

State Registration  
Number  
N2915

**RENEWABLE OPERATING PERMIT  
STAFF REPORT**

ROP Number  
MI-ROP-N2915-2017c

**Toyota Motor North America R&D (TMNA R&D)**

SRN: N2915

Located at

1555 and 1588 Woodridge, Ann Arbor, Washtenaw, Michigan 48105

Permit Number: MI-ROP-N2915-2017c

Staff Report Date: September 25, 2017

Amended Date: January 5, 2018  
August 20, 2018  
November 15, 2019

This Staff Report is published in accordance with Sections 5506 and 5511 of Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451). Specifically, Rule 214(1) requires that the Michigan Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), prepare a report that sets forth the factual basis for the terms and conditions of the Renewable Operating Permit (ROP).

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**Purpose**

Major stationary sources of air pollutants, and some non-major sources, are required to obtain and operate in compliance with an ROP pursuant to Title V of the federal Clean Air Act of 1990 and Michigan's Administrative Rules for Air Pollution Control pursuant to Section 5506(1) of Act 451. Sources subject to the ROP program are defined by criteria in Rule 211(1). The ROP is intended to simplify and clarify a stationary source's applicable requirements and compliance with them by consolidating all state and federal air quality requirements into one document.

This Staff Report, as required by Rule 214(1), sets forth the applicable requirements and factual basis for the draft ROP terms and conditions including citations of the underlying applicable requirements, an explanation of any equivalent requirements included in the draft ROP pursuant to Rule 212(5), and any determination made pursuant to Rule 213(6)(a)(ii) regarding requirements that are not applicable to the stationary source.

**General Information**

Stationary Source Mailing Address:	Toyota Motor North America R&D (TMNA R&D) 1555 Woodridge Ann Arbor, Michigan 48105
Source Registration Number (SRN):	N2915
North American Industry Classification System (NAICS) Code:	547129
Number of Stationary Source Sections:	1
Is Application for a Renewal or Initial Issuance?	Renewal
Application Number:	201600173
Responsible Official:	Kristen Tabar, Vice President TSPO 734-695-2600
AQD Contact:	Diane Kavanaugh Vetort Senior Environmental Quality Analyst 517-416-3537
Date Application Received:	November 3, 2016
Date Application Was Administratively Complete:	November 3, 2016
Is Application Shield In Effect?	Yes
Date Public Comment Begins:	September 25, 2017
Deadline for Public Comment:	October 25, 2017

## Source Description

Toyota Motor North America R&D (TMNA R&D) operates a vehicle research and testing facility in Ann Arbor, Michigan, Washtenaw County. Engine and vehicle performance testing is conducted within engine test stands/cells and within chassis dynamometer chambers located in the Evaluation Building (located at 1555 Woodridge) and at the Powertrain Building (located at 1588 Woodridge) on the TEMA Ann Arbor campus. The engines and vehicles are fueled with gasoline and are permitted to utilize ethanol. Engine emissions are either uncontrolled, or controlled via catalytic converters (production catalysts), individual dedicated catalytic oxidizers, or a shared thermal oxidizer. The facility is also permitted to have two 1,573 break horse power (1,141 kilowatt) natural-gas fired engine generators equipped with an oxidizing catalyst. The facility is located in a wooded area with some residences located 600 feet from the facility.

In February of 2017, the facility received Permit to Install (PTI) No. 186-13C for the two engine generators described above. PTI No. 186-13C also defines ethanol fuel as fuel with an ethanol concentration of 85% by volume or greater. PTI No. 186-13C also decreased the carbon monoxide (CO) emission limit for engine test cells FG-EG125 so the facility's potential to emit CO does not exceed the Prevention of Significant Deterioration (PSD) emission limit of 250 tons per year.

The following table lists stationary source emission information as reported to the Michigan Air Emissions Reporting System (MAERS) for the year **2015**.

### TOTAL STATIONARY SOURCE EMISSIONS

Pollutant	Tons per Year
Carbon Monoxide (CO)	11.3
Lead (Pb)	0
Nitrogen Oxides (NO <sub>x</sub> )	4.8
Particulate Matter (PM)	<1
Sulfur Dioxide (SO <sub>2</sub> )	<1
Volatile Organic Compounds (VOCs)	<1

This source is a true minor of hazardous air pollutants (HAPs), thus no HAP emissions data is listed.

