

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

May 2, 2023

PERMIT TO INSTALL
32-22A

ISSUED TO
McLaren Performance Technologies

LOCATED AT
32233 West Eight Mile Road
Livonia, Michigan 48152

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
A8217

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: February 10, 2023	
DATE PERMIT TO INSTALL APPROVED: May 2, 2023	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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COMMON ACRONYMS

AQD	Air Quality Division
BACT	Best Available Control Technology
CAA	Clean Air Act
CAM	Compliance Assurance Monitoring
CEMS	Continuous Emission Monitoring System
CFR	Code of Federal Regulations
COMS	Continuous Opacity Monitoring System
Department/department/EGLE	Michigan Department of Environment, Great Lakes, and Energy
EU	Emission Unit
FG	Flexible Group
GACS	Gallons of Applied Coating Solids
GC	General Condition
GHGs	Greenhouse Gases
HVLP	High Volume Low Pressure*
ID	Identification
IRSL	Initial Risk Screening Level
ITSL	Initial Threshold Screening Level
LAER	Lowest Achievable Emission Rate
MACT	Maximum Achievable Control Technology
MAERS	Michigan Air Emissions Reporting System
MAP	Malfuction Abatement Plan
MSDS	Material Safety Data Sheet
NA	Not Applicable
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standard for Hazardous Air Pollutants
NSPS	New Source Performance Standards
NSR	New Source Review
PS	Performance Specification
PSD	Prevention of Significant Deterioration
PTE	Permanent Total Enclosure
PTI	Permit to Install
RACT	Reasonable Available Control Technology
ROP	Renewable Operating Permit
SC	Special Condition
SCR	Selective Catalytic Reduction
SNCR	Selective Non-Catalytic Reduction
SRN	State Registration Number
TBD	To Be Determined
TEQ	Toxicity Equivalence Quotient
USEPA/EPA	United States Environmental Protection Agency
VE	Visible Emissions

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

POLLUTANT / MEASUREMENT ABBREVIATIONS

acfm	Actual cubic feet per minute
BTU	British Thermal Unit
°C	Degrees Celsius
CO	Carbon Monoxide
CO ₂ e	Carbon Dioxide Equivalent
dscf	Dry standard cubic foot
dscm	Dry standard cubic meter
°F	Degrees Fahrenheit
gr	Grains
HAP	Hazardous Air Pollutant
Hg	Mercury
hr	Hour
HP	Horsepower
H ₂ S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO _x	Oxides of Nitrogen
ng	Nanogram
PM	Particulate Matter
PM10	Particulate Matter equal to or less than 10 microns in diameter
PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
pph	Pounds per hour
ppm	Parts per million
ppmv	Parts per million by volume
ppmw	Parts per million by weight
psia	Pounds per square inch absolute
psig	Pounds per square inch gauge
scf	Standard cubic feet
sec	Seconds
SO ₂	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

