ST. Vincent's Medical Center
Facility ID No.: 0310068
Duval County

Title V Air Operation Permit Renewal

PROPOSED Permit Project No.: 0310068-007-AV

PERMITTING & COMPLIANCE AUTHORITY:
ENVIRONMENTAL RESOURCE MANAGEMENT DEPARTMENT
ENVIRONMENTAL QUALITY DIVISION
117 WEST DUVAL STREET, SUITE 225
JACKSONVILLE, FL 32202
TELEPHONE: (904) 630-4900
FAX: (904) 630-3638

Title V Air Operation Permit Renewal

PROPOSED Permit No.: 0310068-007-AV

Table of Contents

Section **Page Number**

Placard Page 1

I. Facility Information 2
- A. Facility Description.
- B. Summary of Emissions Unit ID No(s). and Brief Description(s).
- C. Relevant Documents.

II. Facility-wide Conditions ..... 3 - 5

III. Emissions Unit(s) and Conditions ..... 5 - 9

Emissions Unit - 002	Boiler No. 1 (West)
Emissions Unit - 003	Boiler No. 2 (Center)
Emissions Unit - 004	Boiler No. 3 (East)
Emissions Unit - 005	Gas Turbine Cogenerator No. 1

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix LR-1, Local Rule Index
Appendix SS-1, Stack Sampling Facilities
Appendix TV-5, Title V Conditions version dated 03/28/05
Best Available Control Technology Determination for Boilers
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements

Permittee:
St. Vincent's Medical Center
1800 Barrs Street
Jacksonville, FL 32204

PROPOSED Permit No.: 0310068-007-AV
Facility ID No.: 0310068
SIC Nos.: 80
Project: Title V Air Operation Permit Renewal

This permit is for the operation of the Medical Center. This facility is located at 1800 Barrs Street, Jacksonville, Duval County; UTM Coordinates: Zone 17, 433.6 km East and 3352.8 km North; Latitude: 30° 18' 26" North and Longitude: 81° 41' 20" West.

This Title V Air Operation Permit Renewal is issued under the provisions of Chapter 403, Florida Statutes (FS) and Florida Administrative Code (FAC) Chapters 62-4, 62-210, and 62-213. The above named permittee is hereby authorized to operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the permitting authority, in accordance with the terms and conditions of this permit.

Referenced attachments made a part of this permit:
Appendix I-1, List of Insignificant Emissions Units and/or Activities
Appendix TV-5, Title V Conditions version dated 03/28/05
Appendix SS-1, Stack Sampling Facilities
Best Available Control Technology Determination for Boilers

Effective Date:
Renewal Application Due Date: January 1, 2011
Expiration Date: June 30, 2011

Environmental Resource Management Department
Environmental Quality Division

_____
Ebenezer Gujjarlapudi, P.E.
Chief

EG/RR/rdr

S:/PermitV/ TVOP/P/0310068-007k-AV

Section I. Facility Information.

Subsection A. Facility Description.

This facility, a full care medical center including hospital, consists of three (3) boilers, and a gas turbine cogeneration unit.

Also included in this permit are miscellaneous insignificant emissions units and/or activities.

Based on the Title V Air Operation Permit Renewal application received September 13, 2005, this facility is not a major source of hazardous air pollutants (HAPs).

Subsection B. Summary of Emissions Unit ID No(s). and Brief Description(s).

E.U. ID No.	Brief Description
002	Boiler No. 1 (West)
003	Boiler No. 2 (Center)
004	Boiler No. 3 (East)
005	Gas Turbine Cogenerator No. 1

Note: Please reference the Permit No., Facility ID No., and appropriate Emissions Unit(s) ID No(s). on all correspondence, test report submittals, applications, etc.

Subsection C. Relevant Documents.

The documents listed below are not a part of this permit; however, they are specifically related to this permitting action.

These documents are provided to the permittee for information purposes only:
Table 1-1, Summary of Air Pollutant Standards and Terms
Table 2-1, Summary of Compliance Requirements
Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers
Appendix H-1, Permit History
Appendix LR-1, Local Rule Index

These documents are on file with permitting authority:
Title V Permit Renewal Application received September 13, 2005

Section II. Facility-wide Conditions.

