

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

October 13, 2022

**PERMIT TO INSTALL**  
134-22

**ISSUED TO**  
Spectrum Health

**LOCATED AT**  
100 Michigan Street NE  
Grand Rapids, Michigan 49503

**IN THE COUNTY OF**  
Kent

**STATE REGISTRATION NUMBER**  
M2032

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: <b>May 2, 2022</b>	
DATE PERMIT TO INSTALL APPROVED: <b>October 13, 2022</b>	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

    EUCOMBLABGEN..... 8

FLEXIBLE GROUP SPECIAL CONDITIONS..... 11

    FLEXIBLE GROUP SUMMARY TABLE ..... 11

    FGBOILERS ..... 12

    FGENGINES..... 15

    FGCHPS..... 19

FGFACILITY CONDITIONS..... 24

## 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 <sub>2</sub> 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 <sub>2</sub> S	Hydrogen Sulfide
kW	Kilowatt
lb	Pound
m	Meter
mg	Milligram
mm	Millimeter
MM	Million
MW	Megawatts
NMOC	Non-Methane Organic Compounds
NO <sub>x</sub>	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 <sub>2</sub>	Sulfur Dioxide
TAC	Toxic Air Contaminant
Temp	Temperature
THC	Total Hydrocarbons
tpy	Tons per year
µg	Microgram
µm	Micrometer or Micron
VOC	Volatile Organic Compounds
yr	Year

## GENERAL CONDITIONS

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

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

## EMISSION UNIT SPECIAL CONDITIONS

### EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Including Process Equipment & Control Device(s))	Installation Date / Modification Date	Flexible Group ID
EUBOILER1	An 800 BHP dual fired boiler with a maximum heat input rating of 32.5 million Btu (MMBtu) per hour. This supplement boiler (on demand) will generate steam to operate the hospital. The boiler will be fired with natural gas or No. 2 fuel oil.	October 1993 / 7/28/10	FGBOILERS
EUBOILER2	An 800 BHP dual fired boiler with a maximum heat input rating of 32.5 million Btu (MMBtu) per hour. This supplement boiler (on demand) will generate steam to operate the hospital. The boiler will be fired with natural gas or No. 2 fuel oil.	October 1993 / 7/28/10	FGBOILERS
EUBOILER3	An 800 BHP dual fired boiler with a maximum heat input rating of 32.65 million Btu (MMBtu) per hour. The boiler will be the primary steam generation source to operate the hospital. The boiler will be fired with natural gas or No. 2 fuel oil.	7/28/10	FGBOILERS
EUSBJ00873	A Caterpillar Model 3516 diesel emergency generator (2000 kW).  This unit is subject to NSPS IIII and NESHAP ZZZZ.	7/1/10	FGENGINES
EUSBJ00876	A Caterpillar Model 3516 diesel emergency generator (2000 kW).  This unit is subject to NSPS IIII and NESHAP ZZZZ.	7/1/10	FGENGINES
EU6HN01650	A Caterpillar Model 3516 diesel emergency generator (2000 kW).	6/3/03	FGENGINES
EU6HN00382	A Caterpillar Model 3516 diesel emergency generator (2000 kW).	1/1/00	FGENGINES
EU6HN00383	A Caterpillar Model 3516 diesel emergency generator (2000 kW).	1/1/00	FGENGINES
EULHCPGENSET	A Kohler Model 1600 REOZM emergency generator (1.6 MW).  This unit is subject to NSPS IIII and NESHAP ZZZZ.	6/1/08	FGENGINES
EUCOMBLABGEN	A 1040 kW (1462 hp) natural gas fueled emergency engine manufactured in 2011.  This unit is subject to NSPS JJJJ and NESHAP ZZZZ.	6/14/11	NA

<b>Emission Unit ID</b>	<b>Emission Unit Description (Including Process Equipment &amp; Control Device(s))</b>	<b>Installation Date / Modification Date</b>	<b>Flexible Group ID</b>
EUCHP1	One combined heat and power (CHP) engine rated at 23.4 MMBtu/hr (3457 bhp) used for electricity generation and heat via steam. The engine is equipped with an oxidation catalyst for controlling VOCs and CO.	TBD	FGCHPS
EUCHP2	One combined heat and power (CHP) engine rated at 23.4 MMBtu/hr (3457 bhp) used for electricity generation and heat via steam. The engine is equipped with an oxidation catalyst for controlling VOCs and CO.	TBD	FGCHPS

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.

**EUCOMBLABGEN  
EMISSION UNIT CONDITIONS**

**DESCRIPTION**

A 1040 kilowatt (1462 hp) natural gas fueled emergency engine manufactured in 2011. This unit is subject to NSPS JJJJ and NESHAP ZZZZ.

