MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION

December 19, 2018

PERMIT TO INSTALL
112-18

ISSUED TO
Spectrum Health

LOCATED AT
100 Michigan Street NE
Grand Rapids, Michigan

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

DATE OF RECEIPT OF ALL INFORMATION REQUIRED BY RULE 203: **August 13, 2018**	
DATE PERMIT TO INSTALL APPROVED: **December 19, 2018**	SIGNATURE:
DATE PERMIT VOIDED:	SIGNATURE:
DATE PERMIT REVOKED:	SIGNATURE:

PERMIT TO INSTALL

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Common Abbreviations / Acronyms

Common Acronyms		Pollutant / Measurement Abbreviations	
AQD	Air Quality Division	acfm	Actual cubic feet per minute
BACT	Best Available Control Technology	BTU	British Thermal Unit
CAA	Clean Air Act	°C	Degrees Celsius
CAM	Compliance Assurance Monitoring	CO	Carbon Monoxide
CEM	Continuous Emission Monitoring	CO_2e	Carbon Dioxide Equivalent
CFR	Code of Federal Regulations	dscf	Dry standard cubic foot
COM	Continuous Opacity Monitoring	dscm	Dry standard cubic meter
Department/ department	Michigan Department of Environmental Quality	°F	Degrees Fahrenheit
		gr	Grains
EU-	Emission Unit	HAP	Hazardous Air Pollutant
FG-	Flexible Group	Hg	Mercury
GACS	Gallons of Applied Coating Solids	hr	Hour
GC	General Condition	HP	Horsepower
GHGs	Greenhouse Gases	H_2S	Hydrogen Sulfide
HVLP	High Volume Low Pressure*	kW	Kilowatt
ID	Identification	lb	Pound
IRSL	Initial Risk Screening Level	m	Meter
ITSL	Initial Threshold Screening Level	mg	Milligram
LAER	Lowest Achievable Emission Rate	mm	Millimeter
MACT	Maximum Achievable Control Technology	MM	Million
MAERS	Michigan Air Emissions Reporting System	MW	Megawatts
MAP	Malfunction Abatement Plan	NMOC	Non-methane Organic Compounds
MDEQ	Michigan Department of Environmental Quality	NO_x	Oxides of Nitrogen
		ng	Nanogram
MSDS	Material Safety Data Sheet	PM	Particulate Matter
NA	Not Applicable	PM10	Particulate Matter equal to or less than 10 microns in diameter
NAAQS	National Ambient Air Quality Standards		
NESHAP	National Emission Standard for Hazardous Air Pollutants	PM2.5	Particulate Matter equal to or less than 2.5 microns in diameter
NSPS	New Source Performance Standards	pph	Pounds per hour
NSR	New Source Review	ppm	Parts per million
PS	Performance Specification	ppmv	Parts per million by volume
PSD	Prevention of Significant Deterioration	ppmw	Parts per million by weight
PTE	Permanent Total Enclosure	psia	Pounds per square inch absolute
PTI	Permit to Install	psig	Pounds per square inch gauge
RACT	Reasonable Available Control Technology	scf	Standard cubic feet
ROP	Renewable Operating Permit	sec	Seconds
SC	Special Condition	SO_2	Sulfur Dioxide
SCR	Selective Catalytic Reduction	TAC	Toxic Air Contaminant
SNCR	Selective Non-Catalytic Reduction	Temp	Temperature
SRN	State Registration Number	THC	Total Hydrocarbons
TEQ	Toxicity Equivalence Quotient	tpy	Tons per year
USEPA/EPA	United States Environmental Protection Agency	µg	Microgram
		µm	Micrometer or Micron
VE	Visible Emissions	VOC	Volatile Organic Compounds
		yr	Year

*For HVLP applicators, the pressure measured at the gun air cap shall not exceed 10 psig.

