

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

November 4, 2022

**PERMIT TO INSTALL
10-20B**

**ISSUED TO
LivWell Michigan LLC**

**LOCATED AT
21590 Hoover Road
Warren, Michigan 48089**

**IN THE COUNTY OF
Macomb**

**STATE REGISTRATION NUMBER
P1109**

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: November 2, 2022	
DATE PERMIT TO INSTALL APPROVED: November 4, 2022	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
EUDIESEL	8
FLEXIBLE GROUP SPECIAL CONDITIONS.....	12
FLEXIBLE GROUP SUMMARY TABLE	12
FGCOGEN.....	13
FGBOILERS	19
FGEXTRACTION.....	22
FGEMENGINES	24
APPENDIX A.....	29

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 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))	Flexible Group ID
EUGEN1	A 1,431 HP (1,067 kW) natural gas-fueled engine manufactured in 2019.	FGCOGEN
EUGEN2	A 1,431 HP (1,067 kW) natural gas-fueled engine manufactured in 2019	FGCOGEN
EUGEN3	A 1,431 HP (1,067 kW) natural gas-fueled engine manufactured in 2019	FGCOGEN
EUGEN4	A 1,431 HP (1,067 kW) natural gas-fueled engine manufactured in 2019	FGCOGEN
EUGEN5	A 1,431 HP (1,067 kW) natural gas-fueled engine manufactured in 2019	FGCOGEN
EUGEN6	A 1,431 HP (1,067 kW) natural gas-fueled engine manufactured in 2020	FGCOGEN
EUDIESEL	A 1,528 HP (1,139 kW) diesel-fueled standby engine with a model year of 2019, and a displacement of 3 liters/cylinder.	NA
EUC1D1-1	A Solvent based extraction unit and associated equipment that uses Liquid Petroleum Gas for cannabis extraction	FGEXTRACTION
EUC1D1-2	A Solvent based extraction unit and associated equipment that uses Liquid Petroleum Gas for cannabis extraction	FGEXTRACTION
EUC1D2	A Solvent based extraction unit and associated equipment that uses Ethanol for cannabis extraction	FGEXTRACTION
EUBOILER1	A 6.0 MMBtu/hr dual fuel natural gas and propane boiler	FGBOILERS
EUBOILER2	A 6.0 MMBtu/hr dual fuel natural gas and propane boiler	FGBOILERS
EUBOILER3	A 6.0 MMBtu/hr dual fuel natural gas and propane boiler	FGBOILERS
EUBOILER4	A 6.0 MMBtu/hr dual fuel natural gas and propane boiler	FGBOILERS
EUENGINE1	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES
EUENGINE2	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Flexible Group ID
EUENGINE3	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES
EUENGINE4	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES
EUENGINE5	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES
EUENGINE6	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES
EUENGINE7	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES
EUENGINE8	A 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	FGEMENGINES

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.

**EUDIESEL
 EMISSION UNIT CONDITIONS**

DESCRIPTION

A 1,528 HP (1,139 kW) diesel-fueled standby engine with a model year of 2019, and a displacement of 3 liters/cylinder

Flexible Group ID: NA

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NMHC + NO _x	6.4 g/kW-hr	Hourly	EUDIESEL	SC V.1, SC V.2	40 CFR 60.4204(b) Table 2 of Appendix I of 40 CFR 1039
2. NO _x	14.31 pph	Hourly	EUDIESEL	SC V.3	R 336.1205, 40 CFR 52.21 (c) & (d)
3. CO	3.5 g/kW-hr	Hourly	EUDIESEL	SC V.1, SC V.2	40 CFR 60.4204(b) Table 2 of Appendix I of 40 CFR 1039
4. CO	2.02 pph	Hourly	EUDIESEL	SC V.3	R 336.1205, 40 CFR 52.21(d)
5. PM	0.20 g/kW-hr	Hourly	EUDIESEL	SC V.1, SC V.2	40 CFR 60.4204(b) Table 2 of Appendix I of 40 CFR 1039
6. PM	0.37 pph	Hourly	EUDIESEL	SC V.3	R 336.1205, R 336.1331(1)(c)

II. MATERIAL LIMIT(S)

1. The permittee shall burn only diesel fuel, in EUDIESEL with the maximum sulfur content of 15 ppm (0.0015 percent) by weight and a minimum cetane index of 40. **(R 336.1205, R 336.1225, 40 CFR 60.4207, 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate EUDIESEL for more than 186 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 186 hours includes the hours for the purpose of

necessary maintenance checks and readiness testing. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21 (c) & (d))**

2. The permittee shall operate and maintain EUDIESEL such that it meets the emission limits in SC I.1, I.3, and I.5 over the entire life of the engine. **(40 CFR 60.4206, 40 CFR 60.4211)**
3. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year, the permittee shall meet the following requirements for each engine of EUDIESEL:
 - a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions.
 - b) Change only those emission related settings that are permitted by the manufacturer.
 - c) Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as it applies to you.