**Flexible Group ID:** NA

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. NO <sub>x</sub>	2.0 g/hp-hr	Hourly	EUCOMBLABGEN	SC VI.2	40 CFR 60.4233(e), Table 1
2. VOC	1.0 g/hp-hr	Hourly	EUCOMBLABGEN	SC VI.2	40 CFR 60.4233(e), Table 1
3. CO	4.0 g/hp-hr	Hourly	EUCOMBLABGEN	SC VI.2	40 CFR 60.4233(e), Table 1

**II. MATERIAL LIMIT(S)**

1. The permittee shall burn only pipeline natural gas in EUCOMBLABGEN. **(R 336.1205(1)(a), 40 CFR 60.4230)**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate EUCOMBLABGEN for more than 250 hours per 12-month rolling time period as determined at the end of each calendar month. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The permittee may operate EUCOMBLABGEN 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, 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 permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency internal combustion engines beyond 100 hours per calendar year. EUCOMBLABGEN may operate up to 50 hours per calendar year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply non-emergency power as part of a financial arrangement with another entity, except as provided in paragraph 40 CFR 60.4243(d)(3)(i). **(40 CFR 60.4243(d))**
3. If EUCOMBLABGEN is a certified engine, according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for EUCOMBLABGEN:
  - a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions;
  - b) Meet the requirements as specified in 40 CFR Part 1068 Subparts A through D, as applicable, including labeling and maintaining certified engines according to the manufacturer's recommendations; and

- c) Only change those engine settings that are permitted by the manufacturer.

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 will be considered a non-certified engine and be subject to SC III.4. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 60.4234, 40 CFR 60.4243(a) & (b)(1))**

4. If EUCOMBLABGEN is a non-certified engine and control device or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, the permittee shall keep a maintenance plan for EUCOMBLABGEN and shall, to the extent practicable, maintain and operate EUCOMBLABGEN in a manner consistent with good air pollution control practice for minimizing emissions. **(R 336.1205(1)(a) & (3), R 336.1225, R 336.1911, 40 CFR 52.21(c) & (d), 40 CFR 60.4234, 40 CFR 60.4243(a)(2) & (b)(2))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. EUCOMBLABGEN shall be certified to meet the applicable emission standard of 40 CFR 60.4233. The permittee shall install and configure EUCOMBLABGEN according to the manufacturer's specifications. **(40 CFR 60.4243(b))**
2. The permittee shall equip and maintain EUCOMBLABGEN with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4237)**
3. The nameplate capacity of EUCOMBLABGEN shall not exceed 1040 kW, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), 40 CFR 60.4230(a)(4)(iv))**

#### **V. TESTING/SAMPLING**

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

1. Except as provided in 40 CFR 60.4243(b), the permittee shall conduct an initial performance test EUCOMBLABGEN within one year after startup of the engine and every 8760 hours of operation (as determined through the use of a non-resettable hour meter) or three years, whichever occurs first, to demonstrate compliance with the emission limits in 40 CFR 60.4233(e), unless the engines have been certified by the manufacturer in accordance with 40 CFR Part 60 Subpart JJJJ and the permittee maintains the engine as required by 40 CFR 60.4243(a)(1). If a performance test is required, the performance tests shall be conducted according to 40 CFR 60.4244. No less than 30 days prior to any 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. 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. **(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 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) & (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4243, 40 CFR 60.4245)**
2. The permittee shall keep, in a satisfactory manner, the following records for EUCOMBLABGEN:
  - a) If certified: The permittee shall keep records of the documentation from the manufacturer that EUCOMBLABGEN is certified to meet the emission standards and information as required in 40 CFR Parts 90, 1048, 1054, and 1060, as applicable.
  - b) If non-certified: 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. **(R 336.1205(1)(a) & (b), 40 CFR 52.21(c) & (d), 40 CFR 60.4233(e), 40 CFR 60.4243, 40 CFR 60.4245(a))**

3. The permittee shall keep, in a satisfactory manner, the following records of maintenance activity for EUCOMBLABGEN:
- a) If certified: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that EUCOMBLABGEN has been maintained according to them, as specified in SC III.3.
  - b) If non-certified: 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 60.4243, 40 CFR 60.4245(a), 40 CFR Part 60 Subpart JJJJ)**

4. The permittee shall monitor and record the total hours of operation for EUCOMBLABGEN, on a monthly and 12-month rolling time period basis, in a manner acceptable to the AQD District Supervisor. The permittee shall monitor and record the number of hours individually spent for emergency and non-emergency operation, including what classified the operation as emergency, for EUCOMBLABGEN, on a calendar year time period basis, in a manner acceptable to the AQD District Supervisor. **(R 336.1205(1)(a) & (b), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d), 40 CFR 60.4243, 40 CFR 60.4245(b))**
5. The permittee shall keep records of all notifications submitted to comply with 40 CFR Part 60 Subpart JJJJ, and all documentation supporting any notification. **(40 CFR 60.4245(a))**

## **VII. REPORTING**

NA

## **VIII. STACK/VENT RESTRICTION(S)**

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

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-COMBLABGEN*	12	65	R 336.1225, 40 CFR 52.21(c) & (d)

\* This engine is allowed a horizontal discharge.

