

**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY**

150 West Congress Street • Tucson, AZ 85701 • Phone: (520) 740-3340

**AIR QUALITY OPERATING PERMIT**

(As required by Title 17.12, Article II, Pima County Code)

**ISSUED TO**

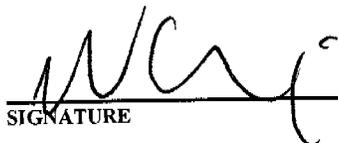
**ST MARY'S HOSPITAL  
1601 W. ST. MARY'S ROAD  
TUCSON, AZ 85745**

*This air quality operating permit does not relieve applicant of responsibility for meeting all air pollution regulations*

THIS PERMIT ISSUED SUBJECT TO THE FOLLOWING Conditions contained in Attachments "A", "B", "C", "D" and "E".

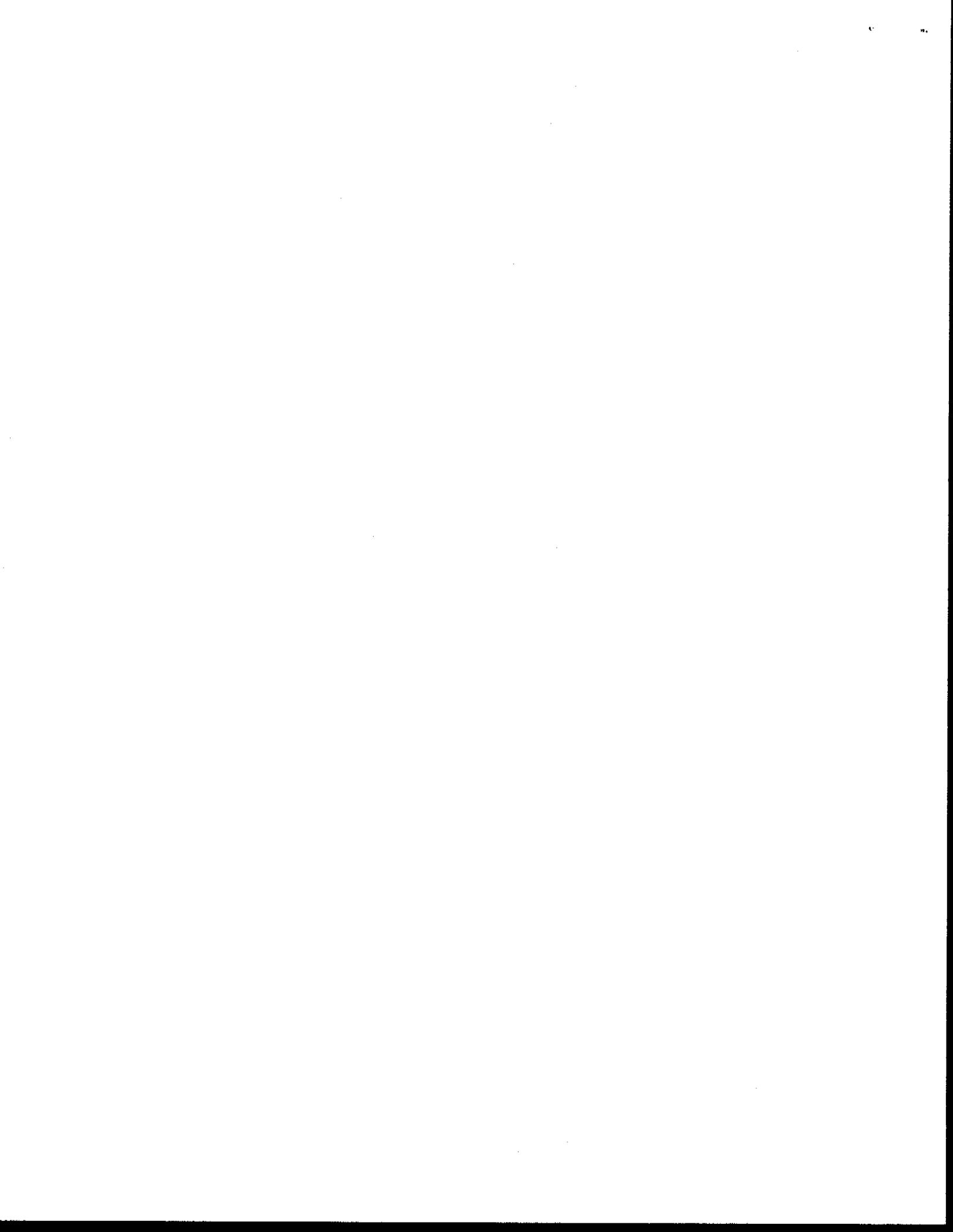
PDEQ PERMIT NUMBER 1631 PERMIT CLASS II EXPIRATION DATE August 13, 2007

PERMIT ISSUED THIS FOURTEENTH DAY OF AUGUST TWO THOUSAND AND TWO

  
SIGNATURE

9.13.07  
DATE

Richard Grimaldi, Deputy Director, PDEQ  
TITLE



**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY**

**AIR QUALITY OPERATING PERMIT NUMBER 1631**



**ST. MARY'S HOSPITAL  
1601 WEST ST. MARY'S ROAD  
TUCSON, AZ 85745**

**Effective: August 14, 2002**

**Expires: August 13, 2007**

Permit Number 1631  
St. Mary's Hospital

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Permit Issued To: St. Mary's Hospital  
Permit Number: 1631