GENERAL CONDITIONS

1. The process or process equipment covered by this permit shall not be reconstructed, relocated, or modified, unless a Permit to Install authorizing such action is issued by the Department, except to the extent such action is exempt from the Permit to Install requirements by any applicable rule. **(R 336.1201(1))**
2. If the installation, construction, reconstruction, relocation, or modification of the equipment for which this permit has been approved has not commenced within 18 months, or has been interrupted for 18 months, this permit shall become void unless otherwise authorized by the Department. Furthermore, the permittee or the designated authorized agent shall notify the Department via the Supervisor, Permit Section, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy, P.O. Box 30260, Lansing, Michigan 48909-7760, if it is decided not to pursue the installation, construction, reconstruction, relocation, or modification of the equipment allowed by this Permit to Install. **(R 336.1201(4))**
3. If this Permit to Install is issued for a process or process equipment located at a stationary source that is not subject to the Renewable Operating Permit program requirements pursuant to Rule 210 (R 336.1210), operation of the process or process equipment is allowed by this permit if the equipment performs in accordance with the terms and conditions of this Permit to Install. **(R 336.1201(6)(b))**
4. The Department may, after notice and opportunity for a hearing, revoke this Permit to Install if evidence indicates the process or process equipment is not performing in accordance with the terms and conditions of this permit or is violating the Department's rules or the Clean Air Act. **(R 336.1201(8), Section 5510 of Act 451, PA 1994)**
5. The terms and conditions of this Permit to Install shall apply to any person or legal entity that now or hereafter owns or operates the process or process equipment at the location authorized by this Permit to Install. If the new owner or operator submits a written request to the Department pursuant to Rule 219 and the Department approves the request, this permit will be amended to reflect the change of ownership or operational control. The request must include all of the information required by subrules (1)(a), (b), and (c) of Rule 219 and shall be sent to the District Supervisor, Air Quality Division, Michigan Department of Environment, Great Lakes, and Energy. **(R 336.1219)**
6. Operation of this equipment shall not result in the emission of an air contaminant which causes injurious effects to human health or safety, animal life, plant life of significant economic value, or property, or which causes unreasonable interference with the comfortable enjoyment of life and property. **(R 336.1901)**
7. The permittee shall provide notice of an abnormal condition, start-up, shutdown, or malfunction that results in emissions of a hazardous or toxic air pollutant which continue for more than one hour in excess of any applicable standard or limitation, or emissions of any air contaminant continuing for more than two hours in excess of an applicable standard or limitation, as required in Rule 912, to the Department. The notice shall be provided not later than two business days after start-up, shutdown, or discovery of the abnormal condition or malfunction. Written reports, if required, must be filed with the Department within 10 days after the start-up or shutdown occurred, within 10 days after the abnormal condition or malfunction has been corrected, or within 30 days of discovery of the abnormal condition or malfunction, whichever is first. The written reports shall include all of the information required in Rule 912(5). **(R 336.1912)**
8. Approval of this permit does not exempt the permittee from complying with any future applicable requirements which may be promulgated under Part 55 of 1994 PA 451, as amended or the Federal Clean Air Act.
9. Approval of this permit does not obviate the necessity of obtaining such permits or approvals from other units of government as required by law.
10. Operation of this equipment may be subject to other requirements of Part 55 of 1994 PA 451, as amended and the rules promulgated thereunder.

11. Except as provided in subrules (2) and (3) or unless the special conditions of the Permit to Install include an alternate opacity limit established pursuant to subrule (4) of Rule 301, the permittee shall not cause or permit to be discharged into the outer air from a process or process equipment a visible emission of density greater than the most stringent of the following. The grading of visible emissions shall be determined in accordance with Rule 303 (R 336.1303). **(R 336.1301)**
 - a) A six-minute average of 20 percent opacity, except for one six-minute average per hour of not more than 27 percent opacity.
 - b) A visible emission limit specified by an applicable federal new source performance standard.
 - c) A visible emission limit specified as a condition of this Permit to Install.
12. Collected air contaminants shall be removed as necessary to maintain the equipment at the required operating efficiency. The collection and disposal of air contaminants shall be performed in a manner so as to minimize the introduction of contaminants to the outer air. Transport of collected air contaminants in Priority I and II areas requires the use of material handling methods specified in Rule 370(2). **(R 336.1370)**
13. The Department may require the permittee to conduct acceptable performance tests, at the permittee's expense, in accordance with Rule 1001 and Rule 1003, under any of the conditions listed in Rule 1001. **(R 336.2001)**

EMISSION UNIT SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EU-TESTCELLCC2	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC3	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC6	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC8	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC9	A test cell with a maximum capacity of 1000 HP with catalytic converters servicing as a primary control device.	1990-2003, 2022	NA
EU-TESTCELL10	A dynamometer cell with a catalytic converter servicing as a primary control device.	5-1-1987/ 4-25-2005	NA
EU-TESTCELLCC11	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC12	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC14	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC15	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC
EU-TESTCELLCC16	A test cell with catalytic converters servicing as a primary control device.	1990-2003	FG-TESTCELLSCC

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.

