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BUREAU OF AIR REGULATION

**TITLE V PERMIT RENEWAL APPLICATION  
CITY OF VERO BEACH MUNICIPAL UTILITIES  
INDIAN RIVER COUNTY, FLORIDA**

**Prepared For:  
City of Vero Beach  
100 17th Street  
Vero Beach, Florida 32653**

**Prepared By:  
Golder Associates Inc.  
6241 NW 23rd Street, Suite 500  
Gainesville, Florida 32653-1500**

**June 2002  
0237541**

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# Department of Environmental Protection

## Division of Air Resources Management

### APPLICATION FOR AIR PERMIT - TITLE V SOURCE

See Instructions for Form No. 62-210.900(1)

#### I. APPLICATION INFORMATION

##### Identification of Facility

1. Facility Owner/Company Name: <b>City of Vero Beach</b>	
2. Site Name: <b>City of Vero Beach Municipal Utilities</b>	
3. Facility Identification Number: <b>0610029</b> [ ] Unknown	
4. Facility Location: Street Address or Other Locator: <b>100 17th Street</b> City: <b>Vero Beach</b> County: <b>Indian River</b> Zip Code: <b>32960</b>	
5. Relocatable Facility? [ ] Yes [ <b>X</b> ] No	6. Existing Permitted Facility? [ <b>X</b> ] Yes [ ] No

##### Application Contact

1. Name and Title of Application Contact: <b>Mr. James F. Stevens, Manager of Support Services</b>	
2. Application Contact Mailing Address: Organization/Firm: <b>City of Vero Beach</b> Street Address: <b>100 17th Street; P.O. Box 1389</b> City: <b>Vero Beach</b> State: <b>FL</b> Zip Code: <b>32961-1389</b>	
3. Application Contact Telephone Numbers: Telephone: <b>( 772 ) 978 - 5051</b> Fax: <b>( 772 ) 978 - 5090</b>	

##### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	7/1/02 0610029-006-AV
2. Permit Number:	↓
3. PSD Number (if applicable):	
4. Siting Number (if applicable):	

**Purpose of Application**

**Air Operation Permit Application**

This Application for Air Permit is submitted to obtain: (Check one)

Initial Title V air operation permit for an existing facility which is classified as a Title V source.

Initial Title V air operation permit for a facility which, upon start up of one or more newly constructed or modified emissions units addressed in this application, would become classified as a Title V source.

Current construction permit number: \_\_\_\_\_

Title V air operation permit revision to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: \_\_\_\_\_

Operation permit number to be revised: \_\_\_\_\_

Title V air operation permit revision or administrative correction to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. (Also check Air Construction Permit Application below.)

Operation permit number to be revised/corrected: \_\_\_\_\_

Title V air operation permit revision for reasons other than construction or modification of an emissions unit. Give reason for the revision; e.g., to comply with a new applicable requirement or to request approval of an "Early Reductions" proposal.

Operation permit number to be revised: 0610029-005-AV

Reason for revision: Renewal Application

**Air Construction Permit Application**

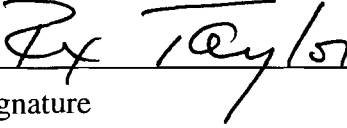
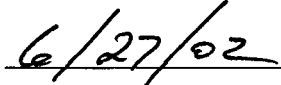
This Application for Air Permit is submitted to obtain: (Check one)

Air construction permit to construct or modify one or more emissions units.

Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

Air construction permit for one or more existing, but unpermitted, emissions units.

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: <b>Rex Taylor, City Manager, Utilities Director</b>
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: <b>City of Vero Beach</b> Street Address: <b>P.O. Box 1389</b> City: <b>Vero Beach</b> State: <b>FL</b> Zip Code: <b>32961-1389</b>
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: <b>( 772 ) 978 - 4710</b> Fax: <b>( 772 ) 778 - 3856</b>
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.</i>   Signature  Date

\* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: <b>Kennard F. Kosky</b> Registration Number: <b>14996</b>
2. Professional Engineer Mailing Address: Organization/Firm: <b>Golder Associates Inc.</b> Street Address: <b>6241 NW 23rd Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653-1500</b>
3. Professional Engineer Telephone Numbers: Telephone: <b>( 352 ) 336 - 5600</b> Fax: <b>( 352 ) 336 - 6603</b>

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:*

*(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and*

*(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here , if so), I further certify that each emissions unit described in this Application for Air Permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here , if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here , if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.*

*Kenneth F. Hendry*  
\_\_\_\_\_  
Signature

*6/26/02*  
\_\_\_\_\_  
Date

(seal) *149*

Attach any exception to certification statement.

**Scope of Application**

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Fossil Fuel Steam Generator Unit 1		
002	Fossil Fuel Steam Generator Unit 2		
003	Fossil Fuel Steam Generator Unit 3		
004	Fossil Fuel Steam Generator Unit 4		
005	Combined Cycle Gas Turbine Unit 5		
---	Facility-Wide Fugitive Emissions (includes IDs 006 and 007)		

**Application Processing Fee**

Check one:  Attached - Amount: \$: \_\_\_\_\_  Not Applicable

**Construction/Modification Information**

1. Description of Proposed Project or Alterations:

**This is a renewal Title V Permit Application for this facility.**

2. Projected or Actual Date of Commencement of Construction:

3. Projected Date of Completion of Construction:

**Application Comment**

[Empty box for Application Comment]

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

#### Facility Location and Type

1. Facility UTM Coordinates: Zone: 17                                      East (km): 561.4                                      North (km): 3056.5			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 27 / 37 / 52                                      Longitude (DD/MM/SS): 80 / 22 / 33			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 49	6. Facility SIC(s): 4911
7. Facility Comment (limit to 500 characters):  <p>Information in this application applies to the City of Vero Beach Power Plant and Wastewater Treatment Plant, which are located on adjacent properties. The power plant consists of 4 Fossil Fuel Fired Steam Generators (Units 1 - 4) and 1 Combined Cycle Unit (Unit 5), which consists of a combustion turbine and an associated heat recovery steam generator (HRSG). See Attachment VB-FI-A7 for pictures of the power plant.</p>			

#### Facility Contact

1. Name and Title of Facility Contact: <b>Mr. James F. Stevens, Manager of Support Services</b>			
2. Facility Contact Mailing Address: Organization/Firm: <b>City of Vero Beach, Power Plant</b> Street Address: <b>100 17th Street; P.O. Box 1389</b> City: <b>Vero Beach</b> State: <b>FL</b> Zip Code: <b>32961-1389</b>			
3. Facility Contact Telephone Numbers: Telephone: ( 772 ) 978 - 5051                                      Fax: ( 772 ) 978 - 5090			



**Facility Regulatory Classifications**

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)?	
3. <input type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)?	
5. <input type="checkbox"/> Synthetic Minor Source of HAPs?	
6. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
7. <input type="checkbox"/> One or More Emission Units Subject to NESHAP?	
8. <input type="checkbox"/> Title V Source by EPA Designation?	
9. Facility Regulatory Classifications Comment (limit to 200 characters):	
<p><b>NSPS Subpart GG applies to the combustion turbine for Unit 5.</b></p>	

**List of Applicable Regulations**

See Attachment VB-FI-A, Title V Core List, effective 3/1/02.	