## **IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all provisions of the federal Standards of Performance for New Stationary Sources as specified in 40 CFR Part 60 Subparts A and JJJJ, as they apply to EUCOMBLABGEN. **(40 CFR Part 60, Subparts A & JJJJ, 40 CFR 63.6590(c))**
2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines, as they apply to EUCOMBLABGEN. **(40 CFR Part 63, Subparts A & ZZZZ)**

## 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
FGBOILERS	One primary 800 BHP dual fired boiler (EUBOILER3) with a maximum heat input rating of 32.65 million Btu (MMBtu) per hour. Two supplement boilers (EUBOILER1 and EUBOILER2), each 800 HP dual fired with a maximum heat input rating of 32.5 million Btu per hour. The primary purpose of these boilers will be steam generation to operate the hospital. All three boilers will be fired with natural gas or No. 2 fuel oil.	EUBOILER1, EUBOILER2, EUBOILER3
FGENGINES	Five 2000kW diesel emergency generators and one 1600kW diesel emergency generator.	EUSBJ00873, EUSBJ00876, EU6HN01650, EU6HN00382, EU6HN00383, EULHCPGENSET
FGCHPS	Two 23.4 MMBTU/hr CHPs used for electricity generation and heat via steam.	EUCHP1, EUCHP2

## FGBOILERS FLEXIBLE GROUP CONDITIONS

**DESCRIPTION**

One primary 800 BHP dual fired boiler (EUBOILER3) with a maximum heat input rating of 32.65 million Btu (MMBtu) per hour. Two supplement boilers (EUBOILER1 and EUBOILER2), each 800 HP dual fired with a maximum heat input rating of 32.5 million Btu per hour. The primary purpose of these boilers will be steam generation to operate the hospital. All three boilers will be fired with natural gas or No. 2 fuel oil.

**Emission Unit:** EUBOILER1, EUBOILER2, and EUBOILER3

**POLLUTION CONTROL EQUIPMENT**

These boilers will be equipped with the oxygen trim packages to allow for more efficient operation and automatic fuel monitors for recordkeeping purpose. EUBOILER3 will be equipped with a low NO<sub>x</sub> natural gas burner with auxiliary No. 2 fuel oil.

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO <sub>x</sub>	5.2 pph per boiler 1 or 2	Hourly	EUBOILER1 or EUBOILER2	SC V.2, SC VI.2	R 336.1205(1)(a), 40 CFR 52.21(c) & (d)
2. NO <sub>x</sub>	6.1 pph per boiler 3	Hourly	EUBOILER-3	SC V.2, SC VI.2	R 336.1205(1)(a), 40 CFR 52.21(c) & (d)
3. Opacity	10 percent	6-minute average, (except one 6-minute average per hour of not more than 27 percent)	FGBOILERS	SC V.1	R 336.1301(c), 40 CFR Part 60, Subpart Dc
4. NO <sub>x</sub>	0.07 lb/MMBTU (71.4 lb/MMcf)	Hourly	FGBOILERS	SC V.1	R 336.1205(1)(a), 40 CFR 52.21(c) & (d)

**II. MATERIAL LIMIT(S)**

1. The permittee shall only fire the FGBOILERS by using natural gas or No. 2 fuel oil. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a), 40 CFR 52.21(c) & (d))**
2. The sulfur content of the No. 2 fuel oil purchased for firing in FGBOILERS from the date of issuance of this permit shall not exceed 15 ppm (0.0015 percent by weight). **(R 336.1205(1)(a), R 336.1402(1), 40 CFR 52.21(c) & (d), 40 CFR 60 Subpart A & Dc)**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate FGBOILERS unless a malfunction abatement plan (MAP) as described in Rule 911(2) has been submitted to the AQD District Supervisor and is implemented and maintained. 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 operation changes to achieve compliance with all applicable emissions limits. **(R 336.1911)**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate FGBOILERS unless the oxygen trim package is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the control device in accordance with an approved malfunction abatement plan (MAP) for FGBOILERS as required in SC III.1. **(R 336.1205(1)(a), R 336.1901, R 336.1910, 40 CFR 52.21(c) & (d))**
2. The permittee shall not operate EUBOILER3 unless a low NO<sub>x</sub> natural gas burner with auxiliary No. 2 fuel oil is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining the control device in accordance with an approved malfunction abatement plan (MAP) for FGBOILERS as required in SC III.1. **(R 336.1205(1)(a), R 336.1901, R 336.1910, 40 CFR 52.21(c) & (d))**
3. EUBOILER1 and EUBOILER2 shall not exceed a maximum heat input rating of 32.5 million Btu per hour. **(R 336.1205(1)(a))**
4. EUBOILER3 shall not exceed a maximum heat input rating of 32.65 million Btu per hour. **(R 336.1205(1)(a))**