**EU-TESTCELLCC9
 EMISSION UNIT CONDITIONS**

DESCRIPTION

A test cell with a maximum capacity of 1000 HP.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Catalytic converters

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. CO	1.1 lb/gal	Hourly	EU-TESTCELLCC9	SC V.1	R 336.1205 (1)(a) and (3))
2. CO	58.0 tpy*	12-month rolling time period as determined at the end of each calendar month.	EU-TESTCELLCC9	SC VI.2	R 336.1205 (1)(a) and (3))

*The annual CO limit is based on an emission factor of 1.1 pounds per gallon of fuel as specified in Special Condition No. I.1. The emission factor, along with the fuel-monitoring requirement shall be applied to each day to ensure compliance with the 12-month rolling averages.

Notes: The fuel-monitoring requirements are found in Special Condition VI.2, VI.3, and VI.4.

II. MATERIAL LIMIT(S)

1. The permittee shall not burn any fuel other than diesel, compressed natural gas (CNG) or liquefied petroleum gas (LPG) in EU-TESTCELLCC9. **(R 336.1224, R 336.1225, R 336.1702)**
2. The total combined fuel usage for EU-TESTCELLCC9 shall not exceed 100 gallons per hour with CNG measured as gasoline gallon equivalents. **(R 336.1225)**
3. The total combined fuel usage for EU-TESTCELLCC9 shall not exceed 1,000 gallons per calendar day with CNG measured as gasoline gallon equivalents. **(R 336.1225)**
4. The fuel usage for EU-TESTCELLCC9 shall not exceed 106,000 gallons per 12-month rolling time period with CNG measured as gasoline gallon equivalents, as determined at the end of each calendar month. **(R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate EU-TESTCELLCC9 unless the test cell has a catalytic converter installed, maintained, and operated in a satisfactory manner. **(R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), R 336.1910)**
2. The permittee shall install, calibrate, maintain and operate in satisfactory manner a device to continuously monitor and record the inlet temperature and catalyst bed temperature for the catalytic converter in EU-TESTCELLCC9 during an engine test. **(R 336.1910)**
3. The permittee shall use the catalytic converters to assure compliance with the carbon monoxide limit. An excursion for non-compliance shall be 2 consecutive 1-hour block average catalyst bed temperature readings less than 230° C. This condition does not affect compliance with R 336.1301. **(R 336.1910)**

V. TESTING/SAMPLING

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

1. Within 180 days after a request by the Department, the permittee shall verify emission rates for CO from EU-TESTCELLCC9 by testing at the owner’s expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**
2. The permittee shall keep the following information on a monthly basis for EU-TESTCELLCC9:
 - a) Record of the amount of each fuel used in gallons or gasoline gallon equivalents per month and 12-month rolling time period.
 - b) Calculations of the total combined fuel used in gasoline gallon equivalents for CNG and gallons for all other fuels per 12-month rolling time period as determined at the end of each calendar month.
 - c) CO emission calculations determining the monthly emission rate in tons per calendar month.
 - d) CO emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

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

3. The permittee shall keep the following information on a daily basis for EU-TESTCELLCC9:
- a) Record of the amount of each fuel used in gallons or gasoline gallon equivalents per calendar day.
 - b) Calculations of the total combined fuel used in gallons (using gasoline gallon equivalents for CNG) per calendar day.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225)**

4. The permittee shall keep the following information on an hourly basis for EU-TESTCELLCC9:
- a) Record of the amount of each fuel used in gallons or gasoline gallon equivalents per hour.
 - b) Calculations of the total combined fuel used in gallons (using gasoline gallon equivalents for CNG) per hour.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1225)**

5. The permittee shall keep, in a satisfactory manner, continuous records of the inlet temperature and catalyst bed temperature for EU-TESTCELLCC9. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-12	12.24	40.1	R 336.1225, 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

**EU-TESTCELL10
 EMISSION UNIT CONDITIONS**

DESCRIPTION

Test cell Number 10 with a catalytic converter servicing as a primary control device.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