PART A: GENERAL PROVISIONS  
(References to PCC are references to Title 17 of the Pima County Code)

- I. Permit Expiration and Renewal [A.R.S. § 49-480.A., PCC 17.12.160.C.2., and PCC 17.12.180.A.1.]
- A. This permit is valid for a period of five years from the date of issuance of the permit.
  - B. The Permittee shall submit an application for renewal of this permit at least 6 months, but not greater than 18 months prior to the date of permit expiration.
- II. Compliance with Permit Conditions [PCC 17.12.180.A. and B.]
- A. The Permittee shall comply with all conditions of this permit, which contains all applicable requirements of Federal and Arizona air quality statutes, and Federal, State, and Pima County air quality rules. Any permit noncompliance constitutes a violation of the Arizona Revised Statutes and is grounds for enforcement action; for permit termination, revocation and reissuance, or revision; or for denial of a permit renewal application. In addition, noncompliance with any federally enforceable requirement constitutes a violation of the Clean Air Act.
  - B. Need to halt or reduce activity not a defense. It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
  - C. The Permittee shall not build, erect, install, or use any article, machine, equipment or process, the use of which conceals an emission which would otherwise constitute a violation of an applicable standard. Such concealment includes, but is not limited to, the use of gaseous diluents to achieve compliance with an opacity standard or with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere. [40 CFR §60.12]
- III. Permit Revision, Reopening, Revocation and Reissuance, or Termination for Cause [PCC 17.12.180.A.8.c. and PCC 17.12.270.]
- A. The permit may be revised, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a permit revision, revocation and reissuance, or termination; or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.
  - B. The permit shall be reopened and revised under any of the following circumstances:
    - 1. Additional applicable requirements under the Act become applicable to a major source. Such reopening shall only occur if there are three or more years remaining in the permit term. The reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to PCC 17.12.280.B. Any permit reopening required pursuant to this paragraph shall comply with provisions in PCC 17.12.280.A and C for permit renewal and shall reset the five-year permit term.
    - 2. Additional requirements, including excess emissions requirements, become applicable to an affected source under the acid rain program. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the Class I permit.
    - 3. The Control Officer or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
    - 4. The Control Officer or the Administrator determines that the permit needs to be revised or revoked to assure compliance with the applicable requirements.

- C. Proceedings to reopen and issue a permit, including appeal of any final action relating to a permit reopening, shall follow the same procedures as apply to initial permit issuance. Such reopenings shall be made as expeditiously as practicable. Permit reopenings for reasons other than those stated in paragraph III.B.1 of this Part shall not result in the resetting of the five-year permit term.

IV. Posting of Permit [PCC 17.12.080.]

- A. Permittee shall post such permit, or a certificate of permit issuance on location where the equipment is installed in such a manner as to be clearly visible and accessible. All equipment covered by the permit shall be clearly marked with one of the following:
1. Current permit number.
  2. Serial number or other equipment number that is also listed in the permit to identify that piece of equipment.
- B. In the event that the equipment is so constructed or operated that such permit cannot be so placed, the permit shall be mounted so as to be clearly visible in an accessible place within a reasonable distance of the equipment or maintained readily available at all times on the operating premises.
- C. A copy of the complete permit shall be kept on the site.

V. Fee Payment [PCC 17.12.180.A.9. and PCC 17.12.510.]

Permittee shall pay fees to the Control Officer pursuant to A.R.S. § 49-480.D and PCC 17.12.510.

VI. Annual Emissions Inventory Questionnaire [PCC 17.12.320.]

- A. When requested by the Control Officer, the Permittee shall complete and submit an annual emissions inventory questionnaire. The questionnaire is due by March 31 or ninety days after the Control Officer makes the request and provides the inventory form each year, whichever occurs later, and shall include emission information for the previous calendar year.
- B. The questionnaire shall be on a form provided by or approved by the Control Officer and shall include the information required by PCC 17.12.320.

VII. Compliance Certification [PCC 17.12.180.A.5. and PCC 17.12.210.A.2.]

Permittee shall submit to the Control Officer a compliance certification that describes the compliance status of the source with respect to each permit condition. Certifications shall be submitted as specified in Part "B" of this permit.

- A. The compliance certification shall include the following:
1. Identification of each term or condition of the permit that is the basis of the certification;
  2. Compliance status;
  3. Whether compliance was continuous or intermittent;
  4. Method(s) used for determining the compliance status of the source, currently and over the reporting period;
  5. A progress report on all outstanding compliance schedules submitted pursuant to Section XI.C of this Part.
- B. A copy of all compliance certifications for Class I permits shall also be submitted to the EPA Administrator.

VIII. Certification of Truth, Accuracy and Completeness

PCC 17.12.210.A.3.]

Any document required to be submitted by this permit, including reports, shall contain a certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required by this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

IX. Inspection and Entry

[PCC 17.12.210.A.4.]

