD template table for the specific state or federal requirement.		
	H5. Has a Consent Order/Consent Judgment (CO/CJ) been issued where the requirements were not incorporated into the existing ROP? If Yes, list the CO/CJ number(s) below and add or change the conditions and underlying applicable requirements in the appropriate Emission Unit/Flexible Group Tables in the mark-up of the ROP.	3	No 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.	X Yes	🗌 No
	Emission limits in FG-FACILITY are proposed for deletion in the redline markup, and as described of this application, to reflect the emission units that were dismantled and are no longer operation.		tion E
	H7. Are you proposing to streamline any requirements? If Yes, identify the streamlined and subsumed requirements and the EU ID, and provide a justification for streamlining the applicable requirement below.	Tes	No No

SRN: M4085	Section	Number	(if	applicable):
01114.141-4000	0000000	110111001	U 1	chhaire in it.

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

H8. Does the source propose to add, change and/or delete emission identify the addition/change/deletion in a mark-up of the correspon provide a justification below.			🛛 Yes	🗌 No
Redline ROP identifies emission limits proposed for deletion as t dismantled.	he associated e	mission units ha	ive been	
H9. Does the source propose to add, change and/or delete material li identify the addition/change/deletion in a mark-up of the correspor provide a justification below.			🛛 Yes	🗌 No
Redline ROP identifies material limits proposed for deletion as th dismantled.	e associated en	nission units hav	ve been	
H10. Does the source propose to add, change and/or delete process requirements? If Yes, identify the addition/change/deletion in a m section of the ROP and provide a justification below.			🛛 Yes	🗌 No
Redline ROP identifies process/operational restrictions proposed have been dismantled.	l for deletion as	the associated	emission	units
H11.Does the source propose to add, change and/or delete design/e requirements? If Yes, identify the addition/change/deletion in a n section of the ROP and provide a justification below.			Yes	No No
H12.Does the source propose to add, change and/or delete testing/s identify the addition/change/deletion in a mark-up of the correspo provide a justification below.			C Yes	No No
H13.Does the source propose to add, change and/or delete monitorin requirements? If Yes, identify the addition/change/deletion in a n section of the ROP and provide a justification below.			X Yes	No
Redline ROP identifies monitoring and recordkeeping requirement emission units have been dismantled.	nts proposed fo	r deletion as the	associa	ted
H14.Does the source propose to add, change and/or delete reporting the addition/change/deletion in a mark-up of the corresponding s justification below.] Yes	No No
	SRN: M4085	Section Number (in	f applicable	e):

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

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

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.

SRN: M4085 Section Number (if applicable): 1. Additional Information ID AI-PTE Additional Information 2. Is This Information Confidential? 🗌 Yes 🖾 No The attached pages provide a PTE analysis for Criteria Pollutants and HAP emissions for the Mack Avenue Plant. Note that current emissions designate Mack Avenue as a minor source under Title V.

Mack Avenue Engine Plant Pg. 1 - Emergency Fire Pump (FG-EMERG) Criteria Pollutant PTE AI-001 - PTE

	Engine	Gallons	Annual Operation	Emis	ssion F	Emission Factors (Ib/1000 gal) AP-42	lb/1000	gal)	GHG EF (lb/1000 qal)		Potential Emissions (tons/yr)	al Emis	sions (tons/yr)	
Mack Avenue Emissions Unit	HP Rating	per hour	(hrs)	so ₂	NOX	00	PM	VOC	C02	SO ₂	NOX	8	PM	VOC	C02
EU-FIRE PUMP1	368	15.19	200	39.7	604	130	42.5	49.3	22501.4	0.2	2.3	0.5	0.2	0.2	85.5
EU-FIRE PUMP2	368	15.19	500	39.7	604	130	42.5	49.3	22501.4	0.2	2.3	0.5	0.2	0.2	85.5
EU-FIRE_PUMP3	368	15.19	500	39.7	604	130	42.5	49.3	22501.4	0.2	2.3	0.5	0.2	0.2	85.5
										1					
		U	Criteria Pollutant PTE from all Emergency Engines (tons/yr):	ant PTI	E from ;	all Eme	rgency	Engines	tons/yr):	•	7	-	•	-	256

Assumptions/Calculations

Emission Factors for NOx, CO, VOC, SO2 and PM in Ib/1000 gal from AP-42 Section 3.3 Industrial Engines (10/96). NOx and CO factors also specified in ROP.
 GHG Emission Factor for CO2 from 40 CFR Part 98, Subpart C, Table C-1.
 Engine Annual Operating Hours fimited to 500 hours per year for each engine based on EPA Guidance.
 Maximum Diesel Fuel usage per hour based on Btu value of diesel fuel and 45% engine efficiency.
 Maximum Diesel Fuel usage on an annual basis based on HP Rating conversion to 15.19 gal/hr * 3 Engines * 500 hr/yr = 22,791 gal/yr fuel oil

AL-001 - PTE Mack Avende Engine Plant Pg. 2 - EU-HEATERS Critera Petitzant PTE and Critera Pollutant Summary