See Parts C and D in the ROP for summary tables of all processes at the stationary source that are subject to process-specific emission limits or standards.

## Regulatory Analysis

The following is a general description and history of the source. Any determinations of regulatory non-applicability for this source are explained below in the Non-Applicable Requirement part of the Staff Report and identified in Part E of the ROP.

The stationary source is located in Washtenaw County, which is currently designated by the U.S. Environmental Protection Agency (USEPA) as attainment/unclassified for all criteria pollutants.

The stationary source is subject to Title 40 of the Code of Federal Regulations (CFR) Part 70, because the potential to emit of carbon monoxide exceeds 100 tons per year.

The stationary source is considered a "synthetic minor" source in regard to the Prevention of Significant Deterioration regulations of the Michigan Air Pollution Control Rules Part 18, Prevention of Significant Deterioration of Air Quality because the stationary source accepted legally enforceable permit conditions

limiting the potential to emit of carbon monoxide to less than 250 tons per year. The annual facility PTE for CO is shown below:

Emission Unit	Annual Material Use Limit (gallons)	Annual CO Emissions (tons)
FG-TM145	205,000	52.2
FG-EG34	80,000	7.50
FG-EG34 (high speed)	20,000	69.3
FG-EG125	145,846	37.1
EU-UPDOWN (ULEV)	21,879	2.05
EU-UPDOWN (LEV)	30,879	3.61
EU-EG6	60,000	5.62
FG-PTCHDYNOS	15,000	1.75
FG-PTCHDYNOS (no cat)	400	1.39
EU-COLD	100	0.35
FG-EVCHDYNOS	15,000	1.75
FG-EVCHDYNOS (no cat)	3,000	10.4
FG-EG789	52,000	13.2
Natural Gas Gensets	153.3 MMscf	22.7
EU-EMERGEN	3.45 MMscf	0.96
Existing Exempt Heaters	266.7 MMscf	11.2
Proposed Exempt Heaters	94.1 MMscf	3.95
Storage Tanks	649,104	-
<b>Total Annual Facility PTE</b>		<b>245.1</b>

FG-GENSETS at the stationary source are subject to the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines promulgated in 40 CFR Part 60, Subparts A and JJJJ.

EU-EMERGEN (natural gas-fired emergency engine 892 horsepower) and FG-GENSETS at the stationary source are subject to the National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines (RICE MACT) promulgated in 40 CFR Part 63, Subparts A and ZZZZ (RICE Area Source MACT). The ROP contains special conditions provided by TEMA in their application for applicable requirements from 40 CFR Part 63, Subparts A and ZZZZ for EU-EMERGEN. FG-GENSETS Table contains both 40 CFR Part 60, Subparts A and JJJJ applicable requirements, and 40 CFR Part 63, Subparts A and ZZZZ higher level citation. The AQD is not delegated the regulatory authority for this area source MACT.

FG-TANKS at the stationary source are subject to the National Emissions Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities promulgated in 40 CFR Part 63, Subparts A and CCCCCC (GDF Area Source MACT). The ROP contains special conditions provided by TEMA in their application for applicable requirements from 40 CFR Part 63, Subparts A and CCCCCC. The AQD is not delegated the regulatory authority for this area source MACT. FG-TANKS consists of three gasoline underground storage tanks, EU-TANK1, EU-TANK2, and EU-TANK5. FG-TANKS are less than 75 cubic meters (19,815 gallons) and therefore 40 CFR 60.110 New Source Performance Standard (NSPS) Subpart Kb is not applicable. Only EU-TANK1 is subject to Rule R 336.1703, as the other tanks do not meet the definition of dispensing facility pursuant to Act 451, Part 55, R 336.1104 (g) and related, R 336.1113 (f).

The monitoring conditions contained in the ROP are necessary to demonstrate compliance with all applicable requirements and are consistent with the "Procedure for Evaluating Periodic Monitoring Submittals."

