

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

CITY OF VERO BEACH,

Petitioner,

vs.

OGC FILE NO. 91-0376
DOAH CASE NO. 91-1400

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION,

Respondent.

FINAL ORDER

On February 14, 1991, the State of Florida Department of Environmental Regulation ("Department") received a request for administrative hearing from Petitioner, the City of Vero Beach. The Petitioner challenged certain permit conditions in the Department's decision to issue Permit No. AC31-184928 to construct a 60 MW combined cycle gas turbine at the Vero Beach Municipal Power Plant in Vero Beach, Florida.

On May 23, 1991, after receiving a Stipulation for Dismissal the assigned Hearing Officer issued an Order which closed the Division of Administrative Hearings file and relinquished jurisdiction back to the Department. (Exhibit 1) There being no further matters to consider,

IT IS ORDERED:

RECEIVED

JUN 06 1991

Division of Air
Resources Management

Department of Environmental Regulation
Routing and Transmittal Slip

To: (Name, Office, Location)

1.

Air Resources Mgmt.

2.

3.

4.

Remarks:

RECEIVED

JUN 06 1991

Division of Air
Resources Management

From:

Karen Rast - OGC

Date

6-5-91

Phone

488-9730

The petition is hereby dismissed and the Department's Division of Air Resources Management is directed to issue Permit No. AC31-184928 as modified in the Stipulation for Dismissal as soon as possible.

Any party to this Order has the right to seek judicial review of the Order pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; 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 of Appeal must be filed within 30 days from the date this Order is filed with the clerk of the Department.

DONE AND ORDERED this 4 day of June, 1991, in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to S120.52 Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Ruby C. Carter Clerk 6-5-91 Date


Carol M. Browner
CAROL M. BROWNER
Secretary

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Telephone: (904) 488-4805

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished to Peter C. Cunningham, Esquire, Gary V. Perko, Post Office Box 6526, Tallahassee, Florida 32314, by U.S. Mail on this 5th day of June, 1991.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION



DOUGLAS H. MACLAUGHLIN
Assistant General Counsel

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Telephone: (904) 488-9730

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

VERO BEACH MUNICIPAL POWER PLANT,)
)
Petitioner,)
)
vs.)
)
STATE OF FLORIDA, DEPARTMENT OF)
ENVIRONMENTAL REGULATION,)
)
Respondent.)

CASE NO. 91-1400 EPP

ORDER CLOSING FILE AND
RETURNING CASE TO THE AGENCY

On May 20, 1991, the parties filed a stipulation for dismissal in the above-styled matter. A true copy of such stipulation is attached hereto. The parties' resolution of their dispute pursuant to Section 120.57(3), Florida Statutes, renders these proceedings moot. Accordingly, it is

ORDERED that the file of the Division of Administrative Hearings is closed, and this matter is hereby returned to the agency for final disposition.

DONE AND ORDERED in Tallahassee, Leon County, Florida, this 22nd day of May 1991.



WILLIAM J. KENDRYCK
Hearing Officer
Division of Administrative Hearings
The DeSoto Building
1230 Apalachee Parkway
Tallahassee, Florida 32399-1550
(904) 488-9675

Filed with the Clerk of the
Division of Administrative Hearings
this 22nd day of May 1991.

Copies furnished:

Peter C. Cunningham, Esquire
Gary V. Perko
Post Office Box 6526
Tallahassee, Florida 32314

Douglas H. MacLuaghlin
Department of Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Case No. 91-1400EPP

STATE OF FLORIDA
DIVISION OF ADMINISTRATIVE HEARINGS

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MAY 20 4 29 PM '91

WJK
DDC
DIVISION OF
ADMINISTRATIVE
HEARINGS

VERO BEACH MUNICIPAL POWER PLANT)
)
Petitioner,)
)
vs.)
)
STATE OF FLORIDA, DEPARTMENT OF)
ENVIRONMENTAL REGULATION)
)
Respondent.)
)
_____)

DOAH Case No. 91-1400 EPP

STIPULATION FOR DISMISSAL


Pursuant to Florida Administrative Code Rule 22I-2.033, Petitioner, City of Vero Beach ("City") and Respondent, State of Florida Department of Environmental Regulation ("Department") jointly file this Stipulation for Dismissal and request the Hearing Officer to enter an order recommending dismissal of this case in accordance with the following settlement agreement. The parties jointly agree:

1. This proceeding relates to the City's application to the Department for an air pollution source construction permit authorizing construction of a 60 megawatt combined cycle gas turbine at the Vero Beach Municipal Power Plant in Vero Beach, Florida. In its Petition For Administrative Proceedings, filed on February 14, 1991, the City contested certain nitrogen oxide (NOx) emission limitations for the proposed combined cycle unit as set forth in the Department's Intent to Issue Permit.