-		_		-	. .,		 -	-
	Vict			POT	0.22			-
	0 Ib/MI	a (TPY	- 1		35		┥	Н
	0x (10	Emissions (TPY)	n,	EF UN	0.6 Ib/MMBhu			
	s for N	5		EF EF UNITS	0.6			
	1 factor	-	4	_	2.76		•	0
	mission	(YPY)		2 P		_	_	Ц
l	cified e	Emissions (TPY)	E	EF UNI	7.6 Ib/MMcf			
	a of spe	E		EF EF UNITS POT	7.6			
	the us				1.99		2	-
	nit and	(YPY)		SS PC		_	_	
	s use fir	Emissions (TPY)	AUC V	EF UNIT	5.5 Ib/MMcl			
	lural ga:	Ē		EF (EF UNITS) POT	5.5			
	this nat				30.46		8	-
	uodn p	(YPY)		104 SI	_			
	e base	Emissions (TPY)	3	EF UNIT	B4 Ib/MMcf			
 م	etow ar	Ē		EF EF UNITS	84			
EU-HEALEKS	wided b	┝		L	36.27		36	7
	nts pro	{\AL		ها ۲	Ц		_	
	i politita	Emissions (TPY)	MUZ	EF UNIT	100 Ib/MMcf			
	criteria	ŝ		EF EF UNITS POT	100			
	sions of	┝		┝	389		42.389	256
	al emis:	(yet)		POT	42.389		42	
	Polenti	Emissions (TPY)	20'	EF UNITS	MBbu			-
	year.	Emis		I 1	0.00 [[]]	┝		
	Acf per			5	116			
	25.3 MA	Source for	Emission	Data	-42/ROF		IS PTE	p) PTE
	bd to 73			_	VG AP.		EU-HEATERS PTI	re Pum
	ge límití lied in tí	Capacity	Rating	Units	725.3 MMcthr NG AP-42/ROP 116.666 br/MMBbu		ECH	FG-EMERG (Fire Pump) PTE
	pas usa s speci		Alto,	. 50	3	╞		G-EME
	t NG) a		Capacity	Rating	724			-
	The current ROP famils natural gas usage limited to 725.3 MMed per year. Potential emissions of criteria pollutants provided below are based upon this natural gas use firmit and the use of specified emission factors for NOx (100 lb/MMcf NG) and CO (64 lb/MMcf NG) as specified in the ROP.		Description		FG-FACIUTY			
	nt ROP CO (84			-	FG-F.			
	e curre 3) and (Source		ROP			
	f Z	1	1		L			

-

32

43

42,646

Mack Avenue Criteria Pollutant PTE Total:

December 2019

Pg. 3 - Hazardous Air Pollutant PTE					
		Emission Factors			
		Natural Gas Combustion (AP-42)	Diesel Combustion (Web FIRE 20300101)	Potential Emission Rate (TPY)	
CAS	Name	(lb/MMft ³)	(lb/MMBtu)		
50-00-0	Formaldehyde	7.50E-02	1.18E-03	0.03	
50-32-8	Benzo(a)pyrene	1.20E-06	1.88E-07	0.00	
53-70-3	Dibenzo(a,h)anthracene	1.20E-06	5.83E-07	0.00	
56-49-5	3-Methylchloranthrene	1.80E-06		0.00	
56-55-3	Benz(a)anthracene	1.80E-06	1.68E-06	0.00	
71-43-2	Benzene	2.10E-03	9.33E-04	0.00	
75-07-0	Acetaldehyde		7.67E-04	0.00	
83-32-9	Acenaphthene	1.80E-06	1.42E-06	0.00	
85-01-8	Phenanathrene	1.70E-05	2.94E-05	0.00	
86-73-7	Fluorene	2.80E-06	2.92E-05	0.00	
91-20-3	Naphthalene	6.10E-04	8.48E-05	0.00	
91-57-6	2-Methylnaphthalene	2.40E-05		0.00	
98-82-8	Cumene			0.00	
106-99-0	1,3 Butadiene		3.91E-05	0.00	
107-02-8	Acrolein		9.25E-05	0.00	
108-88-3	Toluene	3.40E-03	4.09E-04	0.00	
110-54-3	Hexane	1.80E+00		0.65	
120-12-7	Anthracene	2.40E-06	1.87E-06	0.00	
129-00-0	Pyrene	5.00E-06	4.78E-06	0.00	
191-24-2	Benzo(g,h,i)perylene	1.20E-06	4.89E-07	0.00	
193-39-5	Indeno(1,2,3-cd)pyrene	1.80E-06	3.75E-07	0.00	
205-99-2	Benzo(b)fluoranthene	1.80E-06	9.91E-08	0.00	
206-44-0	Fluoranthene	3.00E-06	7.61E-06	0.00	
207-08-9	Benzo(k)fluoranthene	1.80E-06	1.55E-07	0.00	
208-96-8	Acenaphthylene	1.80E-06	5.06E-06	0.00	
218-01-9	Chrysene	1.80E-06	3.53E-07	0.00	
1330-20-7	Xylene		2.85E-04	0.00	
7439-96-5	Manganese	3.80E-04		0.00	
7439-97-6	Mercury	2.60E-04		0.00	
7440-02-0	Nickel	2.10E-03		0.00	
7440-38-2	Arsenic	2.00E-04		0.00	
7440-39-3	Barium	4.40E-03		0.00	
7440-41-7	Beryllium	1.20E-05		0.00	
7440-43-9	Cadmium	1.10E-03		0.00	
7440-47-3	Chromium	1.40E-03		0.00	
7440-48-4	Cobalt	8.40E-05		0.00	
7782-49-2	Selenium	2.40E-05		0.00	
25321-22-6	Dichlorobenzene	1.20E-03		0.00	
na	7,12-Dimethylbenz(a)ant	and the second s		0.00	
Maximum Indiv	idual HAP Emission Rate			0.65	
Aggregate HAP	Emission Rate			0.69	