The emission limitation(s) or standard(s) for carbon monoxide from FG-EG125, FG-TM145, FG-EG789, EU-UPDOWN, FG-EG34, and EU-EG6 at the stationary source are subject to the federal Compliance

Assurance Monitoring rule under 40 CFR Part 64. These emission units have control devices and potential pre-control emissions of carbon monoxide greater than the major source threshold level.

<b>Emission Unit ID</b>	<b>Pollutant/ Emission Limit</b>	<b>UAR(s)</b>	<b>Control Equipment</b>	<b>Monitoring</b>	<b>Presumptively Acceptable Monitoring?</b>
FG-EG125	CO/37.1 tpy	R 336.1205(1)(a) & (3)	Each engine dynamometer is equipped with individual catalyst control system (CCS)	Record daily CCS inlet temperature as an indicator of proper operation. Measure catalyst activity and replace as necessary.	No
FG-TM145	CO/52.2 tpy	R 336.1205(1)(a) & (3)	Each engine dynamometer is equipped with individual catalyst control system (CCS)	Record daily CCS inlet temperature as an indicator of proper operation. Measure catalyst activity and replace as necessary.	No
FG-EG789	CO/13.2 tpy	R 336.1205(1)(a) & (3), 40 CFR 52.21(d)	Controlled by a shared thermal oxidizer (TO)	Record every 15 minutes combustion chamber temperature as an indication of proper operation.	No
EU-UPDOWN	CO/5.66 tpy	R 336.1205(1)(a) & (3)	Each engine dynamometer is equipped with individual ULEV or LEV catalysts	Record daily each 1 <sup>st</sup> inline catalyst inlet temperature or last inline catalyst outlet temperature as an indicator of proper operation.	No
FG-EG34	CO/76.8 tpy	R 336.1205(1)(a) & (3)	Each engine dynamometer is equipped with individual ULEV or LEV catalysts	Record daily each 1 <sup>st</sup> inline catalyst inlet temperature of last inline catalyst outlet temperature as an indicator of proper operation.	No
EU-EG6	CO/5.62 tpy	R 336.1205(1)(a) & (3)	Each engine dynamometer is equipped with individual catalysts	Record daily each 1 <sup>st</sup> inline catalyst inlet temperature of last inline catalyst outlet temperature as an indicator of proper operation.	No

The stationary source proposed CAM related monitoring and recordkeeping of catalyst / thermocouple based on the type of air pollution control equipment used. ROP contains applicable requirements for installing monitoring devices, monitoring timeframes, and compliant operating ranges in addition to record keeping and maintenance. Additional details shall be represented in the actual CAM Plan the facility maintains, and may be adjusted in the future based on manufacturer changes, new information, testing or other acceptable data.

Please refer to Parts B, C and D in the draft ROP for detailed regulatory citations for the stationary source. Part A contains regulatory citations for general conditions.

**Source-wide Permit to Install (PTI)**

Rule 214a requires the issuance of a Source-wide PTI within the ROP for conditions established pursuant to Rule 201. All terms and conditions that were initially established in a PTI are identified with a footnote designation in the integrated ROP/PTI document.

The following table lists all individual PTIs that were incorporated into previous ROPs. PTIs issued after the effective date of ROP No. MI-ROP-N2915-2012 are identified in Appendix 6 of the ROP.

PTI Number			
45-03C			

**Streamlined/Subsumed Requirements**

This ROP includes the following streamlined/subsumed requirements pursuant to Rules 213(2) and 213(6).

Emission Unit/Flexible Group ID	Condition Number	Streamlined Limit/ Requirement	Subsumed Limit/ Requirement	Stringency Analysis
FG-GENSETS	I.1	0.5 g/hp-hr NOX (R 336.1205(1)(a) 40 CFR 52.21(c) & (d))	1.0 g/hp-hr NOX (40 CFR 60.4233(e))	Streamlined limit is more stringent than subsumed NSPS limit.
FG-GENSETS	I.2	0.9 g/hp-hr CO (R 336.1205(1)(a) 40 CFR 52.21 (d))	2.0 g/hp-hr CO (40 CFR 60.4233(e))	Streamlined limit is more stringent than subsumed NSPS limit.
FG-GENSETS	I.3	0.35 g/hp-hr VOC (R 336.1205(1)(a) 40 CFR 52.21 (d))	0.7 g/hp-hr VOC (excluding formaldehyde) (40 CFR 60.4233(e))	Streamlined limit is more stringent than subsumed NSPS limit.