Catalytic Converter

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. CO	709.2 lb/day	Daily	EU-TESTCELL10	SC VI.3	R 336.1205(1)(a) and (3), 40 CFR 52.21(d)
2. CO	16 tpy	12-month rolling time period as determined at the end of each calendar month.	EU-TESTCELL10	SC VI.2	R 336.1205(1)(a) and (3), 40 CFR 52.21(d)

*Limits are based on the worst-case controlled emission factors as determined by testing in condition V(1) and as follows:
 CO = 1.45 lb/gal;

II. MATERIAL LIMIT(S)

1. The permittee shall burn only unleaded gasoline, diesel, kerosene, compressed natural gas (CNG), and liquid petroleum gas (LPG) in EU-TESTCELL10. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**
2. The fuel usage for EU-TESTCELL10 shall not exceed 489 total combined gallons per calendar day. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**
3. The fuel usage for EU-TESTCELL10 shall not exceed 22,069 total combined gallons per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EU-TESTCELL10 with a catalytic converter. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) and (d))**

V. TESTING/SAMPLING

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

1. The permittee shall verify emission rates for CO from EU-TESTCELL10 by testing at the owner's expense, in accordance with Department requirements. Testing should be performed no later than 1 year prior to the renewable operating permit renewal. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
CO	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the 15th day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(1)(a) and (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) and (d))**
2. The permittee shall keep the following information on a monthly basis for EU-TESTCELL10:
 - a) A record of the days of operation.
 - b) Total combined gallons used per month and 12-month rolling time period.
 - c) CNG and LPG use calculations determining the annual usage rate in gallons, converted from cubic feet, per 12-month rolling time period as determined at the end of each calendar month.
 - d) CO emission calculations determining the monthly emission rate in tons per calendar month.
 - e) CO emission calculations determining the annual emission rate in tons per 12-month rolling time period as determined at the end of each calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) and (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(c) and (d))**

3. The permittee shall keep the following information on a monthly basis for EU-TESTCELL10:
 - a) Daily fuel used calculations based upon the total combined gallons used divided by the number of days EU-TESTCELL10 operated during the calendar month.
 - b) Daily CO emission calculations based upon the monthly CO emissions divided by the number of days EU-TestCell10 operated during the calendar month.

The permittee shall keep the records in a format acceptable to the AQD District Supervisor. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) and (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2810, 40 CFR 52.21(c) and (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-13	12	36	R 336.1225, R 336.2803, R 336.2804, 40 CFR 52.21(c) and (d)

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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

FLEXIBLE GROUP SPECIAL CONDITIONS

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-TESTCELLSCC	9 test cells with catalytic converters servicing as the primary control devices.	EU-TESTCELLCC2, EU-TESTCELLCC3, EU-TESTCELLCC6, EU-TESTCELLCC8, EU-TESTCELLCC11, EU-TESTCELLCC12, EU-TESTCELLCC14, EU-TESTCELLCC15, EU-TESTCELLCC16

**FG-TESTCELLSCC
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

9 test cells with catalytic converters servicing as the primary control devices.

Emission Unit: EU-TESTCELLCC2, EU-TESTCELLCC3, EU-TESTCELLCC6, EU-TESTCELLCC8, EU-TESTCELLCC11, EU-TESTCELLCC12, EU-TESTCELLCC14, EU-TESTCELLCC15, EU-TESTCELLCC16

POLLUTION CONTROL EQUIPMENT

Catalytic converters

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. CO	0.59 lb/gal	Hourly	FG-TESTCELLSCC	SC V.1, SC V.2	R 336.1205(1)(a) and (3)
2. CO	133.4 tpy*	12-month rolling time period as determined at the end of each calendar month	FG-TESTCELLSCC	SC VI.1	R 336.1205(1)(a) and (3)
3. VOC	0.008 lb/gal	Hourly	FG-TESTCELLSCC	SC V.1, SC V.2	R 336.1205(1)(a) and (3)
4. VOC	1.8 tpy**	12-month rolling time period as determined at the end of each calendar month	FG-TESTCELLSCC	SC VI.2	R 336.1205(1)(a) and (3)

*The annual CO limit is based on an emission factor of 0.59 pound per gallon of gasoline as specified in Special Condition No. I.1. The emission factor, along with the fuel-monitoring requirement shall be applied to each day to ensure compliance with the 12-month rolling averages.

