Florida Department of Environmental Protection

Northeast District
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Jacksonville, Florida 32256-7590

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Secretary

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE:

North Florida/South Georgia Veterans Health System
1601 SW Archer Road
Gainesville, Florida 32609

Air Permit No. 0010041-011-AC
Date of Issue: Draft
Expiration Date: Draft

Authorized Representative:
Ronald Stipp, Chief Facilities Manager

Air Construction Permit

This is the final air construction permit, which authorizes the North Florida/South Georgia Veterans Health System to be reclassified as a non-Title V facility. The proposed project will affect the Malcom Randall Veterans Affairs Medical Center, which is a General Medical & Surgical Hospital (Standard Industrial Classification No. 8062). The facility is located in Alachua County at 1601 SW Archer Road, Gainesville, Florida. The UTM coordinates are Zone 17, 370.0 km E; 3279.3 km N. As noted in the Final Determination provided with this final permit, only minor changes and clarifications were made to the draft permit.

This final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

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.

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 Jacksonville, Florida

Draft

_____ _____

Khalid Al-Nahdy, P. E. Date
District Air Program Administrator

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) 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 ____Draft____ to the persons listed below.

Ronald Stipp, Chief Facilities Manager, Malcom Randall Veterans Affairs Medical Center (Ronald.Stipp@va.gov)
Veronica N. Sgro, P.E., Koogler and Associates, Inc. (vsgro@kooglerassociates.com)

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.

_____ _____

(Clerk) (Date)

FACILITY AND PROJECT DESCRIPTION

Proposed Project

The applicant has proposed to shut down the existing Hospital/Medical/Infectious Waste Incinerator (EU 006) and to reclassify the facility as a non-Title V facility.

Existing Facility

The North Florida/South Georgia Veterans Health System, Malcom Randall Veterans Affairs Medical Center, Gainesville Division, is a functional hospital that provides a broad range of inpatient and outpatient health care services.

Three Keeler 579 Horsepower steam generating boilers, which are generally fired one at a time, are located at the facility. Each of the boilers has a maximum firing rate of 26 MMBtu/hr, firing natural gas primarily and No. 2 fuel oil as a secondary fuel. The production capacity of each boiler is approximately 20,000 lbs of steam per hour. However, the system is designed to automatically cut off the operation of one of the boilers if total steam production exceeds approximately 35,000 pounds per hour. The boilers are subject to Rule 62-296.406, F.A.C. The boilers are also subject to 40 CFR 63, Subpart JJJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers Area Sources. This subpart has **not** been adopted by rule into the F.A.C.

The emergency internal combustion engines are to supply power to varying electrical loads for the duration of power interruption. These engines are subject to NSPS, Subpart IIII--Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. The four large diesel internal combustion engines are described below:

Manufacturer: Cummins	Model: DQKH
Power Rating:	2250 KW or 3251 HP @ 1800 RPM
Total Displacement:	60.2 liters for 16 cylinders
Maximum Fuel Consumption Rate:	150.2 gallons/hour
Maximum Gas Flow:	15705 CFM

The facility also consists of four AMSCO 3017 Ethylene Oxide Sterilizers. The sterilizer is for use in sterilizing heat and moisture sensitive materials unable to withstand the high temperature and turbulence of conventional steam sterilization. The Amsco Eagle 3017 Ethylene Oxide (EO) Sterilizer / Aerator uses single dose gas cartridges (sold separately) as the EO supply. Control is provided with preset, qualified cycle parameters. The sterilizers are subject to 40 CFR 63, Subpart WWWWW – National Emission Standards for Hospital Ethylene Oxide Sterilizers. This subpart has **not** been adopted by rule into the F.A.C. These units are therefore exempt from permitting pursuant to Rule 62-210.300(3)(b)1, F.A.C.

The facility also consists of eight emergency internal combustion engines (not including the four engines noted above.) Of these eight engines, two were manufactured after 2006 and are subject to 40 CFR 60, Subpart IIII -- Standards of Performance for Stationary Compression Ignition Internal Combustion Engines. Collectively, these eight engines burn less than 32,000 gallons of diesel fuel annually, and are therefore exempt from permitting pursuant to Rule 62-210.300(3)(a)35, F.A.C.

