

**MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

December 23, 2013

**PERMIT TO INSTALL
130-13**

ISSUED TO
Meiden Technical Center North America LLC

LOCATED AT
15810 Centennial Drive
Northville Township, Michigan

IN THE COUNTY OF
Wayne

STATE REGISTRATION NUMBER
N7807

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203:

November 4, 2013

DATE PERMIT TO INSTALL APPROVED:

December 23, 2013

SIGNATURE:

DATE PERMIT VOIDED:

SIGNATURE:

DATE PERMIT REVOKED:

SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	BTU	British Thermal Unit
BACT	Best Available Control Technology	°C	Degrees Celsius
CAA	Clean Air Act	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	dscf	Dry standard cubic foot
CFR	Code of Federal Regulations	dscm	Dry standard cubic meter
CO ₂ e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H ₂ S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfuction Abatement Plan	NO _x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO ₂	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

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

GENERAL CONDITIONS

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

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

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

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

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUTESTCELL1	An engine test cell for testing of automotive engines or powertrain systems up to 800 horsepower in size, fueled by gasoline, ethanol, diesel and biodiesel fuels. For the purpose of this permit gasoline and ethanol are considered equivalent and diesel and biodiesel are considered equivalent.	12/1/2008	FGTESTCELL FGFACILITY
EUTESTCELL2	An engine test cell for testing of automotive engines or powertrain systems up to 800 horsepower in size, fueled by gasoline, ethanol, diesel and biodiesel fuels. For the purpose of this permit gasoline and ethanol are considered equivalent and diesel and biodiesel are considered equivalent.	12/1/2008	FGTESTCELL FGFACILITY
EUTESTCELL3	An engine test cell for testing of automotive engines or powertrain systems up to 800 horsepower in size, fueled by gasoline, ethanol, diesel and biodiesel fuels. For the purpose of this permit gasoline and ethanol are considered equivalent and diesel and biodiesel are considered equivalent.	12/1/2008	FGTESTCELL FGFACILITY
EUTESTCELL4	An engine test cell for testing of automotive engines or powertrain systems up to 800 horsepower in size, fueled by gasoline, ethanol, diesel and biodiesel fuels. For the purpose of this permit gasoline and ethanol are considered equivalent and diesel and biodiesel are considered equivalent.	12/1/2008	FGTESTCELL FGFACILITY
EUTESTCELL5	An engine test cell for testing of automotive engines or powertrain systems up to 800 horsepower in size, fueled by gasoline, ethanol, diesel and biodiesel fuels. For the purpose of this permit gasoline and ethanol are considered equivalent and diesel and biodiesel are considered equivalent.	12/1/2008	FGTESTCELL FGFACILITY
EUTANK1	One 8000 gallon single compartment underground fuel tanks. This tank is for storage of gasoline, ethanol, diesel and biodiesel fuels.	7/1/2008	FGTANKS FGFACILITY
EUTANK2	One 8000 gallon dual compartment underground fuel tanks for storage of gasoline, ethanol, diesel and biodiesel fuels.	7/1/2008	FGTANKS FGFACILITY

Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1290.

FLEXIBLE GROUP SUMMARY TABLE

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

Flexible Group ID	Flexible Group Description	Associated Emission Unit IDs
FGTESTCELLS	5 engine test cells for testing of automotive engines and powertrain systems each with a capacity up to 800 horsepower in size, fueled by gasoline, ethanol, diesel and biodiesel fuels. For the purpose of this permit gasoline and ethanol are considered equivalent and diesel and biodiesel are considered equivalent.	EUTESTCELL1 through EUTESTCELL5
FGTANKS	1 – 8000 Gallon dual-compartment underground fuel tank 1 – 8000 gallon single compartment underground fuel tank. Both tanks are for the storage of gasoline, ethanol, diesel and biodiesel fuels.	EUTANK1, EUTANK2
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	NA

