

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

MAY 25, 2021

**PERMIT TO INSTALL
61-19A**

**ISSUED TO
ENBRIDGE ENERGY, LIMITED PARTNERSHIP**

**LOCATED AT
T34 – R32W S35
CRYSTAL FALLS, MICHIGAN 49220**

**IN THE COUNTY OF
IRON**

**STATE REGISTRATION NUMBER
P1015**

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: April 15, 2021	
DATE PERMIT TO INSTALL APPROVED: May 25, 2021	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

Table of Contents

COMMON ACRONYMS	2
POLLUTANT / MEASUREMENT ABBREVIATIONS.....	3
GENERAL CONDITIONS	4
EMISSION UNIT SPECIAL CONDITIONS.....	6
EMISSION UNIT SUMMARY TABLE	6
EUDRLLRGPRM300.....	7
FLEXIBLE GROUP SPECIAL CONDITIONS.....	9
FLEXIBLE GROUP SUMMARY TABLE	9
FGTRIB-PAINT≤600	10

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	Malfunction 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 _{2e}	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))	Flexible Group ID
EULIGHT	Eight diesel-fired temporary engines rated at 600 HP or less. The engine powers portable lights.	FGTRIB-PAINT≤600
EUCOMPRESSOR	Four diesel-fired temporary engines rated at 600 HP or less. The engine powers portable air compressors.	FGTRIB-PAINT≤600
EUMUDPUMP	Two diesel-fired temporary engines rated at 600 HP or less. The engine powers a mud pump.	FGTRIB-PAINT≤600
EUMUDSYSTEM	Two diesel-fired temporary engines rated at 600 HP or less. The engine powers a mud handling system.	FGTRIB-PAINT≤600
EUWATERPUMPS	Eight diesel-fired temporary engines rated at 600 HP or less. The engine powers portable air compressors.	FGTRIB-PAINT≤600
EUDRLLRGAA440	Diesel-fired temporary engine rated at 600 HP or less. The engine powers drilling activities.	FGTRIB-PAINT≤600
EUDRLLRGPRM300	Diesel-fired temporary engine rated at greater than 600 HP. The engine powers drilling activities.	NA

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.

**EUDRLLRGPRM300
EMISSION UNIT CONDITIONS**

DESCRIPTION

Diesel-fired temporary engine rated at greater than 600 HP. The engine powers drilling activities.

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall burn only ultra-low sulfur diesel in EUDRLLRGPRM300, where ultra-low sulfur diesel has a maximum sulfur content of 15 ppm (0.0015 percent) by weight. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUDRLLRGPRM300 for more than 1,209,600 horsepower-hours (hp-hr) combined per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee shall not retain EUDRLLRGPRM300 at the site for more than 12 consecutive months. **(40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ, 40 CFR 1068.30)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The EUDRLLRGPRM300 nameplate capacity shall be greater than 600 HP, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, records confirming that the diesel fuel is ultra-low sulfur diesel for each delivery of diesel fuel oil used in EUDRLLRGPRM300. The permittee shall keep the records on file with EUDRLLRGPRM300 and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 60.4207, 40 CFR 80.510(b))**
3. The permittee shall monitor, in a satisfactory manner, the hours of operation for EUDRLLRGPRM300 on a monthly basis and calculate the hp-hr of operation on a 12-month rolling time period basis for

EUDRLLRGPRM300; the calculation shall be based upon the recorded hours of operation and the maximum hp of the operated engine. The permittee shall keep, in a satisfactory manner, the required records of hours and hp-hr of operation on file with EUDRLLRGPRM300 and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

4. The permittee shall keep, in a satisfactory manner, records and information associated with the location on site of EUDRLLRGPRM300 as required by SC III.2. The permittee shall keep all records on file with EUDRLLRGPRM300 and make them available to the Department upon request. **(40 CFR Part 60 Subpart III, 40 CFR Part 63 Subpart ZZZZ)**
5. The permittee shall keep, in a satisfactory manner, manufacturer information regarding the engine, including the size and emissions profile, on file with EUDRLLRGPRM300 and make it available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. The permittee shall notify the AQD District Supervisor, in writing, of the date on which EUDRLLRGPRM300 is located at the facility no later than 15 calendar days after such date. **(40 CFR Part 60 Subpart III, 40 CFR Part 63 Subpart ZZZZ)**
2. The permittee shall notify the AQD District Supervisor, in writing, of the date on which EUDRLLRGPRM300 is removed from the facility no later than 15 calendar days after such date. **(40 CFR Part 60 Subpart III, 40 CFR Part 63 Subpart ZZZZ)**