**Non-applicable Requirements**

Part E of the ROP lists requirements that are not applicable to this source as determined by the AQD, if any were proposed in the ROP Application. These determinations are incorporated into the permit shield provision set forth in Part A (General Conditions 26 through 29) of the ROP pursuant to Rule 213(6)(a)(ii).

**Processes in Application Not Identified in Draft ROP**

The following table lists processes that were included in the ROP Application as exempt devices under Rule 212(4). These processes are not subject to any process-specific emission limits or standards in any applicable requirement.

<b>PTI Exempt Emission Unit ID</b>	<b>Description of PTI Exempt Emission Unit</b>	<b>Rule 212(4) Citation</b>	<b>PTI Exemption Rule Citation</b>
EU-1588Heat	Thirty-one similar natural gas fired heaters, boilers, and/or hot water tanks that have a maximum heat input of <2 MMBTU/hr and a combined heat input of <15 MMBTU/hr used in the 1588 Building.	212(4)(b)	282(2)(b)(i)
EU-EvalHeat	Twenty-one similar natural gas fired heaters, boilers, and/or hot water tanks that have a maximum heat input of <5 MMBTU/hr and a combined heat input of <20 MMBTU/hr used in the Evaluation Building.	212(4)(b)	282(2)(b)(i)
EU-E1Heat	Four similar natural gas fired heaters, boilers, and/or hot water tanks that have a maximum heat input of <2 MMBTU/hr and a combined heat input of <4 MMBTU/hr used in the E1 Building.	212(4)(b)	282(2)(b)(i)
EU-E2Heat	Five similar natural gas fired heaters, boilers, and/or hot water tanks that have a maximum heat input of <3 MMBTU/hr and a combined heat input of <7 MMBTU/hr used in the E2 Building.	212(4)(b)	282(2)(b)(i)
EU-EnviroHeat	0.53 MMBTU/hr natural gas fired boiler used to provide space heat to the environmental chamber.	212(4)(b)	282(2)(b)(i)
EU-PaintboothHeater	680,000 BTU/hr natural gas fired burner used to provide space heat to the paint booth.	212(4)(b)	282(2)(b)(i)
EU-MachineShop	Grinder, lathe, and drill used for non-production and in-plant only.	212(4)(e)	285(2)(l)(vi)(C)

**Draft ROP Terms/Conditions Not Agreed to by Applicant**

This draft ROP does not contain any terms and/or conditions that the AQD and the applicant did not agree upon pursuant to Rule 214(2).

**TMNA R&D Emission Unit Renaming**

Some of the existing emission units and flexible groups were renamed for ROP MI-ROP-N2915-2012a (and PTI 186-13A), and have been carried forward to MI-ROP-N2915-20XX. The following table contains information for emission units, including previously assigned emission unit names and flexible groups.