AI-001 - PTE Mack Avenue Engine Plant Pg. 3 - Hazardous Air Pollutant PTE

		Potential Fuel
		Use
Natural Gas	MMft ³ /yr	725
Diesel Fuel	MMBtu/yr	2,963

DEO

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY AIR QUALITY DIVISION

EFFECTIVE DATE: JUNE 24, 2015

REVISION DATE: November 17, 2015

ISSUED TO: FCA US LLC - MACK AVENUE ENGINE PLANT

State Registration Number (SRN): M4085

LOCATED AT: 11570 Warren Avenue East, Detroit, Michigan 48214

RENEWABLE OPERATING PERMIT

Permit Number: MI-ROP-M4085-2015a

Expiration Date: June 24, 2020

Administratively Complete ROP Renewal Application Due Between December 24, 2018 and December 24, 2019

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-M4085-2015a

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

Michigan Department of Environmental Quality

Wilhemina McLemore, Detroit District Supervisor

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AUTHORITY AND ENFORCEABILITY

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

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

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

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

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

A. GENERAL CONDITIONS

Permit Enforceability

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

General Provisions

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

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

Equipment & Design

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

Emission Limits

- 11. Unless otherwise specified in this ROP, the permittee shall comply with Rule 301, which states, in part, "Except as provided in subrules 2, 3, and 4 of this rule, a person shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of a density greater than the most stringent of the following:" ² (R 336.1301(1))
 - a. A 6-minute average of 20 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.

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

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

Testing/Sampling

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

Monitoring/Recordkeeping

ROP No: MI-ROP-M4085-2015a Expiration Date: June 24, 2020 PTI No: MI-PTI-M4085-2015a

- 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, whichever is first. The written reports shall include all of the information required in Rule 912(5) and shall be certified by a Responsible Official in a manner consistent with the CAA.² (R 336.1912)

Permit Shield

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

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

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

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

Revisions

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

Reopenings

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

Renewals

35. For renewal of this ROP, an administratively complete application shall be considered timely if it is received by the department not more than 18 months, but not less than 6 months, before the expiration date of the ROP. (R 336.1210(8))

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 68.10(a):
 - a. June 21, 1999,
 - b. Three years after the date on which a regulated substance is first listed under 40 CFR 68.130, or
 - c. The date on which a regulated substance is first present above a threshold quantity in a process.
- 40. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall submit any additional relevant information requested by any regulatory agency necessary to ensure compliance with the requirements of 40 CFR Part 68.
- 41. If subject to Section 112(r) of the CAA and 40 CFR Part 68, the permittee shall annually certify compliance with all applicable requirements of Section 112(r) as detailed in Rule 213(4)(c)). **(40 CFR Part 68)**

Emission Trading

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

Permit To Install (PTI)

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

Footnotes:

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

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

B. SOURCE-WIDE CONDITIONS

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

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

C. EMISSION UNIT CONDITIONS

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

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

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description	Installation	Flexible Group ID
	(Including Process Equipment & Control	Date/	-
	Device(s))	Modification Date	
EU-DYNO1	Engine dynamometer test cell burning	01/27/2014	FG-DYNOS,
	unleaded gasoline.		FG-FACILITY
EU-DYNO2	Engine dynamometer test cell burning	12/17/2013	— FG-DYNOS,
	unleaded gasoline.		FG-FACILITY
EU-DYNO3	Engine dynamometer test cell burning	1/13/2014	FG-DYNOS,
	unleaded gasoline.		FG-FACILITY
EU-HOTTEST1S	Natural gas-fired engine hot test stand.	01/01/1997	FG-HOTTESTS,
			FG-FACILITY
EU-HOTTEST2S	Natural gas-fired engine hot test stand.	01/01/1997	FG-HOTTESTS,
			FG-FACILITY
EU-HEATERS	Air handling units, heaters, ovens, and hot	08/05/2002	FG-FACILITY
	water boilers; each burning natural gas fuel.		
EU-FIRE PUMP1	368 horse power diesel fueled emergency fire	01/08/1996	FG-EMERG,
—	pump engine		FG-FACILITY
EU-FIRE PUMP2	368 horse power diesel fueled emergency fire	01/08/1996	FG-EMERG,
—	pump engine		FG-FACILITY
EU-FIRE PUMP3	368 horse power diesel fueled emergency fire	01/11/1999	FG-EMERG,
—	pump engine		FG-FACILITY
EU-RULE331 MACH	Various machining operations including	01/01/2014	FG-RULE331,
_	grinding, boring, etc. utilizing various cutting		FG-FACILITY
	oils and coolants. The processes are		
	maintained with oil mist collectors and are		
	exempt from permit to install (R336.1201)		
	requirements by R336.1285(I)(vi), but are		
	subject to R336.1331.		
EU-	Loctite adhesive applied to head sub	01/01/2014	FG-RULE290,
HEADSUB_LOCT	assembly spark plug tube install.		FG-FACILITY
EU-HEAD_LOCT	Loctite adhesive applied to head line cup plug	01/01/2014	FG-RULE290,
	install.		FG-FACILITY
EU-BLOCK_LOCT	Loctite adhesive applied to repair blocks.	01/01/2014	FG-RULE290,
			FG-FACILITY
EU-MARKINGINK	Marking inks for 4.7L head sub-assembly,	09/01/2003	FG-RULE290,
	maintenance painting.		FG-FACILITY
EU-IPA	Isopropyl alcohol used for cleaning engines	09/01/2003	FG-RULE290,
	prior to adhesive application.		FG-FACILITY