#### **V. TESTING/SAMPLING**

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

1. For No. 2 fuel oil only, 180 days after issuance of this permit, the permittee shall conduct an opacity performance test for EUBOILER1, EUBOILER2 and EUBOILER3 of the FGBOILERS by testing at owner's expense, in accordance with federal Standards of Performance for New Stationary Sources 40 CFR Part 60 Subparts A and Dc. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of an opacity performance 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 Part 60 Subparts A & Dc)**
2. Upon request from District Supervisor, Air Quality Division, the permittee shall verify NO<sub>x</sub> emission rates from FGBOILERS by testing at owner's expense, in accordance with Department requirements. No less than 60 days prior to testing, the permittee shall submit a complete test plan to the AQD. The AQD must approve the final plan prior to testing. Verification of emission rates includes the submittal of a complete report of the test results to the AQD within 60 days following the last date of the test. **(R 336.1205(1)(a), 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 maintain records for FGBOILERS for all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to, the following:
  - a) Initial compliance tests and any testing required under 40 CFR Subpart Dc or the special conditions of this permit.
  - b) Monthly fuel usage records for both natural gas and No. 2 oil shall be maintained separately for each boiler.
  - c) For any boiler burning distillate oil compliance with the SO<sub>2</sub> standard shall be demonstrated by utilization of fuel sulfur content of less than or equal to 0.0015 percent by weight.

All of the above information shall be stored in a format acceptable to the Air Quality Division and shall be consistent with the requirements of 40 CFR Part 60, Subparts A and Dc. **(R 336.1205(1)(a), R 336.1401, R 336.1901, 40 CFR 60 Subparts A & Dc)**

2. The permittee shall monitor, record, and calculate the following for the FGBOILERS:
  - a) For each boiler:
    - i) Usage amount of No. 2 fuel oil per day;
    - ii) Usage amount of natural gas per month,
  - b) For each boiler:
    - i) Actual operating hours per day when operating on No. 2 fuel oil;
    - ii) Actual operating hours per month when operating on natural gas,
  - c) For each delivery of No. 2 fuel oil, a complete record of No. 2 fuel oil, specifications and/or a fuel analysis. These records shall include purchase records for ASTM specification fuel oil, specifications or analyses provided by the vendor at the time of delivery, analytical results from laboratory testing, or any other records adequate to demonstrate compliance with the percent sulfur limit in the No. 2 fuel oil.,
  - d) All calculations necessary to show compliance with the emissions limits contained in this permit by a method approved by the AQD District Supervisor.

All of the information shall be stored in a format acceptable to the Air Quality Division. **(R 336.1205(1)(a), 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subparts A & Dc)**

## **VII. REPORTING**

1. The permittee shall comply with the reporting requirements listed in 40 CFR Part 60, Subparts A and Dc for the operation of each boiler. **(40 CFR Part 60, Subpart A & Dc)**
2. The permittee shall maintain records for FGBOILERS for all information necessary for all notifications and reports as specified in these special conditions as well as that information necessary to demonstrate compliance with the emission limits of this permit. This information shall include, but shall not be limited to, the following:
  - a) Date of original construction or reconstruction, and anticipated startup (Natural gas and distillate oil).
  - b) The design heat-input capacity of the boiler and identification of the fuels to be combusted in the boiler (Natural gas and distillate oil).
  - c) The annual capacity (fuel consumption) at which you anticipate operating the boiler, based on all fuels fired and based on each individual fuel fired (Natural gas and distillate oil).
  - d) If an emerging technology will be used for controlling sulfur dioxide (SO<sub>2</sub>) emissions (Distillate oil only). **(40 CFR Part 60, Subpart A & Dc)**

## **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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-BOILER1	38	99	R 336.1225, R 336.1901 40 CFR 52.21(c) & (d)
2. SV-BOILER2	38	99	R 336.1225, R 336.1901 40 CFR 52.21(c) & (d)
3. SV-BOILER3	46	99	R 336.1225, R 336.1901 40 CFR 52.21(c) & (d)

## **IX. OTHER REQUIREMENT(S)**

1. The permittee shall comply with all of the applicable requirements contained in the 40 CFR Part 60, Subparts A and Dc, as applicable to FGBOILERS. **(40 CFR Part 60, Subparts A and Dc)**

## FGENGINES FLEXIBLE GROUP CONDITIONS

**DESCRIPTION**

Five 2000kW diesel emergency generators and one 1600kW diesel emergency generator.