EU Name in ROP MI-ROP-N2915-20XX and PTI 186-13C	FG Name in ROP MI-ROP-N2915-20XX and PTI 186-13C	Stack ID in ROP MI-ROP-N2915-20XX and PTI 186-13C	EU Name in ROP MI-ROP-N2915-2012a and PTI 186-13	FG Name in ROP MI-ROP-N2915-2012a and PTI 186-13	EU Name in ROP MI-ROP-N2915-2012 and before PTI 186-13	FG Name in ROP MI-ROP-N2915-2012 and before PTI 186-13
EU-CHDY1	FG-PTCHDYNOS	SV-CHDY1234	EU-CHDY1	FG-CHDYNOS	EU-CHASSIS1	FG-DYNOS
EU-CHDY2	FG-PTCHDYNOS	SV-CHDY1234	EU-CHDY2	FG-CHDYNOS	EU-CHASSIS2	FG-DYNOS
EU-CHDY3	FG-PTCHDYNOS	SV-CHDY1234	EU-CHDY3	FG-CHDYNOS	EU-CHASSIS3	FG-DYNOS
EU-CHDY4	FG-PTCHDYNOS	SV-CHDY1234	EU-CHDY4	FG-CHDYNOS	EU-CHASSIS4	FG-DYNOS
EU-CHDY5	FG-PTCHDYNOS	SV-CHDY5	EU-CHDY5	FG-CHDYNOS	EU-CHASSIS5	FG-CHDY5-6
EU-CHDY6	FG-PTCHDYNOS	SV-CHDY6	EU-CHDY6	FG-CHDYNOS	EU-CHASSIS6	FG-CHDY5-6
EU-CHDY7	FG-EVCHDYNOS	SV-CHDY7	NA (new)	NA (new)	NA (new)	NA (new)
EU-CHDY8	FG-EVCHDYNOS	SV-CHDY8	NA (new)	NA (new)	NA (new)	NA (new)
EU-CHDY9	FG-EVCHDYNOS	SV-CHDY9	NA (new)	NA (new)	NA (new)	NA (new)
EU-CHDY10	FG-EVCHDYNOS	SV-CHDY10	NA (new)	NA (new)	NA (new)	NA (new)
EU-UPDOWN	NA (not in FG)	SV-MERGED	EU-UPDOWN	NA (not in FG)	EU-TESTCELL1	FG-TESTCELLS
EU-EG1	FG-EG125	SV-MERGED	EU-EG1	FG-EG125	EU-TESTCELL2	FG-TESTCELLS
EU-EG2	FG-EG125	SV-MERGED	EU-EG2	FG-EG125	EU-TESTCELL3	FG-TESTCELLS
EU-EG3	FG-EG34	SV-EG3	EU-EG3	FG-EG34	EU-TESTCELL-EG3	NA (not in FG)
EU-EG4	FG-EG34	SV-EG4	EU-EG4	FG-EG34	NA (new)	NA (new)
EU-EG5	FG-EG125	SV-EG5	EU-EG5	FG-EG125	NA (new)	NA (new)
EU-EG6	NA (not in FG)	SV-EG6	EU-CAT	NA (not in FG)	NA (new)	NA (new)
EU-EG7	FG-EG789	SV-EG789	NA (new)	NA (new)	NA (new)	NA (new)
EU-EG8	FG-EG789	SV-EG789	NA (new)	NA (new)	NA (new)	NA (new)
EU-EG9	FG-EG789	SV-EG789	NA (new)	NA (new)	NA (new)	NA (new)
EU-COLD	NA (not in FG)	SV-COLD	EU-COLD	NA (not in FG)	NA (not in permit)	NA (not in permit)
EU-TM1	FG-TM145	SV-MERGED	EU-TM1	FG-TM145	EU-TESTCELL4	FG-TESTCELLS
EU-TM4	FG-TM145	SV-TM4	EU-TM4	FG-TM145	NA (new)	NA (new)
EU-TM5	FG-TM145	SV-TM5	EU-TM5	FG-TM145	NA (new)	NA (new)
EU-GENSET1	FG-GENSETS	SV-GENSET1	NA (new)	NA (new)	NA (new)	NA (new)

EU-GENSET2	FG-GENSETS	SV-GENSET2	NA (new)	NA (new)	NA (new)	NA (new)
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**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements as of the effective date of this ROP.

**Action taken by the MDEQ, AQD**

The AQD proposes to approve this ROP. A final decision on the ROP will not be made until the public and affected states have had an opportunity to comment on the AQD’s proposed action and draft permit. In addition, the USEPA is allowed up to 45 days to review the draft ROP and related material. The AQD is not required to accept recommendations that are not based on applicable requirements. The delegated decision maker for the AQD is Scott Miller, Jackson District Supervisor. The final determination for ROP approval/disapproval will be based on the contents of the ROP Application, a judgment that the stationary source will be able to comply with applicable emission limits and other terms and conditions, and resolution of any objections by the USEPA.

Michigan Department of Environmental Quality  
Air Quality Division

State Registration Number

**RENEWABLE OPERATING PERMIT**

ROP Number

N2915

**OCTOBER 30, 2017 STAFF REPORT ADDENDUM**

MI-ROP-N2915-2017

**Purpose**

A Staff Report dated September 25, 2017, was developed in order to set forth the applicable requirements and factual basis for the draft Renewable Operating Permit (ROP) terms and conditions as required by R 336.1214(1). The purpose of this Staff Report Addendum is to summarize any significant comments received on the draft ROP during the 30-day public comment period as described in R 336.1214(3). In addition, this addendum describes any changes to the draft ROP resulting from these pertinent comments.