The Permittee shall allow the Control Officer or the authorized representative of the Control Officer upon presentation of proper credentials to:

- A. Enter upon the Permittee's premises where a source is located or emissions-related activity is conducted, or where records are required to be kept under the conditions of the permit;
- B. Have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
- C. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
- D. Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the permit or other applicable requirements; and
- E. Record any inspection by use of written, electronic, magnetic and photographic media.

X. Permit Revision Pursuant to Federal Hazardous Air Pollutant Standard

[PCC 17.12.160.C.4.]

If this source becomes subject to a standard promulgated by the Administrator pursuant to section 112(d) of the Act, then the Permittee shall, within twelve months of the date on which the standard is promulgated, submit an application for a permit revision demonstrating how the source will comply with the standard.

XI. Affirmative Defenses for Excess Emissions Due to Malfunctions, Startup, and Shutdown

[A.R.S. §49-480.B, A.A.C. 18-2-310, and PCC 17.28.065]

- A. **Applicability.** This permit condition establishes affirmative defenses for certain emissions in excess of an emission standard or limitation and applies to all emission standards or limitations except for standards or limitations:
  1. Promulgated pursuant to Sections 111 or 112 of the Act,
  2. Promulgated pursuant to Titles IV or VI of the Clean Air Act,
  3. Contained in any Prevention of Significant Deterioration (PSD) or New Source Review (NSR) permit issued by the U.S. E.P.A.,
  4. Contained in PCC 17.16.280.F, or
  5. Included in a permit to meet the requirements of PCC 17.16.590.A.5.

B. Affirmative Defense for Malfunctions

Emissions in excess of an applicable emission limitation due to malfunction shall constitute a violation. The owner or operator of a source with emissions in excess of an applicable emission limitation due to malfunction has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner or operator of the source has complied with the reporting requirements of XIII.B of this Part and has demonstrated all of the following:

1. The excess emissions resulted from a sudden and unavoidable breakdown of process equipment or air pollution control equipment beyond the reasonable control of the operator;

2. The air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
3. If repairs were required, the repairs were made in an expeditious fashion when the applicable emission limitations were being exceeded. Off-shift labor and overtime were utilized where practicable to ensure that the repairs were made as expeditiously as possible. If off-shift labor and overtime were not utilized, the owner or operator satisfactorily demonstrated that the measures were impracticable;
4. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
5. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
6. The excess emissions were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;
7. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;
8. The excess emissions did not stem from any activity or event that could have been foreseen and avoided, or planned, and could not have been avoided by better operations and maintenance practices;
9. All emissions monitoring systems were kept in operation if at all practicable; and
10. The owner or operator's actions in response to the excess emissions were documented by contemporaneous records.

C. Affirmative Defense for Startup and Shutdown

1. Except as provided in XI.C.2, and unless otherwise provided for in the applicable requirement, emissions in excess of an applicable emission limitation due to startup and shutdown shall constitute a violation. The owner or operator of a source with emissions in excess of an applicable emission limitation due to startup and shutdown has an affirmative defense to a civil or administrative enforcement proceeding based on that violation, other than a judicial action seeking injunctive relief, if the owner or operator of the source has complied with the reporting requirements of XIII.B of this Part and has demonstrated all of the following:
  - a. The excess emissions could not have been prevented through careful and prudent planning and design;
  - b. If the excess emissions were the result of a bypass of control equipment, the bypass was unavoidable to prevent loss of life, personal injury, or severe damage to air pollution control equipment, production equipment, or other property;
  - c. The source's air pollution control equipment, process equipment, or processes were at all times maintained and operated in a manner consistent with good practice for minimizing emissions;
  - d. The amount and duration of the excess emissions (including any bypass operation) were minimized to the maximum extent practicable during periods of such emissions;
  - e. All reasonable steps were taken to minimize the impact of the excess emissions on ambient air quality;
  - f. During the period of excess emissions there were no exceedances of the relevant ambient air quality standards established in PCC Chapter 17.08 that could be attributed to the emitting source;

- g. All emissions monitoring systems were kept in operation if at all practicable; and
- h. The owner or operator's actions in response to the excess emissions were documented by contemporaneous records.

2. If excess emissions occur due to a malfunction during routine startup and shutdown, then those instances shall be treated as other malfunctions subject to XI.B.

D. Affirmative Defense for Malfunctions During Scheduled Maintenance

If excess emissions occur due to a malfunction during scheduled maintenance, then those instances will be treated as other malfunctions subject to XI.B.

E. Demonstration of Reasonable and Practicable Measures

For an affirmative defense under XI.B or C, the owner or operator of the source shall demonstrate, through submission of the data and information required by this Section and XII.B, that all reasonable and practicable measures within the owner or operator's control were implemented to prevent the occurrence of the excess emissions.

XII. Record Keeping Requirements

[PCC 17.12.180.A.4.]

A. Permittee shall keep records of all required monitoring information including, but not limited to, the following:

- 1. The date, place as defined in the permit, and time of sampling or measurements;
- 2. The date(s) analyses were performed;
- 3. The name of the company or entity that performed the analyses;
- 4. A description of the analytical techniques or methods used;
- 5. The results of such analyses; and
- 6. The operating conditions as existing at the time of sampling or measurement.