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Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date/ Modification Date	Flexible Group ID
EU-STA_RTV_400	RTV adhesive applied to oil pan and front	01/01/2014	FG-RULE290,
	cover.		FG-FACILITY
EU-STA_RTV_700	RTV adhesive applied to valve cover.	01/01/2014	FG-RULE290,
			FG-FACILITY

D. FLEXIBLE GROUP CONDITIONS

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

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

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-DYNOS	Three dynamometer engine test cells burning unleaded gasoline.	EU-DYNO1, EU-DYNO2, EU-DYNO3
FG-HOTTESTS	Two natural gas-fired hot test stands.	EU-HOTTEST1S, EU-HOTTEST2S
FG-EMERG_RICE	Emergency equipment including three diesel fueled fire pumps (compression ignition [CI]) subject to 40 CFR 63 Subpart ZZZZ, NESHAP for Reciprocating Internal Combustion Engines (RICE).	EU-FIRE_PUMP1, EU-FIRE_PUMP2, EU-FIRE_PUMP3
FG-RULE290	Any emission unit that emits air contaminants and is exempt from the requirements of Rule 201 pursuant to Rules 278 and 290.	EU-HEADSUB_LOCT, EU-HEAD_LOCT, EU-BLOCK_LOCT, EU-IPA, EU-MARKINGINK, EU-STA_RTV_400, EU-STA_RTV_700
FG-GAS_DISP	Gasoline dispensing storage tanks.	EU-UST1, EU-UST2
FG-RULE331	Various machining operations including grinding, boring, etc. utilizing various cutting oils and coolants. The processes are maintained with oil mist collectors and are exempt from permit to install (R336.1201) requirements by R336.1285(I)(vi), but subject to R336.1331 requirements.	EU-RULE331_MACH

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Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FG-FACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment	EU-DYNO1, EU-DYNO2, EU-DYNO3, EU-HOTTEST1S, EU-HOTTEST2S, EU-HEATERS, EU-FIRE_PUMP1, EU-FIRE_PUMP2, EU-FIRE_PUMP3, EU-HEADSUB_LOCT, EU-HEAD_LOCT, EU-HEAD_LOCT, EU-HEAD_LOCT, EU-HEAD_LOCT, EU-HEAD_LOCT, EU-HEAD_LOCT, EU-HEAD_LOCT, EU-HEAD_LOCT, EU-BLOCK_LOCT, EU-BLOCK_LOCT, EU-BLOCK_LOCT, EU-UST1, EU-UST1, EU-UST2,

FG-DYNOS FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

Three engine dynamometer test cells burning unleaded gasoline.

Emission Units: EU-DYNO1, EU-DYNO2, EU-DYNO3

POLLUTION CONTROL EQUIPMENT:

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. VOC	10.8 tpy²	12-month rolling time period as determined at the end of each calendar month.	FG-DYNOS	SC VI.2, V.5	R 336.1205(1)(a) & (b), R 336.1702(a)
2. Benzene	0.41 tpy ¹	12-month rolling time period as determined at the end of each calendar month.	FG-DYNOS	SC VI.2, V.5	R 336.1224, R 336.1225
3. 1,3-Butadiene	0.14 tpy ¹	12-month rolling time period as determined at the end of each calendar month.	FG-DYNOS	SC VI.2, V.5	R 336.1224, R 336.1225
4. Formaldehyde	0.23 tpy ¹	12-month rolling time period as determined at the end of each calendar month.	FG-DYNOS	SC VI.2, V.5	R 336.1224, R 336.1225
Emission Factor for VOC: 0.160 lb/gal					

Benzene, 1,3-Butadiene, and Formaldehyde emission rates are calculated by multiplying the VOC emission rate by the emission factor and a correction factor.

Benzene:	1,3-Butadiene:	Formaldehyde:
Emission Factor – 5.9 % VOC	Emission Factor – 0.54 % VOC	Emission Factor – 0.92 % VOC
emissions	emissions	emissions
Correction Factor - 0.65	Correction Factor – 2.4	Correction Factor — 2.3

II. MATERIAL LIMIT(S)

- 1. The permittee shall burn only unleaded gasoline in FG-DYNOS.² (R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))
- 2. The unleaded gasoline usage for FG-DYNOS shall not exceed 1,152 gallons per calendar day.¹ (R 336.1224, R 336.1225)

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. Not later than December 31, 2018, the permittee shall verify and quantify the VOC, benzene, 1,3-butadiene, formaldehyde, CO and NOx emission rates from one of the following dynamometer test cells; EU-DYNO1, EU-DYNO2, EU-DYNO3, by testing at owner's expense, in accordance with Department requirements. The testing shall be performed over a range of typical engine testing operations. Testing will be completed to verify emission factors used in determining pollutant emissions under FG-DYNOS (VOC, benzene, 1,3-butadiene, formaldehyde) and FG-FACILITY (CO and NOx). No less than 60 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. (R 336.2001, R 336.2003, R 336.2004)

