MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

August 7, 2015

PERMIT TO INSTALL
280-96A

ISSUED TO
Ford Motor Company, Van Dyke Transmission Plant

LOCATED AT
41111 Van Dyke
Sterling Heights, Michigan

IN THE COUNTY OF
Macomb

STATE REGISTRATION NUMBER
B1771

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: **June 23, 2015**	
DATE PERMIT TO INSTALL APPROVED: **August 7, 2015**	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_2e	Carbon Dioxide Equivalent	°F	Degrees Fahrenheit
COM	Continuous Opacity Monitoring	gr	Grains
EPA	Environmental Protection Agency	Hg	Mercury
EU	Emission Unit	hr	Hour
FG	Flexible Group	H_2S	Hydrogen Sulfide
GACS	Gallon of Applied Coating Solids	hp	Horsepower
GC	General Condition	lb	Pound
GHGs	Greenhouse Gases	kW	Kilowatt
HAP	Hazardous Air Pollutant	m	Meter
HVLP	High Volume Low Pressure *	mg	Milligram
ID	Identification	mm	Millimeter
LAER	Lowest Achievable Emission Rate	MM	Million
MACT	Maximum Achievable Control Technology	MW	Megawatts
MAERS	Michigan Air Emissions Reporting System	ng	Nanogram
MAP	Malfunction Abatement Plan	NO_x	Oxides of Nitrogen
MDEQ	Michigan Department of Environmental Quality (Department)	PM	Particulate Matter
MSDS	Material Safety Data Sheet	PM10	PM with aerodynamic diameter ≤10 microns
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	PM with aerodynamic diameter ≤ 2.5 microns
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonably Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	THC	Total Hydrocarbons
SRN	State Registration Number	tpy	Tons per year
TAC	Toxic Air Contaminant	µg	Microgram
TEQ	Toxicity Equivalence Quotient	VOC	Volatile Organic Compound
VE	Visible Emissions	yr	Year

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

GENERAL CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EUBOILER1	Babcock and Wilson - Natural gas-fired boiler, rated at 107 MMBtu/hr	12/1/1968*	FGFACILITY FGPOWERHOUSE
EUBOILER3	Johnson Boiler Company - Natural gas-fired boiler, rated at 41 MMBtu/hr	1/26/2008*	FGFACILITY FGPOWERHOUSE
EUSLUDGECOOK	Sludge cooking tank with fume scrubber control	1995	FGFACILITY
EUTANKS	Three 200,000 gallon receiving tanks and four oil/coolant storage tanks. [Field erected with fiberglass roof]	1968	FGFACILITY
EUFUMESCRUBBER	Fume scrubber controlling EUTANKS	1995	FGFACILITY
EUMAINTBOOTH	Maintenance Paint Booth (Global Finishing Solutions - Dry filter paint booth)	April 2005	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
FGPOWERHOUSE	Two natural gas fired boilers. EUBOILER1 has a rated capacity of 107 MMBtu/hr, and EUBOILER3 has a rated capacity of 41 MMBTU/hr	EUBOILER1 EUBOILER3
FGFACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

The following conditions apply to: FGPOWERHOUSE

DESCRIPTION: Two natural gas fired boilers. EUBOILER1 has a rated capacity of 107 MMBtu/hr, and EUBOILER3 has a rated capacity of 41 MMBTU/hr

Emission Units:

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMITS

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Natural gas	960 million cubic feet per year	Rolling 12-month time period as determined at the end of each month	EUBOILER1 EUBOILER3	Appendix A	R 336.1201(3)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall only combust natural gas in FGPOWERHOUSE. **(R336.1205(1)(a))**

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 monitor and record, in a satisfactory manner, the natural gas usage for FGPOWERHOUSE on a 12-month rolling time period basis. **(R 336.1205(3) 40 CFR 60.48c(g)(1))**

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
1. SV-BOILER1	54	80	R 336.2803 R 336.2804
2. SV-BOILER3	34	60.5	R 336.2803 R 336.2804

IX. OTHER REQUIREMENTS

1. The permittee shall comply with all applicable requirements of the National Emission Standards for Hazardous Air Pollutants: Industrial, Commercial, and Institutional Boilers Area Sources by the compliance date(s) specified in the Standards. (40 CFR 63 Subpart JJJJJJ, 40 CFR 63 Subpart A)

2. The permittee shall comply with all applicable requirements of the National New Source Performance Standards: Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units by the compliance date(s) specified in the Standards. (40 CFR 60 Subpart Dc, 40 CFR 63 Subpart A)

The following conditions apply to: FGFACILITY

DESCRIPTION:

Emission Units:

POLLUTION CONTROL EQUIPMENT:

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NOx	19 tons/month		FGFACILITY	SC VI.2	R 336.1205(3)
2. NOx	99 tons/year	12-month rolling time period, as determined at the end of each calendar month	FGFACILITY	SC VI.2	R 336.1205(3)
3. Single HAP	9.7 tons/year	12-month rolling time period, as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(3)
4. Single HAP	2.5 tons/month	Calendar Month	FGFACILITY	SC VI.1	R 336.1205(3)
5. Aggregated HAPs	24 tons/year	12-month rolling time period, as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(3)
6. VOCs	11 tons/month	Calendar month	FGFACILITY	SC VI.1	R 336.1205(3)
7. VOCs	99 tons/year	12-month rolling time period, as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(3)
8. Visible Emissions	20% opacity	6-minute average except for 1 6-minute average not exceeding 27%	FGPOWERHOUSE	Appendix A	R 336.1331)
9. Visible Emissions	20% opacity	6-minute average except for 1 6-minute average not exceeding 27%	EUPAINTBOOTH	Appendix A	R 336.1331
10. Visible Emissions	No visible emissions, except for uncombined water vapor	Instantaneous	EUSLUDGCOOKER EUFUMESCRUBBER	Appendix A	R 336.1331