**The annual VOC limit is based on an emission factor on 0.008 pound per gallon of gasoline as specified in Special Condition No. I.3. The emission factor, along with the fuel-monitoring requirement shall be applied to each day to ensure compliance with the 12-month rolling averages.

Notes: The fuel-monitoring requirements are found in Special Condition VI.3.

II. MATERIAL LIMIT(S)

- The permittee shall not burn any fuel other than unleaded gasoline in FG-TESTCELLSCC. **(R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702(a))**

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
2. Fuel	2,000 gallons	Calendar Day	FG-TESTCELLSCC	SC VI.3	R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702(a)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
3. Fuel	450,000 gallons	12-month rolling time period as determined at the end of each calendar month	FG-TESTCELLSCC	SC VI.3	R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702(a)

III. PROCESS/OPERATIONAL RESTRICTION(S)

NA

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall not operate any test cell from FG-TESTCELLSCC unless each of the test cell has a catalytic converter installed, maintained, and operated in a satisfactory manner. **(R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a), R 336.1910)**
2. The permittee shall install, calibrate, maintain and operate in satisfactory manner a device to continuously monitor and record the inlet temperature and catalyst bed temperature for each catalytic converter in FG-TESTCELLSCC during an engine test. **(R 336.1910)**
3. The permittee shall use the catalytic converters to assure compliance with the carbon monoxide limit. An excursion for non-compliance shall be 2 consecutive 1-hour block average catalyst bed temperature readings less than 230° C. This condition does not affect compliance with R 336.1301. **(R 336.1910)**

V. TESTING/SAMPLING

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

1. Once, during the term of the ROP, the permittee shall verify emission rates for CO and VOCs from FG-TESTCELLSCC by testing at the owner’s expense, in accordance with Department requirements. Testing should be performed no later than 1 year prior to the renewable operating permit renewal. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

2. Within 180 days after a request by the Department, the permittee shall verify emission rates for any requested pollutants from FG-TESTCELLSCC by testing at the owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in the table below.

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
PM10 / PM2.5	40 CFR Part 51, Appendix M
NO _x	40 CFR Part 60, Appendix A
SO ₂	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A
Metals	40 CFR Part 60, Appendix A; 40 CFR Part 61, Appendix B; 40 CFR Part 63, Appendix A
Sulfuric Acid Mist	40 CFR Part 60, Appendix A
HAPs	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1225, R 336.2001, R 336.2003, R 336.2004)**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep, in a satisfactory manner, daily, monthly, and previous 12-month CO emission calculation records for FG-TESTCELLSCC. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a) and (3))**
2. The permittee shall keep, in a satisfactory manner, daily, monthly, and previous 12-month VOC emission calculation records for FG-TESTCELLSCC. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a) and (3), R 336.1702 (a))**
3. The permittee shall keep, in a satisfactory manner, daily, monthly, and previous 12-month fuel use records for FG-TESTCELLSCC. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1205 (1)(a) and (3), R 336.1225, R 336.1702 (a))**
4. The permittee shall keep, in a satisfactory manner, continuous records of the inlet temperature and catalyst bed temperature for FG-TESTCELLSCC. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(R 336.1910)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

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

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-5	12	36	R 336.1225
2. SV-6	12	36	R 336.1225
3. SV-9	9.84	36	R 336.1225
4. SV-11	9.84	36	R 336.1225
5. SV-14	12	36	R 336.1225
6. SV-15	12	36	R 336.1225
7. SV-22	26X26	36	R 336.1225
8. SV-21	12	36	R 336.1225

IX. OTHER REQUIREMENT(S)

NA

Footnotes:

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