If you do not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine will be regulated as a non-certified engine. **(40 CFR 60.4211(a))**

4. If the permittee purchased a non-certified engine or if a certified engine has been operated or maintained in a non-certified manner, the permittee shall keep a maintenance plan for each engine of EUDIESEL and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(3))**
5. The permittee shall not operate EUDIESEL unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted within 60 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
 - d) Identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - e) A description of the corrective procedures that all be taken in the event that a new non-resettable hour meter needs to be repaired or replaced.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, 40 CFR 52.21(c) and (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain EUDIESEL with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3)R 336.1225)**
2. The maximum rated power output of EUDIESEL shall not exceed 1,341 HP (1,000 kW), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 60.4202, 40 CFR 60.4205, 40 CFR 89.112(a))**

V. TESTING/SAMPLING

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

1. The permittee shall conduct an initial performance test for EUDIESEL within one year after startup of the engine to demonstrate compliance with the emission limits in 40 CFR 60.4205 unless the engine has been certified by the manufacturer and the permittee maintains the engine as required by 40 CFR Part 60 Subpart IIII. If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212. No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. The final plan must be approved by the AQD 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. Subsequent performance testing shall be conducted every 8,760 hours of engine operation or 3 years, whichever comes first. **(40 CFR 60.4211, 40 CFR 60.4212, 40 CFR Part 60 Subpart IIII)**
2. If EUDIESEL is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
 - a) Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
 - b) If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212.
 - c) Conduct subsequent performance testing every 8,760 hours of engine operation or every 3 years thereafter, whichever comes first, to demonstrate compliance with the applicable emission standards.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. 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. **(40 CFR 60.4211(g)(3), 40 CFR 60.4212)**

3. Upon the request of the AQD District Supervisor, the permittee shall verify NO_x, CO, and PM emission rates from EUDIESEL by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
NO _x	40 CFR Part 60, Appendix A
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 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall keep all required records and calculations in a format acceptable to the AQD District Supervisor by the 30th 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, 40 CFR 52.21 (c) & (d), 40 CFR Part 60 Subpart IIII)**
2. The permittee shall keep, in a satisfactory manner, records of testing required in SC V.1 or manufacturer certification documentation indicating that EUDIESEL meets the applicable requirements contained in the federal Standards of Performance for New Stationary Sources, 40 CFR Part 60 Subpart IIII. If EUDIESEL

becomes uncertified, then the permittee must also keep records of a maintenance plan and maintenance activities. The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

3. The permittee shall monitor and record the total hours of operation for EUDIESEL, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. **(R 336.1205(1)(a) & (3), R 336.1225)**
4. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in EUDIESEL, demonstrating that the fuel meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(R 336.1205(1)(a) & (3), 40 CFR 60.4207(b), 40 CFR 1090.305)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent, pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of EUDIESEL. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether EUDIESEL will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(40 CFR Part 60 Subpart IIII)**

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. SVDIESEL	14	14.9	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. 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 EUDIESEL. **(40 CFR Part 60 Subparts A & IIII, 40 CFR 63.6590(c)(1))**
2. 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 EUDIESEL. **(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
FGCOGEN	Six (6) natural gas-fired engines used for electricity generation for the cannabis cultivation, extraction, processing and distribution operations. Each engine is equipped with a SCR for control of NO _x and CO and oxidation catalyst for control of VOC and formaldehyde. The SCR system includes two 1,100-gallon Urea tanks shared by all six engines.	EUGEN1 EUGEN2 EUGEN3 EUGEN4 EUGEN5 EUGEN6
FGBOILERS	Four (4) dual fueled boilers that provide hot water to the facility	EUBOILER1 EUBOILER2 EUBOILER3 EUBOILER4
FGEXTRACTION	Three (3) solvent-based extraction units and associated equipment for cannabis extraction.	EUC1D1-1 EUC1D1-2 EUC1D2
FGEMENGINES	Eight (8) 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.	EUENGINE1 EUENGINE2 EUENGINE3 EUENGINE4 EUENGINE5 EUENGINE6 EUENGINE7 EUENGINE8

**FGCOGEN
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Six (6) natural gas-fired engines used for electricity generation for the cannabis cultivation, extraction, processing, and distribution operations. Each engine is equipment with a SCR for control of NO_x and CO and oxidation catalyst for control of VOC and formaldehyde. The SCR system includes two 1,100-gallon Urea tanks shared by all six engines.