GENERAL CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

SPECIAL CONDITIONS

EMISSION UNIT SUMMARY TABLE

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

Emission Unit ID	Emission Unit Description (Process Equipment & Control Devices)	Installation Date / Modification Date	Flexible Group ID
EU-BOILER1	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 / July 28, 2010	FG-BOILERS
EU-BOILER2	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 / July 28, 2010	FG-BOILERS
EU-BOILER3	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.	July 28, 2010	FG-BOILERS
EU-SBJ00873	A Caterpillar Model 3516 diesel emergency generator (2000 kW). This unit is subject to NSPS IIII and NESHAP ZZZZ.	July 1,2010	FG-ENGINES
EU-SBJ00876	A Caterpillar Model 3516 diesel emergency generator (2000 kW). This unit is subject to NSPS IIII and NESHAP ZZZZ.	July 1, 2010	FG-ENGINES
EU-6HN01650	A Caterpillar Model 3516 diesel emergency generator (2000 kW).	June 3, 2003	FG-ENGINES
EU-6HN00382	A Caterpillar Model 3516 diesel emergency generator (2000 kW).	January 1, 2000	FG-ENGINES
EU-6HN00383	A Caterpillar Model 3516 diesel emergency generator (2000 kW).	January 1, 2000	FG-ENGINES
EU-LHCPGENSET	A Kohler Model 1600 REOZM emergency generator (1.6 MW). This unit is subject to NSPS IIII and NESHAP ZZZZ.	June 1, 2008	FG-ENGINES
EU-COMBLABGEN	A 1040 kW (1462 hp) natural gas fueled emergency engine manufactured in 2011. This unit is subject to NSPS JJJJ and NESHAP ZZZZ.	June 14, 2011	NA
Changes to the equipment described in this table are subject to the requirements of R 336.1201, except as allowed by R 336.1278 to R 336.1291.			

The following conditions apply to:
EU-COMBLABGEN

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 LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	2.0 g/hp-hr	Hourly	EU-COMBLABGEN	SC VI.2	40 CFR 60.4233(e), Table 1
2. VOC	1.0 g/hp-hr	Hourly	EU-COMBLABGEN	SC VI.2	40 CFR 60.4233(e), Table 1
3. CO	4.0 g/hp-hr	Hourly	EU-COMBLABGEN	SC VI.2	40 CFR 60.4233(e), Table 1

II. MATERIAL LIMITS

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

III. PROCESS/OPERATIONAL RESTRICTIONS

1. The permittee shall not operate EU-COMBLABGEN 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 EU-COMBLABGEN 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. EU-COMBLABGEN 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 EU-COMBLABGEN 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 EU-COMBLABGEN:
   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 EU-COMBLABGEN 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 EU-COMBLABGEN and shall, to the extent practicable, maintain and operate EU-COMBLABGEN 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 PARAMETERS

1. EU-COMBLABGEN shall be certified to meet the applicable emission standard of 40 CFR 60.4233. The permittee shall install and configure EU-COMBLABGEN according to the manufacturer's specifications. **(40 CFR 60.4243(b))**

2. The permittee shall equip and maintain EU-COMBLABGEN 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 EU-COMBLABGEN shall not exceed 1040 kW, as certified by the equipment manufacturer. **(R 336.1205(1)(a) & (3), 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 EU-COMBLABGEN 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 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) & (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 EU-COMBLABGEN:
   a. If certified: The permittee shall keep records of the documentation from the manufacturer that EU-COMBLABGEN 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 EU-COMBLABGEN:
   a. If certified: The permittee shall keep the manufacturer's emission-related written instructions and records demonstrating that EU-COMBLABGEN 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 EU-COMBLABGEN, 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 EU-COMBLABGEN, 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 RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-COMBLABGEN*	12	65	R 336.1225, 40 CFR 52.21 (c) & (d)
* This engine is allowed a horizontal discharge.			

IX. OTHER REQUIREMENTS

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 EU-COMBLABGEN. **(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 EU-COMBLABGEN. **(40 CFR Part 63, Subparts A and ZZZZ)**

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

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
FG-BOILERS	One primary 800 BHP dual fired boiler (EU-BOILER3) with a maximum heat input rating of 32.65 million Btu (MMBtu) per hour. Two supplement boilers (EU-BOILER1 and. EU-BOILER2), 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.	EU-BOILER1, EU-BOILER2, EU-BOILER3
FG-ENGINES	Five 2000kW diesel emergency generators and one 1600kW diesel emergency generator.	EU-SBJ00873, EU-SBJ00876, EU-6HN01650, EU-6HN00382, EU-6HN00383, EU-LHCPGENSET
FG-FACILITY	All process equipment source-wide including equipment covered by other permits, grand-fathered equipment and exempt equipment.	