## B. FACILITY POLLUTANTS

### List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
SO <sub>2</sub>	A				Sulfur Dioxide
PM	A				Particulate Matter-Total
PM <sub>10</sub>	A				Particulate Matter-PM <sub>10</sub>
NO <sub>x</sub>	A				Nitrogen Oxides
CO	A				Carbon Monoxide
H106	A				Hydrochloric Acid
SAM	A				Sulfuric Acid Mist
HAPs	A				Total Hazardous Air Pollutants

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [ X ] Attached, Document ID: <u>VB-FI-C1</u> [ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [ X ] Attached, Document ID: <u>VB-FI-C2</u> [ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [ X ] Attached, Document ID: <u>VB-FI-C3</u> [ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ X ] Attached, Document ID: <u>VB-FI-C4</u> [ ] Not Applicable [ ] Waiver Requested
5. Fugitive Emissions Identification: [ X ] Attached, Document ID: <u>VB-FI-C5</u> [ ] Not Applicable [ ] Waiver Requested
6. Supplemental Information for Construction Permit Application: [ ] Attached, Document ID: _____ [ X ] Not Applicable
7. Supplemental Requirements Comment: <b>Compliance certification was submitted prior to March 1, 2002 and therefore, is not included with this application.</b>

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

8. List of Proposed Insignificant Activities: <input checked="" type="checkbox"/> Attached, Document ID: <u>VB-FI-C8</u> <input type="checkbox"/> Not Applicable
9. List of Equipment/Activities Regulated under Title VI: <input checked="" type="checkbox"/> Attached, Document ID: <u>VB-FI-C9</u> <input type="checkbox"/> Equipment/Activities On site but Not Required to be Individually Listed <input type="checkbox"/> Not Applicable
10. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
11. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
12. Identification of Additional Applicable Requirements: <input checked="" type="checkbox"/> Attached, Document ID: <u>VB-FI-C12</u> <input type="checkbox"/> Not Applicable
13. Risk Management Plan Verification: <input checked="" type="checkbox"/> Plan previously submitted to Chemical Emergency Preparedness and Prevention Office (CEPPO). Verification of submittal attached (Document ID: _____) or previously submitted to DEP (Date and DEP Office: <u>June 21, 1999</u> ) <input type="checkbox"/> Plan to be submitted to CEPPO (Date required: _____) <input type="checkbox"/> Not Applicable
14. Compliance Report and Plan: <input checked="" type="checkbox"/> Attached, Document ID: <u>VB-FI-C14</u> <input type="checkbox"/> Not Applicable
15. Compliance Certification (Hard-copy Required): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**ATTACHMENT VB-FI-A**  
**FACILITY REGULATIONS**

# Title V Core List

Effective: 03/01/02

[**Note:** The Title V Core List is meant to simplify the completion of the "List of Applicable Regulations" for DEP Form No. 62-210.900(1), Application for Air Permit - Long Form. The Title V Core List is a list of rules to which all Title V Sources are presumptively subject. The Title V Core List may be referenced in its entirety, or with specific exceptions. The Department may periodically update the Title V Core List.]

**Federal:** *(description)*

40 CFR 61, Subpart M: NESHAP for Asbestos.

40 CFR 82: Protection of Stratospheric Ozone.

40 CFR 82, Subpart B: Servicing of Motor Vehicle Air Conditioners (MVAC).

40 CFR 82, Subpart F: Recycling and Emissions Reduction.

**State:** *(description)*

**CHAPTER 62-4, F.A.C.: PERMITS, effective 06-01-01**

62-4.030, F.A.C.: General Prohibition.

62-4.040, F.A.C.: Exemptions.

62-4.050, F.A.C.: Procedure to Obtain Permits; Application.

62-4.060, F.A.C.: Consultation.

62-4.070, F.A.C.: Standards for Issuing or Denying Permits; Issuance; Denial.

62-4.080, F.A.C.: Modification of Permit Conditions.

62-4.090, F.A.C.: Renewals.

62-4.100, F.A.C.: Suspension and Revocation.

62-4.110, F.A.C.: Financial Responsibility.

62-4.120, F.A.C.: Transfer of Permits.

62-4.130, F.A.C.: Plant Operation - Problems.

62-4.150, F.A.C.: Review.

62-4.160, F.A.C.: Permit Conditions.

62-4.210, F.A.C.: Construction Permits.

62-4.220, F.A.C.: Operation Permit for New Sources.

**CHAPTER 62-210, F.A.C.: STATIONARY SOURCES - GENERAL  
REQUIREMENTS, effective 06-21-01**

62-210.300, F.A.C.: Permits Required.

62-210.300(1), F.A.C.: Air Construction Permits.

62-210.300(2), F.A.C.: Air Operation Permits.

62-210.300(3), F.A.C.: Exemptions.

62-210.300(5), F.A.C.: Notification of Startup.

62-210.300(6), F.A.C.: Emissions Unit Reclassification.

62-210.300(7), F.A.C.: Transfer of Air Permits.

## **Title V Core List**

Effective: 03/01/02

62-210.350, F.A.C.: Public Notice and Comment.  
62-210.350(1), F.A.C.: Public Notice of Proposed Agency Action.  
62-210.350(2), F.A.C.: Additional Public Notice Requirements for Emissions Units Subject to Prevention of Significant Deterioration or Nonattainment-Area Preconstruction Review.  
62-210.350(3), F.A.C.: Additional Public Notice Requirements for Sources Subject to Operation Permits for Title V Sources.

62-210.360, F.A.C.: Administrative Permit Corrections.  
62-210.370(3), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility.  
62-210.400, F.A.C.: Emission Estimates.  
62-210.650, F.A.C.: Circumvention.  
62-210.700, F.A.C.: Excess Emissions.

62-210.900, F.A.C.: Forms and Instructions.  
62-210.900(1), F.A.C.: Application for Air Permit – Title V Source, Form and Instructions.  
62-210.900(5), F.A.C.: Annual Operating Report for Air Pollutant Emitting Facility, Form and Instructions.  
62-210.900(7), F.A.C.: Application for Transfer of Air Permit – Title V and Non-Title V Source.