**Emission Unit:** EUSBJ00873, EUSBJ00876, EU6HN01650, EU6HN00382, EU6HN00383, EULHCPGENSET

**POLLUTION CONTROL EQUIPMENT**

NA

**I. EMISSION LIMIT(S)**

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Monitoring / Testing Method	Underlying Applicable Requirements
1. NO <sub>x</sub>	515 lb/1,000 gal	Hourly	EUSBJ00873 EUSBJ00876 EULHCPGENSET	SC V.1 SC VI.1	R 336.1205(1)(a) & (3)
2. NO <sub>x</sub>	515 lb/1,000 gal	Hourly	EU6HN01650 EU6HN00382 EU6HN00383	SC V.1 SC VI.1	R 336.1205(1)(a) & (3)
3. CO	3.5 g/kW-hr	Hourly	EUSBJ00873 EUSBJ00876 EULHCPGENSET	SC V.1 SC VI.1	40 CFR 60.4205(b), 40 CFR 1039
4. NMHC + NO <sub>x</sub>	6.4 g/kW-hr	Hourly	EUSBJ00873 EUSBJ00876 EULHCPGENSET	SC V.1 SC VI.1	40 CFR 60.4205(b), 40 CFR 1039
5. PM	0.2 g/kW-hr	Hourly	EUSBJ00873 EUSBJ00876 EULHCPGENSET	SC V.1 SC VI.1	40 CFR 60.4205(b), 40 CFR 1039

**II. MATERIAL LIMIT(S)**

- The permittee shall burn only diesel fuel in EUSBJ00873, EUSBJ00876, and EULHCPGENSET 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 60.4207, 40 CFR 80.510(b))**
- The permittee shall burn only diesel fuel in EU6HN01650, EU6HN00382, and EU6HN00383 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))**

**III. PROCESS/OPERATIONAL RESTRICTION(S)**

- The permittee shall operate FGENGINES in accordance with manufacturer’s recommendations for safe and proper operation to minimize emissions during period of startup, shutdown and malfunction. **(R 336.1912)**
- The permittee may operate EUSBJ00873, EUSBJ00876, and EULHCPGENSET individually 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. Engines EUSBJ00873, EUSBJ00876, and EULHCPGENSET 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 EUSBJ00873, EUSBJ00876, and EULHCPGENSET:
  - 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; and
  - c) Meet the requirements as specified in 40 CFR 89, 94, and/or 1068, as they apply 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 may be considered a non-certified engine. **(40 CFR 60.4211(a))**

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 EUSBJ00873, EUSBJ00876, and EULHCPGENSET 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))**

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the fuel use for FGENGINES on a monthly basis. **(R 336.1205(1)(a), R 336.1224, R 336.1225, R 336.1702, 40 CFR 52.21(c) & (d))**
2. The permittee shall equip and maintain each unit in EUSBJ00873, EUSBJ00876, and EULHCPGENSET with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4209)**
3. The permittee shall equip and maintain each unit in EU6HN01650, EU6HN00382, and EU6HN00383 with non-resettable hours meters to track the operating hours. **(R 336.1205(1)(a) & (3), R 336.1225)**
4. The maximum rated power output of EUSBJ00873 and EUSBJ00876 shall not exceed 2000 kW (2680 HP), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4202, 40 CFR 1039)**
5. The maximum rated power output of EULHCPGENSET shall not exceed 1600 kW (2144.32 HP), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), R 336.1225, 40 CFR 60.4202, 40 CFR 1039)**
6. The maximum rated power output of EU6HN01650, EU6HN00382, and EU6HN00383 shall not exceed 2000 kW (2680 HP), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), R 336.1225)**

#### **V. TESTING/SAMPLING**

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

1. Verification of the NO<sub>x</sub> emission limits from one or more representative units of FGENGINES, by testing at owner's expense, in accordance with Department requirements may be required. No less than 60 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 the emission factor includes the submittal of a complete report of the test result

to the AQD within 60 days following the last date of the test. **(R 336.1205(1)(a), R 336.2001, R 336.2003, R 336.2004)**

2. If EUSBJ00873, EUSBJ00876, and EULHCPGENSET are 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)**

## **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), 40 CFR 52.21 (c) & (d))**
2. The permittee shall keep, in a satisfactory manner, the following records for EUSBJ00873, EUSBJ00876, and EULHCPGENSET:
  - a) For each certified engine: The permittee shall keep records of the manufacturer certification documentation.
  - b) For each uncertified engine: The permittee shall keep records of testing required in SC V.2.