2. The parties agree to a mutually acceptable resolution of this proceeding in accordance with the attached permit. The Department agrees to issue a final construction permit in

accordance with the terms of the attached permit within one week of the date of the Hearing Officer's Recommended Order of Dismissal, or as soon as possible thereafter.

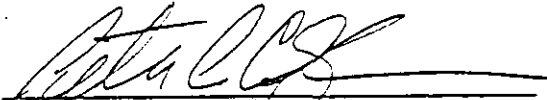
DEPARTMENT OF ENVIRONMENTAL
REGULATION


Douglas H. MacLaughlin
Twin Towers Office Bldg.
2600 Blair Stone Road
Tallahassee, FL 32399-2400
(904) 488-9730

Attorney for Respondent

Date 15 May 1991

HOPPING BOYD GREEN & SAMS


Peter C. Cunningham
Gary V. Perko
Post Office Box 6526
Tallahassee, FL 32314
(904) 222-7500

Attorneys for Petitioner

Date 15 May 1991

PERMITTEE:
Vero Beach Municipal Power Plant
Post Office Box 1389
Vero Beach, Florida 32961

Permit Number: AC 31-184928
Expiration Date: December 31, 1993
County: Indian River
Latitude/Longitude: 27°37'59"N
80°22'41"W

Project: 60 MW Combined Cycle
Gas Turbine

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Chapter 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawings(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

For the construction of a 60 MW combined cycle gas turbine to be located at the Vero Beach Municipal Power Plant in Vero Beach, Florida. The UTM coordinates are 561.385 km East and 3056.538 km North.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachments are listed below:

1. Vero Beach Municipal Power Plant's application dated August 13, 1990.
2. Department's letter dated September 11, 1990.
3. Vero Beach Municipal Power Plant's letter received on October 1, 1990.
4. Letter from EPA dated November 30, 1990.
5. Letter from EPA dated January 28, 1991.
6. Letter from Hopping Boyd Green & Sams received on March 27, 1991.
7. Letter from Hopping Boyd Green & Sams received May 9, 1991.

PERMITTEE:

Vero Beach Municipal Power Plant

Permit Number: AC 31-184928

Expiration Date: December 31, 1993

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provisions includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

PERMITTEE:

Permit Number: AC 31-184928

Vero Beach Municipal Power Plant Expiration Date: December 31, 1993

GENERAL CONDITIONS:

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:

- a. Have access to and copy any records that must be kept under the conditions of the permit;
- b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

PERMITTEE:

Vero Beach Municipal Power Plant

Permit Number: AC 31-184928

Expiration Date: December 31, 1993

GENERAL CONDITIONS:

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rule 17-4.120 and 17-30.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

- (x) Determination of Best Available Control Technology (BACT)
- (x) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards (NSPS)

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rules.
- c. Records of monitoring information shall include:
 - the date, exact place, and time of sampling or measurements;

PERMITTEE:

Permit Number: AC 31-184928

Vero Beach Municipal Power Plant Expiration Date: December 31, 1993

GENERAL CONDITIONS:

- the person responsible for performing the sampling or measurements;
- the dates analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

SPECIFIC CONDITIONS:

Emission Limits

1. During the first year of commercial operation of Unit 5, the maximum allowable emissions from Unit 5 shall not exceed the emission limitations listed in Table 1. In addition, when constructing the combined cycle generating unit, the permittee shall install duct modules suitable for later installation of a selective catalytic reduction (SCR) system.

2. Within one year of the date Unit 5 commences commercial operation, the permittee shall install low NO_x combustors or an SCR system to control NO_x emissions from the unit. If low NO_x combustors are installed, the maximum allowable emissions from Unit 5 shall not exceed the emission limitations listed in Table 2. However, should compliance testing performed in accordance with Specific Condition No. 10 establish, to the satisfaction of the Department, a NO_x emissions rate of 42 ppmvd (at 15% O₂ on a dry basis) or lower, the emission limitations listed in Table 3 shall apply. In the event an SCR system is installed, it may be bypassed during simple cycle operation.