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

- The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))
- 2. The permittee shall keep the following information on a monthly basis for FG-DYNOS:
 - a) A record of the days of operation for FG-DYNOS.
 - b) Gallons of unleaded gasoline used per month and 12-month rolling time period in FG-DYNOS.
 - c) VOC emission calculations determining the monthly emission rate in tons per calendar month.
 - d) 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.
 - e) Benzene emission calculations determining the monthly emission rate in tons per calendar month.
 - f) Benzene 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) 1,3-Butadiene emission calculations determining the monthly emission rate in tons per calendar month.
 - h) 1,3-Butadiene 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) Formaldehyde emission calculations determining the monthly emission rate in tons per calendar month.
 - j) Formaldehyde 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.² (R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a))

- 3. The permittee shall keep the following information on a monthly basis for FG-DYNOS:
 - a) Gallons of unleaded gasoline used per calendar day in FG-DYNOS. The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.1702(a))
- See Appendices 3, 4, and 7

VII. <u>REPORTING</u>

- 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. SV-DYNOSTACK	18 2	38.0²	R 336.1225, R 336.2803, R 336.2804, 4 0 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

⁴This condition is state-only enforceable and was established pursuant to Rule 201(1)(b). ²This condition is federally enforceable and was established pursuant to Rule 201(1)(a).

FG-HOTTESTS FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

Two natural gas-fired hot test stands.

Emission Units: EU-HOTTEST1S, EU-HOTTEST2S

POLLUTION CONTROL EQUIPMENT:

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

- 1. The permittee shall burn only natural gas in FG-HOTTESTS.² (R 336.1205(1)(a) & (b), R 336.1224, R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))
- 2. The fuel usage for FG-HOTTESTS shall not exceed 2.0 million cubic feet per year on a 12-month rolling time period as determined at the end of each calendar month.² (R 336.1205(1)(a) & (b), R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

 The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage of FG-HOTTESTS on a continuous basis.² (R 336.1205, R 336.1225, R 336.1702, R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

V. TESTING/SAMPLING

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

NA

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

 The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

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2. The permittee shall keep the following information on a monthly basis for FG-HOTTESTS:

a) Million cubic feet of natural gas used per month and 12-month rolling time period in FG-HOTTESTS. The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request.² (R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

See Appendices 3, 4, and 7

VII. <u>REPORTING</u>

- 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. SV-HOTTESTS	12 2	50²	R 336.1225, R 336.2803, R 336.2804, 4 0 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

⁴This condition is state-only enforceable and was established pursuant to Rule 201(1)(b).

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

FG-EMERG_RICE FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

Emergency equipment including three diesel fueled fire pumps (compression ignition [CI]) subject to 40 CFR 63 Subpart ZZZZ, NESHAP for Reciprocating Internal Combustion Engines (RICE).

Compliance date – May 3, 2013 for CI Engines

Emission Units: EU-FIRE_PUMP1, EU-FIRE_PUMP2, EU-FIRE_PUMP3

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

NA

III. PROCESS/OPERATIONAL RESTRICTION(S)

- 1. The permittee shall operate and maintain any affected CI RICE, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. **(40 CFR 63.6605(b))**
- 2. The permittee shall comply with the following requirements, except during periods of startup: (40 CFR 63.6603(a))

For CI Engines: (40 CFR 63.6603(a), Table 2d item 4)

- a) Change oil and filter every 500 hours of operation or annually, whichever comes first, except as allowed in SC III.4.
- b) Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first.
- c) Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.
- 3. The permittee shall operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop you own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air-pollution control practice for minimizing emissions. (40 CFR 63.6625(e), 40 CFR 63.6640(a), Table 6 item 9)
- 4. The permittee may utilize an oil analysis program in order to extend the specified oil change requirement in 40 CFR 63.6603(a) and as listed in SC III.2. The oil analysis program must be performed at the same frequency as oil changes are required. The analysis program must analyze the parameters and keep records as required in 63.6625(i). (40 CFR 63.6625(i))

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- 5. The permittee shall not allow the engine(s) to exceed 100 hours for maintenance checks and readiness testing. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency RICE beyond 100 hours per year. **(40 CFR 63.6640(f)(ii))**
- 6. The permittee shall not allow the engine(s) to operate more than 50 hours per year for non-emergency situations, as allowed in 40 CFR 63.6640(f)(iii). **(40 CFR 63.6640(f)(iii))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

NA

V. TESTING/SAMPLING

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

1. If using the oil analysis program for CI Engine(s), the permittee shall test for Total Base Number, viscosity and percent water content. (40 CFR 63.6625(i))

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. Must install a non-resettable hour meter if one is not already installed. (40 CFR 63.6625(f))
- 2. The permittee must keep records of the hours of operation of the engine that is recorded through the non-resettable hour meter. (40 CFR 63.6655(f))
- 3. The permittee must document how many hours are spent for emergency operation, including what classified the operation as emergency, and how many hours are spent for non-emergency. (40 CFR 63.6655(f))

See Appendices 3, 4, and 7

VII. <u>REPORTING</u>

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

NA

IX. OTHER REQUIREMENT(S)

1. Permittee shall comply with all applicable provisions of the RICE MACT as specified in 40 CFR 63 Subpart ZZZZ. (40 CFR 63 Subpart ZZZZ)

Footnotes:

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

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

FG-FACILITY FLEXIBLE GROUP CONDITIONS

DESCRIPTION:

All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.

Emission Units:

EU-DYNO1, EU-DYNO2, EU-DYNO3, EU-HOTTEST1S, EU-HOTTEST2S, EU-HEATERS, EU-FIRE_PUMP1, EU-FIRE_PUMP2, EU-FIRE_PUMP3, EU-HEADSUB_LOCT, EU-HEAD_LOCT, EU-BLOCK_LOCT, EU-IPA, EU- MARKINGINK, EU-STA_RTV_400, EU-STA_RTV_700, EU-UST1, EU-UST2, EU-RULE331_MACH

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period/ Operating Scenario		Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO *	93.7 tpy²	12-month rolling time period as determined at the end of each calendar month.		FG-FACILITY	SC VI.2	R 336.1205(1)(a) & (b), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d)
2. CO	244 tpy²	12-month rolling time period as determined at the end of each calendar month.		FG-FACILITY	SC VI.2	R 336.1205(1)(a) & (b), R 336.2804, 4 0 CFR 52.21(d)
Emission Factors:						
NO _x : EU-HEATERS – 100 lb/MMcf FG-DYNOS – 0.30 lb/gal FG-HOTTESTS – 2840 lb/MMcf				CO: EU-HEATERS – 84 lb/MMcf FG-DYNOS – 3.12 lb/gal FG-HOTTESTS – 399 lb/MMcf		

II. MATERIAL LIMIT(S)

- 1. The natural gas usage for FG-FACILITY shall not exceed 725.3 million cubic feet per year on a 12-month rolling time period as determined at the end of each calendar month.² (R 336.1205(1)(a) & (b))
- 2. The unleaded gasoline usage for FG-FACILITY shall not exceed 135,000 gallons per year on a 12-month rolling time period as determined at the end of each calendar month.² (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))

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner, a device to monitor and record the natural gas usage of FG-FACILITY on a continuous basis.² (R 336.1205(1)(a) & (b))

V. TESTING/SAMPLING

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

NA

See Appendix 5

VI. MONITORING/RECORDKEEPING

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

- The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 30th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition.² (R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))
- 2. The permittee shall keep the following information on a monthly basis for FG-FACILITY:
 - a) A record of the days of operation for FG-HOTTESTS.
 - b) Gallons of unleaded gasoline used per month and 12-month rolling time period.
 - c) Million cubic feet of natural gas used per month and 12-month rolling time period.
 - d) NO_x emission calculations determining the monthly emission rate in tons per calendar month.
 - e) 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.
 - f) CO emission calculations determining the monthly emission rate in tons per calendar month.
 - g) 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.² (R 336.1205, R 336.1205, R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), R 336.2803, R 336.2804, 40 CFR 52.21(c) & (d))

See Appendices 3, 4, and 7

VII. <u>REPORTING</u>

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

NA

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

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

E. NON-APPLICABLE REQUIREMENTS

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

APPENDICES

Appendix 1. Abbreviations and Acronyms

Common Acronyms			Pollutant / Measurement Abbreviations		
AQD	Air Quality Division	acfm	Actual cubic feet per minute		
BACT	Best Available Control Technology	BTU	British Thermal Unit		
CAA CAM	Clean Air Act Compliance Assurance Monitoring	°C CO	Degrees Celsius Carbon Monoxide		
CEM CFR	Continuous Emission Monitoring Code of Federal Regulations	CO ₂ e dscf	Carbon Dioxide Equivalent Dry standard cubic foot		
COM Department/ department	Continuous Opacity Monitoring Michigan Department of Environmental Quality	dscm °F	Dry standard cubic meter Degrees Fahrenheit		
EU	Emission Unit	gr HAP	Grains Hazardous Air Pollutant		
FG	Flexible Group	Hg	Mercury		
GACS	Gallons of Applied Coating Solids	hr	Hour		
GC	General Condition	HP	Horsepower		
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide		
HVLP	High Volume Low Pressure*	kW	Kilowatt		
ID	Identification	lb	Pound		
IRSL ITSL	Initial Risk Screening Level Initial Threshold Screening Level	m	Meter Milliarom		
LAER	Lowest Achievable Emission Rate	mg mm	Milligram Millimeter		
MACT	Maximum Achievable Control Technology	MM	Million		
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts		
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds		
MDEQ	Michigan Department of Environmental Quality	NO _x	Oxides of Nitrogen		
MSDS	Material Safety Data Sheet	ng PM	Nanogram Particulate Matter		
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns		
NAAQS	National Ambient Air Quality Standards		in diameter		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter		
NSPS	New Source Performance Standards	pph	Pounds per hour		
NSR	New Source Review	ppm	Parts per million		
PS	Performance Specification	ppmv	Parts per million by volume		
PSD PTE PTI RACT	Prevention of Significant Deterioration Permanent Total Enclosure Permit to Install Reasonable Available Control Technology	ppmw psia psig scf	Parts per million by weight Pounds per square inch absolute Pounds per square inch gauge Standard cubic feet		
ROP SC	Renewable Operating Permit Special Condition	sec SO ₂	Seconds Sulfur Dioxide		
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant		
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature		
SRN	State Registration Number	THC	Total Hydrocarbons		
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year		
USEPA/EPA	United States Environmental Protection Agency	μg	Microgram		
VE	Visible Emissions	μm VOC yr	Micrometer or Micron Volatile Organic Compounds Year		

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

Appendix 2. Schedule of Compliance

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

Appendix 3. Monitoring Requirements

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

Appendix 4. Recordkeeping

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

Appendix 5. Testing Procedures

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 Permit to Install and/or Operate, that relate to the identified emission units or flexible groups as of the effective date of this ROP. This includes all Permits to Install and/or Operate that are hereby incorporated into Source-Wide PTI No. MI-PTI-M4805-2015. PTIs issued after the effective date of this ROP, including amendments or modifications, will be identified in Appendix 6 upon renewal.