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 EUSBJ00873, EUSBJ00876, and EULHCPGENSET:
  - a) For each 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 each 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 and the hours of operation during non-emergencies for EUSBJ00873, EUSBJ00876, and EULHCPGENSET, on a monthly and 12-month rolling time period basis, in a manner acceptable to the AQD District Supervisor. The permittee shall document how many hours are spent for emergency operation of EUSBJ00873, EUSBJ00876, and EULHCPGENSET, including what classified the operation as emergency. **(R 336.1205(1)(a) & (3), 40 CFR 60.4211, 40 CFR 60.4214)**
5. The permittee shall monitor and record the total hours of operation and the hours of operation during non-emergencies for EU6HN01650, EU6HN00382, and EU6HN00383 on a monthly and 12-month rolling time period 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 EU6HN01650, EU6HN00382, and EU6HN00383,

including what classified the operation as emergency. **(R 336.1205(1)(a) & (3), 40 CFR Part 63, Subpart ZZZZ)**

6. The permittee shall monitor and record in a satisfactory manner the diesel fuel usage rate for FGEngines on a monthly and 12-month rolling time period basis. The permittee shall keep all records on file 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))**

**VII. REPORTING**

1. The permittee shall submit a notification specifying whether EUSBJ00873, EUSBJ00876, and EULHCPGENSET 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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SV-SBJ00873	18	99	R 336.1225, 40 CFR 52.21(c) & (d)
2. SV-SBJ00876	18	99	R 336.1225, 40 CFR 52.21(c) & (d)
3. SV-6HN01650	16	51	R 336.1225, 40 CFR 52.21(c) & (d)
4. SV-6HN00382	16	51	R 336.1225, 40 CFR 52.21(c) & (d)
5. SV-6HN00383	16	51	R 336.1225, 40 CFR 52.21(c) & (d)
6. SV-LHCPGENSET	16	25	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 EUSBJ00873, EUSBJ00876, and EULHCPGENSET. **(40 CFR Part 60 Subparts A & IIII, 40 CFR 63.6590)**
2. The permittee shall comply with all provisions of the National Emission Standards for Hazardous Air Pollutants, as specified in 40 CFR Part 63, Subpart A and Subpart ZZZZ, for Stationary Reciprocating Internal Combustion Engines, as it applies to each engine in FGEngines. **(40 CFR Part 63, Subparts A & ZZZZ)**

**FGCHPS  
FLEXIBLE GROUP CONDITIONS**

**DESCRIPTION**

Two 23.4 MMBTU/hr CHPs used for electricity generation and heat via steam.

**Emission Unit:** EUCHP1, EUCHP2

**POLLUTION CONTROL EQUIPMENT**

Oxidation Catalyst on each engine for control of CO and VOC.

**I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. NO <sub>x</sub> <sup>a</sup>	1.0 g/hp-hr Or 82 ppmvd @15%O <sub>2</sub>	Hourly	Each engine within FGCHPS	SC V.2 SC VI.3	40 CFR 60.4233(e), Table 1 of 40 CFR Part 60 Subpart JJJJ
2. CO <sup>a</sup>	2.0 g/hp-hr Or 270 ppmvd @15%O <sub>2</sub>	Hourly	Each engine within FGCHPS	SC V.2 SC VI.3	40 CFR 60.4233(e), Table 1 of 40 CFR Part 60 Subpart JJJJ
3. VOC <sup>a</sup> (excludes formaldehyde)	0.7 g/hp-hr Or 60 ppmvd @15%O <sub>2</sub>	Hourly	Each engine within FGCHPS	SC V.2 SC VI.3	40 CFR 60.4233(e), Table 1 of 40 CFR Part 60 Subpart JJJJ
4. NO <sub>x</sub>	33.4 tpy	12-month rolling time period as determined at the end of each calendar month.	FGCHPS (total of both engines)	SC VI.2	R 336.1205 (1)(a) & (3), 40 CFR 52.21 (c) & (d)
5. NO <sub>x</sub>	3.81 pph	Hourly	Each engine within FGCHPS	SC V.1	40 CFR 52.21 (c) & (d)
6. CO	12.4 tpy	12-month rolling time period as determined at the end of each calendar month.	FGCHPS (total of both engines)	SC VI.2	R 336.1205 (1)(a) & (3), 40 CFR 52.21 (c) & (d)
7. CO	1.42 pph	Hourly	Each engine within FGCHPS	SC V.1	40 CFR 52.21 (c) & (d)
8. VOC (includes formaldehyde)	1.51 pph	Hourly	Each engine within FGCHPS	SC V.1	R 336.1702(a)
9. Formaldehyde	0.185 pph	Hourly	Each engine within FGCHPS	SC V.1	R 336.1224, R 336.1225(2)

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

<sup>a</sup> Per footnote "a" of 40 CFR Part 60 Subpart JJJJ, owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O<sub>2</sub>.