3. Unless the Department has determined other concentrations are required to protect public health and safety, predicted acceptable ambient air concentrations (AAC) of the following pollutants shall not be exceeded:

PERMITTEE:

Permit Number: AC 31-184928

Vero Beach Municipal Power Plant

Expiration Date: December 31, 1993

SPECIFIC CONDITIONS:

Pollutant	Acceptable Ambient Concentrations ug/m ³		
	8 hrs	24 hrs	Annual
Beryllium	0.02	0.005	0.0004
Lead	1.5	0.36	0.09
Mercury: allyl compounds	0.1	0.024	- RAC=2
• all forms of vapor except allyl	0.5	0.12	-
• allyl & organic compounds	1	0.24	-

4. Visible emissions shall not exceed 10% opacity.

Operating Rates

5. This source is allowed to operate continuously (8760 hours per year).

6. This source is allowed to use either natural gas or No. 2 fuel oil.

7. The permitted materials and utilization rates for the combined cycle gas turbine shall not exceed the values as follows:

- Maximum No. 2 fuel oil consumption shall not exceed 3,390 gals/hr.
- Maximum No. 2 fuel oil consumption shall not exceed 7,500,000 gals/yr., unless SCR is installed. If low NO_x burners are installed and compliance testing in accordance with Specific Condition No. 16 establishes a NO_x emission rate of 42 ppmvd (at 15% O₂ on a dry basis) or lower, the limit on No. 2 fuel oil consumption shall be raised to 10,000,000 gals./yr.
- Maximum annual firing using No. 2 fuel oil shall not exceed 25% of the annual capacity factor, unless SCR is installed. If low NO_x combustors are installed and compliance testing in accordance with Specific Condition No. 10 establishes a NO_x emissions rate of 42 ppmvd (at 15% O₂ on a dry basis) or lower, the annual limit on firing of No. 2 fuel oil shall be raised to 33% of the annual capacity factor.
- Maximum annual simple cycle operation shall not exceed 25% of the annual capacity factor unless low NO_x combustors are installed.

PERMITTEE:

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Vero Beach Municipal Power Plant Expiration Date: December 31, 1993

SPECIFIC CONDITIONS:

- Maximum sulfur (S) content in the oil shall not exceed 0.25 percent by weight.
- Maximum heat input shall not exceed 446 MMBtu/hr (gas) or 443 MMBtu/hr (oil), based on sea level pressure at 59° F ambient dry bulb temperatures & 60% relative humidity (ISO conditions).

8. Any change in the method of operation, equipment or operating hours shall be submitted to the DER's Bureau of Air Regulation and Central District offices.

9. Any other operating parameters established during compliance testing and/or inspection that will ensure the proper operation of this facility shall be included in the operating permit.

Compliance Determination

10. Initial (I) compliance tests shall be performed on each CT using both fuels. The stack test for each turbine shall be performed within 10 percent of the maximum heat rate input for the tested operating temperature. Annual (A) compliance tests shall be performed on each CT with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using EPA reference methods in accordance with the November 2, 1989, version of 40 CFR 60 Appendix A:

- a. 5 or 17 for PM (I, A, for oil only)
- b. 10 for CO (I)
- c. 9 for VE (I, A)
- d. 20 for NO_x (I, A)
- e. Trace elements of Beryllium (Be) shall be tested (I, for oil only) using EMTIC Interim Test Method. As an alternative, Method 104 may be used; or Be may be determined from fuel sample analysis using either Method 7090 or 7091, and sample extraction using Method 3040 as described in the EPA solid waste regulations SW 846.

Other DER approved methods may be used for compliance testing after prior Departmental approval.

11. Method 5 must be used to determine the initial compliance status

PERMITTEE:

Vero Beach Municipal Power Plant

Permit Number: AC 31-184928

Expiration Date: December 31, 1993

SPECIFIC CONDITIONS:

of this unit. Thereafter, the opacity emissions test may be used unless 10% opacity is exceeded.

12. Compliance with the SO₂ emission limit can also be determined by calculations based on fuel analysis using ASTM D2880-71 for the sulfur content of liquid fuels and ASTM D1072-80, D3031-81, D4084-82 or D3246-81 for sulfur content of gaseous fuels.

13. During performance tests, to determine compliance with the proposed NO_x standard, measured NO_x emission at 15 percent oxygen will be adjusted to ISO ambient atmospheric conditions by the following correction factor:

$$NO_x = (NO_x \text{ obs}) \left(\frac{P_{\text{ref}}}{P_{\text{obs}}} \right)^{0.5} e^{19} (H_{\text{obs}} - 0.00633) (288^\circ\text{K})^{1.53} T_{\text{AMB}}$$

where:

NO_x = Emissions of NO_x at 15 percent oxygen and ISO standard ambient conditions.

NO_x obs = Measured NO_x emission at 15 percent oxygen, ppmv.

P_{ref} = Reference combustor inlet absolute pressure at 101.3 kilopascals (1 atmosphere) ambient pressure.