**General Information**

Responsible Official:	Kristen Tabar, Vice President TSPO 734-695-2600
AQD Contact:	Diane Kavanaugh Vetort, Senior Environment Quality Analyst 517-416-3537

**Summary of Pertinent Comments**

No pertinent comments were received during the 30-day public comment period.

Michigan Department of Environmental Quality  
Air Quality Division

State Registration Number

**RENEWABLE OPERATING PERMIT**

ROP Number

N2915

**JANUARY 5, 2018 - STAFF REPORT FOR RULE  
216(2) MINOR MODIFICATION**

MI-ROP-N2915-2017a

**Purpose**

On December 20, 2017, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N2915-2017 to Toyota Motor North America R&D (TMNA R&D) pursuant to R 336.1214. Once issued, a company is required to submit an application for changes to the ROP as described in R 336.1216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1216(2).

**General Information**

Responsible Official:	Kristen Tabar, Vice President TSPO 734-695-2600
AQD Contact:	Caryn Owens, Environmental Engineer 231-878-6688
Application Number:	201700149
Date Application For Minor Modification Was Submitted:	November 27, 2017

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to R 336.1216(2).

**Description of Changes to the ROP**

PTI 186-13D was to increase the allowable pound per hour emission limit and decrease the allowed tons per year fuel limit in EU-EG6. Stack dimensions were updated for FG-EVCHDYNOS and FG-EG789. Additionally, for the emission units and flexible groups that were addressed in the PTI, AQD removed duplicate Conditions between test reporting Conditions, to keep the ROP consistent.

Additionally, during company review, Toyota Motor North America R&D (TMNA R&D) also requested to include catalyst bed temperature to SC IV.2 and SC VI.1 in FGCAM, and so the minor addition was made to FGCAM.

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

**Action Taken by the DEQ**

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-N2915-2017, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the U.S. Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the District

Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.

State Registration Number  
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**RENEWABLE OPERATING PERMIT**  
**AUGUST 20, 2018 - STAFF REPORT FOR RULE**  
**216(2) MINOR MODIFICATION**

ROP Number  
MI-ROP-N2915-2017b

**Purpose**

On February 21, 2018, the Department of Environmental Quality, Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N2915-2017a to Toyota Motor North America R&D (TMNA R&D) pursuant to R 336.1214. Once issued, a company is required to submit an application for changes to the ROP as described in R 336.1216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to R 336.1216(2).

**General Information**

Responsible Official:	Mike Bernas, Vice President TSP 734-695-5549
AQD Contact:	Caryn Owens, Environmental Engineer 231-878-6688
Application Number:	201800089
Date Application for Minor Modification was Submitted:	July 11, 2018

**Regulatory Analysis**

The AQD has determined that the change requested by the stationary source meets the qualifications for a Minor Modification pursuant to R 336.1216(2).

**Description of Changes to the ROP**

This Minor Modification was to update the CAM Plan indicator ranges for the catalyst control systems (CCS) for emission units EU-EG1, EU-EG2, EU-EG5, EU-TM1, EU-TM4, and EU-TM5 which are covered in the FG-CAM Flexible Group Table of the ROP. The CCS are used to control CO emissions from the above listed emission units. The requested CAM Condition changes are requested, since the current Conditions do not account for a short test duration, engine idling, smaller more efficient engines, and engine spike testing where the engine revolutions per minute (RPMs) are increased then cut. The new Conditions account for the daily monitoring of the catalyst temperature to ensure proper operation of the CCS. In the case when the minimum average temperature of the catalyst is not achieved, the company can show emission compliance through fuel consumption.

**Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the emission unit(s) involved with the change as of the date of approval of the Minor Modification to the ROP.