Emission Unit: EUGEN1, EUGEN2, EUGEN3, EUGEN4, EUGEN5, EUGEN6

POLLUTION CONTROL EQUIPMENT

Each engine is equipment with a SCR and oxidation catalyst for control of NO_x, CO, VOC, and formaldehyde. The SCR system includes a 1,000-gallon Urea tank.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO _x	1.0 g/hp-hr Or 82 ppmvd @ 15% O ₂	Hourly	Each engine in FGCOGEN	SC III.2, SC V.2.	40 CFR 60.4233(e), Table 1 of 40 CFR Part 60 Subpart JJJJ
2. NO _x	0.05 g/hp-hr (for each engine)	Hourly	EUGEN1 EUGEN2 EUGEN6	SC V.1.	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
3. NO _x	0.14 g/hp-hr (for each engine)	Hourly	EUGEN3 EUGEN4 EUGEN5	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
4. CO	2.0 g/hp-hr Or 270 ppmvd @15% O ₂	Hourly	Each engine in FGCOGEN	SC III.2, SC V.2.	40 CFR 60.4233(e), Table 1 of 40 CFR Part 60 Subpart JJJJ
5. CO	0.036 g/hp-hr (for each engine)	Hourly	EUGEN1 EUGEN2	SC V.1.	R 336.1205(1)(a) & (3), 40 CFR 52.21 (d)
6. CO	0.45 g/hp-hr (for each engine)	Hourly	EUGEN3 EUGEN4 EUGEN5 EUGEN6	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
7. VOC ^A	0.7 g/hp-hr Or 60 ppmvd @15% O ₂	Hourly	Each engine in FGCOGEN	SC III.2, SC V.2.	40 CFR 60.4233(e), Table 1 of 40 CFR Part 60 Subpart JJJJ
8. VOC	0.07 g/hp-hr (for each engine)	Hourly	EUGEN1 EUGEN2	SC V.1.	R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
9. VOC	0.28 g/hp-hr (for each engine)	Hourly	EUGEN3 EUGEN4 EUGEN5 EUGEN6	SC V.1	R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d)
10. NH ₃ ¹	5 ppm @ 15% O ₂	Hourly	EUGEN1 EUGEN2	SC V.1	R 336.1225
11. NH ₃ ¹	3.5 ppm @ 15% O ₂	Hourly	EUGEN3 EUGEN4 EUGEN5 EUGEN6	SC V.1	R 336.1225

ppmvd = parts per million by volume at 15 percent oxygen and on a dry gas basis.

^A Per footnote “d” of Table 1 of 40 CFR Part 60 Subpart JJJJ, when calculating emissions of VOCs, emissions of formaldehyde should not be included.

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. Natural Gas	0.056 MMSCF	Hourly	FGCOGEN	SC VI.5	R 336.1205, R 336.1225

- The permittee shall burn only pipeline quality natural gas, in each engine within FGCOGEN. **(R 336.1205(1)(a), 40 CFR 60.4230)**

III. PROCESS/OPERATIONAL RESTRICTION(S)

- No later than 30 days after startup of any engine in FGCOGEN, the permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement plan (MAP) for FGCOGEN. After approval of the MAP by the AQD District Supervisor, the permittee shall not operate FGCOGEN unless the MAP, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum the plan shall include:
 - Identification of the equipment and, if applicable, air-cleaning device and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair.
 - Description of the items or conditions to be inspected and frequency of the inspections or repairs.
 - Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures.
 - Identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
 - A description of the corrective procedures or operational changes that shall be taken in the event of a leak or malfunction occurs to the urea storage tank.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, 40 CFR 52.21 (c) & (d))**

2. The permittee shall operate and maintain each engine included in FGCOGEN such that it meets the emission limits in SC I.1, I.4, and I.7 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
3. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for FGCOGEN and shall, to the extent practicable, maintain and operate each engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4243(b)(2))**
4. The permittee shall not exhaust EUGEN3, EUGEN4, or EUGEN5 from ERV1 and/or ERV2. **(R 336.1225, 40 CFR 52.21 (c) & (d))**
5. The permittee shall not exhaust from either EUGEN1 and EUGEN2 into SVERV1 and SVERV2 at the same time. **(R 336.1225, 40 CFR 52.21 (c) & (d))**
6. The permittee shall not operate each engine in FGCOGEN for more than 8,640 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 8,640 hours includes the hours for the purpose of necessary maintenance checks and readiness testing. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21 (c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. Each engine in FGCOGEN shall be certified to meet the applicable emission standard of 40 CFR 60.4233. The permittee shall install and configure each engine according to the manufacturer's specifications. **(40 CFR 60.4243)**
2. The nameplate capacity of each engine in FGCOGEN shall not exceed 1,431 HP (1,067 kW), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), 40 CFR 60.4230)**
3. The permittee shall not operate any engine in FGCOGEN unless the associated SCR system and oxidation catalyst are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for FGCOGEN as required in SC III.1. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1910, R 336.1941, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart JJJJ)**
4. The permittee shall monitor and record the natural gas consumption on an hourly basis, in a manner and with an instrumentation acceptable to the AQD District Supervisor. **(R 336.1205, R 336.1225)**