P_{obs} = Measured combustor inlet absolute pressure at test ambient pressure.

H_{obs} = Specific humidity of ambient air at test.

e = Transcendental constant (2.718).

T_{AMB} = Temperature of ambient air at test.

14. Test results will be the average of 3 valid runs. The Central District will be notified at least 30 days in advance of the compliance test. The source shall operate between 90% and 100% of permitted capacity during the compliance test. Compliance test results shall be submitted to the Central District office no later than 45 days after completion.

15. After the installation of low NO_x combustors or SCR, the permittee shall determine compliance with the NO_x standards in accordance with Specific Conditions Nos. 10 and 13.

PERMITTEE:

Permit Number: AC 31-184928

Vero Beach Municipal Power Plant Expiration Date: December 31, 1993

SPECIFIC CONDITIONS:

16. A continuous monitoring system shall be installed to monitor and record the fuel consumption. Continuous monitoring shall also be installed, operated, and maintained in accordance with 40 CFR 60, Appendix F, for the combined cycle unit to monitor nitrogen oxides emissions.

- a. Each continuous emission monitoring system (CEMS) shall meet performance specifications of 40 CFR 60, Appendix B.
- b. CEMS data shall be recorded and reported in accordance with Chapter 17-2, F.A.C., and 40 CFR 60. The record shall include periods of startup, shutdown and malfunction.
- c. A malfunction means any sudden and unavoidable failure of air pollution control equipment or process equipment to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation or any other preventable upset conditions or preventable equipment breakdown shall not be considered malfunctions.
- d. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation and operation of all CEMS.
- e. For purposes of reports required under this permit, excess emissions are defined as any calculated average emission concentration, as determined pursuant to Condition No. 22 herein, which exceeds the applicable emission limits in Condition No. 1.

17. Sulfur, nitrogen content and lower heating value of the fuel being fired in the gas turbine shall be recorded daily. The records of fuel oil usage will be kept by the company for a two-year period; available for regulatory agency's inspection.

Rule Requirements

18. This source shall comply with all applicable provisions of Chapter 403, Florida Statutes and Chapter 17-2 and 17-4, Florida Administrative Code.

19. This source shall comply with all requirements of 40 CFR 60, Subpart GG and F.A.C. Rule 17-2.660(2)(a), Standards of Performance for Stationary Gas Turbines.

PERMITTEE:

Permit Number: AC 31-184928

Vero Beach Municipal Power Plant

Expiration Date: December 31, 1993

SPECIFIC CONDITIONS:

20. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements and regulations (F.A.C. Rule 17-2.210(1)).

21. This source shall comply with F.A.C. Rule 17-2.700, Stationary Paint Source Emission Test Procedure.

22. Pursuant to F.A.C. Rule 17-2.210(2), Air Operating Permits, the permittee is required to submit annual reports on the actual operating rate and emissions from the facility. These reports shall include, but are not limited to the following: sulfur, nitrogen content and lower heating value of the fuel being fired, fuel usage, hours of operation, air emissions limits, etc. Annual reports shall be sent to the Department's Central District office.

23. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).

24. An application for an operation permit must be submitted to the Central District office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rule 17-4.220).

Issued this _____ day
of _____, 1991.

STATE OF FLORIDA DEPARTMENT OF
ENVIRONMENTAL REGULATION

STEVE SMALLWOOD, P.E., Director
Division of Air Resources
Management

TABLE 4
ALLOWABLE EMISSION LIMITS
(If SCR is Installed)

Pollutant	Standards		Gas Turbine and HRSG Tons Per Year		Basis
	Gas Firing	No. 2 Fuel Oil Firing	Gas	Oil	
NO _x - combined cycle ^(a)	9 ppmvd at 15% O ₂ on a dry basis	25 ppmvd at 15% O ₂ on a dry basis	65.7	186	BACT
NO _x - simple cycle ^(a)	42 ppmvd at 15% O ₂ on a dry basis	65 ppmvd at 15% O ₂ on a dry basis	82.1	132.5	BACT
SO ₂	Natural gas as fuel	0.25 percent S by weight	1.3	523	BACT
PM	0.006 lb/MMBtu	0.025 lb/MMBtu	10.95	43.8	BACT
VOC	0.0112 lb/MMBtu	0.0113 lb/MMBtu	21.9	21.9	BACT
CO	0.0224 lb/MMBtu	0.0226 lb/MMBtu	43.8	43.8	BACT
Mercury (Hg)		3.0×10^{-6} lbs/MMBtu		0.006	Est. by Appl.
Lead (Pb)		2.8×10^{-5} lbs/MMBtu		0.05	Est. by Appl.
Beryllium (be)		2.5×10^{-6} lbs/MMBtu		0.005	BACT
Sulfuric Acid Mist	Natural gas as fuel	8.1×10^{-3} lbs/MMBtu	0.019	15.7	BACT

(a) Emission limitations based on 100 percent capacity factor for combined cycle operation.