## **II. MATERIAL LIMIT(S)**

1. The permittee shall burn only natural gas in each engine within FGCHPS. **(R 336.1205(1)(a), R 336.1225, R 336.1702(a))**

## **III. PROCESS/OPERATIONAL RESTRICTION(S)**

1. The permittee shall not operate FGCHPS unless a malfunction abatement plan (MAP) as described in Rule 911(2), for operation of engines with oxidation catalyst, has been submitted within 90 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.

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 336.1910, R 336.1911, 40 CFR 52.21(c) & (d))**

2. The permittee shall keep a maintenance plan for FGCHPS 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))**
3. The permittee shall operate and maintain each engine within FGCHPS such that it meets the emission limits in SC I.1, SC I.2, and SC I.3 over the entire life of the engine. **(40 CFR 60.4234, 40 CFR 60.4243(b))**
4. If the permittee purchased a certified engine, according to procedures specified in 40 CFR Part 60 Subpart JJJJ, for the same model year, the permittee shall meet the following requirements for each engine within FGCHPS:
  - a) Operate and maintain the certified engine and control device according to the manufacturer's emission-related written instructions,
  - b) May only adjust engine settings according to and consistent with the manufacturer's emission-related written instructions,
  - c) Meet the requirements as specified in 40 CFR 1068 Subparts A through D.

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 will be considered a non-certified engine. **(40 CFR 60.4243(b)(1))**

5. 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 and records of conducted maintenance for each engine within FGCHPS 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))**

## **IV. DESIGN/EQUIPMENT PARAMETER(S)**

1. The permittee shall not operate either engine within FGCHPS unless the associated oxidation catalyst is installed, maintained, and operated in a satisfactory manner. Satisfactory manner includes operating and maintaining each control device in accordance with an approved MAP for each engine as required in SC III.1. **(R 336.1205(1)(a) & (3), R 336.1224, R 336.1225, R 336.1702(a), R 336.1910, 40 CFR 52.21(c) & (d), 40 CFR Part 60 Subpart JJJJ)**
2. The nameplate capacity of each engine within FGCHPS shall not exceed 23.4 MMBTU/hr (3457 bhp), as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), 40 CFR 60.4230)**

## **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, the permittee shall verify NO<sub>x</sub>, CO, VOC, and formaldehyde emission rates from each engine within FGCHPS by testing at owner's expense, in accordance with Department requirements. Subsequent testing shall be performed by the permittee upon the request of the AQD District Supervisor. Testing shall be performed using an approved EPA Method listed below.

<b>Pollutant</b>	<b>Test Method Reference</b>
NO <sub>x</sub>	40 CFR Part 60, Appendix A
CO	40 CFR Part 60, Appendix A
VOCs	40 CFR Part 60, Appendix A
HAPs (formaldehyde)	40 CFR Part 63, Appendix A

An alternate method, or a modification to the approved EPA Method, may be specified in an AQD approved Test Protocol and must meet the requirements of the federal Clean Air Act, all applicable state and federal rules and regulations, and be within the authority of the AQD to make the change. No less than 30 days prior to testing, the permittee shall submit a complete test plan to the AQD Technical Programs Unit and District Office. The AQD must approve the final plan prior to testing, including any modifications to the method in the test protocol that are proposed after initial submittal. The permittee must submit a complete report of the test results to the AQD Technical Programs Unit and District Office within 60 days following the last date of the test. **(R 336.1205, R 336.1224, R 336.1225, R 336.1702, R 336.1902, R 336.2001, R 336.2003, R 336.2004, 40 CFR 52.21(c) & (d))**

2. If either engine within FGCHPS is a non-certified engine and control device or a certified engine operating in a non-certified manner, per 40 CFR Part 60 Subpart JJJJ, 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 the engines in FGCHPS will be operated, but no later than 180 days after initial startup.
  - b) If a performance test is required, 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 3 years, whichever comes first.