V. TESTING/SAMPLING

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

1. Within 180 days after startup of each engine included in FGCOGEN, the permittee shall verify NO_x, CO, VOC and Ammonia emission factors used to calculate emissions from each engine included in FGCOGEN, by testing at owner's expense, in accordance with Department requirements. Thereafter, the permittee must complete the required testing, by testing at owner's expense, upon request by the AQD District Supervisor. Testing shall be performed using an approved EPA Method listed below.

Pollutant	Test Method Reference
NO _x	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A
Ammonia	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. 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. No less

than 7 days prior to testing, the permittee shall notify the AQD Technical Programs Unit and District Office, in writing, of the time and place of the test and who shall conduct it. 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 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. For each non-certified engine included in FGCOGEN the permittee must demonstrate compliance as follows:
 - a) Conduct an initial performance test to demonstrate compliance with the applicable emission standards in 40 CFR 60.4233(e), within 60 days after achieving the maximum production rate at which each engine included in FGCOGEN will be operated, but not later than 180 days after initial startup of each engine included in FGCOGEN.
 - b) The performance tests shall be conducted according to 40 CFR 60.4244.
 - c) Conduct subsequent performance testing every 8,760 hours of engine operation or every three years, whichever comes first, thereafter, to demonstrate compliance with the applicable emission standards.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD Technical Programs Unit and District Office. 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 Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.2001, R 336.2003, R 336.2004, 40 CFR 60.8, 40 CFR 60.4243, 40 CFR 60.4244, 40 CFR 60.4245, 40 CFR Part 60 Subpart JJJJ)**

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 30th 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, 40 CFR 52.21 (c) & (d))**
2. For non-certified engines in FGCOGEN, the permittee shall keep, in a satisfactory manner, the following records:
 - a) Testing for each engine, as required in SC V.2.
 - b) Maintenance activities for each engine, as required by SC III.3.

The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), 40 CFR 60.4243(b))**

3. The permittee shall keep records of notifications submitted for the completion of construction and start-up of each engine in FGCOGEN. **(40 CFR 60.4245(a))**
4. The permittee shall monitor and record the hours of operation of each engine in FGCOGEN, on a monthly and 12-month rolling basis in a manner acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (3), R 336.1702(a), 40 CFR 52.21 (c) & (d))**
5. The permittee shall monitor and record the natural gas fuel use for FGCOGEN, on a continuous hourly basis in a manner acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (3), R 336.1702(a), 40 CFR 52.21 (c) & (d))**
6. The permittee shall keep, in a satisfactory manner, all records related to, or as required by the MAP. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, R 336.1911, R 336.1912, 40 CFR 52.21(c) & (d))**
7. The permittee shall monitor and record, in a satisfactory manner, the date and hours of operation (start and end time) for when EUGEN1 and/or EUGEN2 exhausts through SVERV1 and SVERV2. **(R 336.1225, 40 CFR 52.21 (c) & (d))**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of each engine in FGCOGEN. **(R 336.1201(7)(a))**
2. The permittee must submit an initial notification as required in 40 CFR 60.7(a)(1), for each engine in FGENGINE. The notification must include the following information:
 - a) The date construction commenced.
 - b) Name and address of the owner or operator.
 - c) The address of the engine.
 - d) Information about the engine, including make, model, engine family, serial number, model year, maximum engine power, and engine displacement.
 - e) The engine's emission control equipment.
 - f) Fuel used.

The notification shall be submitted to the AQD District Supervisor and must be postmarked no later than 30 days after the date construction commenced. **(40 CFR 60.7(a)(1), 40 CFR 60.4245(c))**

3. The permittee shall submit a notification specifying whether each engine included in FGCOGEN will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(R 336.1201(3))**
4. The permittee shall submit a notification, to the AQD District Supervisor, specifying if the ventilation system from EUGEN1 and EUGEN2 to SVERV1 and/or SVERV2 has changed, within 30 days of the change. **(R 336.1201(3), R 336.1225, 40 CFR 52.21 (c) & (d))**
5. The permittee shall notify the Department if a change in land use occurs for property classified as industrial or as a public roadway, where this classification was relied upon to demonstrate compliance with Rule 225(1). The permittee shall submit the notification to the AQD District Supervisor, within 30 days of the actual land use change. Within 60 days of the land use change, the permittee shall submit to the AQD District Supervisor a plan for complying with the requirements of Rule 225(1). The plan shall require compliance with Rule 225(1) no later than one year after the due date of the plan submittal. **(R 336.1225(4))**

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. SVGEN1	14.2	41	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SVGEN2	14.2	41	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SVGEN3	14.2	41	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SVGEN4	14.2	41	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SVGEN5	14.2	41	R 336.1225, 40 CFR 52.21 (c) & (d)
6. SVGEN6	14.2	41	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SVERV1	35.8	41	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SVERV2	35.8	41	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. 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 JJJJ, as they apply to each engine in FGCOGEN. **(40 CFR Part 60 Subparts A & JJJJ, 40 CFR 63.6590(c)(1))**
2. 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 each engine in FGCOGEN. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

Footnotes:

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

FGBOILERS FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Four (4) dual fueled boilers that provide hot water to the facility

Emission Unit: EUBOILER1, EUBOILER2, EUBOILER3, EUBOILER4

POLLUTION CONTROL EQUIPMENT

Each boiler is equipment with low NO_x burners

I. EMISSION LIMIT(S)

NA

II. MATERIAL LIMIT(S)

1. The permittee shall burn only pipeline quality natural gas or propane in each boiler within FGBOILERS. **(R 336.1205(1)(a), 40 CFR 63.11195(e))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. No later than 45 days after the completion of installation of the equipment, the permittee shall submit to the AQD District Supervisor, for review and approval, a malfunction abatement plan (MAP) for FGBOILERS. After approval of the MAP by the AQD District Supervisor, the permittee shall not operate FGBOILERS unless the MAP, or an alternate plan approved by the AQD District Supervisor, is implemented and maintained. The plan shall incorporate procedures recommended by the equipment manufacturer as well as incorporating standard industry practices. At a minimum, the plan shall include:
 - a) Identification of the equipment and, if applicable, air-cleaning device and the supervisory personnel responsible for overseeing the inspection, maintenance, and repair.
 - b) Description of the items or conditions to be inspected and frequency of the inspections or repairs.
 - c) Identification of the equipment and, if applicable, air-cleaning device, operating parameters that shall be monitored to detect a malfunction or failure, the normal operating range of these parameters and a description of the method of monitoring or surveillance procedures.
 - d) Identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - e) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days, if new equipment is installed or upon request from the AQD District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1205, R 336.1224, R 336.1225, R 336.1910, R 336.1911, R 336.1912)**

2. The permittee shall not combust propane in any boiler in FGBOILERS unless there is a natural gas outage at the facility. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21 (c) & (d))**
3. The permittee shall not combust propane in any boiler in FGBOILERS for more than 300 hours per year on a 12-month rolling time period basis 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))**

4. The permittee shall not combust natural gas in any boiler in FGBOILERS for more than 500 hours per year on a 12-month rolling time period basis 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))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The maximum design heat input capacity for each boiler in FGBOILERS shall not exceed 6.0 MMBtu per hour on a fuel heat input basis. **(R 336.1205, 40 CFR Part 60 Subpart Dc)**
2. The permittee shall not operate each boiler in FGBOILERS unless the low NO_x burners are installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the equipment in accordance with the MAP required in SC III.1. **(R 336.1205, R 336.1910)**

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 keep all required records and calculations in a format acceptable to the AQD District Supervisor by the 30th 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)**
2. The permittee shall monitor and record, in a satisfactory manner, the date and hours of operation (start and end time) for each boiler in FGBOILERS. **(R 336.1225, 40 CFR 52.21 (c) & (d))**
3. The permittee shall monitor and record the total hours of operation for each boiler in FGBOILERS when the boilers are operating on propane, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. **(R 336.1205(1)(a) & (3), R 336.1225)**
4. The permittee shall monitor and record the total hours of operation for each boiler in FGBOILERS when the boilers are operating on natural gas, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. **(R 336.1205(1)(a) & (3), R 336.1225)**

VII. REPORTING

1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of each boiler in FGBOILERS. **(R 336.1201(7)(a))**

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. SVBOILER1	14	26	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SVBOILER2	14	26	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SVBOILER3	14	26	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SVBOILER4	14	26	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. The permittee shall comply with all provisions of the federal National Emission Standards for Hazardous Air Pollutants for Sources as specified in 40 CFR Part 63 Subparts A and JJJJJJ, as they apply to each boiler in FGBOILERS. **(40 CFR Part 63 Subparts A & JJJJJJ)**

Footnotes:

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

FGEXTRACTION FLEXIBLE GROUP CONDITIONS

DESCRIPTION

Three (3) solvent-based extraction units and associated equipment for cannabis extraction.

Emission Unit: EUC1D1-1, EUC1D1-2, EUC1D2

POLLUTION CONTROL EQUIPMENT

NA

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. VOC	17 tpy	12-month rolling time period as determined at the end of each calendar month	FGEXTRACTION	SC VI.2	R 336.1205, R 336.1225, R 336.1702(a)

II. MATERIAL LIMIT(S)

Material	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. LPG Consumption	20,000 lb/year	12-month rolling time period as determined at the end of each calendar month	EUC1D1-1 EUC1D1-2 (combine)	SC VI.2	R 336.1225, R 336.1702(a)
2. Ethanol and denatured ethanol consumption	14,000 lb/year	12-month rolling time period as determined at the end of each calendar month	EUC1D2	SC VI.2	R 336.1225, R 336.1702(a)

3. The permittee shall only use Liquid Petroleum Gas in EUC1D1-1, EUC1D1-2. **(R 336.1225, R 336.1702(a))**

4. The permittee shall only use Ethanol in EUC1D2. **(R 336.1225, R 336.1702(a))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate FGEXTRACTION unless a malfunction abatement plan (MAP) as described in Rule 911(2), has been submitted within 60 days of permit issuance, and is implemented and maintained. The MAP shall, at a minimum, specify the following:
 - a) A complete preventative maintenance program including identification of the supervisory personnel responsible for overseeing the inspection, maintenance, and repair of air-cleaning devices, a description of the items or conditions that shall be inspected, the frequency of the inspections or repairs, and an identification of the major replacement parts that shall be maintained in inventory for quick replacement.
 - b) An identification of the source and air-cleaning device operating variables that shall be monitored to detect a malfunction or failure, the normal operating range of these variables, and a description of the method of monitoring or surveillance procedures.
 - c) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.
 - d) Identification of the major replacement parts that shall be maintained in inventory for quick replacement.

- e) A description of the corrective procedures or operational changes that shall be taken in the event of a malfunction or failure to achieve compliance with the applicable emission limits.

If at any time the MAP fails to address or inadequately addresses an event that meets the characteristics of a malfunction, the permittee shall amend the MAP within 45 days after such an event occurs. The permittee shall also amend the MAP within 45 days if new equipment is installed or upon request from the District Supervisor. The permittee shall submit the MAP and any amendments to the MAP to the AQD District Supervisor for review and approval. If the AQD does not notify the permittee within 90 days of submittal, the MAP or amended MAP shall be considered approved. Until an amended plan is approved, the permittee shall implement corrective procedures or operational changes to achieve compliance with all applicable emission limits. **(R 336.1225, R 336.1702(a), R 336.1911)**

IV. DESIGN/EQUIPMENT PARAMETER(S)

- 1. The permittee shall install, operate, and maintain the extraction processes in FGEXTRACTION according to the manufacturer specification. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a))**

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 30th 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))**
- 2. The permittee shall keep the following information on a monthly basis for each extraction process in FGEXTRACTION:
 - a) Volume or weight of each solvent used on a monthly and 12-month rolling time period as determined at the end of each calendar month
 - b) The type of solvent used
 - c) VOC content of the solvent as supplied on Safety data sheets (SDS).
 - d) VOC mass emission calculations determining the monthly emission rate in tons per calendar month.
 - e) VOC mass 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 on file at the facility, in a format specified in Appendix A or an alternate format that has been approved by the AQD District Supervisor and make them available to the Department upon request. **(R 336.1205, R 336.1225, R 336.1702(a))**

VII. REPORTING

NA

VIII. STACK/VENT RESTRICTION(S)

NA

IX. OTHER REQUIREMENT(S)

NA

**FGEMENGINES
 FLEXIBLE GROUP CONDITIONS**

DESCRIPTION

Eight (8) 796 HP (615 kW) diesel-fired emergency engine with a model year of 2011 or later, and a displacement of <10 liters/cylinder. The engine is designed to be compliant with Tier IV emission standards.

Emission Unit: EUENGINE1, EUENGINE2, EUENGINE3, EUENGINE4, EUENGINE5, EUENGINE6, EUENGINE7, EUENGINE8

POLLUTION CONTROL EQUIPMENT

Designed for Tier IV emission standards and diesel particulate filter.

I. EMISSION LIMIT(S)

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NMHC ^A +NO _x	6.4 g/kW-hr ^B (for each engine)	Hourly	FGEMENGINES	SC V.1, SC VI.2, SC VI.3	40 CFR 60.4205(b), 40 CFR 60.4202, Table 2 of Appendix I of 40 CFR 1039
2. NO _x	0.44 pph	Hourly	FGEMENGINES	SC V.2	R 336.1205, 40 CFR 52.21 (c) & (d)
3. CO	3.5 g/kW-hr ^B (for each engine)	Hourly	FGEMENGINES	SC V.1, SC VI.2, SC VI.3	40 CFR 52.21 (d) 40 CFR 60.4205(b), 40 CFR 60.4202, Table 2 of Appendix I of 40 CFR 1039
4. CO	0.12 pph	Hourly	FGEMENGINES	SC V.2	R 336.1205, 40 CFR 52.21(d)
5. PM	0.20 g/kW-hr ^B (for each engine)	Hourly	FGEMENGINES	SC V.1, SC VI.2, SC VI.3	R 336.1205(1) (a) & (3), 40 CFR 60.4205(b), 40 CFR 60.4202, Table 2 of Appendix I of 40 CFR 1039
6. PM	0.03 pph	Hourly	FGEMENGINES	SC V.2	R 336.1205, R 336.1331(1)(c)
7. VOC	0.004 pph	Hourly	FGEMENGINES	SC V.2	R 336.1205, 40 CFR 52.21 (c) & (d)

^A NMHC = nonmethane hydrocarbon

^B These emission limits are for certified engines; if testing becomes required to demonstrate compliance, then the tested values must be compared to the Not to Exceed (NTE) requirements determined through 40 CFR 60.4212(c).

II. MATERIAL LIMIT(S)

- The permittee shall burn only diesel fuel in FGEMENGINES with the maximum sulfur content of 15 ppm (0.0015 percent) by weight, and a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent. **(R 336.1205(1)(a) & (3), 40 CFR 52.21(c) & (d), 40 CFR 60.4207(b), 40 CFR 80.510(b))**

III. PROCESS/OPERATIONAL RESTRICTION(S)

1. The permittee shall not operate each engine in FGEMENGINES for more than 300 hours per year on a 12-month rolling time period basis as determined at the end of each calendar month. The 300 hours includes the hours for the purpose of necessary maintenance checks and readiness testing as described in SC III.2. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee may operate each engine in FGEMENGINES for no more than 100 hours per calendar year for the purpose of necessary maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The permittee may petition the Department for approval of additional hours to be used for maintenance checks and readiness testing. A petition is not required if the owner or operator maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. Each engine in FGEMENGINES may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per calendar year provided for maintenance and testing. Except as provided in 40 CFR 60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or demand response, or to generate income for the permittee to supply non-emergency power as part of a financial arrangement with another entity. **(40 CFR 60.4211(f))**
3. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart IIII, for the same model year and maximum engine power, the permittee shall meet the following requirements for each engine in FGEMENGINES:
 - a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions.
 - b) Change only those emission-related settings that are permitted by the manufacturer.
 - c) Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as they apply to FGEMENGINES.

If the permittee does not operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions, the engine may be considered a non-certified engine. **(40 CFR 60.4211(a) & (c))**

4. If the permittee purchased a non-certified engine or a certified engine operating in a non-certified manner, the permittee shall keep a maintenance plan for each engine in FGEMENGINES and shall, to the extent practicable, maintain and operate engine in a manner consistent with good air pollution control practice for minimizing emissions. **(40 CFR 60.4211(g)(3))**
5. The permittee shall only conduct the necessary maintenance checks and readiness testing on one engine in FGEMENGINES at a time. **(40 CFR 52.21 (c) & (d))**

IV. DESIGN/EQUIPMENT PARAMETER(S)

1. The permittee shall equip and maintain each engine in FGEMENGINES with a non-resettable hour meter to track the operating hours. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4209(a))**
2. The maximum rated power output of each engine in FGEMENGINES shall not exceed 615 kW, 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))**
3. The permittee shall not operate any engine in FGEMENGINES unless the respective diesel particulate filter is installed, maintained, and operated in a satisfactory manner. **(R 336.1205(1)(a) & (3), R 336.1331, R 336.1910)**

V. TESTING/SAMPLING

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

1. If any engine in FGEMENGINES is not installed, configured, operated, and maintained according to the manufacturer's emission-related written instructions, or the permittee changes emission-related settings in a way that is not permitted by the manufacturer, the permittee must demonstrate compliance as follows:
 - a) Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.
 - b) If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4212.
 - c) Conduct subsequent performance testing every 8,760 hours of engine operation or every 3 years, whichever comes first, thereafter, to demonstrate compliance with the applicable emission standards.