VIII. STACK/VENT RESTRICTION(S)

1. The exhaust gases from the stacks shall be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

1. If EUDRLLRGPRM300 exceeds the restriction in SC III.2, then the permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart III, as they apply to that engine. **(40 CFR Part 60 Subparts A & III, 40 CFR 63.6590)**
2. If EUDRLLRGPRM300 the restriction in SC III.2, then the permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63 Subpart A and Subpart ZZZZ, as they apply to that engine. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

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
FGTRIB-PAINT≤600	Temporary engines ≤600 HP used to replace a segment of Line 5 with horizontal direction drill technology.	EULIGHT, EUCOMPRESSOR, EUMUDPUMP, EUMUDSYSTEM, EUWATERPUMPS, EUDRLLRGAA440

**FGTRIB-PAINT≤600
FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Temporary engines ≤600 HP used to replace a segment of Line 5 with horizontal direction drill technology.

Emission Unit: EULIGHT, EUCOMPRESSOR, EUWATERPUMPS, EUMUDSYSTEM, EUMUDPUMP, EUDRLLRGAA440

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall burn only ultra-low sulfur diesel in any engine in FGTRIB-PAINT≤600, where ultra-low sulfur diesel has a maximum sulfur content of 15 ppm (0.0015 percent) by weight. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGTRIB-PAINT≤600 for more than 4,736,205 horsepower-hours (hp-hr) combined per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee shall not retain any engine in FGTRIB-PAINT≤600 at the site for more than 12 consecutive months. **(40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ, 40 CFR 1068.30)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The EULIGHT, EUCOMPRESSOR, EUWATERPUMPS, EUMUDSYSTEM, EUMUDPUMP, EUDRLLRGAA440 nameplate capacities shall each not exceed 600 HP, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

V. TESTING/SAMPLING

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(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee shall keep, in a satisfactory manner, records confirming that the diesel fuel is ultra-low sulfur diesel for each delivery of diesel fuel oil used in FGTRIB-PAINT≤600. The permittee shall keep the records on file with FGTRIB-PAINT≤600 and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), 40 CFR 60.4207, 40 CFR 80.510(b))**

3. The permittee shall monitor, in a satisfactory manner, the hours of operation for each engine in FGTRIB-PAINT≤600 on a monthly basis and calculate the hp-hr of operation on a 12-month rolling time period basis for FGTRIB-PAINT≤600; the calculation shall be based upon the recorded hours of operation and the maximum hp of the operated engine. The permittee shall keep, in a satisfactory manner, the required records of hours and hp-hr of operation on file with FGTRIB-PAINT≤600 and make them available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
4. The permittee shall keep, in a satisfactory manner, records and information associated with the location on site of each engine in FGTRIB-PAINT≤600 as required by SC III.2. The permittee shall keep all records on file with FGTRIB-PAINT≤600 and make them available to the Department upon request. **(40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ)**
5. The permittee shall keep, in a satisfactory manner, manufacturer information regarding the engine, including the size and emissions profile, on file with FGTRIB-PAINT≤600 and make it available to the Department upon request. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**

VII. REPORTING

1. The permittee shall notify the AQD District Supervisor, in writing, of the date on which each engine in FGTRIB-PAINT≤600 is located at the facility no later than 15 calendar days after such date. **(40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ)**
2. The permittee shall notify the AQD District Supervisor, in writing, of the date on which each engine in FGTRIB-PAINT≤600 is removed from the facility no later than 15 calendar days after such date. **(40 CFR Part 60 Subpart IIII, 40 CFR Part 63 Subpart ZZZZ)**

VIII. STACK/VENT RESTRICTION(S)

1. The exhaust gases from the stacks shall be discharged unobstructed vertically upwards to the ambient air.

IX. OTHER REQUIREMENT(S)

1. If any engine in FGTRIB-PAINT≤600 exceeds the restriction in SC III.2, then the permittee shall comply with the provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subpart A and Subpart IIII, as they apply to that engine. **(40 CFR Part 60 Subparts A & IIII, 40 CFR 63.6590)**
2. If any engine in FGTRIB-PAINT≤600 exceeds the restriction in SC III.2, then the permittee shall comply with the provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63 Subpart A and Subpart ZZZZ, as they apply to that engine. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**