The following conditions apply to:
FG-BOILERS

DESCRIPTION: One primary 800 BHP dual fired boiler (EU-BOILER3) with a maximum heat input rating of 32.65 million Btu (MMBtu) per hour. Two supplement boilers (EU-BOILER1 and EU-BOILER2), 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 Units: EU-BOILER1, EU-BOILER2, and EU-BOILER3

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. EU-BOILER3 will be equipped with a low NO_x natural gas burner with auxiliary No. 2 fuel oil.

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	5.2 pph per boiler 1 or 2	Hourly	EU-BOILER1 or EU-BOILER-2	SC V.2, SC VI.2	R 336.1205(1)(a), 40 CFR 52.21(c) & (d)
2. NO_x	6.1 pph per boiler 3	Hourly	EU-BOILER-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)	FG-BOILERS	SC V.1	R 336.1301(c), 40 CFR Part 60, Subpart Dc

II. MATERIAL LIMITS

1. The permittee shall only fire the FG-BOILERS 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 FG-BOILERS 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 RESTRICTIONS

1. Within 120 days from the issuance of this permit, the permittee shall not operate FG-BOILERS 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 PARAMETERS

1. The permittee shall not operate FG-BOILERS 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 FG-BOILERS 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 EU-BOILER3 unless a low NO_x 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 FG-BOILERS as required in SC III.1. **(R 336.1205(1)(a), R 336.1901, R 336.1910, 40 CFR 52.21(c) & (d))**

3. EU-BOILER1 and EU-BOILER2 shall not exceed a maximum heat input rating of 32.5 million Btu per hour. **(R 336.1205(1)(a))**

4. EU-BOILER3 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 EU-BOILER1, EU-BOILER2 and EU-BOILER3 of the FG-BOILERS 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 and Dc)**

2. Upon request from District Supervisor, Air Quality Division, the permittee shall verify NO_x emission rates from FG-BOILERS 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 FG-BOILERS 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_2 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 and Dc)**

2. The permittee shall monitor, record, and calculate the following for the FG-BOILERS:
   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 and 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 and Dc)**

2. The permittee shall maintain records for FG-BOILERS 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_2) emissions (Distillate oil only).
   (40 CFR Part 60, Subpart A and Dc)

VIII. STACK/VENT RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-BOILER1	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 REQUIREMENTS

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 FG-BOILERS. **(40 CFR Part 60, Subparts A and Dc)**

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

The following conditions apply to:
FG-ENGINES

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

Emission Units: EU-SBJ00873, EU-SBJ00876, EU-6HN01650, EU-6HN00382, EU-6HN00383, and EU-LHCPGENSET.

POLLUTION CONTROL EQUIPMENT: NA

I. EMISSION LIMITS

Pollutant	Limit	Time Period/ Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	515 lb/1,000 gal*	Hourly	EU-SBJ00873 EU-SBJ00876 EU-LHCPGENSET	SC V.1 SC. VI.1	R 336.1205(1)(a) & (3), 40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), 40 CFR 60.89.112(a)
2. NO_x	515 lb/1,000 gal	Hourly	EU-6HN01650 EU-6HN00382 EU-6HN00383	SC V.1 SC. VI.1	R 336.1205(1)(a) & (3)
3. CO	3.5 g/kW-hr	Hourly	EU-SBJ00873 EU-SBJ00876 EU-LHCPGENSET	SC V.1 SC. VI.1	40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), 40 CFR 60.89.112(a)
4. VOC	6.4 g/kW-hr	Hourly	EU-SBJ00873 EU-SBJ00876 EU-LHCPGENSET	SC V.1 SC. VI.1	40 CFR 60.4205(b), 40 CFR 60.4202(a)(2), 40 CFR 60.89.112(a)
5. PM	0.2 g/kW-hr	Hourly	EU-SBJ00873 EU-SBJ00876 EU-LHCPGENSET	SC V.1 SC. VI.1	40 CFR 60.4205(b) 40 CFR 60.4202(a)(2) 40 CFR 60.89.112(a)
*This limit is subsuming the NSPS IIII emission limit (6.4 g/kW-hr).					

II. MATERIAL LIMITS

1. The permittee shall burn only diesel fuel in EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET 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))**

2. The permittee shall burn only diesel fuel in EU-6HN01650, EU-6HN00382, and EU-6HN00383 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 RESTRICTIONS

1. The permittee shall operate FG-ENGINES in accordance with manufacturer's recommendations for safe and proper operation to minimize emissions during period of startup, shutdown and malfunction. **(R 336.1912)**

2. The permittee may operate EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET 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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET 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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET:
   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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET 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 PARAMETERS

1. The permittee shall install, calibrate, maintain and operate in a satisfactory manner a device to monitor and record the fuel use for FG-ENGINES 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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET 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 EU-6HN01650, EU-6HN00382, and EU-6HN00383 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 EU-SBJ00873 and EU-SBJ00876 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 89.112(a))**

5. The maximum rated power output of EU-LHCPGENSET 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 89.112(a))**

6. The maximum rated power output of EU-6HN01650, EU-6HN00382, and EU-6HN00383 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_x emission limits from one or more representative units of FG-ENGINES, 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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET 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 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), 40 CFR 52.21 (c) & (d))**

2. The permittee shall keep, in a satisfactory manner, the following records for EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET:
   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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET:
   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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET, on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall document how many hours are spent for emergency operation of EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET, 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 EU-6HN01650, EU-6HN00382, and EU-6HN00383 on a monthly and 12-month rolling time period basis, in a manner acceptable to the District Supervisor, Air Quality Division. The permittee shall document how many hours are spent for emergency operation of each engine in EU-6HN01650, EU-6HN00382, and EU-6HN00383, 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 FG-ENGINES 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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET 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 RESTRICTIONS

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

Stack & Vent ID	Maximum Exhaust Diameter/Dimensions (inches)	Minimum Height Above Ground (feet)	Underlying Applicable Requirements
1. SV-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 REQUIREMENTS

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 EU-SBJ00873, EU-SBJ00876, and EU-LHCPGENSET. **(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 FG-ENGINES. **(40 CFR Part 63, Subparts A and ZZZZ)**

Footnotes:

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

The following conditions apply Source-Wide to:
FG-FACILITY

DESCRIPTION: All process equipment source-wide 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. EU-BOILER3 will be equipped with low NO_x natural gas burner with auxiliary No. 2 fuel oil. The remaining units do not have pollution controls.

I. EMISSION LIMITS

Pollutant	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1. NO_x	89.0 tpy	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC.VI.1	R 336.1205(1)(a) & (3)

II. MATERIAL LIMITS

Material	Limit	Time Period / Operating Scenario	Equipment	Testing / Monitoring Method	Underlying Applicable Requirements
1.Diesel (No. 2 fuel oil)	100,000 gal/ yr	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC.VI.1	R 336.1205(1)(a) & (3)
2. Natural gas	1,250 MMcf/ yr	12-month rolling time period as determined at the end of each calendar month	FG-FACILITY	SC.VI.1	R 336.1205(1)(a) & (3)

III. PROCESS/OPERATIONAL RESTRICTIONS

NA

IV. DESIGN/EQUIPMENT PARAMETERS

NA

V. TESTING/SAMPLING

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

NA

VI. MONITORING/RECORDKEEPING

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

1. The permittee shall monitor and record in a satisfactory manner the diesel fuel and natural gas usage rate for each unit in FG-FACILITY on a monthly basis. The permittee shall also calculate and keep the total diesel and natural gas usage rate for FG-FACILITY 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 RESTRICTIONS

NA

IX. OTHER REQUIREMENTS

NA

Footnotes:

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