The following conditions apply facility-wide:

1. Appendix TV-5, Title V Conditions, is a part of this permit.
   {Permitting note: Appendix TV-5, Title V Conditions, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided one copy when requested or otherwise appropriate.}

2. General Particulate Emission Limiting Standards. General Visible Emissions Standard.
Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20 percent opacity) in accordance with Rule 62-296.320(4)(b)1., FAC, and Rule 2.1001, JEPB. EPA Method 9 is the method of compliance pursuant to Chapter 62-297, FAC, and Rule 2.1101, JEPB. Testing shall be required upon request of the Department.

3. Prevention of Accidental Releases (Section 112(r) of CAA).
    a. The permittee shall submit its Risk Management Plan (RMP) to the Chemical Emergency Preparedness and Prevention Office (CEPPO) RMP Reporting Center when, and if, such requirement becomes applicable; and
    b. The permittee shall submit to the permitting authority Title V certification forms or a compliance schedule in accordance with Rule 62-213.440(2), FAC.

    [40 CFR 68.]

4. General Pollutant Emission Limiting Standards. Volatile Organic Compounds (VOC) Emissions or Organic Solvents (OS) Emissions. The permittee shall allow no person to store, pump, handle, process, load, unload, or use in any installation, VOC or OS without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
[Rule 62-296.320(1)(a), FAC, and Rule 2.1001, JEPB]

5. Insignificant Emissions Units and/or Activities. Appendix I-1, List of Insignificant Emissions Units and/or Activities, is part of this permit.
[Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), FAC, and Rules 2.501 and 2.1301, JEPB.]

6. Unconfined particulate matter emissions from yard operations, open stock piling of materials and /or materials handling operations shall be controlled by using the following reasonable precautions.
    - Reduced speed for vehicular traffic.
    - Use of liquid resinous adhesives or other liquid dust suppressants or wetting agents.
    - Use of paving or other asphaltic materials.
    - Removal of particulate matter from paved roads and/or other paved areas by vacuum cleaning or otherwise by wetting prior to sweeping.
    - Covering of trucks, trailers, front end loaders, and other vehicles or containers to prevent spillage of particulate matter during transport.
    - Use of mulch, hydro seeding, grassing, and/or other vegetative ground cover on barren areas to prevent or reduce particulate matter from being windblown.
    - Use of hoods, fans, filters, and similar equipment to contain, capture, and vent particulate matter.
    - Enclosures or covering of conveyor systems.

    [Rule 62-296.320(4)(c)2., FAC, and Rule 2.1001, JEPB]

7. Permittee shall notify the Air and Water Quality Division (Department) fifteen (15) days prior to Emissions Unit testing.
[Rule 62-297.310(7)(a)9., FAC, and Rule 2.1101, JEPB]

8. Control equipment shall be provided with a method of access that is safe and readily accessible.
[Rule 62-297.310(6), FAC, and Rule 2.1101, JEPB]

9. Testing of emissions shall be conducted with the Emissions Unit operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then Emissions Units may be tested at less capacity; in this case subsequent Emissions Unit operation is limited to 110 percent of the test load until a new test is conducted. Once the Emissions Unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit.
   [Rule 62-297.310(2), FAC, and Rule 2.1101, JEPB]

10. Copies of the test report(s) shall be submitted to the Department within forty-five (45) days of completion of testing.
    [Rule 62-297.310(8)(b), FAC, and Rule 2.1101, JEPB]

11. When appropriate, any recording, monitoring or reporting requirements that are time-specific shall be in accordance with the effective date of the permit, which defines day one.
    [Rule 62-213.440, FAC and Rule 2.501, JEPB]

12. Statement of Compliance. The annual statement of compliance pursuant to Rule 62-213.440(3)(a)2., FAC, shall be submitted within 60 (sixty) days after the end of the calendar year using DEP Form No. 62-213.900(7), FAC.
    [Rules 62-213.440(3) and 62-213.900, FAC, and Rule 2.501, JEPB]

13. Excess emissions resulting from startup, shutdown, or malfunction of any emission unit shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized but in no case exceed two hours in any 24 hour period unless specifically authorized by the Department for longer duration. Excess emissions which are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure which may reasonably be prevented during startup, shutdown, or malfunction shall be prohibited. In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Permitting Authority in accordance with Rule 62-4.130, FAC and Rule 2.1301, JEPB. A full written report on the malfunctions shall be submitted to the Permitting Authority in a quarterly report, if requested by the Permitting Authority.
    [Rule 62-210.700, FAC, and Rule 2.201, JEPB]