This permit consists of three steam generating boilers and four emergency internal combustion engines:

E.U. ID No.	Brief Description
-001	No. 1 Keeler 579 hp Boiler
-002	No. 2 Keeler 579 hp Boiler
-003	No. 3 Keeler 579 hp Boiler
-007	Emergency Stationary Internal Combustion Engine No.1
-008	Emergency Stationary Internal Combustion Engine No.2
-009	Emergency Stationary Internal Combustion Engine No.3
-010	Emergency Stationary Internal Combustion Engine No.4

FACILITY REGULATORY CLASSIFICATION

- The facility is not a major source of hazardous air pollutants (HAP).
- The facility has no 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 213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.

Applicable Unit Specific Rule (s)

These emissions unit are regulated under the following:
NSPS, 40 CFR 60, Subpart IIII
NESHAP, 40 CFR 63, Subpart JJJJJJ
Rule 62-210.300(2)(b), F.A.C.
Rule 62-296.406, F.A.C.
BACT Determination dated September 25, 2007

1. Permitting Authority: The permitting authority for this project is the Northeast District Air Program, Florida Department of Environmental Protection (Department). The Northeast District's mailing address is 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7590. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the North East District Office. The mailing address and phone number of the District Office is: 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256. The Permitting Authority's telephone number is 904/256-1700.

3. Appendices: The following Appendices are attached as part of this permit:
   a. Appendix A. Citation Formats and Glossary of Common Terms;
   b. Appendix B. General Conditions;
   c. Appendix C. Common Conditions; and
   d. Appendix D. Common Testing Requirements.
   e. Appendix E. Subpart A of NSPS – General Provision.

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. Application for Non - Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. A completed Application for Air Permit - Non Title V Source (DEP Form No. 62-210.900(3), F.A.C.), was submitted to the Department on April 9, 2012, and is currently being processed. To properly apply for a construction permit, the permittee shall submit the appropriate application form, processing fee, and compliance test reports as required by this permit. [Rules 62-4.055 and 62-4.220, F.A.C.]

A. This section of the permit addresses the following emissions unit/units.

E.U. ID No.	Brief Description
001	No.1 Keeler 579 hp Boiler with common stack
002	No.2 Keeler 579 hp Boiler with common stack
003	No.3 Keeler 579 hp Boiler with common stack

Emissions Units 001, 002, and 003 identify (3) dual-fired boilers. Each boiler may fire natural gas (primary fuel) and No. 2 fuel oil (secondary fuel). Maximum heat input of each boiler is 26 MMBtu per hour. The production capacity of each boiler is approximately 20,000 lbs of steam per hour. However, the system is designed to automatically cut off the operation of one of the boilers if total steam production exceeds approximately 35,000 pounds per hour. Emissions from the three boilers are vented through a common stack. Each of the three boilers began commercial operation on January 1, 1966.

These emissions units are regulated under:
Rule 296.406, F.A.C. –Fossil Fuel Steam Generators with Less Than 250 Million Btu Per Hour Heat Input
BACT Determination dated September 25, 2007

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

A.1. Permitted Capacity. The maximum heat input (operation rate) of each boiler is 26 MMBtu per hour.
[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

A.2. Methods of Operation - Permitted Fuels. The only authorized fuels to be fired in each of these boilers are No. 2 distillate fuel oil and natural gas. Natural gas shall be the primary fuel fired and No. 2 distillate fuel oil the secondary fuel. The sulfur content in the No. 2 distillate fuel oil shall not exceed 0.25% by weight.
[Rule 62-296.406(3), F.A.C.; BACT Determination dated September 25, 2007; Construction Permit No. 0010041-006-AC]

Emission Limitations and Standards

{Permitting Note: Unless otherwise specified, the averaging times for these conditions are based on the specified averaging time of the applicable test method.}

A.3. Visible Emissions Limitations. The boilers are subject to the following visible emissions limitations as described below.

(a) During normal operation, visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.
(b) During soot blowing and load change, visible emissions shall not exceed 60 percent opacity during the 3 hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

{Permitting Note: Standard is applicable to each boiler. A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.}

[Rule 62-210.700(3), Rule 62-296.406(1), F.A.C.; Construction Permit No. 0010041-006-AC]

A.4. Particulate Matter (PM) Emissions Limitations. The boilers are subject to the following PM emissions limitations as described below.