B. Permittee shall retain records of all required monitoring data and support information for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

XIII. Reporting Requirements

[PCC 17.12.180.A.5.a.]

Permittee shall comply with all of the reporting requirements of this permit. These include all of the following:

A. Compliance certifications pursuant to Part "A", Section VII of this permit.

B. Excess Emissions Reporting Requirements

[A.R.S. §49-480.B, and A.A.C. 18-2-310.01]

- 1. The owner or operator of any source shall report to the control officer any emissions in excess of the limits established by this permit. The report shall be in two parts as specified below:
  - a. Notification by telephone or facsimile within 24 hours of the time the owner or operator first learned of the occurrence of excess emissions that includes all available information from XIII.B.2.
  - b. Detailed written notification by submission of an excess emissions report within 72 hours of the notification under XIII.B.1.a.

2. The excess emissions report shall contain the following information:
  - a. The identity of each stack or other emission point where the excess emissions occurred;
  - b. The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;
  - c. The time and duration or expected duration of the excess emissions;
  - d. The identity of the equipment from which the excess emissions emanated;
  - e. The nature and cause of the emissions;
  - f. The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunctions;
  - g. The steps that were or are being taken to limit the excess emissions; and
  - h. If the source's permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the permit procedures.
3. In the case of continuous or recurring excess emissions, the notification requirements of this Section shall be satisfied if the source provides the required notification after excess emissions are first detected and includes in the notification an estimate of the time the excess emissions will continue. Excess emissions occurring after the estimated time period or changes in the nature of the emissions as originally reported shall require additional notification pursuant to XIII.B.1 and 2.

C. Permit Deviations (Other Than Excess Emissions) Reporting Requirements. The Permittee shall promptly report deviations from permit requirements, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and any corrective actions or preventive measures taken. For the purposes of this condition, "promptly report" shall mean that the Permittee submitted the report to the control officer by certified mail or hand-delivery within two working days of the of time the deviation was discovered.

D. Reporting requirements listed in Part "B" of this permit.

#### XIV. Duty to Provide Information

[PCC 17.12.160.G. and PCC 17.12.180.A.8.e.]

A. The Permittee shall furnish to the Control Officer, within a reasonable time, any information that the Control Officer may request in writing to determine whether cause exists for revising, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the Permittee shall also furnish to the Control Officer copies of records required to be kept by the permit. For information claimed to be confidential, the Permittee, for Class I sources, shall furnish an additional copy of such records directly to the Administrator along with a claim of confidentiality.

B. If the Permittee has failed to submit any relevant facts or if the Permittee has submitted incorrect information in the permit application, the Permittee shall, upon becoming aware of such failure or incorrect submittal, promptly submit such supplementary facts or corrected information.

#### XV. Permit Amendment or Revision

[PCC 17.12.240., PCC 17.12.250., and PCC 17.12.260.]

Permittee shall apply for a permit amendment or revision for changes to the facility which do not qualify for a facility change without revision under Section XVI, as follows:

A. Administrative Permit Amendment (PCC 17.12.240.);

B. Minor Permit Revision (PCC 17.12.250.);

C. Significant Permit Revision (PCC 17.12.260.).

The applicability and requirements for such action are defined in the above referenced regulations.

XVI. Facility Change Without Permit Revision

[PCC 17.12.230.]

- A. Permittee may make changes at the permitted source without a permit revision if all of the following apply:
1. The changes are not modifications under any provision of Title I of the Act (Air Pollution Prevention and Control) or under A.R.S. § 49-401.01(19).
  2. The changes do not exceed the emissions allowable under the permit whether expressed therein as a rate of emissions or in terms of total emissions.
  3. The changes do not violate any applicable requirements or trigger any additional applicable requirements.
  4. The changes satisfy all requirements for a minor permit revision under PCC 17.12.250.
  5. The changes do not contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
- B. The substitution of an item of process or pollution control equipment for an identical or substantially similar item of process or pollution control equipment shall qualify as a change that does not require a permit revision, if it meets all of the requirements of subsections (A) and (C) of this Section.
- C. For each such change under subsections A and B of this Section, a written notice by certified mail or hand delivery shall be received by the Control Officer and, for Class I permits, the Administrator, a minimum of 7 working days in advance of the change. Notifications of changes associated with emergency conditions, such as malfunctions necessitating the replacement of equipment, may be provided less than 7 working days in advance of the change but must be provided as far in advance of the change as possible or, if advance notification is not practicable, as soon after the change as possible. Each notification shall include:
1. When the proposed change will occur.
  2. A description of each such change.
  3. Any change in emissions of regulated air pollutants.
  4. The pollutants emitted subject to the emissions trade, if any.
  5. The provisions in the implementation plan that provide for the emissions trade with which the source will comply and any other information as may be required by the provisions in the implementation plan authorizing the trade.
  6. If the emissions trading provisions of the implementation plan are invoked, then the permit requirements with which the source will comply.
  7. Any permit term or condition that is no longer applicable as a result of the change.