14. The permittee shall submit all compliance related notifications and reports required of this permit to:

    Environmental Resource Management Department
    Environmental Quality Division
    117 West Duval Street, Suite 225
    Jacksonville, FL 32202
    Telephone: (904) 630-4900
    Fax: (904) 630-3638

15. Any reports, data, notifications, certifications, and requests required to be sent to the United States Environmental Protection Agency should be sent to:

    United States Environmental Protection Agency
    Region 4
    Air, Pesticides & Toxics Management Division
    Air & EPCRA Enforcement Branch, Air Enforcement Section
    61 Forsyth Street
    Atlanta, GA 30303-8960
    Telephone: (404) 562-9155
    Fax: (404) 562-9163

16. The permittee shall submit reports of any required monitoring at least every six (6) months. All instances of deviations from permit requirements must be clearly identified in such reports. The permittee shall report in accordance with the requirements of Rule 62-210.700(6), FAC, Rule 62-4.130, FAC, Rule 2.201, JEPB, and Rule 2.1301, JEPB, deviations from permit requirements, including those attributable to upset conditions as defined in the permit. Reports shall include the probable cause of such deviations, and any corrective actions or preventive measures taken. All reports shall be accompanied by a certification by a responsible official, pursuant to Rule 62-213.420(4), FAC, and Rule 2.501, JEPB. Unless otherwise specified in **a permit, rule, or order;** reports shall cover the period of January through June (report due on or before September 1) and July through December (report due on or before March 1).
[Rule 62-213.440(1)(b)3., FAC, and Rule 2.501, JEPB]

The following Facility-wide conditions are not federally enforceable

17. General Pollutant Emission Limiting Standards. Objectionable Odor Prohibited. The permittee shall not cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor.
[Rule 62-296.320(2), FAC, and Rule 2.1001, JEPB]

18. The facility shall be subject to the City of Jacksonville Ordinance Code, Title X, Chapter 360 [Environmental Regulation], Chapter 362 [Air and Water Pollution], Chapter 376 [Odor Control], and JEPB Rule 1 [Final Rules with Respect to Organization, Procedure, and Practice].

19. The facility shall be subject to JEPB Rule 2, Parts I through VII, and Parts IX through XIII.

Section III. Emissions Unit(s) and Conditions.

Emissions Unit No. 002 - Boiler No. 1 (West)

Emissions Unit Description - A $25x10^6$ Btu per hour Babcock & Wilcox Boiler. The primary fuel is natural gas with No. 2 Fuel Oil as standby.

Essential Potential to Emit (PTE) Parameters

1. The maximum heat input shall be limited to $25x10^6$ Btu per hour of natural gas or No. 2 Fuel Oil.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

2. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

Emission Limitations and Standards

3. Sulfur dioxide (SO_2) and PM emissions shall be controlled in accordance with the Best Available Control Technology (BACT) Determination.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

4. The maximum sulfur content of No. 2 Fuel Oil fired shall be limited to 0.05 percent, by weight.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

5. VE shall be limited to 20 percent opacity except that VE not exceeding 27 percent opacity are allowed for up to 6 minutes in any one hour period.
[Rule 62-296.406(1), FAC, and 2.1001, JEPB]

Test Methods and Procedures

6. Testing for demonstration of compliance shall be performed in accordance with EPA RM 9 (as described in 40 CFR 60, appendix A) for the visual determination of opacity.
[Rule 62-297.310(4)(a)2., FAC, and Rule 2.1101, JEPB]

7. Compliance shall be demonstrated annually while burning No. 2 Fuel Oil from the date of September 1, 2005.
[Rule 62-4.070(3), FAC, and Rule 2.1301, JEPB]

8. Fuel oil sulfur content shall be determined through certification by the fuel oil supplier (annually). Alternate testing may be through the use of ASTM Method D 2622-82 Sulfur in Petroleum Products (X-Ray Spectrographic Method). Records shall be maintained for a minimum period of five (5) years and shall be provided to the Department upon request.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

Emissions Unit No. 003 - Boiler No. 2 (Center)

Emissions Unit Description - A $25x10^6$ Btu per hour Babcock & Wilcox Boiler. The primary fuel is natural gas with No. 2 Fuel Oil as standby.

Essential Potential to Emit (PTE) Parameters

1. The maximum heat input shall be limited to $25x10^6$ Btu per hour of natural gas or No. 2 Fuel Oil.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

2. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

Emission Limitations and Standards

3. Sulfur dioxide (SO_2) and PM emissions shall be controlled in accordance with the Best Available Control Technology (BACT) Determination.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

4. The maximum sulfur content of No. 2 Fuel Oil fired shall be limited to 0.05 percent, by weight.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

5. VE shall be limited to 20 percent opacity except that VE not exceeding 27 percent opacity are allowed for up to 6 minutes in any one hour period.
[Rule 62-296.406(1), FAC, and 2.1001, JEPB]

Test Methods and Procedures

6. Testing for demonstration of compliance shall be performed in accordance with EPA RM 9 (as described in 40 CFR 60, appendix A) for the visual determination of opacity.
[Rule 62-297.310(4)(a)2., FAC, and Rule 2.1101, JEPB]

7. Compliance shall be demonstrated annually while burning No. 2 Fuel Oil from the date of September 1, 2005.
[Rule 62-4.070(3), FAC, and Rule 2.1301, JEPB]

8. Fuel oil sulfur content shall be determined through certification by the fuel oil supplier (annually). Alternate testing may be through the use of ASTM Method D 2622-82 Sulfur in Petroleum Products (X-Ray

Spectrographic Method). Records shall be maintained for a minimum period of five (5) years and shall be provided to the Department upon request.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

Emissions Unit No. 004 - Boiler No. 3 (East)

Emissions Unit Description - A $25x10^6$ Btu per hour Babcock & Wilcox Boiler. The primary fuel is natural gas with No. 2 Fuel Oil as standby.

Essential Potential to Emit (PTE) Parameters

1. The maximum heat input shall be limited to $25x10^6$ Btu per hour of natural gas or No. 2 Fuel Oil.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

2. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

Emission Limitations and Standards

3. Sulfur dioxide (SO_2) and PM emissions shall be controlled in accordance with the Best Available Control Technology (BACT) Determination.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

4. The maximum sulfur content of No. 2 Fuel Oil fired shall be limited to 0.05 percent, by weight.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

5. VE shall be limited to 20 percent opacity except that VE not exceeding 27 percent opacity are allowed for up to 6 minutes in any one hour period.
[Rule 62-296.406(1), FAC, and 2.1001, JEPB]

Test Methods and Procedures

6. Testing for demonstration of compliance shall be performed in accordance with EPA RM 9 (as described in 40 CFR 60, appendix A) for the visual determination of opacity.
[Rule 62-297.310(4)(a)2., FAC, and Rule 2.1101, JEPB]

7. Compliance shall be demonstrated annually while burning No. 2 Fuel Oil from the date of September 1, 2005.
[Rule 62-4.070(3), FAC, and Rule 2.1301, JEPB]

8. Fuel oil sulfur content shall be determined through certification by the fuel oil supplier (annually). Alternate testing may be through the use of ASTM Method D 2622-82 Sulfur in Petroleum Products (X-Ray Spectrographic Method). Records shall be maintained for a minimum period of five (5) years and shall be provided to the Department upon request.
[Rules 62-296.406(2) and (3), FAC, and Rule 2.1001, JEPB]

Emissions Unit No. 005 - Gas Turbine Cogenerator No. 1

Emissions Unit Description - A $25x10^6$ Btu per hour turbine engine generator. The primary fuel is natural gas with No. 2 Fuel Oil as standby. The turbine engine generator will produce a maximum of 1,500 kW and 12,000 pounds of steam per hour.

Essential Potential to Emit (PTE) Parameters

1. The maximum heat input shall be limited to $25x10^6$ Btu per hour of natural gas or No. 2 Fuel Oil.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

2. This emissions unit is allowed to operate continuously, i.e., 8,760 hours per year.
[Rule 62-210.200(203), FAC, and Rule 2.301, JEPB]

Emission Limitations and Standards

3. Gas Turbine Cogenerator No. 1 shall be subject to the provisions of 40 CFR 60, Subpart GG - Standards of Performance for Stationary Gas Turbines, and 40 CFR 60, Subpart A - General Provisions.