The following conditions apply to: FGTESTCELLS

DESCRIPTION: 5 engine test cells for testing of automotive engines and powertrain systems up to 800 horsepower in size, fueled by gasoline, ethanol, diesel and biodiesel fuels

Emission Units: EUTESTCELL1 – EUTESTCELL5

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	38.6 pph	Test Protocol*	FGTESTCELLS	SC V.1 SC VI.3	40 CFR 52.21 (c) & (d)
2. NOx	18.8 tpy	12-month rolling time period as determined at the end of each calendar month	FGTESTCELLS	SC VI.5	R336.1205(3)
3. CO	883.7 pph	Test Protocol*	FGTESTCELLS	SC V.1 SC VI.4	40 CFR 52.21(d)
4. CO	89.2 tpy	12-month rolling time period as determined at the end of each calendar month	FGTESTCELLS	SC VI.5	R336.1205(3)
5. VOC	7.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGTESTCELLS	SC VI.6	R336.1205(3), R336.1702(a)
6. Formaldehyde ¹	0.20 tpy	12-month rolling time period as determined at the end of each calendar month	FGTESTCELLS	SC VI.6	R336.1225(2)

*Test Protocol will specify averaging time

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Gasoline/Ethanol	6992.9 gallons per day	Calendar day	FGTESTCELLS	SC VI.2	R 336.1205 R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d)
2. Gasoline/Ethanol	56,300 gallons per year	12-month rolling time period as determined at the end of each calendar month.	FGTESTCELLS	SC VI.7	R 336.1205 R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d)
3. Diesel/Bio-diesel	4085.2 gallons per day	Calendar day	FGTESTCELLS	SC VI.2	R 336.1205 R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d)
4. Diesel/Bio-diesel	150,000 gallons per year	12-month rolling time period as determined at the end of each calendar month.	FGTESTCELLS	SC VI.7	R 336.1205 R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d)

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

1. Upon request of the AQD District Supervisor, the permittee may be required to verify the CO and NOx emission rates from EUTESTCELLS, by testing at owner's expense, in accordance with Department requirements in the event of a change in the operational testing process as compared to previous verification testing. The testing shall be performed over a range of the new testing operations, using diesel and gasoline fuel. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004)**

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 last day of the calendar month, for the previous calendar month, unless otherwise specified in another notification special condition. **(R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

2. The permittee shall keep, in a satisfactory manner, daily diesel and gasoline use calculation records for FGTESTCELLS, as required by SC II.1 and SC II.3. The permittee shall calculate the daily gasoline and diesel usage rate based upon monthly recordkeeping prorated to a daily rate. Should the prorated daily rate exceed 90 percent of the daily limit, the permittee shall commence daily recordkeeping for a minimum of two months until the daily rate falls below 90 percent of the daily limit. The permittee shall keep all records on file at the facility for a period of at least five years and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
3. The permittee shall calculate hourly NOx emission rates for FGTESTCELLS based upon monthly fuel use records, prorated to an hourly rate and data from Table 1 below or the most recent stack test data available, whichever is higher. Should the prorated emission rate exceed 90 percent of the limit, the permittee shall keep hourly records for a minimum of two months until the emission rate falls below 90 percent of the limit. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(40 CFR 52.21 (d))**
4. The permittee shall calculate hourly CO emission rates for FGTESTCELLS based upon monthly fuel use records, prorated to an hourly rate and data from Table 1 below or the most recent stack test data available, whichever is higher. Should the prorated emission rate exceed 90 percent of the limit, the permittee shall keep hourly records for a minimum of two months until the emission rate falls below 90 percent of the limit. All records shall be kept on file for a period of at least five years and made available to the Department upon request. **(40 CFR 52.21 (d))**

Table 1. Emission Factors for FGTESTCELLS

Diesel/Biodiesel Emission Factor*	lb/gallon	Gasoline/Ethanol Emission Factor*	lb/gallon
NOx	0.227	NOx	0.063
CO	0.045	CO	3.05
VOC	0.049	VOC	0.148
Formaldehyde	0.000162	Formaldehyde	0.00660