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. Natural gas	1,019 million cubic feet	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	VI.1	R 336.1205(3)

III. PROCESS/OPERATIONAL RESTRICTIONS

1. Permittee shall not operate EUSLUDGECOOKTANK unless EUFUMESCRUBBER is installed and operating properly. **(R 336.1910)**

2. Permittee shall equip and maintain EUFUMESCRUBBER with a water flow indicator and a pH monitor. **(R 336.1910)**

3. Permittee shall not operate the fume scrubber unless a preventative maintenance program has been developed and implemented. **(R 336.1911)**

4. Permittee shall not operate EUTANKS unless they are covered and vented to EUFUMESCRUBBER. **(R 336.1901**)

5. The permittee shall not operate EUMAINTBOOTH unless all exhaust filters are in place. **(R 336.1910)**

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 keep a separate record for each of the following for FGFACILITYFor each material, record the following on a monthly basis:The identification and the coating category for each VOC and HAP containing coatings and solvents.The VOC content in pounds per gallon (minus water) as received.The content in pounds per gallon of each HAP for all coatings as received.Monthly calculations of the following for VOCs;Monthly calculation of the VOC emission rate in tons per month by process and for FGFACILITY.Natural gas usage in million cubic feet, on a 12-month rolling time period basis.

2. The permittee shall keep a separate record for each of the following for FGPOWERHOUSE:
   a. Monthly calculation of NOx emission rate in tons per month for FGPOWERHOUSE.
   b. Monthly calculation of NOx determining a 12-month rolling time period emission rate in tons per year for the two boilers.

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:

NA

IX. OTHER REQUIREMENTS

NA

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

APPENDIX Appendix A, Compliance Methodology

VOC limitations:

A. Boilers – maintain monthly records of natural gas usage.

   Gas usage (10^6 cu. Ft./mo. X AP-42 Factor (lb/10^6 cu.ft. x 1 ton/2,000 lb. = tons VOC/mo.

B. Parts Cleaning Stations – maintain monthly usage record of solvent "make-up" compliance demonstration

   (Total solvent replacement – Total solvent recycled (gal.mo.) x solvent density x 1 ton/2,000 lb. = Tons VOC /mo.

C. Machining Operations – maintain monthly usage records of cutting fluids used in machining operations.

   Compliance demonstration:

   Cutting fluid usage (gal.mo.) x VOC Emission Factor (lb./gal.) x 1 ton/2,000 ton = tons VOC/mo.

- The monthly emission rate will be determined by summation of the calculations A through E.
- The annual emission rate will be determined by summation A through E over a rolling 12-month period as determined at the end of each month.

HAP emissions

Maintain monthly usage records of the HAP containing materials in the facility that exceed 1. tpy HAP emissions as determined at the beginning of each year based on the previous calendar year.

Compliance demonstration:

Material usage (quantity/mo.) X HAP emission factor (lb./quantity) x 1ton/2,000 lbs. = tons HAP/mo.

- The monthly combined HAP emission rate will be determined by summation of the above calculation for individual HAPs (that exceed the 1.0 tpy threshold).
- The annual individual HAP emission rate will be determined by summation of the above calculation over a rolling 12-month period as determined at the end of each month.
- The annual combined HAP emission rate will be determined by summation of the annual individual HAP emission rates.

NOx emissions

Maintain monthly usage records of natural gas used at the facility.

Compliance demonstration:

Natural gas usage (10^6 cubic feet/month) x NOx Emission Factor (lb./10^6 cu. ft.) = lb. NOx/month
The monthly NOx emission rate will be determined by the summation of the above calculations. The annual NOx emission rate will be determined by the summation of the monthly emission rate over a rolling 12-month period as determined at the end of each month. The most recent emission factor published in AP-42 or the FIRE database, or latest testing results shall be used as an emission factor to calculate emissions.

Natural gas usage

Maintain monthly records of the natural gas consumed in the two boilers and the plant as a whole. The annual usage will be determined by summation of the monthly usage over a rolling 12-month period as determined at the end of each month.

Opacity requirements:

The two boiler exhausts will be inspected daily for visible emissions. Any visible emission will be noted and corrected actions taken. The corrective actions will also be noted.

Records of VOC and HAP emissions:

Maintain records for each VOC and/or HAP containing coating or solvent, identifying the material and indicating the VOC content in lb./gal. and the HAP content in lb./gal.

Maintain records and calculations for the monthly and annual VOC emissions rates as under "HAP Emissions" above.

Operational Restrictions

Sludge cooking operations will not be conducted unless the scrubber is compliant with the following:

- The water flow indicator and pH meter were installed and are maintained as specified in the original installation permit application.
- The preventative maintenance plan has been implemented, documented, and is maintained at the facility

Operational Restriction

The receiving tanks and the oil/coolant storage tanks are covered and ducted to the existing fume scrubber.

Operational Restriction

The maintenance spray booth is inspected weekly to ensure all exhaust filters are in place.