(a) Particulate matter emissions shall be controlled by firing of natural gas and/or low sulfur content liquid fuel as described by specific condition A.2 of this section.
(b) During soot blowing and load change, Particulate Matter emissions shall not exceed an average of 0.3 lb/MMBTU heat input while boiler cleaning (soot blowing) or during a load change. These excess emissions resulting from operation in either of these two modes shall not exceed 3 hours in any 24-hour period. Best operational practices to minimize emissions shall be adhered to and the duration of excess emissions shall be minimized.

{Permitting Note: Standard is applicable to each boiler. A load change occurs when the operational capacity of a unit is in the 10 percent to 100 percent capacity range, other than startup or shutdown, which exceeds 10 percent of the unit's rated capacity and which occurs at a rate of 0.5 percent per minute or more.}

[Rule 62-296.406(2), F.A.C, BACT dated September 25, 2007 and Rule 62-210.700(3), F.A.C.]

Test Methods and Procedures

A.5. Test Method(s). The owner or operator shall demonstrate compliance with the emissions limit with the test methods as described in the table below.

Compliance Demonstration For	Test Method	Description
PM Limit	EPA Method 1 through 4	Method for determining traverses points, velocity, flow rate, gas analysis, and moisture content. These methods shall be performed as necessary to support other methods.
	EPA Method 5	Method for determining the Particulate Matter Emissions.
VE Limit	DEP Method 9	Method for determining opacity observations.

The above EPA methods are specified in Appendix A of 40 CFR 60 and are adopted by reference in Rule 62-204.800, F.A.C. DEP Method 9 shall be conducted in accordance with the procedures and requirements of Rule 62-297, F.A.C.
[Rule 62-297.401, F.A.C.]

A.6. VE Limit Compliance Demonstration. The owner or operator shall conduct testing within 12 months after the issue date of this permit to demonstrate initial compliance with the VE limit (as described by specific condition A.3) on one boiler using No. 2 fuel oil.
[Rules 62-4.070(3), 62-297.401, F.A.C.]

A.7. Particulate Matter Limit Compliance Demonstration.

To comply with PM Limitation as described in	Compliance Demonstration
Specific Condition A.4.a.	The unit is assumed to be in compliance if it complies with VE limit as described in specific condition A.3.a of this section.
Specific Condition A.4.b. (soot blowing & load change)	Use the test method as described by specific condition A.5 for compliance demonstration. A compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which the fossil fuel steam generator does not burn liquid fuel for more than 400 hours other than during startup.

[Rule 62-296.406, 62-297.310(7)(a)5., F.A.C.; Construction Permit No. 0010041-006-AC]

A.8. Fuel Oil Sulfur Content. Fuel oil shall not exceed 0.25 percent sulfur content, by weight. The permittee shall maintain records to demonstrate that each shipment of fuel oil has 0.25 percent or less sulfur content by weight and that the sulfur content was determined by ASTM methods ASTM D4057-88 and ASTM D129-91, ASTM D2622-94 or ASTM D4294- 90, adopted and incorporated by reference in Rule 62- 297.440(1).
[Rule 62-296.406(3), F.A.C.; Construction Permit No. 0010041-006-AC]

Excess Emissions

{Permitting Note: The Excess Emissions Rule at Rule 62-210.700, F.A.C., cannot vary any requirement of a NSPS or NESHAP provision.}

A.9. Excess Emissions – Soot Blowing and Load Change. Excess Emissions resulting from existing fossil-fuel steam generators resulting from boiler cleaning (soot blowing) and load change shall be permitted provided the duration of such excess emissions shall not exceed 3 hours in any 24-hour period and visible emissions shall not exceed the opacity stated in specific condition A.3.b., and providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized. Particulate Matter emissions shall not exceed the limitation stated in specific condition A.4.b.

Pursuant to Rule 62-210.200(129), F.A.C. – An existing emissions unit is defined as an emissions unit which was in existence, in operation, or under construction, or had received a permit to begin construction prior to January 18, 1972.
[Rule 62-210.700(3), F.A.C.]

Recordkeeping Requirements

A.10. SO_2 Recordkeeping. The permittee shall maintain a record of the fuel oil sulfur content analysis results stated in specific condition A.8 for a period of 5 years.
[Rule 62-4.070, F.A.C.]