Permit to Install Number	Description of Equipment	Corresponding Emission Unit(s) or Flexible Group(s)
261-99B	Engine dynamometer test cell burning unleaded gasoline	EU-DYNO1 FG-DYNOS FG-FACILITY
	Engine dynamometer test cell burning unleaded gasoline	EU-DYNO2 FG-DYNOS FG-FACILITY
	Engine dynamometer test cell burning unleaded gasoline	EU-DYNO3 FG-DYNOS FG-FACILITY
	Natural gas-fired engine hot test stand.	EU-HOTTEST1S FG-HOTTESTS FG-FACILITY
	Natural gas-fired engine hot test stand.	EU-HOTTEST2S FG-HOTTESTS FG-FACILITY
	Air handling units, heaters, ovens, and hot water boilers; each burning natural gas fuel.	FG-FACILITY

The following ROP amendments or modifications were issued after the effective date of ROP No. MI-ROP-M4085-2015.

Permit to Install Number	ROP Revision Application Number/Issuance Date	Description of Change	Corresponding Emission Unit(s) or Flexible Group(s)
261-99C	201500145/ November 17, 2015	Incorporate Permit to Install (PTI) No. 261-99C. PTI No. 261-99C was for deletion of an obsolete condition regarding tracking lead content. The gas utilized no longer contains lead.	FG-HOTTESTS FG-FACILITY

Appendix 7. Emission Calculations

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

Appendix 8. Reporting

A. Annual, Semiannual, and Deviation Certification Reporting

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

B. Other Reporting

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

Title V Renewable Operating Permit – Renewal Application and Technical Support Document

Prepared For:

FCA Group LLC MACK AVENUE ENGINE PLANT

December 2019

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Appendix A:	ROP Renewal Application	FORMS
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Appendix B: Marked-up Copy of Current ROP

1.0 PROJECT BACKGROUND

FCA US LLC (FCA) Mack Avenue Engine Plant (MAEP) is located at 11570 Warren Avenue East, Detroit, Michigan. The facility operates pursuant to the conditions of Renewable Operating Permit (ROP) No. MI-ROP-M4085-2015a issued on June 24, 2015.

Pursuant to State of Michigan Rule 336.1210(7), a stationary source that renews its Title V permit must submit an administratively complete application not more than 18 months, but not less than 6 months, before the expiration date of the current ROP. MAEP's current ROP expires on June 24, 2020. Therefore, an administratively complete ROP application must be submitted to the Department of Environment, Great Lakes, and Energy - Air Quality Division (EGLE-AQD) no later than December 24, 2019.

At the time of issuance of the current ROP, activities at MAEP consisted of engine manufacturing operations, including engine component machining, engine assembly operations, and engine testing (i.e., hot test stands and dynamometers). The current ROP restricts emissions of carbon monoxide (CO) to 244 tons per year (TPY) and oxides of nitrogen (NOx) to 93.7 TPY. Such emission limits exceed the Title V threshold of 100 TPY for a criteria pollutant, which categorized the facility as a major source under Title V.

In June of 2019, FCA ceased engine manufacturing and testing operations at the facility. As such, the majority of emission units (EU) at the facility have been dismantled and/or removed, including those EUs for which the CO and NOx emission limits were originally established. As a result, and as demonstrated in this application on the "AI-PTE" form, potential emissions at the facility are now below Title V major source thresholds. These actions have coincided with the renewal of the ROP application and other ongoing permitting actions, therefore FCA is submitting this renewal application pursuant to Rule 336.1210 simply to maintain an application shield until the remaining EUs can be rolled into another permit and the current ROP is considered void.

2.0 RENEWABLE OPERATING PERMIT - RENEWAL APPLICATION

This ROP renewal application was developed using the MDEQ-AQD's Renewable Operating Permit Renewal Application Form. The sections below provide details regarding the intent of the application.

2.1 Insignificant and Exempt Emission Units

A complete Title V ROP application must identify significant air emission units/groups at a facility that are subject to regulatory requirements, including a classification of the specific applicable requirement (i.e., permit terms, consent orders, consent judgments, state or federal rule) as it applies to the emission source. Insignificant emission units may also need to be included in a complete application, depending upon the activity.

Insignificant emission units exempt from inclusion in the application are defined in Michigan Air Pollution Control Regulations ("Rule") R336.1212(2), 212(3) or 212(4). Emission units defined in Rule 212(2) do not need to be included in the ROP application. Emission units defined in Rule 212(3) need not be included in a complete Title V ROP application unless the process or process equipment is subject to applicable requirements that include a process-specific emission limitation or standard. Emission units defined in Rule 212(4) are exempt from the requirement to obtain a PTI, however the emission units still need to be included in an administratively complete application. Part D of the ROP Renewal Application form is designed to identify emission units at MAEP that are considered exempt but must be identified within the ROP Application pursuant to Rule 212(4). There are no such emission units at MAEP, as indicated in Section D.1.