5. The permittee shall keep, in a satisfactory manner, monthly and previous 12-month rolling NO_x and CO calculation records for FGTESTCELL, as required by SC I.2 and SC I.4. The permittee shall use the monthly fuel records and data from Table 1 above or the most recent stack test data available, whichever is higher. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**
6. The permittee shall calculate monthly and previous 12-month VOC and formaldehyde emissions from FGTESTCELLS, as required by SC I.6, based upon monthly fuel use records using data from the Table 1 above. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205 40 CFR 52.21(c) & (d))**
7. The permittee shall keep, in a satisfactory manner, monthly and 12-month rolling diesel/bio-diesel and gasoline/ethanol use records for FGTESTCELLS. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
SVTESTCELLS	42	48	R 336.1225, 40 CFR 52.21(c) & (d)

IX. OTHER REQUIREMENTS

NA

Footnotes:

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

The following conditions apply to: FGTANKS

DESCRIPTION: 1 – 8000 Gallon dual-compartment underground fuel tank
1 – 8000 Gallon single compartment underground fuel tank
Both tanks are for the storage of gasoline, ethanol, diesel, and biodiesel.

Emission Units: EUTANK1 and EUTANK2

POLLUTION CONTROL EQUIPMENT: Vapor balance system

I. EMISSION LIMITS

NA

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not fill either tank in FGTANKS unless the vapor balance system is installed, maintained and operated in a satisfactory manner as follows:
 - a. **The vapor-tight collection line shall be connected to the delivery vessel before any gasoline is transferred**
 - b. **The vapor-tight collection line shall close upon disconnection so as to prevent release of gasoline vapor.**
2. The permittee shall develop written procedures for the operation of all the control measures described above, and such procedures shall be available in an accessible location near the transfer equipment.
(R 336.1205(1)(a) & (b), R 336.1225, R 336.1703(3)(a) & (b))

IV. DESIGN/EQUIPMENT PARAMETERS

1. It is unlawful for a person to load or allow the loading of gasoline from a delivery vessel into any new stationary vessel of more than 2,000-gallon capacity located at any gasoline loading facility, unless the stationary vessel is equipped with a permanent submerged fill pipe. **(R336.1703(1))**
2. It is unlawful for a person to load or allow the loading of gasoline from a delivery vessel into any new stationary vessel of more than 2,000-gallon capacity located at a new gasoline dispensing facility or an existing gasoline dispensing facility subject to R 336.1606(3) and (4) in any area listed in table 61, unless the stationary vessel is controlled by a vapor balance system or an equivalent control system approved by the department. The vapor balance system shall capture displaced gasoline vapor and air via a vapor tight collection line and shall be designed to return not less than 90% by weight of the displaced gasoline vapor from the stationary vessel to the delivery vessel. **(R336.1703(2))**

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep records of the type of fuel stored in FGTANKS. **(R 336.1205)**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

1. The permittee shall keep records of the dimensions and an analysis showing the capacity of each underground storage tank included in FGTANKS. All records shall be readily accessible and kept for the life of the source. **(R 336.1702(a))**

The following conditions apply Source-Wide to: FGFACILITY

POLLUTION CONTROL EQUIPMENT: Vapor balance system for the tanks

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. CO	89.9 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)

II. MATERIAL LIMITS

NA

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall complete all required calculations in a format acceptable to the AQD District Supervisor by the last day of the calendar month, for the previous calendar month, unless otherwise specified in any monitoring/recordkeeping special condition. **(R 336.1205(3))**
2. The permittee shall keep, in a satisfactory manner, monthly and previous 12-month rolling CO emission calculation records for FGFACILITY, as required by SC I.1. The permittee shall keep all records on file for a period of at least five years and make them available to the Department upon request. **(R 336.1205(3))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA