# Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Noah Valenstein
Secretary

**PERMITTEE**

Jackson Memorial Hospital (JMH)
1611 Northwest 12th Avenue
Miami, FL 33136-1096

Authorized Representative:
Jaime Cruz, Director of Engineering and Plant Operations

Air Permit No. 0250232-017-AC
Permit Expires: December 31, 2019
Minor Air Construction Permit
Jackson Memorial Hospital
Emergency Generator Replacement

**PROJECT**

This is the final air construction permit, which authorizes the replacement of two existing 1,100 kilowatt (kW) emergency generators with two new 2,500 kW emergency generators. The proposed work will be conducted at the existing Jackson Memorial Hospital, which is a General Medical and Surgical Hospital categorized under Standard Industrial Classification No. 8062. The existing facility is in Miami-Dade County at 1611 Northwest 12th Avenue in Miami, Florida. The UTM coordinates are Zone 17, 578.03 kilometers (km) East and 2,852.74 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); and Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

**STATEMENT OF BASIS**

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

Jonathan Holtom

Digitally signed by
Jonathan Holtom, P.E.
Date: 2018.04.03
15:10:36 -04'00'

*For*:
Syed Arif, P.E., Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

SA/dlr/ead

## CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Construction Permit package was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Mr. Jaime Cruz, JMH: jaime.cruz@jhsmiami.org
Mr. Kevin Koenig, GLE Associates: kkoenig@gleassociates.com
Mr. Vivek Kamath, P.E., AECOM: vik.kamath@aecom.com
Ms. Sonia Burkule, AECOM: sonia.burkule@aecom.com
Southeast District Air Compliance: SED.AIR@floridadep.gov
Ms. Lynn Scearce, DEP OPC: lynn.scearce@floridadep.gov

Clerk Stamp

**FILING AND ACKNOWLEDGMENT FILED**, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Lynn Scearce

2018.04.03 15:16:52 -04'00'

## FACILITY DESCRIPTION

JMH is an existing general medical and surgical hospital located in metropolitan Miami, Florida. The facility operates various generator sets to provide emergency backup power for essential operations at the hospital complex. The hospital operates two boilers to provide steam and power for the facility.

The existing facility consists of the following emissions units (EU).

| EU No. | Emission Unit Description |
|---|---|
| 012 | Fifteen Emergency Generators |
| 013 | Florida Detroit Diesel Allison Emergency Generator A (2,000 kW) |
| 014 | Florida Detroit Diesel Allison Emergency Generator B (2,000 kW) |
| 015 | Unilux Boiler A (50.96 MMBtu/hour) |
| 016 | Unilux Boiler B (50.96 MMBtu/hour) |

## PROPOSED PROJECT

JMH proposes to replace two out of three of the existing 1,100 kilowatt (kW) emergency generators located at the Utility Center with two new 2,500 kW emergency generators. This project will also remove the third Utility Center generator set because it is inactive.

This project will modify the following emissions units.

| EU No. | Emission Unit Description |
|---|---|
| 012 | ~~Fifteen~~ Twelve Emergency Generators |

This project will add the following emissions units.

| EU No. | Emission Unit Description |
|---|---|
| 017 | Emergency Diesel Generator, Utility Center #6 (2,500 kW) |
| 018 | Emergency Diesel Generator, Utility Center #7 (2,500 kW) |

## FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is not a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- The facility does operate units subject to the New Source Performance Standards (NSPS) of Title 40 Part 60 of the Code of Federal Regulations (40 CFR 60).
- The facility does operate units subject to the National Emissions Standards of Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

## SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Department's Southeast District Office at: 3301 Gun Club Road, MSC 7210-1, West Palm Beach, Florida 33406.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Department's Southeast District Office at: 3301 Gun Club Road, MSC 7210-1, West Palm Beach, Florida 33406.

3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); Appendix C (Common Conditions); and Appendix D (Common Testing Requirements).

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296, and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Construction and Expiration: The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(3) & (4), 62-4.080 & 62-210.300(1), F.A.C.]

8. Application for Air Operation Permit: Subsequent to any construction, reconstruction or modification of a facility or emissions unit authorized by an air construction permit, and demonstration of compliance with the conditions of such air construction permit, the owner or operator of such facility or emissions unit shall obtain an initial air operation permit or revision of an existing air operation permit, whichever is appropriate, in accordance with all applicable provisions of Chapters 62-4 and 62-210, F.A.C. [Rule 62-210.300(2), F.A.C.]

## SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

### A. Existing Emergency Generators

This section of the permit addresses the following emissions unit.

| EU No. | Emission Unit Description |
|---|---|
| 012 | ~~Fifteen~~ Twelve Emergency Generators |

This emissions unit is used to provide emergency backup power to certain essential areas of JMH.

This emissions unit currently consists of the following emergency generator units. The three highlighted units will be removed by this project. Utility Center Generator #3 is currently inactive, and will be removed by this project but not replaced.

| Manufacturer | Serial No. | Location |
|---|---|---|
| Kato | 178238731 | Energy Center #1 |
| Kato | 82273-1 | Energy Center #2 |
| Kato | 82273-3 | Energy Center #3 |
| Kato | 822273-2 | Energy Center #4 |
| ~~Caterpillar~~ | ~~24Z03004~~ | ~~Utility Center #1~~ |
| ~~Caterpillar~~ | ~~12Z06696~~ | ~~Utility Center #2~~ |
| ~~Caterpillar~~ | ~~24Z02998~~ | ~~Utility Center #3~~ |
| Onan | A9130498693 | Highlands |
| Perkin | 366019 | Children Center |
| EM | 172920731 | J Medical Center |
| Detroit Allison | 105-0-76 | ACC-E |
| Kohler | 2123298 | P Plaza West |
| Cummins | UJ3515313-01 | North Wing |
| Cummins | 92830—8/5-1 | P Plaza West |
| Cummins | PC-19-507553/72 | P Plaza East |

*{Permitting Note: This emissions unit is regulated under 40 CFR 63, Subpart A – General Provisions, and Subpart ZZZZ – NESHAP for Stationary Reciprocating Internal Combustion Engines (RICE), adopted and incorporated by reference in Rules 62-204.800(11)(d)1 and (b)82, F.A.C., respectively.}*

**PREVIOUS APPLICABLE REQUIREMENTS**

1. Other Permits: The conditions of this permit supplement all previously issued air construction and operation permits for this emissions unit. Unless otherwise specified, these conditions are in addition to all other applicable permit conditions and regulations. [Rule 62-4.070, F.A.C.]

**EQUIPMENT**

2. Equipment Shutdown: The following three (3) Utility Center emergency generators and associated RICE are required to be permanently shut down:
   a. Utility Center Generator #1, Caterpillar, Serial No. 24Z03004;
   b. Utility Center Generator #2, Caterpillar, Serial No. 12Z06696; and
   c. Utility Center Generator #3, Caterpillar, Serial No. 24Z02998.
   [Application No. 0250232-017-AC]

## B. New Emergency Generators

This section of the permit addresses the following emissions units.

| EU No. | Emission Unit Description |
|---|---|
| 017 | 2,500 kW Emergency Generator, Utility Center #6 |
| 018 | 2,500 kW Emergency Generator, Utility Center #7 |

These engines are certified to EPA Tier 2. These units have no add-on control devices, and the engines fire ultra-low sulfur diesel fuel.

*{Permitting Notes: These emission units are regulated under 40 CFR 60, Subpart A – General Provisions and Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (CI ICE), adopted and incorporated by reference in Rules 62-204.800(8)(d) and (8)(b)82, F.A.C., respectively. Per 40 CFR 63.6590(c), any new stationary CI ICE located at an area source of HAP subject to both 40 CFR 60, Subpart IIII, and 40 CFR 63, Subpart ZZZZ, must meet the requirements of 40 CFR 63, Subpart ZZZZ, by meeting the requirements of 40 CFR 60, Subpart IIII.}*

### EQUIPMENT

1. Emergency Engine/Generator Sets: The permittee is authorized to install and operate two (2) emergency 4-stroke-cycle CI ICE/Generator sets (Caterpillar Model 3516C, or equivalent). Each emergency engine/generator set will have the following nominal design specifications: a maximum engine rating of 3,352.6 HP at 100% load with a power rating of 2,500 kW; electrical generator rating of 2.5 MW; engine displacement of 4.88 liters per cylinder; and a maximum heat input rate of approximately 23.5 MMBtu/hour. [Design, Application No. 0250232-017-AC]

### PERFORMANCE RESTRICTIONS

2. Authorized Fuel: These stationary CI ICE must use diesel fuel that meets the following requirements for non-road diesel fuel:
   a. *Sulfur Content*. The sulfur content (on a per gallon basis) shall not exceed 15 parts per million (=0.0015%) by weight for non-road diesel fuel.
   b. *Cetane and Aromatic Content*. The fuel must have a minimum cetane index of 40 or must have a maximum aromatic content of 35% by volume.

   [Rules 62-204.800 & 62-210.200(PTE), F.A.C.; and 40 CFR 60.4207(b) & 80.510(b)]

3. Hours of Operation:
   a. *Emergency Situations*. The hours of operation for these emergency stationary CI ICE are unrestricted for emergency situations. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4211(f)(1)]
   b. *Maintenance and Testing*. These emergency stationary CI ICE are authorized to operate for 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. Maintenance checks and readiness testing of these units are limited to 100 hours per calendar year per unit. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4211(f)(2)(i)]
   c. *Other Situations*. These emergency stationary CI ICE may be operated for up to 50 hours per calendar year per unit in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4211(f)(3)]

### EMISSIONS STANDARDS

4. Non-methane Hydrocarbons plus Nitrogen Oxides Emissions: Emissions of non-methane hydrocarbons plus nitrogen oxides (NMHC + $NO_X$) shall not exceed 6.4 grams per kilowatt-hour (g/kW-hr). [Rule 62-204.800, F.A.C.; and 40 CFR 60.4205(b), 60.4202(b)(2), and Table 1 of 89.112(a)]