### **CHAPTER 62-212, F.A.C.: STATIONARY SOURCES - PRECONSTRUCTION REVIEW, effective 08-17-00**

### **CHAPTER 62-213, F.A.C.: OPERATION PERMITS FOR MAJOR SOURCES OF AIR POLLUTION, effective 04-16-01**

62-213.205, F.A.C.: Annual Emissions Fee.  
62-213.400, F.A.C.: Permits and Permit Revisions Required.  
62-213.410, F.A.C.: Changes Without Permit Revision.  
62-213.412, F.A.C.: Immediate Implementation Pending Revision Process.  
62-213.415, F.A.C.: Trading of Emissions Within a Source.  
62-213.420, F.A.C.: Permit Applications.  
62-213.430, F.A.C.: Permit Issuance, Renewal, and Revision.  
62-213.440, F.A.C.: Permit Content.  
62-213.450, F.A.C.: Permit Review by EPA and Affected States  
62-213.460, F.A.C.: Permit Shield.

62-213.900, F.A.C.: Forms and Instructions.  
62-213.900(1), F.A.C.: Major Air Pollution Source Annual Emissions Fee Form.  
62-213.900(7), F.A.C.: Statement of Compliance Form.

## **Title V Core List**

Effective: 03/01/02

### **CHAPTER 62-296, F.A.C.: STATIONARY SOURCES - EMISSION STANDARDS, effective 03-02-99**

62-296.320(4)(c), F.A.C.: Unconfined Emissions of Particulate Matter.

62-296.320(2), F.A.C.: Objectionable Odor Prohibited.

### **CHAPTER 62-297, F.A.C.: STATIONARY SOURCES - EMISSIONS MONITORING, effective 03-02-99**

62-297.310, F.A.C.: General Test Requirements.

62-297.330, F.A.C.: Applicable Test Procedures.

62-297.340, F.A.C.: Frequency of Compliance Tests.

62-297.345, F.A.C.: Stack Sampling Facilities Provided by the Owner of an Emissions  
Unit.

62-297.350, F.A.C.: Determination of Process Variables.

62-297.570, F.A.C.: Test Report.

62-297.620, F.A.C.: Exceptions and Approval of Alternate Procedures and Requirements.

#### **Miscellaneous:**

**CHAPTER 28-106, F.A.C.:** Decisions Determining Substantial Interests

**CHAPTER 62-110, F.A.C.:** Exception to the Uniform Rules of Procedure, effective  
07-01-98

**CHAPTER 62-256, F.A.C.:** Open Burning and Frost Protection Fires, effective 11-30-94

**CHAPTER 62-257, F.A.C.:** Asbestos Notification and Fee, effective 02-09-99

**CHAPTER 62-281, F.A.C.:** Motor Vehicle Air Conditioning Refrigerant Recovery and  
Recycling, effective 09-10-96



**ATTACHMENT VB-FI-A7**

**FACILITY COMMENT**



Photo 1. Aerial View of Vero Beach Municipal Utilities



Photo 2. Profile View of Vero Beach Municipal Utilities

Attachment VB-FI-A7  
City of Vero Beach Municipal Utilities  
Power Plant Views

Source: City of Vero Beach, 2002; Golder, 2002.





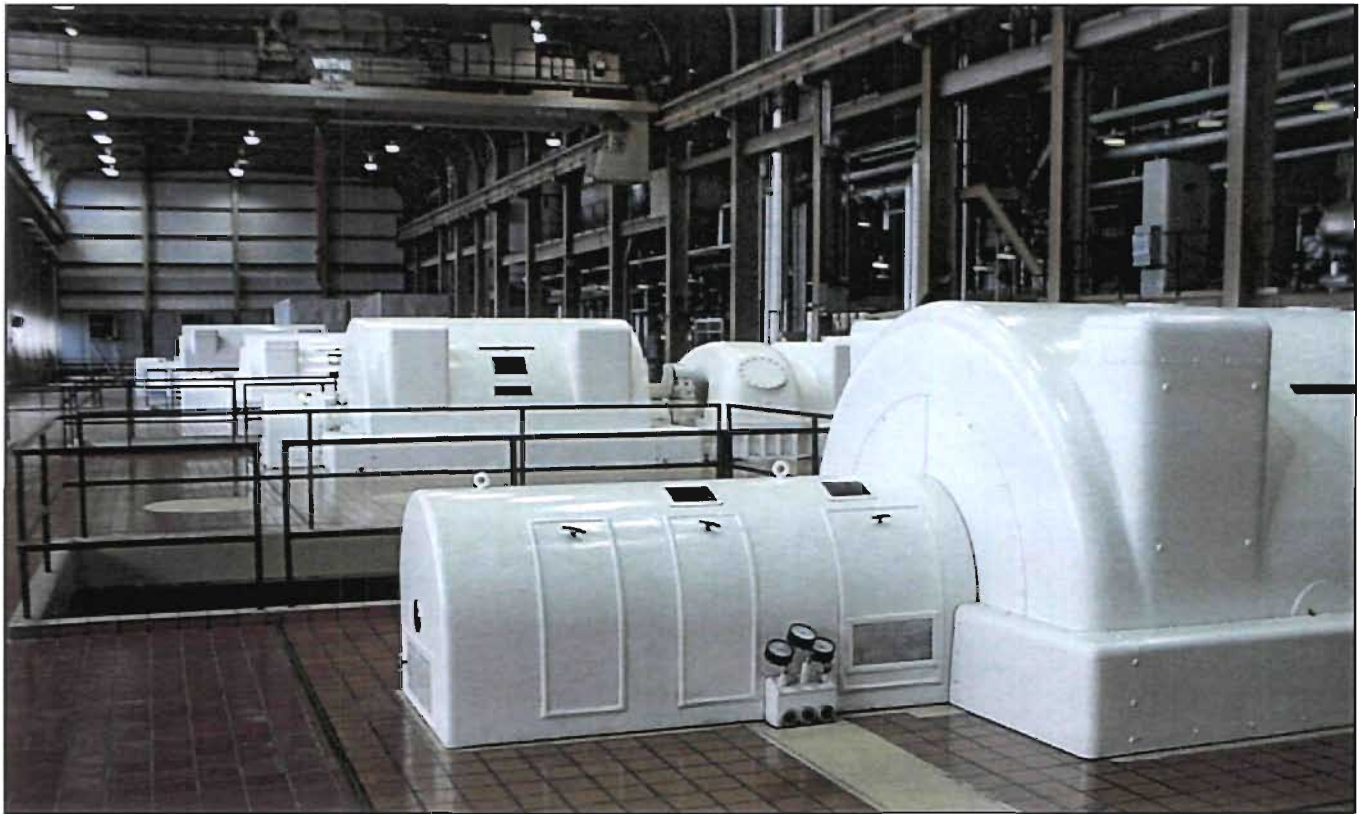


Photo 3. Profile View of Steam Generator Units 1 - 4



Photo 4. Steam Generator Units 1 - 4

Attachment VB-FI-A7  
City of Vero Beach Municipal Utilities  
Steam Generator Units 1 - 4

Source: City of Vero Beach, 2002; Golder, 2002.





Photo 5. Internal View of Unit 5



Photo 6. Simple Cycle and Combined Cycle Stacks for Unit 5

Attachment VB-FI-A7  
City of Vero Beach Municipal Utilities  
Combustion Turbine Unit 5

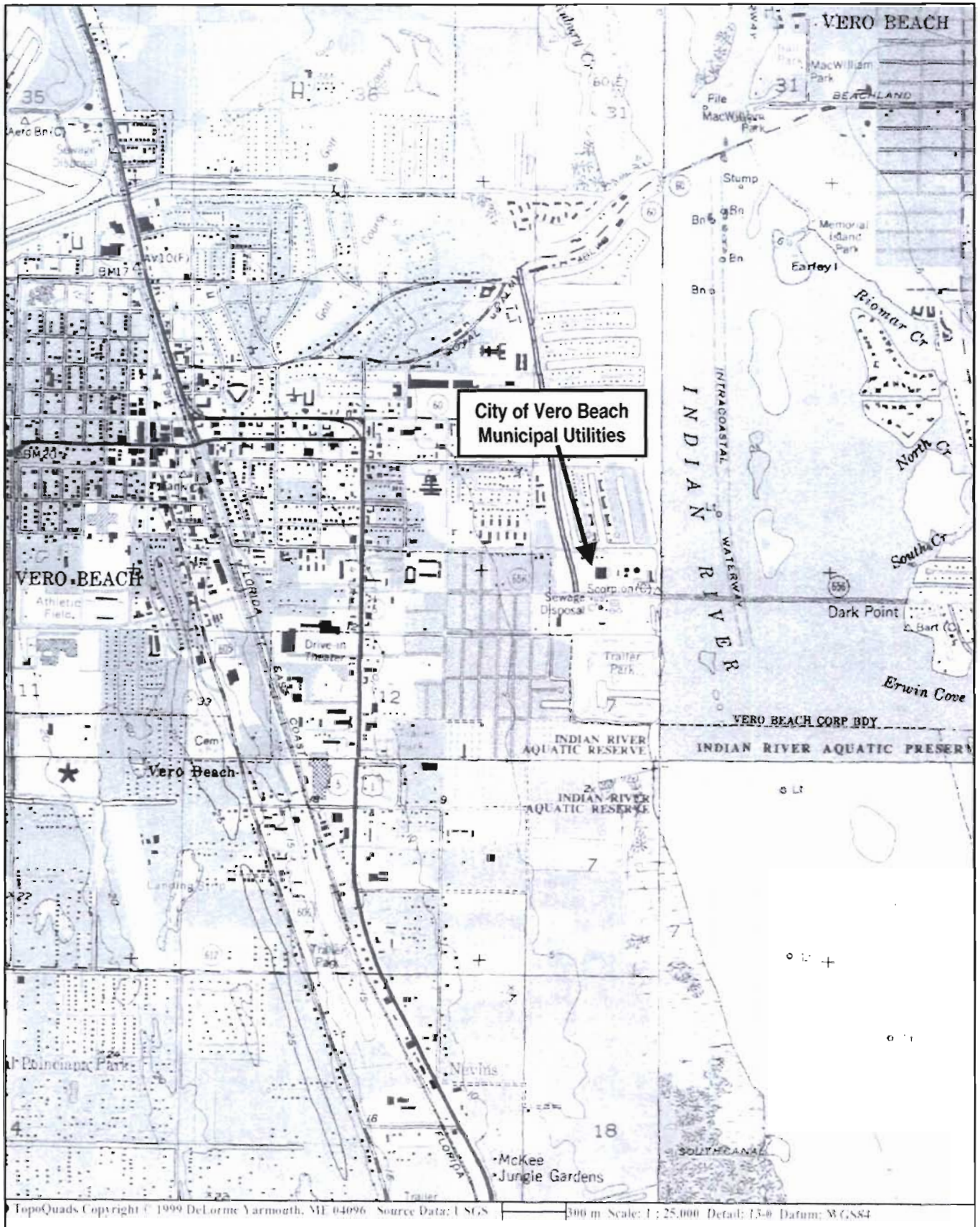
Source: City of Vero Beach, 2002; Golder, 2002.



**ATTACHMENT VB-FI-C1**

**AREA MAP**





TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 300 m Scale: 1 : 25,000 Detail: 1:30 Datum: WGS84

Attachment VB-FI-C1  
Location of the City of Vero Beach Municipal Utilities



Source: USGS, 1983; Golder, 2002.

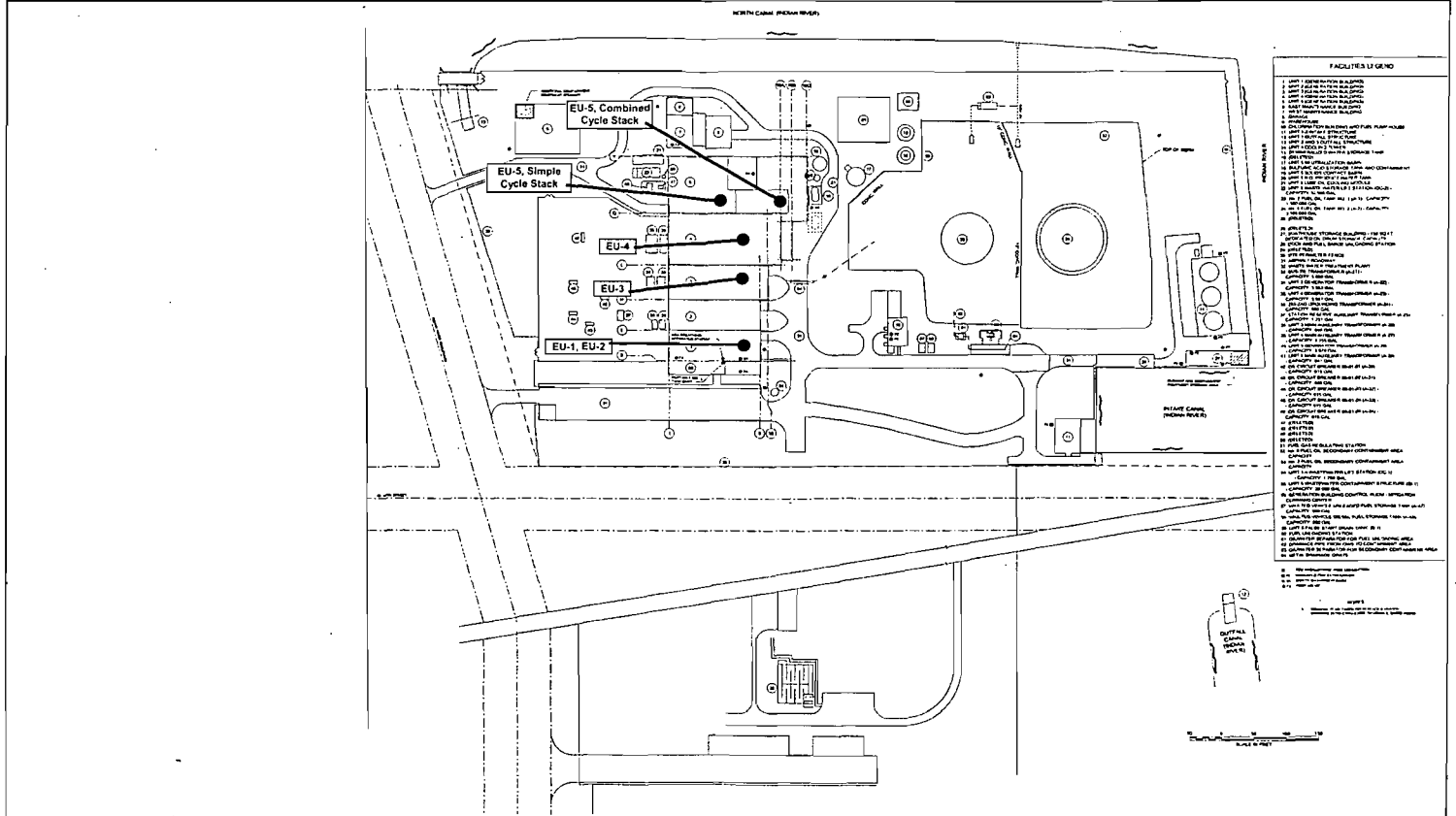
**ATTACHMENT VB-FI-C2**

**FACILITY PLOT PLAN**

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6/26/02

0237541/44-44-4.1/VB-FI-C2



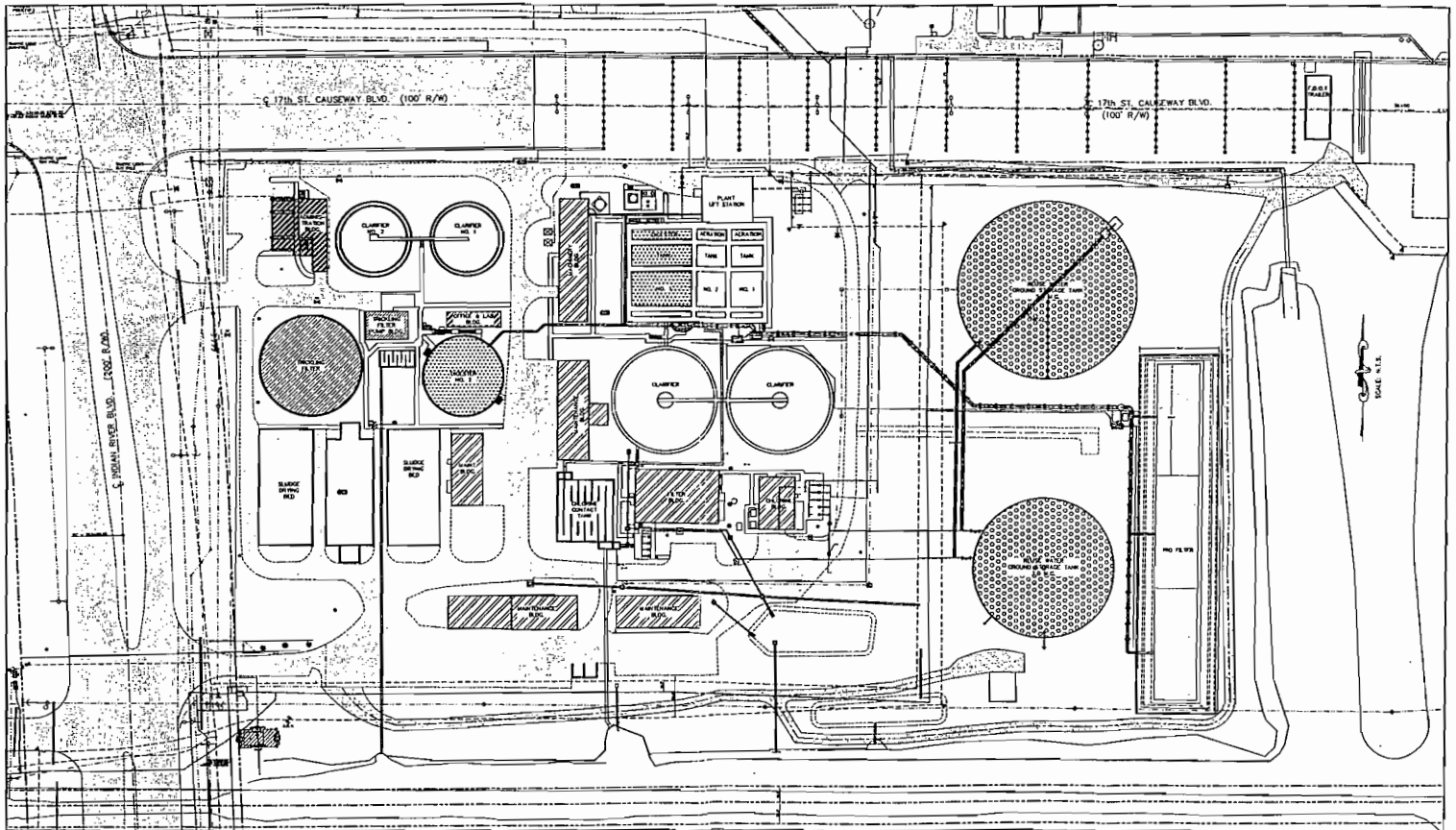
Attachment VB-FI-C2  
 Facility Plot Plan, City of Vero Beach Municipal Utilities

Source: R.W. Beck, 2000; Black & Veatch, 2001; Golder, 2002.





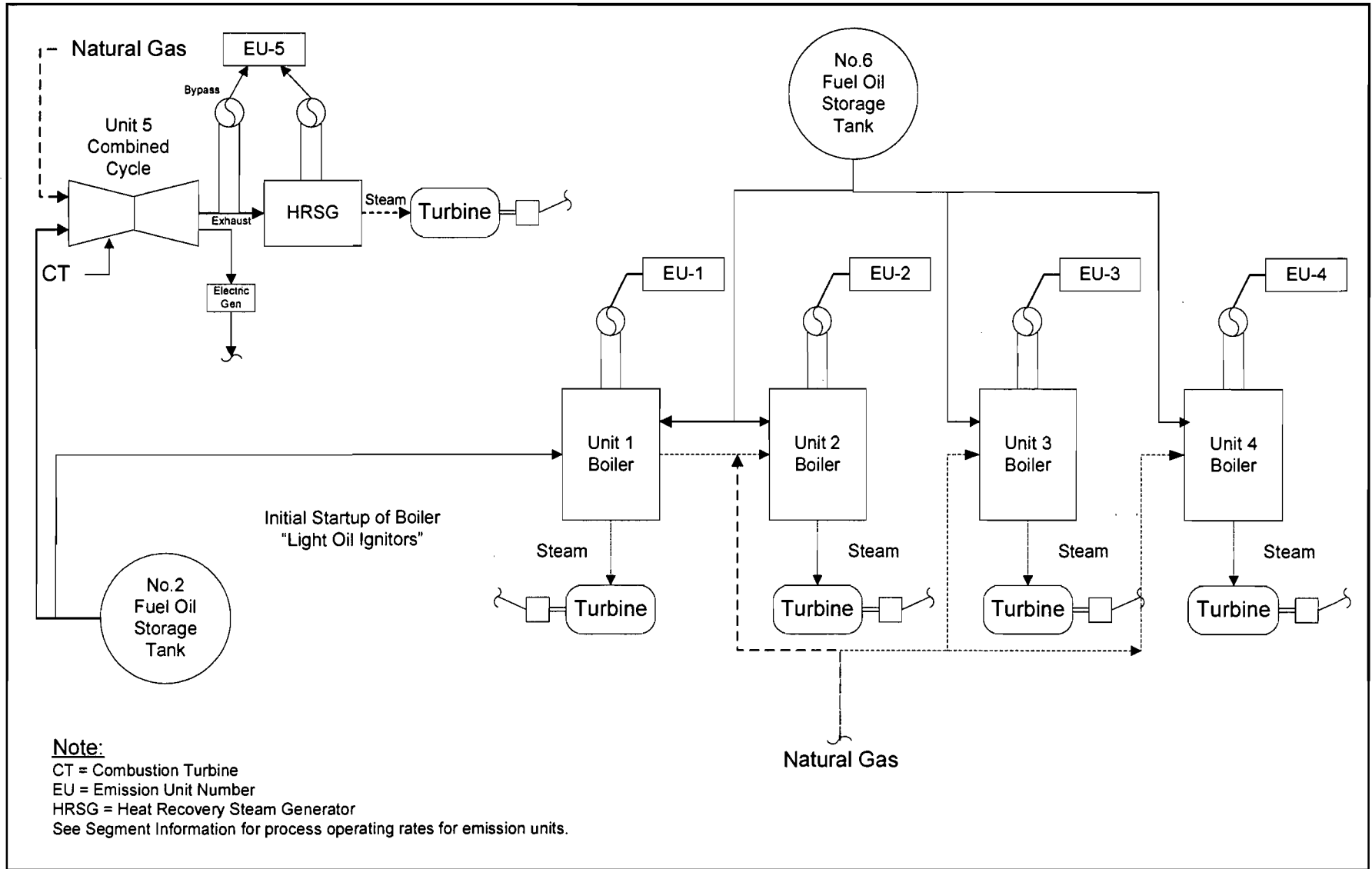
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REV. NO.	DESCRIPTION	AUTHORIZED BY	DRAWN BY	DATE
	CITY OF VERO BEACH WASTE WATER TREATMENT PLANT			
	SITE MAP	SCALE N.T.S.	DATE 8/23/02	
CITY OF VERO BEACH WATER AND SEWER DEPARTMENT				
CITY PROJECT NO. ATLASDETAILS SHEET 1 OF 1				

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**ATTACHMENT VB-FI-C3**  
**PROCESS FLOW DIAGRAM**



Attachment VB-FI-C3  
 Facility Process Flow Diagram

City of Vero Beach Municipal Power Plant - Vero Beach, Florida

Process Flow Legend	
Solid/Liquid	→
Gas	→
Steam	→



**ATTACHMENT VB-FI-C4**

**PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER**

**ATTACHMENT VB-FI-C4****PRECAUTIONS TO PREVENT EMISSIONS OF UNCONFINED PARTICULATE MATTER**

The facility may emit negligible amounts of unconfined particulate matter as a result of the operation of the facility. Potential examples of particulate matter include:

- Fugitive dust from paved and unpaved roads, and
- Fugitive particulates from the use of bagged chemical products.

Operational measures are undertaken at the facility, which also minimize particulate emissions, in accordance with 62-296.310(3), F.A.C.:

- Maintenance of paved areas as needed,
- Regular mowing of grass and care of vegetation,
- Limiting access to plant property by unnecessary vehicles, and
- Care in handling and use of bagged chemical products.

**ATTACHMENT VB-FI-C5**  
**FUGITIVE EMISSIONS IDENTIFICATION**

**ATTACHMENT VB-FI-C5****FUGITIVE EMISSIONS IDENTIFICATION**

Many fugitive emissions at the plant site have been classified as "trivial activities" (as presented in EPA's memorandum, "White Paper for Streamlined Development of Part 70 Permit Applications," July 10, 1995). As a result, these activities are not included as part of this permit application. For example, emissions from general plant maintenance and upkeep activities at the facility would be considered fugitive emissions, but have been judged to be trivial since these activities are not conducted as part of a manufacturing process, not related to the source's primary business activity, and do not otherwise trigger a permit modification.

Fugitive emissions that may result from the operation of activities that are not trivial at the facility are addressed in Emission Unit No. 6. This emission unit contains information on fugitive emissions that occur on a facility-wide basis. A summary of potential fugitive emission sources at the facility is presented in the following sections.

**Criteria and Precursor Air Pollutants**

The City of Vero Beach (CVB) has not identified fugitive emissions of sulfur dioxide, nitrogen oxides, carbon monoxide, or lead compounds which would exceed the thresholds defined in the permit application instructions.

**Volatile Organic Compounds (VOCs)**

Fugitive emissions of VOCs include those resulting from the use of cleaners and solvents for maintenance and operation. VOCs are also emitted by the various fuel oil storage tanks on the plant property, and by the combined-cycle combustion turbine and the fossil-fuel steam generators.

**Fugitive HAPs Emissions**

The following hazardous air pollutants are present on the facility property and are potential sources of fugitive HAPs emissions:

- asbestos
- benzene
- ethyl benzene
- hexane
- hydrochloric acid
- mercury compounds
- methyl ethyl ketone
- toluene
- 2,2,4 trimethylpentane
- xylene

**Asbestos** - Present in gasket material, pipe insulation, and various other locations. The facility complies with the federal NESHAPS (40 CFR 61 Subpart M) and state rules (62-257, F.A.C.) governing the abatement of asbestos-containing materials. No releases of asbestos are expected for the facility.

**Benzene, Toluene, 2,2,4 Trimethylpentane, Xylene, Ethyl benzene** - Present in unleaded gasoline. The facility maintains a 500-gallon storage tank for unleaded gasoline. These emissions have been calculated to be less than 1 TPY.

**Hydrochloric Acid** - The facility maintains two 1-liter containers of hydrochloric acid in the chemistry laboratory for use in analytical procedures.

**Mercury Compounds** - The facility maintains a total of 2 liters of mercury-containing compounds in the chemistry laboratory for use in analytical procedures.

**Methyl Ethyl Ketone, Toluene, Xylene** - The facility maintains less than 12 1-gallon containers of paint thinner and solvents (which may contain MEK, toluene, or xylene) for use in power and wastewater treatment plant maintenance activities. These containers are kept closed and are stored in weather-tight buildings.

**Regulated Toxic or Flammable Substances**

The following regulated toxic or flammable substances are present at the CVB facility:

- hydrochloric acid
- sulfuric acid
- acetylene
- methane (natural gas)
- chlorine
- sulfur dioxide (anhydrous)

**Sulfuric Acid** - The facility maintains a 7,500-gallon Sulfuric Acid storage tank for water treatment use.

**Acetylene** - Present on the facility property in 125 ft<sup>3</sup> capacity cylinders which are used for plant maintenance (welding and cutting).

**Methane** - A primary component of natural gas. The facility has a natural gas pipeline which delivers fuel to the generating units. This fuel delivery system is normally airtight, but does have safety valves which occasionally relieve (open) when an over pressure condition develops in the gas line.

**Chlorine** - The wastewater treatment plant maintains five 1-ton chlorine cylinders for use at the plant.

**Sulfur Dioxide (anhydrous)** - The wastewater treatment plant maintains four to six 1-ton sulfur dioxide cylinders for use at the plant.



**ATTACHMENT VB-FI-C8**

**LIST OF PROPOSED INSIGNIFICANT ACTIVITIES**

**ATTACHMENT VB-FI-C8****LIST OF INSIGNIFICANT EMISSION UNITS AND/OR ACTIVITIES**

The following emission units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.:

- Startup generator diesel engine associated with Unit 5.
- Vapor extractor rooftop vents, one each for Units 1-4.
- Cooling tower.
- Diesel fuel tank for vehicles and gasoline tank for vehicles (500 gallon capacity each).
- 750 kW emergency diesel generator used for 4 hours per month for testing and maintenance.

**ATTACHMENT VB-FI-C9**

**LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI**

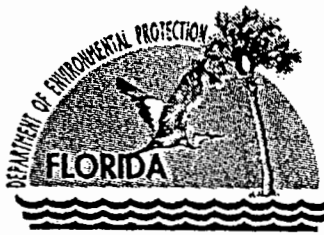
**ATTACHMENT VB-FI-C9**

**LIST OF EQUIPMENT/ACTIVITIES REGULATED UNDER TITLE VI**

The City of Vero Beach Municipal Utilities currently has approximately 80 refrigeration and air-conditioning units on the plant site. Of these, no air-conditioning units currently meet the 50-pound threshold established by the Department.

**ATTACHMENT VB-FI-C12**

**IDENTIFICATION OF ADDITIONAL APPLICABLE REQUIREMENTS**



Jeb Bush  
Governor

# Department of Environmental Protection

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

David B. Struhs  
Secretary

## PROPOSED Permit Electronic Posting Courtesy Notification

City of Vero Beach  
City of Vero Beach Municipal Utilities  
**Facility ID No.:** 0610029  
Indian River County

Title V Air Operation Permit Revision  
**PROPOSED Permit No.:** 0610029-005-AV

The electronic version of the PROPOSED permit was posted on the Division of Air Resources Management's world wide web site for the United States Environmental Protection Agency (USEPA) Region 4 office's review on April 2, 2002.

USEPA's review period ends on the 45th day after the permit posting date. Day 45 is May 16, 2002. If an objection (veto) is received from USEPA, the permitting authority will provide a copy of the objection to the applicant.

Provided an objection is not received from USEPA, the PROPOSED permit will become a FINAL permit by operation of law on the 55th day after the permit posting date. Day 55 is May 26, 2002.

**RECEIVED**  
APR 08 2002  
V.B. POWER PLANT

"More Protection, Less Process"

Printed on recycled paper.

March 29, 2002

Mr. Rex Taylor  
City Manager, Utilities Director  
City of Vero Beach  
PO Box 1389  
Vero Beach, FL 32961-1389

Re: Title V Air Operation Permit Revision  
PROPOSED Permit No.: 0610029-005-AV  
City of Vero Beach Municipal Utilities Power Plant

Dear Mr. Taylor:

One copy of the "PROPOSED PERMIT DETERMINATION" for the City of Vero Beach Municipal Utilities Power Plant located at 100 17th Street, Vero Beach, Indian River County, is enclosed. This letter is only a courtesy to inform you that the DRAFT permit has become a PROPOSED permit.

Pursuant to Section 403.0872(6), Florida Statutes, if no objection to the PROPOSED permit is made by the USEPA within 45 days, the PROPOSED permit will become a FINAL permit no later than 55 days after the date on which the PROPOSED permit was mailed (posted) to USEPA. If USEPA has an objection to the PROPOSED permit, the FINAL permit will not be issued until the permitting authority receives written notice that the objection is resolved or withdrawn.

If you should have any questions, please contact Scott M. Sheplak, P.E. at 850/921-9532.

Sincerely,

C. H. Fancy, P.E.  
Chief  
Bureau of Air Regulation

CHF/sms

Enclosures

copy furnished to:

Mr. James F. Stevens, Supervisor of Environmental Affairs  
Ms. Gracy Danois, USEPA, Region 4 (INTERNET E-mail Memorandum)

SOB only:

Mr. Kennard F. Kosky, P.E., Golder Associates  
Mr. Len Kozlov, P.E., DEP Central District

## **PROPOSED PERMIT DETERMINATION**

PROPOSED Permit No.: 0610029-005-AV  
Page 1 of 1

### **I. Public Notice.**

An "INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" to the City of Vero Beach Municipal Utilities for a Title V air operation permit revision for the City of Vero Beach Municipal Utilities Power Plant, located at 100 17th Street, Vero Beach, Indian River County was clerked on February 5, 2002. The "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" was published in the Press Journal on February 15, 2002. The DRAFT Title V Air Operation Permit was available for public inspection at the Central District office in Orlando and the permitting authority's office in Tallahassee. Proof of publication of the "PUBLIC NOTICE OF INTENT TO ISSUE TITLE V AIR OPERATION PERMIT" was received on February 25, 2002.

### **II. Public Comment(s).**

No comments were received during the 30 (thirty) day public comment period. Since no comments were received, the DRAFT Title V Air Operation Permit becomes the PROPOSED Title V Air Operation Permit.

### **III. Conclusion.**

Since there were no comments received during the Public Notice period, no changes were made to the DRAFT Title V Permit and the permitting authority hereby issues the PROPOSED Permit.