If a performance test is required, 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. **(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 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, 40 CFR 52.21(c) & (d))**
2. The permittee shall calculate and keep, in a satisfactory manner, records of monthly and 12-month rolling total NO<sub>x</sub>, CO, and formaldehyde mass emissions for FGCHPS, as required by SC I.4 and I.6. The

permittee shall keep all records on file and make them available to the Department upon request.  
**(R 336.1205(1)(a) & (3), R 336.1225(2), 40 CFR 52.21(c) & (d))**

3. The permittee shall keep, in a satisfactory manner, records of test reports for FGCHPS, as required in SC V.1. The permittee shall keep all records on file and make them available to the Department upon request.  
**(R 336.1205(1)(a) & (3), R 336.1225(2), 40 CFR 52.21(c) & (d))**
4. The permittee shall keep, in a satisfactory manner, all records related to, or as required by, the MAP as specified in SC III.1. **(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))**
5. The permittee shall keep, in a satisfactory manner, the following records for each engine in FGCHPS:
  - a) All notifications submitted to comply with this subpart and all documentation supporting any notification.
  - b) Maintenance conducted on the engine.
  - c) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 1048, 1054, and 1060, as applicable.
  - d) If the stationary SI internal combustion engine is not a certified engine or is a certified engine operating in a non-certified manner, documentation that the engine meets the emission standards.
    - i. Testing for each engine, as required in SC V.2.
    - ii. Maintenance activities for each engine, as required by SC III.2.

The permittee shall keep all records on file and make them available to the Department upon request.  
**(40 CFR 60.4245(a))**

## **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 FGCHPS. **(R 336.1201(7)(a))**
2. The permittee shall submit a notification specifying whether each engine included in FGCHPS 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))**
3. If any engine in FGCHPS has not been certified by an engine manufacturer to meet the emission standards in 40 CFR 60.4231, the permittee shall submit an initial notification as required in 40 CFR 60.7(a)(1). The notification must include the following information:
  - a) The date construction of the engine commenced.
  - b) Name and address of the owner or operator.
  - c) The address of the affected source.
  - d) The engine information including make, model, engine family, serial number, model year, maximum engine power, and engine displacement.
  - e) The emission control equipment.
  - f) Fuel used in the engine.

The notification must be postmarked no later than 30 days after construction commenced for each engine.  
**(40 CFR 60.7(a)(1), 40 CFR 60.4245(c))**

## **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:

<b>Stack &amp; Vent ID</b>	<b>Maximum Exhaust Diameter / Dimensions (inches)</b>	<b>Minimum Height Above Ground (feet)</b>	<b>Underlying Applicable Requirements</b>
1. SVCHP1	24	138	R 336.1225, 40 CFR 52.21(c) & (d)
2. SVCHP2	24	138	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 FGCHPS. **(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 FGCHPS. **(40 CFR Part 63 Subparts A & ZZZZ)**

## FGFACILITY CONDITIONS

### **DESCRIPTION**

The following conditions apply source-wide to all process equipment including equipment covered by other permits, grand-fathered equipment, and exempt equipment.

### **POLLUTION CONTROL EQUIPMENT**

The boilers will be equipped with the oxygen trim packages to allow for more efficient operation and automatic fuel monitors for recordkeeping purpose. EUBOILER3 will be equipped with low NO<sub>x</sub> natural gas burner with auxiliary No. 2 fuel oil. The new CHP engines will each be equipped with an oxidation catalyst for CO and VOC control.

#### **I. EMISSION LIMIT(S)**

<b>Pollutant</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. NO <sub>x</sub>	89.2 tpy	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC VI.1	R 336.1205(1)(a) & (3)

#### **II. MATERIAL LIMIT(S)**

<b>Material</b>	<b>Limit</b>	<b>Time Period / Operating Scenario</b>	<b>Equipment</b>	<b>Monitoring / Testing Method</b>	<b>Underlying Applicable Requirements</b>
1. Diesel (No. 2 fuel oil)	100,000 gal/ yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC.VI.1	R 336.1205(1)(a) & (3)
2. Natural gas	1160 MMcf/ yr	12-month rolling time period as determined at the end of each calendar month	FGFACILITY	SC.VI.1	R 336.1205(1)(a) & (3)

#### **III. PROCESS/OPERATIONAL RESTRICTION(S)**

NA

#### **IV. DESIGN/EQUIPMENT PARAMETER(S)**

NA

#### **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 monitor and record in a satisfactory manner the diesel fuel and natural gas usage rate for each unit in FGFACILITY on a monthly basis. The permittee shall also calculate and keep the total diesel and natural gas usage rate for FGFACILITY on a monthly and 12-month rolling time basis. The permittee shall keep all records on file and make them available to the Department upon request. **(R 336.1205(1)(a) & (3))**

**VII. REPORTING**

NA

**VIII. STACK/VENT RESTRICTION(S)**

NA

**IX. OTHER REQUIREMENT(S)**

NA