XVII. Testing Requirements

[PCC 17.12.050.]

A. Operational Conditions During Testing

Tests shall be conducted while the unit is operating under such conditions as the control officer shall specify to the plant operator based on representative performance of the source unless other conditions are required by the applicable test method or in this permit. With prior written approval from the Control Officer, testing may be performed at a lower rate. Operations during start-up, shutdown, and

malfunction (as defined in PCC 17.04.340.A.) shall not constitute representative operational conditions unless otherwise specified in the applicable requirement.

B. Test Plan

At least 14 calendar days prior to performing a test, the owner or operator shall submit a test plan to the Control Officer, in accordance with PCC 17.12.050.B. and the Arizona Testing Manual. This test plan must include the following:

1. test duration;
2. test location(s);
3. test method(s); and
4. source operation and other parameters that may affect test results.

C. Stack Sampling Facilities

Permittee shall provide or cause to be provided, performance testing facilities as follows:

1. Sampling ports adequate for test methods applicable to the facility;
2. Safe sampling platforms;
3. Safe access to sampling platforms; and
4. Utilities for sampling and testing equipment.

D. Interpretation of Final Results

Each performance test shall consist of three separate runs using the required test method. Each run shall be conducted in accordance with the applicable standard and test method. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. If a sample is accidentally lost or conditions occur which are not under the Permittee's control and which may invalidate the run, compliance may, upon the Control Officer's approval, be determined using the arithmetic mean of the other two runs.

E. Report of Final Test Results

A written report of the results of all performance tests shall be submitted to the Control Officer within 30 days after the test is performed. The report shall be submitted in accordance with the Arizona Testing Manual and PCC 17.12.050.A.

F. Cessation of Testing After the First Run Has Started

If the Control Officer or the Control Officer's designee is not present, tests may only be stopped for good cause. Good cause includes, forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions or other conditions beyond the Permittee's control. Termination of any test without good cause after the first run is commenced shall constitute a failure of the test. Supporting documentation that demonstrates good cause must be submitted.

XVIII. Property Rights

[PCC 17.12.180.A.8.d.]

This permit does not convey any property rights of any sort, or any exclusive privilege.

XIX. Severability Clause

[PCC 17.12.180.A.7.]

The provisions of this permit are severable. If any provision of this permit is held invalid, the remainder of this permit shall not be affected thereby.

XX. Permit Shield

[PCC 17.12.310.]

Compliance with the conditions of this permit shall be deemed compliance with the applicable requirements identified in Part "C" of this permit. The permit shield shall not apply to any change made pursuant to Section XV.B of this Part and Section XVI of this Part.

XXI. Accident Prevention Requirements Under the Clean Air Act (CAA Section 112(r))

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the accidental release prevention regulations in Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in Section 68.10 and shall certify compliance with the requirements of Part 68 as part of the semiannual compliance certification as required by 40 CFR Part 70 and Part "B" of this permit.



**St. Mary's Hospital – (Permit # 1631)**

**Summary of Facility Operations**

The Source is a hospital that utilizes two multiple fuel fired (natural gas and diesel) boilers – one of which is subject to NSPS standards found in 40 CFR 60.40.c, and two 620 kW emergency generators.

**Summary of Permit Requirements**

This is the only Part B for this permitted facility. In summary, the source must comply with SIP rules 321, 343, P.C.C. rules 17.16.165 and 17.16.340. 40 CFR 60 Rules 321 and 343 regard opacity standards and visibility limiting standards, respectively. Rules 17.16.165 and 17.16.340 give the standards of performance for fossil fuel fired industrial and commercial equipment and for stationary rotating machinery, respectively.

**Dual Fuel Fired Steam Generating Equipment and Diesel Fired Emergency Power Units**

Emission Unit	Pollutants Emitted	Control Measures	Emission Limits/Standards	Monitoring	Recordkeeping/Reporting	Testing Frequency/Methods
Emergency Generators	PM-10, SOx, NOx	None	$E \leq 1.02 Q^{0.75}$ Opacity $\leq 40\%$ Sulfur content of fuel $< 0.9\%$ by weight $SO_2 \leq 1.0$ lb/MMBtu Each generator is limited to no more than 500 hours of operation in any 12 consecutive month period.	Install and operate a non-resettable hour meter on each generator. Monitor the monthly hours of operation and hours in each 12-consecutive month period of each engine. Monitor the sulfur content of the fuel.	Record the monthly hours of operation of each engine. Record the type of fuel fired and its sulfur content. Excess emissions report and semiannual reports of monitoring as required. Compliance certification reports annually. Emissions inventory reports as required. Report any daily period where the sulfur content of the fuel fired is greater than 0.8 percent.	Test the sulfur content of the liquid fuel using ASTM D2880-71 or equivalent for each load of fuel delivered. EPA Test Method 9 shall be used to monitor compliance with the opacity standard. Mass emissions testing and testing for compliance with the $SO_2$ standard is not normally required.
Dual Fired Boilers	PM-10, SOx, NOx	None	$E \leq 1.02 Q^{0.75}$ Fuel limited to pipeline natural gas or diesel fuel. Opacity $\leq 40\%$ Sulfur content of fuel $< 0.9\%$ by weight $SO_2 \leq 1.0$ lb/MMBtu Fuel limited to pipeline natural gas or diesel fuel.	Monitor the sulfur content of the fuel. Monitor dates on which diesel fuel was fired. Monitor boiler stack for abnormal emissions.	Record the sulfur content of the fuel. Record date on which diesel fuel was fired. Record results of stack checks. Report all six-minute periods during which the opacity exceeded 15%. Excess emissions report and semiannual reports of monitoring as required. Compliance certification reports annually. Emissions inventory reports as required. Notification shall have been given to the administrator of US EPA prior to and after installation.	
Superior Boiler			Sulfur content of fuel $< 0.5\%$ by weight			

Part "B": SPECIFIC CONDITIONS  
Air Quality Control Permit No. 1631  
St. Mary's Hospital

(revised July 12, 2004)

- I. **APPLICABILITY: DIESEL FIRED STATIONARY ROTATING MACHINERY USED FOR POWER GENERATION, WATER PUMPS FOR FIREFIGHTING, ETC. THE ENGINES IN THIS CATEGORY ARE SYNTHETIC MINOR SOURCES based on an 8760 hours per year of operation for all engines covered in this Part and considering emissions from other emission units of the same SIC Code at this facility**

**SMALL DUEL FUEL FIRED INDUSTRIAL-COMMERCIAL-INSTITUTIONAL STEAM GENERATING UNITS. THE UNITS IN THIS CATEGORY ARE TRUE MINOR SOURCES based on an 8760 hours per year of operation for all steam generating units covered in this Part and considering emissions from other emission units of the same SIC Code at this facility**

- A. Affected Emission Source or Process: This Part B contains equipment specific requirements for the installation and/or operation of Diesel Fired Engines and multiple fuel fired boilers.
- B. Affected Emission Source Classification: **Class II; Synthetic Minor Source; Stationary Source.**

II. Emission Limits and Standards

- A. Emission Limits and Standards

Allowable emission limits: The following emission rates are for reference purposes only and are not intended to be enforced by direct measurement unless otherwise noted herein. They were determined based on standard EPA AP-42 emission factors or emissions data provided by the engine manufacturer(s), the total Btu/hr rating of 24,107,000, the total brake horsepower of 1662, and the permit conditions set forth in II.B. 1, 4, and 5 of this Part.

POLLUTANT	LB/HR	TPY
Nitrogen Dioxide (as NO <sub>x</sub> )	59.8	29.5
Carbon Monoxide (CO)	14.6	11.6
Volatile Organic Compounds (VOC)	2.8	1.7
Particulate Matter (as PM <sub>10</sub> )	2.6	2.1
Sulfur Dioxide (as SO <sub>x</sub> )	19.6	25.3
Lead	Negligible	Negligible
Total Hazardous Air Pollutants (HAPS)	Negligible	Negligible

B. Emergency Generators

1. Emissions of particulate matter shall not exceed: [PCC 17.16.340.C.]  
 $E = 1.02Q^{0.769}$   
where:  
E = the maximum allowable particulate emissions rate in pounds-mass per hour.  
Q = the heat input in million Btu per hour.
2. Opacity Standard [SIP Rule 321 and PCC 17.16.340.E]
  - a. No person shall cause, allow, or permit to be emitted into the atmosphere from any stationary rotating machinery, smoke for any period greater than ten consecutive seconds that exceeds 40 percent opacity. Visible emissions when starting cold equipment shall be exempt from this requirement for the first ten minutes. **[Federally Enforceable Requirement]**
  - b. The maximum allowable average opacity for cold (i.e., within 10 consecutive minutes of startup) or loaded (i.e., being accelerated under load) diesel engines shall not exceed 60%. **[Federally Enforceable Requirement]**
3. Sulfur dioxide (SO<sub>2</sub>) emissions shall not exceed 1.0 pound per million Btu heat input when low sulfur oil is fired. [PCC 17.16.340.F.]
4. Permittee shall burn only low sulfur diesel fuel in the generators. [PCC 17.16.340.H.]  
**[Material Permit Condition]**
5. Permittee shall not operate any generator more than 500 hours during any 12-consecutive month period. [PCC 17.12.180.A.2, 17.12.220, and 17.12.350.A.3.a.]  
**[Material Permit Condition] [Federally Enforceable Requirement]**

C. Dual Fuel Fired Boilers

1. Particulate Matter Standard [PCC 17.16.165.C.1]  
Permittee shall not cause, allow or permit the emission of particulate matter, caused by combustion of fuel, from any fuel burning operation having a heat input rate of 4200 million Btu per hour or less in excess of the amounts calculated by the following equation:  
 $E = 1.02 Q^{0.769}$   
where:  
E = the maximum allowable particulate emissions rate in pounds-mass per hour.  
Q = the heat input in million Btu per hour.
2. Visibility Limiting Standards [SIP Rule 343 and 321]
  - a. The Permittee shall not cause, allow or permit to be emitted into the atmosphere from any fuel-burning operation, smoke, excluding water vapor, which exceeds 40 percent opacity. **[Federally Enforceable Condition]**
  - b. Permittee shall not cause or permit the airborne diffusion of visible emissions, excluding water vapor, beyond the property boundary line without appropriately controlling the emissions at the point of discharge.  
**[Federally Enforceable Condition]**

3. Permittee shall combust only pipeline quality natural gas or diesel fuel in the boilers.  
[PCC 17.12.180.A.2., and 17.12.220] **[Material Permit Condition]**
4. Permittee shall not emit more than 1.0 pound of sulfur dioxide per million BTU heat input.  
[PCC 17.16.165.E.]
5. Permittee shall not burn in the Superior boiler fuel and the York-Shipley boiler fuel oil that contains sulfur in an amount equal to or greater than 0.5 and 0.9 percent by weight, respectively.  
[40 CRF 60.42.c(d) and PCC 17.16.165.G.] **[Material Permit Condition]**  
**[Superior boiler requirement is a Federally Enforceable Condition]**

### III. Monitoring and Recordkeeping Requirements

#### A. Emergency Generators.

1. The Permittee shall verify the hours of operation of the generators by installing and maintaining a non-resettable engine hour meter on each generator.  
[PCC 17.12.180.A.2. and 17.12.350.A.3 c.] **[Material Permit Condition]**
2. The Permittee shall maintain an operation log for each generator showing:  
[PCC 17.12.180.A.4.]
  - a. the type of fuel burned in the generator; [PCC 17.16.010.C.]
  - b. the maximum sulfur content in percent by weight for each load of fuel purchased;
  - c. the dates that fuel was purchased or delivered;
  - d. the basis for the determination of the sulfur content;
  - e. the monthly total engine-hours of operation of each generator. The totals for each month shall be recorded within five working days after the end of the month; and,
  - f. the total engine-hours of operation of each generator for the most recent 12-consecutive month period.

#### B. Dual Fired Boilers.

1. The Permittee shall monitor and record the sulfur content of the fuel being fired in the dual fired boilers.  
[PCC 17.12.180.A.3. and 4.]
  - a. When using natural gas fuel, the Permittee may demonstrate that only commercially available pipeline quality natural gas fuel was fired by making available to the Control Officer for his inspection, documentation, such as invoices or statements from the fuel supplier, showing that commercial natural gas was purchased for use in the equipment. Alternatively, the demonstration may be made by actual inspection of the equipment showing that pipeline natural gas is plumbed to the equipment for firing.
  - b. When using diesel fuel, the Permittee shall maintain an operation log for each dual fired boiler showing:
    - i. the dates on which diesel fuel was fired in the boiler; [PCC 17.16.010.C.]
    - ii. the maximum sulfur content in percent by weight for each load of diesel fuel purchased as certified by the supplier using Test Method ASTM D 2880-71 or an equivalent to determine the sulfur content of liquid fuels;

- iii. the dates that diesel fuel was purchased or delivered; and,
  - iv. the basis for the determination of the sulfur content of the diesel fuel.
2. The Permittee shall observe the exhaust stacks of each dual-fired boiler at least once when during each period where the units are firing diesel fuel for evidence of abnormal emissions. The Permittee shall record the results of each of these in a log containing the date of the check, the person making the check, the specific stack observed, and whether abnormal emissions were observed. If abnormal emissions were observed, the Permittee shall include in the log entry any corrective action taken.

3. Superior Boiler

Federal New Source Performance Standards require the Permittee to record and maintain records of the amounts of each fuel combusted during each day (40 CFR 60.48c(g)). This requirement is necessitated by circumstances of multiple fuel use in affected facilities. Since this permit restricts the Permittee to the use of pipeline quality natural gas and diesel fuel containing less than 0.5 percent sulfur by weight, there is no benefit to be gained by requiring daily records of each fuel used. Consequently, *for the purposes of compliance with the conditions of this paragraph, the Permittee shall not be required to record and maintain daily fuel use in the Superior boiler.* Since the York-Shipley boiler is not an NSPS affected facility, the requirement for a daily record of fuel use does not apply.

- C. Location of Records. The Permittee shall retain all records relating to this permit, and a copy of the permit at the permit site. The Permittee shall comply with the permit posting requirements of Part "A", Section IV. All records shall be maintained in accordance with the requirements of Section XII. of Part "A".

#### IV. Reporting Requirements

- A. Superior Boiler

[40 CFR 60.42c]

1. Notification shall be given to the Administrator of USEPA of:
  - a. Date of anticipated startup postmarked not more than 60 days nor less than 30 days prior to such date;
  - b. Date of actual startup postmarked not more than 15 days after such date;
  - c. Any changes which could increase emissions of any pollutant to which a standard applies postmarked 60 days prior to the change;
2. The notice required under IV.A.1.(a). and (b) of this section shall contain:
  - a. The design heat input capacity and identification of the types of fuel to be used.
  - b. Notification if an emerging technology will be used for controlling emissions of SO<sub>2</sub>.

- B. Excess Emissions and Permit Deviation Reporting.

[PCC 17.12.180.A.5.b. & 17.12.180.E.3.d]

The Permittee shall report to the Control Officer any emissions in excess of the limits established by this Part within 24 hours of the time the Permittee first learned of the excess emissions occurrence. The Permittee shall report other deviations from permit requirements in this Part within two working days of the time the deviation occurred. (See Part "A", Section XI for detailed information on these two reports).

C. Semiannual Summary Reports of Required Monitoring. [PCC 17.12.180.A.5.a.]

The Permittee is not required to submit semiannual reports of required monitoring unless excess emissions or permit deviations have occurred during the reporting period. Summary reports, if required, shall be due on January 31st (covering the period July 1st through December 31st) and July 31st (covering the period January 1st through June 30th) of each year. The first summary report due after permit issuance may not cover a six-month period. All instances of excess emissions and deviations from permit requirements shall be clearly identified in such reports.

D. The permittee shall report any daily period during which the sulfur content of the fuel being fired is greater than 0.8 percent. [PCC 17.16.340.J]

E. Compliance Certification Reporting. [PCC 17.12.210.A.2.]

The Permittee shall submit an annual compliance certification to the Control Officer. The Compliance Certification Report is due on January 31st of each year. The first report due after permit issuance may not cover a 12-month period. (See Part "A", Section VII for detailed information on this report).

F. Emissions Inventory Reporting. [PCC 17.12.320.]

Every source subject to a permit requirement shall complete and submit an annual emissions inventory questionnaire when requested by the control officer. (See Part "A", Section VI for additional information on this report).

V. Testing Requirements [PCC 17.12.180.A.3.a and 17.20.010]

For purposes of District enforcement, these test methods shall be used, provided that for the purpose of establishing whether or not the facility has violated or is in violation of any provision of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable federal requirements if the appropriate performance or compliance procedures or methods had been performed.

A. The Permittee shall determine compliance with the sulfur content standard in II.B.4 and II.C.5 as follows: ASTM D 2880-71 or an equivalent shall be used to determine the sulfur content of liquid fuels and ASTM D 1072-80, D 3031-81, D 4084-82, D 3246-81, or an equivalent shall be used for the sulfur content of gaseous fuels. When firing natural gas fuel in the dual-fired boilers, the Permittee need only demonstrate that pipeline quality natural gas was fired since the Federal Energy Regulatory Commission regulates the sulfur content of pipeline quality natural gas. When firing diesel fuel, the permittee may provide suppliers records certifying the sulfur content of the fuel in lieu of testing. [40 CFR 60.44.c(h)]

B. When required EPA Test Method 9 shall be used to monitor compliance with the opacity standard in II.B.2 and II.C.2. [PCC 17.12.180.A.2]

C. Mass emission testing to determine compliance with the particulate matter standard in II.B.1 and II.C.1 is not normally necessary as standard emission factors for boilers and generators yield emission estimates of particulate matter that are far less than the standard allowed by the referenced equation. The control officer may require the Permittee to quantify its particulate matter emissions if the control officer has reasonable cause to believe a violation of a standard has been committed. [PCC 17.20.010.]

D. Testing to determine compliance with the sulfur dioxide emission standard at II.B.3 and II.C.4 is not normally necessary as standard emission factors for boilers and generators yield

sulfur dioxide concentrations below the standard when the units are fired with low sulfur fuel. The control officer may require the Permittee to quantify its particulate matter emissions if the control officer has reasonable cause to believe a violation of a standard has been committed.

[PCC 17.20.010.]



Part "C": APPLICABLE REGULATIONS  
Air Quality Control Permit Number 1631  
For  
St. Mary's Hospital

**REQUIREMENTS SPECIFICALLY IDENTIFIED AS APPLICABLE**

Compliance with the terms contained in this permit shall be deemed compliance with the following federally applicable requirements in effect on the date of permit issuance:

40 CFR 60:

Subpart Dc Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

Pima County SIP:

Rule 321 Emissions-Discharge Opacity Limiting Standards-Standards and Applicability  
Rule 343 Visibility Limiting Standard

Compliance with the terms contained in this permit shall be deemed compliance with the following non-federally applicable requirements in effect on the date of permit issuance:

Pima County Code (PCC) Title 17, Chapter 17.16.:

17.16.010. Local Rules and Standards; Applicability of More Than One Standard  
17.16.165. Standards of Performance for Fossil-Fuel Fired Industrial and Commercial Equipment  
17.16.340. Standards of Performance for Stationary Rotating Machinery

Part "D": EQUIPMENT LIST  
 Air Quality Control Permit Number 1631  
 For  
 St. Mary's Hospital

Equipment Type	Make	Serial No.	Model No.	Capacity	NSPS
Emergency Generator	Caterpillar	36J1786	D 348 SR4	831 bhp	No
Emergency Generator	Caterpillar	6FA 03079	3412 SR4	831 bhp	No
Emergency Generator	Generac	2077905	SD350	525 bhp	No
Boiler	York-Shipley	76-11111 H-68252	SPH-3003N2 155 460 D	10,043,000 Btu/hr	No
Boiler	Superior	13420	4-X-1758	14,064,000 Btu/hr	Yes

Sum of brake horsepower of all above generators: 2187 hp

Sum of Btu/hr of all above steam generating units: 24,107,000 Btu/hr