4. Emissions of nitrogen oxides (NO_x) shall be limited as follows:

$$\mathbf{STD = 0.0150 \frac{(14.4)}{Y} + F}$$

Where:
STD = allowable NO_x emissions (percent by volume at 15 percent oxygen and on a dry basis).
Y = manufacturer's rated heat rate at manufacturer's rated peak load (kilojoules per watt hour), or actual measured heat rate based on lower heating value of fuel as measured at actual peak load for the facility. The value of Y shall not exceed 14.4 kilojoules per watt hour.
F = NO_x emission allowance for fuel-bound nitrogen as defined in the following:

F shall be defined according to the nitrogen content of the fuel as follows:

Fuel-bound nitrogen (percent by weight)	F (NO_x percent by volume)
N<0.015	0
0.015<N<0.1	0.04 (N)
0.1<N<0.25	0.004+0.0067 (N-0.1)
N>0.25	0.005

Where: N = the nitrogen content of the fuel (percent by weight)
[40 CFR 60.332(a)(2), Rule 62-212.400(5), FAC, and Rule 2.401, JEPB]

5. Emissions of sulfur dioxide in the discharge gases shall be limited to 0.015 percent by volume at 15 percent oxygen and on a dry basis.
[40 CFR 60.333(a), Rule 62-204.800, FAC, and Rule 2.501, JEPB]

6. The maximum sulfur content of natural gas shall be limited to 1.0 grain per 100 cubic feet.
[Applicant's Request]

7. The sulfur content of the No. 2 Fuel Oil shall be limited to 0.8 percent by weight.
[40 CFR 60.333(b), Rule 62-204.800, FAC, and Rule 2.501, JEPB]

8. VE shall be limited to 15 percent opacity.
[Rule 62-4.070, FAC, and Rule 2.1301, JEPB]

Test Methods and Procedures

9. Compliance with NO_x emission rate shall be computed for each run using the following equation:

$$NO_x = (NO_{xo})\,(P_r/P_o)^{0.5}\, e^{19(Ho-0.00633)}\,(288^oK/T_a)^{1.53}$$

Where:
NO_x = emission rate of NO_x at 15 percent oxygen and ISO standard ambient conditions, volume percent.
NO_{xo} = observed NO_x concentration, ppm by volume.
P_r = reference combustor inlet absolute pressure at 101.3 kilopascals ambient pressure, mm Hg.
P_o = observed combustor inlet absolute pressure at test, mm Hg.
H_o = observed humidity of ambient air, g H_2O/g air.
e = transcendental constant, 2.718.
T_a = ambient temperature, ^oK.
[40CFR60.335(c)(1), Rule 62-204.800, FAC, and Rule 2.501, JEPB]

10. Fuel consumption shall be determined during each test run. All loads shall be corrected to ISO conditions using the appropriate equations supplied by the manufacturer.
[40CFR60.335(c)(2), Rule 62-204.800, FAC, and Rule 2.501, JEPB]

11. EPA RM 20 shall be used to determine the nitrogen oxides, sulfur dioxide, and oxygen concentrations. The span values shall be 300 ppm of nitrogen oxide and 21 percent oxygen. The nitrogen content of the fuel being fired during the compliance test shall be determined from a sample taken on or about the day of the compliance test.
[40CFR60.335(c)(3), Rule 62-204.800, FAC, and Rule 2.501, JEPB]

12. Testing for demonstration of compliance shall be performed in accordance with EPA RM 9 (as described in 40 CFR 60, Appendix A) for the visual determination of opacity.
[Rule 62-297.310(4)(a)2., FAC, and Rule 2.1101, JEPB]

13. Testing for nitrogen oxides, sulfur dioxide, and visible emissions (while firing natural gas) shall be conducted annually from the date of February 1, 2005.
[Rule 62-4.070(3), FAC, and Rule 2.1301, JEPB]

14. Testing for nitrogen oxides and sulfur dioxides (while firing No. 2 Fuel Oil) shall be conducted within 120 days prior to the permit expiration date.
[Rule 62-4.070(3), FAC, and Rule 2.1301, JEPB]

15. Testing for demonstration of compliance shall be performed in accordance with 40 CFR 60.335.

Monitoring of Operations

16. The fuel flow to the turbine and the turbine generator power output shall be metered and recorded a minimum of every 12 hours. Data shall be maintained for a minimum of five (5) years and made available to the Department upon request.
[Rule 62-212.400(5), FAC, and Rule 2.401, JEPB]