A.11. Fuel Oil Firing. The permittee shall maintain a record of the hours per calendar year that fuel oil is fired in any of the boilers.
[Rule 62-4.070, F.A.C.]

B. This section of the permit addresses the following emissions unit/units.

E.U. ID No.	Brief Description
007	Emergency Stationary Internal Combustion Engine No.1
008	Emergency Stationary Internal Combustion Engine No.2
009	Emergency Stationary Internal Combustion Engine No.3
010	Emergency Stationary Internal Combustion Engine No.4

The units are subject to the following regulations:

NSPS, Subpart IIII--Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The following specific conditions apply to the emissions unit(s) listed above:

Essential Potential to Emit (PTE) Parameters

B.1. Hours of Operation. The hours of operation are restricted to 500 hours per year for each unit.
[Rules 62-4.160(2), 62-210.200(PTE), F.A.C., and Permit No. 0010041-007-AC]

B.2. Maximum Operating Rate. The maximum diesel fuel consumption rate is 150.2 gallons/hour for each unit.
[Rules 62-4.160(2), 62-210.200(PTE), F.A.C.]

Emissions Limitations and Work Practice Standards

B.3. Emissions Limits. The units are subject to the emissions limit as stated in the table below.

Pollutant	Emissions Limit in g/KW-hr (g/HP-hr)	Rule
HC	1.3 (1.0)	40 CFR 60.4205 (b) and Table 1 to Subpart IIII of NSPS
NOx	9.2 (6.9)	
CO	11.4 (8.5)	
PM	0.54 (0.40)	

B.4. Operation & Maintenance. Owners and operators shall operate and maintain the units according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer, over the entire life of the engine.
[40 CFR 60.4206]

B.5. Fuel Requirements. The owner or operator shall comply with the following fuel requirements.

Beginning June 1, 2010, owners and operators shall use diesel fuel that meets the meets the following per-gallon standards:
Sulfur Content. 15 ppm maximum for Non Road (NR) diesel fuel. 500 ppm maximum for Locomotive and Marine (LM) diesel fuel.
Cetane index or aromatic content, as follows:

A minimum cetane index of 40; or
A maximum aromatic content of 35 volume percentage.
[40 CFR 60.4207(b), 40 CFR 80.510(b)]

B.6. Monitoring Requirements. The owner or operator shall comply with the following monitoring requirements.

(a) The owner or operator shall install a non-resettable hour meter prior to startup of the engine.

(b) If the engine is equipped with a diesel particulate filter to comply with the emission standards, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.
[40 CFR 60.4209]

B.7. Emergency stationary ICE may be operated for the purpose of 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 such units is limited to 100 hours per year. Anyone may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but 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 ICE beyond 100 hours per year. Emergency stationary ICE may operate up to 50 hours per 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 to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.
[40 CFR 60.4211(f)]

Compliance Demonstration and Testing Requirements

B.8. The owner or operator shall operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's written instructions or procedures developed by the owner or operator that are approved by the engine manufacturer. In addition, owners and operators may only change those settings that are permitted by the manufacturer. The owner or operator shall also meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to the units.
[40 CFR 60.4211(a)]

B.9. Compliance Certification. The owner or operator shall comply by purchasing an engine certified to the emission standards as described by specific condition B.3. The engine must be installed and configured according to the manufacturer's specifications.
[40 CFR 60.4211(c)]

B.10. Test Method. The owner or operator shall conduct the performance tests according to procedures as described below if special compliance tests are requested by the Department pursuant to Appendix D, condition 4(b).

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in 40 CFR 60.4213 of this subpart, as appropriate.
[40 CFR 60.4212]

Notification, Reporting and Recordkeeping Requirements

B.11. Recording Keeping – Hours of Operation. The owner shall record the time of operation of the engine and the reason the engine was in operation during that time.
[40 CFR 60.4214(b)]

B.12. Recordkeeping – PM Filter. If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator shall keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.
[40 CFR 60.4214(c)]

B.13. Recordkeeping – Fuel. The owner or operator shall keep the record of fuel oil analysis for each batch of diesel fuel purchased. The owner or operator shall also keep the record of fuel usage.
[Rule 62-4.070, F.A.C.]