(b) Emission limitations based on 25 percent capacity factor for simple cycle operation.

MAY 19 1992
DEPT. OF ENVIRONMENTAL
OFFICE OF GENERAL COUNSEL

TABLE 3
ALLOWABLE EMISSION LIMITS
(If Low NOx Combustors Are Installed)

Pollutant	Standards		Gas Turbine and HRSG Tons Per Year ^(a)	Basis
	Gas Firing	No. 2 Fuel Oil Firing		
NO _x	25 ppmvd at 15% oxygen on a dry basis	42 ppmvd at 15% oxygen on a dry basis	243.7	BACT
SO ₂	Natural gas as fuel	0.25 percent S by weight	173.6	BACT
PM	0.006 lb/MMBtu	0.025 lb/MMBtu	21.79	BACT
VOC	0.0112 lb/MMBtu	0.0113 lb/MMBtu	21.9	BACT
CO	0.0224 lb/MMBtu	0.0226 lb/MMBtu	43.8	BACT
Mercury (Hg)		3.0×10^{-6} lbs/MMBtu	0.0019	Est. by Appl.
Lead (Pb)		2.8×10^{-5} lbs/MMBtu	0.018	Est. by Appl.
Beryllium (be)		2.5×10^{-6} lbs/MMBtu	0.0016	BACT
Sulfuric Acid Mist	Natural gas as fuel	8.1×10^{-3} lbs/MMBtu	5.20	BACT

(a) Emission limitations based on 67 percent capacity factor for gas-firing; 33 percent capacity factor for oil-firing.

TABLE 2
ALLOWABLE EMISSION LIMITS
(If Low NOx Combustors Are Installed)

Pollutant	Standards		Gas Turbine and HRSG Tons Per Year ^(a)	Basis
	Gas Firing	No. 2 Fuel Oil Firing		
NO _x	25 ppmvd at 15% oxygen on a dry basis	65 ppmvd at 15% oxygen on a dry basis	278.8	BACT
SO ₂	Natural gas as fuel	0.25 percent S by weight	131.9	BACT
PM	0.006 lb/MMBtu	0.025 lb/MMBtu	19.16	BACT
VOC	0.0112 lb/MMBtu	0.0113 lb/MMBtu	21.9	BACT
CO	0.0224 lb/MMBtu	0.0226 lb/MMBtu	43.8	BACT
Mercury (Hg)		3.0×10^{-6} lbs/MMBtu	0.0015	Est. by Appl.
Lead (Pb)		2.8×10^{-5} lbs/MMBtu	0.014	Est. by Appl.
Beryllium (be)		2.5×10^{-6} lbs/MMBtu	0.0012	BACT
Sulfuric Acid Mist	Natural gas as fuel	8.1×10^{-3} lbs/MMBtu	3.939	BACT

(a) Emission limitations based on 75 percent capacity factor for gas-firing; 25 percent capacity factor for oil-firing.

TABLE 1
 ALLOWABLE EMISSION LIMITS
 (Before Installation of Low NOx Combustors or SCR)

Pollutant	Standards		Gas Turbine and HRSG ^(a) Tons Per Year	Basis
	Gas Firing	No. 2 Fuel Oil Firing		
NO _x	42 ppmvd at 15% oxygen on a dry basis	65 ppmvd at 15% oxygen on a dry basis	378.9	BACT
SO ₂	Natural gas as fuel	0.25 percent S by weight	131.9	BACT
PM	0.006 lb/MMBtu	0.025 lb/MMBtu	19.16	BACT
VOC	0.0112 lb/MMBtu	0.0113 lb/MMBtu	21.9	BACT
CO	0.0224 lb/MMBtu	0.0226 lb/MMBtu	43.8	BACT
Mercury (Hg)		3.0×10^{-6} lbs/MMBtu	0.0015	Est. by Appl.
Lead (Pb)		2.8×10^{-5} lbs/MMBtu	0.014	Est. by Appl.
Beryllium (be)		2.5×10^{-6} lbs/MMBtu	0.0012	BACT
Sulfuric Acid Mist	Natural gas as fuel	8.1×10^{-3} lbs/MMBtu	3.939	BACT

(a) Emission limitations based on 75 percent capacity factor for gas-firing; 25 percent capacity factor for oil-firing.