5. Carbon Monoxide Emissions: Emissions of carbon monoxide (CO) shall not exceed 3.5 g/kW-hr. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4205(b), 60.4202(b)(2), and Table 1 of 89.112(a)]

6. Particulate Matter Emissions: Emissions of particulate matter (PM) shall not exceed 0.20 g/kW-hr. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4205(b), 60.4202(b)(2), and Table 1 of 89.112(a)]

**MONITORING REQUIREMENTS**

7. Hour Meter: The owner or operator must install a non-resettable hour meter on the engines if one is not already installed. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4209(a)]

**TESTING AND COMPLIANCE REQUIREMENTS**

8. Operation and Maintenance: The owner or operator must operate and maintain these engines according to the manufacturer's written instructions. In addition, the owner or operator may only change those settings that are permitted by the manufacturer. These CI ICE must be maintained and operated to meet the emissions limits in Specific Conditions **4** through **6** of this section over the entire life of the engine. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4206 and 60.4211(a)]

9. Engine Certification Requirements: The owner or operator must comply with the emissions standards in Specific Conditions **4** through **6** of this section by having purchased an engine certified by the manufacturer to meet those limits. The engine must have been installed and configured according to the manufacturer's emission-related specifications, except as provided in Specific Condition **10**. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4211(c)]

10. Compliance Requirements Due to Loss of Certification: If the owner or operator does not install, configure, operate, and maintain the engines according to the manufacturer's emission-related written instructions, or change the emission-related settings in a way that is not permitted by the manufacturer, the owner or operator must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engines in a manner consistent with good air pollution control practice for minimizing emissions. In addition: the owner or operator must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of start-up, or within 1 year after the engine is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after any emission-related settings have been changed in a way that is not permitted by the manufacturer. The owner or operator must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to determine compliance with the applicable emission standards. [Rule 62-204.800, F.A.C.; and 40 CFR 60.4211(g)]

11. Testing Requirements: In the event that performance tests are required pursuant to Specific Condition **10**, above, the following requirements shall be met:
    a. *Testing Procedures*. The performance tests must be conducted according to the in-use testing procedures in 40 CFR Part 1039, Subpart F.
    b. *NTE Standards*. Exhaust emissions from these engines must not exceed the not-to-exceed (NTE) numerical requirements, rounded to the same number of decimal places as the applicable standard (STD) in Specific Conditions **4** through **6** of this section, determined from the following equation:

$$NTE\ Requirement\ for\ Each\ Pollutant = (1.25)x(STD) \qquad \text{(Equation 1)}$$

    [Rule 62-204.800, F.A.C.; and 40 CFR 60.4212(a) & (c)]

    *{Permitting Note: Specific Conditions **10**, **11**, and **13** only apply in the instance when the engine loses its EPA Tier 2 certification. As long as the engine remains certified, there is no performance testing required.}*

12. Common Testing Requirements: Unless otherwise specified, tests shall be conducted in accordance with the requirements and procedures specified in Appendix D, Common Testing Requirements. [Rule 62-297.310, F.A.C.]

## RECORDS AND REPORTS

13. Testing Notification: At such time that the requirements of Specific Conditions **10** and **11** become applicable, the owner or operator shall notify the Compliance Authority of the date by which the initial compliance test must be performed. [Rule 62-4.070(3), F.A.C.]

14. Hours of Operation Records: The owner or operator must keep records of the operation of the engines in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner or operator must record the time of operation of the engines and the reason the engine was in operation during that time. [Rules 62-4.070(3) & 62-204.800, F.A.C.; and 40 CFR 60.4214(b)]

15. Maintenance Records: To demonstrate compliance with the manufacturer's written instructions for maintaining the certified engine and to document when compliance testing must be performed pursuant to Specific Conditions **10** and **11**, the owner or operator must keep the following records:
    a. Engine manufacturer data indicating compliance with the standards.
    b. A copy of the manufacturer's written instructions for operation and maintenance of the certified engine.
    c. A written maintenance log detailing the date and type of maintenance performed on the engine, as well as any deviations from the manufacturer's written instructions.

    [Rules 62-4.070(3) & 62-204.800, F.A.C.; and 40 CFR 60.4211(c) & (g)]

## GENERAL PROVISIONS

16. 40 CFR 60, Subpart A – General Provisions: The owner or operator shall comply with the applicable requirements of 40 CFR 60, Subpart A – General Provisions, as specified in the following table:

| General Provisions Citation | Subject of Citation |
|---|---|
| §60.1 | General applicability of the General Provisions. |
| §60.2 | Definitions. (see also §60.4219) |
| §60.3 | Units and abbreviations. |
| §60.4 | Address. |
| §60.5 | Determination of construction or modification. |
| §60.6 | Review of plans. |
| §60.9 | Availability of information. |
| §60.10 | State Authority. |
| §60.12 | Circumvention. |
| §60.14 | Modification. |
| §60.15 | Reconstruction. |
| §60.16 | Priority list. |
| §60.17 | Incorporations by reference. |
| §60.19 | General notification and reporting requirements. |

[Rule 62-204.800, F.A.C.; and 40 CFR 60.4218 & Table 8 to Subpart IIII of Part 60]