**Action Taken by the DEQ**

The AQD proposes to approve a Minor Modification to ROP No. MI-ROP-N2915-2017a, as requested by the stationary source. A final decision on the Minor Modification to the ROP will not be made until any affected states and the U.S. Environmental Protection Agency (USEPA) has been allowed 45 days to

review the proposed changes to the ROP. The delegated decision maker for the AQD is the District Supervisor. The final determination for approval of the Minor Modification will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by any affected states or the USEPA.

State Registration Number

N2915

## RENEWABLE OPERATING PERMIT

ROP Number

MI-ROP-N2915-2017c

### NOVEMBER 15, 2019 - STAFF REPORT FOR RULE 216(1)(a)(v) ADMINISTRATIVE AMENDMENT

#### Purpose

On October 11, 2018, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), approved and issued Renewable Operating Permit (ROP) No. MI-ROP-N2915-2017b to Toyota Motor North America R&D (TMNA R&D) pursuant to Rule 214 of the administrative rules promulgated under Act 451. Once issued, a company is required to submit an application for changes to the ROP as described in Rule 216. The purpose of this Staff Report is to describe the changes that were made to the ROP pursuant to Rule 216(1)(a)(v).

#### General Information

Responsible Official:	Mike Bernas, Vice President TSP 734-695-5549
AQD Contact:	Caryn Owens, Environmental Engineer 231-878-6688
Application Number:	201900158
Date Application for Administrative Amendment was Submitted:	September 9, 2019

#### Regulatory Analysis

The stationary source has requested that the Permit to Install (PTI) No. 186-13E, issued on November 16, 2018, be incorporated into their ROP. The AQD has determined that the change requested meets the following criteria for an Administrative Amendment pursuant to Rule 216(1)(a)(v): the PTI includes terms and conditions that comply with the permit content requirements contained in Rule 213; the procedure used to issue the PTI was substantially equivalent to the requirements of Rule 214 regarding public participation and review by affected states; and the process or process equipment is in compliance with, and no changes are required to, the terms and conditions of the PTI that are to be incorporated into the ROP. Also, the permittee notified the AQD in writing within 30 days of commencing operation of the processes covered by the PTI and has submitted certified results of all required testing, monitoring and recordkeeping performed to demonstrate compliance with the PTI.

The notice for public participation was posted in the Ann Arbor News on October 4, 2018. The public comment period ended on November 5, 2018. There was no request for a hearing and no comments received.

The final permit had only one small change from the proposed conditions based upon an error found during the public comment period. This change is at the bottom of the emission unit summary table. In the bottom merged cell, the range of rules that cover the exemptions from permitting now goes to R 336.1291 instead of R 336.1290.

#### Description of Changes to the ROP

Administrative Amendment Number 201900158 was to consolidate fuel material limits and CO emission limits into a Prevention of Significant Deterioration (PSD) opt-out and corrections to stack parameters on various pieces of equipment. The facility increased the fuel usage limit by 3,000 gallons.



The facility requested a PSD opt-out of 249.0 tpy based upon a 12-month rolling time period with fuel restrictions on the engine or vehicle component testing. The AQD also added a fuel restriction on natural gas usage to cover the rest of the combustion equipment at the facility.

In addition, two gasoline storage tanks were installed. The following flexible groups were removed because they were restructured into new Flexible Groups in the ROP: FG-EG125, FG-EG34, FG-TM145, FG-EG789, FG-PTCHDYNOS, FG-EVCHDYNOS.

FG-CAM was updated to address new emission units and remove references to former Emission Units and Flexible Groups that are no longer applicable. The FG-CAM table will be updated and reviewed during the next Renewal.

### **Compliance Status**

The AQD finds that the stationary source is expected to be in compliance with all applicable requirements associated with the change as of the date of approval of the Administrative Amendment to the ROP.

### **Action Taken by EGLE**

The AQD proposes to approve an Administrative Amendment to ROP No. MI-ROP-N2915-2017b, as requested by the stationary source. A final decision on the Administrative Amendment to the ROP will not be made until the United States Environmental Protection Agency (USEPA) has been allowed 45 days to review the proposed changes to the ROP. The delegated decision maker for the AQD is the District Supervisor. The final determination for approval of the Administrative Amendment will be based on the contents of the permit application, a judgment that the stationary source will be able to comply with applicable emission limits and other requirements, and resolution of any objections by the USEPA.