2.2 Proposed Changes to Emission Units/Flexible Groups

As indicated in Section 1.0, several EUs have been removed or dismantled from the facility. Specifically, all EU's *except for* the natural gas space heaters (EU-HEATERS) and the emergency fire pumps (FG-EMERGRICE) have been made inoperable and/or removed from the facility, and accordingly are proposed to be removed from the ROP, as indicated in the attached marked-up ROP.

These changes are also included in Part E of the application and are summarized below:

Dismantled Emission Unit	Associated Flexible Group (proposed for deletion)
EU-DYNO1, EU-DYNO2, EU-DYNO3	FG-DYNOS
EU-HOTTEST1S, EU-HOTTEST2S	FG-HOTTEST
EU-HEAD_LOCT, EU-HEADSUB_LOCT, EU-BLOCK_LOCT, EU-MARKINGINK, EU- IPA, EU-STA_RTV_400, EU-STA_RTV_700	FG-RULE290
EU-UST1, EU-UST2	FG-GAS_DISP
EU-RULE331_MACH	FG-RULE331

2.3 Potential to Emit and Regulatory Applicability for Remaining Emission Units

In accordance with the removal of the EUs listed above, the PTE for the facility was calculated based upon the natural gas limits in the current ROP of 725.3 million cubic feet per year for FG-HEATERS, and 500 hours of operation per year for the three emergency fire pumps included in FG-EMERG. Combined potential emissions are presented on the AI-PTE form, and are as follows:

Pollutant	PTE (TPY)
NOx	43
СО	32
VOC	3
PM	3
SO2	1
CO2/GHG	42,646

The PTE profile for the facility no longer qualifies MAEP as a major source under the Title V program. Further, all of the remaining EUs (space heaters and emergency engines) would be considered exempt from the requirement to obtain a permit to install, pursuant to Michigan Rule 336.1282(b)(i) for natural gas heating units less than 50 MMBtu/hr, or Rule 336.1285(g) for internal combustion engines less than 10 MMBtu/hr heat input.

2.3.1 Michigan Rule 278 Applicability

Michigan Rule R 336.1278 (Rule 278) specifies exclusions to the exemptions specified in Rules 280 through 290 for certain circumstances as outlined in the sections that follow. One of the key exclusion criteria is item (b) of Rule 278 which states the following:

(b) Any activity that results in an increase in <u>actual emissions</u> greater than the significance levels defined in R 336.1119. For the purpose of this rule, "activity" means the concurrent and related

installation, construction, reconstruction, relocation, or modification of any process or process equipment.

Actual emission levels are well below the Rule 278 significance thresholds (based upon Rule 119 definitions of significance) for both the natural gas heating equipment and the emergency fire pumps. As indicated in the attached PTE demonstration, the potential emissions from both of these activities is less than significant. As the potential emissions are less than significant, actual emissions must be less than significant.

In addition, Michigan Rule R 336.1278 lists exclusions to the exemptions specified in Rules 280 through 290 for certain circumstances as outlined below:

R 336.1278 Exclusion from exemption. Rule 278. (1) The exemptions specified in *R* 336.1280 to *R* 336.1290 do not apply to either of the following:

(a) Any activity that is subject to prevention of significant deterioration of air quality regulations or new source review for major sources in nonattainment areas regulations.

FCA concluded that due to the minor source status of the facility, the federal NSR program (40 C.F.R. §52.21) does not apply to the space heaters or emergency fire pumps, and the non-attainment NSR provisions of R336.1220 also do not apply.

(2) The exemptions specified in R 336.1280 to R 336.1290 do not apply to the construction of a new major source of hazardous air pollutants or reconstruction of a major source of hazardous air pollutants, as defined in and subject to 40 C.F.R. §63.2 and §63.5(b)(3), national emission standards for hazardous air pollutants, adopted by reference in R 336.1299.

(3) The exemptions specified in R 336.1280 to R 336.1290 do not apply to a construction or modification as defined in and subject to 40 C.F.R. Part 61, national emission standards for hazardous air pollutants, adopted by reference in R 336.1299.

(4) The exemptions in R 336.1280 to R 336.1290 apply to the requirement to obtain a permit to install only and do not exempt any source from complying with any other applicable requirement or existing permit limitation.

MAEP is a minor source of HAPs and the existing space heaters and fire pumps do not constitute newly constructed or modified sources of HAPs, or new or modified sources that would be subject to a NESHAP. Based upon the above, the exclusion from exemption in Rule 278 does not obviate the use of the exemptions found in Rules 282 and 285 for the space heating units or the emergency fire pumps. For this reason, MAEP does not believe that for practical purposes the facility currently needs an ROP or a PTI to operate these remaining emission sources.

3.0 CONCLUSION

The ROP renewal application has appropriately identified the current applicable requirements for emission sources at MAEP. These applicable requirements are based upon the remaining emission sources at the plant, as indicated in the associated marked-up ROP. The Title V ROP renewal application for MAEP has been submitted to the EGLE-AQD in accordance with the required application submittal schedule, however, based upon the PTE analysis and Rule 278 analysis included in this application, FCA does not believe the MAEP is currently subject to the Title V ROP program or the Michigan PTI requirements.

APPENDIX A

ROP Renewal Application Forms

APPENDIX B

Marked-Up Copy of Current ROP