No less than 30 days prior to testing, a complete test plan shall be submitted to the AQD. 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. **(40 CFR 60.4211(g)(3), 40 CFR 60.4212)**

2. Upon the request of the AQD District Supervisor, the permittee shall verify NO_x, CO, PM, and VOC emission rates from the requested engine in FGEMENGINES by testing at owner's expense, in accordance with Department requirements. Testing shall be performed using an approved EPA Method listed in:

Pollutant	Test Method Reference
PM	40 CFR Part 60, Appendix A; Part 10 of the Michigan Air Pollution Control Rules
NO _x	40 CFR Part 60, Appendix A
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 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

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 30th 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), 40 CFR 60.4211, 40 CFR 60.4214)**
2. The permittee shall keep, in a satisfactory manner, the following records for each engine in FGEMENGINES:
 - a) For certified engine: The permittee shall keep records of the manufacturer certification documentation.
 - b) For uncertified engine: The permittee shall keep records of testing required in SC V.1.

The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for each engine in FGEMENGINES:

- a) For certified engine: The permittee shall keep records of the manufacturer's emission-related written instructions, and records demonstrating that the engine has been maintained according to those instructions, as specified in SC III.3.
- b) For uncertified engine: The permittee shall keep records of a maintenance plan, as required by SC III.4, and maintenance activities.

The permittee shall keep all records on file and make them available to the Department upon request. **(40 CFR 60.4211)**

- 4. The permittee shall monitor and record, the total hours of operation for each engine in FGEMENGINES on a monthly and 12-month rolling time period basis, and the hours of operation during emergency and non-emergency service that are recorded through the non-resettable hour meter for each engine in FGEMENGINES, on a calendar year basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of each engine in FGEMENGINES, including what classified the operation as emergency and how many hours and reason are spent for non-emergency operation. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1702(a), 40 CFR 60.4211, 40 CFR 60.4214)**
- 5. The permittee shall keep, in a satisfactory manner, fuel supplier certification records or fuel sample test data, for each delivery of diesel fuel oil used in FGEMENGINES, demonstrating that the fuel meets the requirement of 40 CFR 1090.305. The certification or test data shall include the name of the oil supplier or laboratory, the sulfur content, and cetane index or aromatic content of the fuel oil. **(R 336.1205(1)(a) & (3), 40 CFR 60.4207(b), 40 CFR 1090.305)**

VII. REPORTING

- 1. Within 30 days after completion of the installation, construction, reconstruction, relocation, or modification authorized by this Permit to Install, the permittee or the authorized agent pursuant to Rule 204, shall notify the AQD District Supervisor, in writing, of the completion of the activity. Completion of the installation, construction, reconstruction, relocation, or modification is considered to occur not later than commencement of trial operation of each engine in FGEMENGINES. **(R 336.1201(7)(a))**
- 2. The permittee shall submit a notification specifying whether each engine in FGEMENGINES will be operated in a certified or a non-certified manner to the AQD District Supervisor, in writing, within 30 days following the initial startup of the engine and within 30 days of switching the manner of operation. **(R 336.1201(3))**

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. SVEMENGINE1	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)
2. SVEMENGINE2	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)
3. SVEMENGINE3	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)
4. SVEMENGINE4	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)
5. SVEMENGINE5	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)

Stack & Vent ID	Maximum Exhaust Diameter / Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
6. SVEMENGINE6	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)
7. SVEMENGINE7	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)
8. SVEMENGINE8	8.6	20	R 336.1225, 40 CFR 52.21 (c) & (d)

IX. OTHER REQUIREMENT(S)

1. 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 each engine in FGEMENGINES. **(40 CFR Part 60 Subparts A & IIII, 40 CFR 63.6590)**
2. 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 each engine in FGEMENGINES, upon startup. **(40 CFR Part 63 Subparts A and ZZZZ, 40 CFR 63.6595)**

Footnotes:

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

APPENDIX A

Calculating VOC/HAP emissions

The permittee shall demonstrate compliance with the emission limits in this permit by keeping track of the solvent usage in the extraction process. Then completing a mass balance assuming the entire solvent contents in the products are emitted. The calculation can be done using the following equation or an alternative method can be submitted to the AQD District Supervisor.

$$VOC_{emissions} = (Product_{consumption}) * (VOC \%)$$

Where:

$$Product_{consumption} = [Beginning Inventory] + [New Purchases] - [End Inventory]$$

VOC % is in weight percent (i.e., VOC's weight percent in the product).