City of Vero Beach  
City of Vero Beach Municipal Utilities  
**Facility ID No.:** 0610029  
Indian River County

Title V Air Operation Permit Revision  
**PROPOSED Permit No.:** 0610029-005-AV

Permitting Authority:  
State of Florida  
Department of Environmental Protection  
Division of Air Resources Management  
Bureau of Air Regulation  
Title V Section

Mail Station #5505  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Telephone: 850/488-0144  
Fax: 850/922-6979

Title V Air Operation Permit  
**PROPOSED Permit No.: 0610029-005-AV**

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**Permittee:**

City of Vero Beach  
PO Box 1389  
Vero Beach, FL 32961-1389

**PROPOSED Permit No.:** 0610029-005-AV  
**Facility ID No.:** 0610029  
**SIC Nos.:** 49 , 4931  
**Project:** Title V Air Operation Permit Revision

This permit revision is for the inclusion of an evaporative cooling system from Permit No. 0610029-004-AC (PSD-FL-152C) on the existing 38 MW combined cycle combustion turbine-electrical generator designated as Unit 5. This facility is located at 100 17th Street, Vero Beach, Indian River County; UTM Coordinates: Zone 17, 561.4 km East and 3056.5 km North; Latitude: 27° 37' 52" North and Longitude: 80° 22' 33" West.

**STATEMENT OF BASIS:** This Title V air operation permit revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, 62-213, and 62-214. The above named permittee is hereby authorized to perform the work or 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 U-1, List of Unregulated Emissions Units and/or Activities  
Appendix I-1, List of Insignificant Emissions Units and/or Activities  
Appendix TV-1, Title V Conditions (version dated 12/2/97)  
Appendix SS-1, Stack Sampling Facilities (version dated 10/07/96)  
Appendix M, Custom Fuel Monitoring Schedule for Natural Gas  
Table 297.310-1, Calibration Schedule (version dated 10/07/96)  
Figure 1 - Summary Report-Gaseous And Opacity Excess Emission And Monitoring System  
Performance Report (version dated 7/96)  
Phase II Acid Rain Application/Compliance Plan received 07/01/95  
Alternate Sampling Procedure: ASP Number 97-B-01  
BACT Determination dated June 28, 1991  
Order Dated 9/17/97 Extending Permit Expiration Date  
Approval of Custom Fuel Monitoring Schedule Dated 10/28/97

**Effective Date:** January 1, 1998

**Revision Effective Date:** (Day 55)

**Renewal Application Due Date:** July 5, 2002

**Expiration Date:** December 31, 2002

---

Howard L. Rhodes, Director  
Division of Air Resources  
Management

HLR/sms

**Section I. Facility Information.**

**Subsection A. Facility Description.**

This facility is an electric power generating plant located adjacent to a wastewater treatment facility and consists of:

Fossil Fuel Steam Generating Unit 1 (Emissions Unit 001), rated at 13 MW;

Fossil Fuel Steam Generating Unit 2 (Emissions Unit 002), rated at 17 MW;

Fossil Fuel Steam Generating Unit 3 (Emissions Unit 003), rated at 34 MW;

Fossil Fuel Steam Generating Unit 4 (Emissions Unit 004), rated at 56 MW;

Combined Cycle Gas Turbine Unit 5 (Emissions Unit 005), rated at 38 MW.

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

Based on the Title V permit application received June 14, 1996, this facility is a major source of hazardous air pollutants (HAPs).

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

<b>E.U. ID No.</b>	<b>Brief Description</b>
001	Fossil Fuel Steam Generator, Unit 1, rated at 13 MW, 202 mmBtu/hr for natural gas and 140 mmBtu/hr for fuel oil, capable of burning any combination of natural gas and numbers 2, 4 and 6 fuel oil, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 002.
002	Fossil Fuel Steam Generator, Unit 2, rated at 17 MW, 248 mmBtu/hr for natural gas and 243 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 001.
003	Fossil Fuel Steam Generator, Unit 3, rated at 34 MW, 417 mmBtu/hr for natural gas and 410 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
004	Fossil Fuel Steam Generator, Unit 4, rated at 56 MW, 685 mmBtu/hr, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
005	Combined Cycle Gas Turbine, Unit 5, rated at 38 MW, 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas, capable of burning any combination of, number 2 fuel oil, and natural gas, with emissions exhausted through a 125 ft. stack.

<b>Unregulated Emissions Units and/or Activities, See Appendix U-1</b>	
006	Fuel oil, gasoline and lube oil storage tanks.
007	Waste water treatment plant.

*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:

Appendix A-1, Abbreviations, Acronyms, Citations, and Identification Numbers

Appendix H-1, Permit History/ID Number Changes

Table 1-1, Summary of Air Pollutant Standards and Terms

Table 2-1, Summary of Compliance Requirements

These documents are on file with the permitting authority:

Title V Permit Revision Application received November 13, 2001

Initial Title V Permit Application received June 14, 1996

**Section II. Facility-wide Conditions.**

**The following conditions apply facility-wide:**

1. APPENDIX TV-1, TITLE V CONDITIONS, is a part of this permit.  
{Permitting Notes: APPENDIX TV-1, TITLE V CONDITIONS, is distributed to the permittee only. Other persons requesting copies of these conditions shall be provided a copy when requested or otherwise appropriate.}
2. **Not Federally Enforceable. 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), F.A.C.]
3. **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). EPA Method 9 is the method of compliance pursuant to Chapter 62-297, F.A.C.  
[Rule 62-296.320(4)(b)1. & 4, F.A.C.]
4. **Prevention of Accidental Releases (Section 112(r) of CAA).** If required by 40 CFR 68, the permittee shall submit to the implementing agency:
  - a. a risk management plan (RMP) when, and if, such requirement becomes applicable; and
  - b. certification forms and/or RMPs according to the promulgated rule schedule.[40 CFR 68]
5. **Unregulated Emissions Units and/or Activities.** Appendix U-1, List of Unregulated Emissions Units and/or Activities, is a part of this permit.  
[Rule 62-213.440(1), F.A.C.]
6. **Insignificant Emissions Units and/or Activities.** Appendix I-1, List of Insignificant Emissions Units and/or Activities, is a part of this permit.  
[Rules 62-213.440(1), 62-213.430(6), and 62-4.040(1)(b), F.A.C.]
7. **Not Federally Enforceable. 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 process or installation, volatile organic compounds (VOC) or organic solvents (OS) without applying known and existing vapor emission control devices or systems deemed necessary and ordered by the Department.
  - a. Tightly cover or close all VOC or OS containers when they are not in use.
  - b. Tightly cover all open tanks which contain VOC or OS when they are not in use.
  - c. Maintain all pipes, valves, fittings, etc., which handle VOC or OS in good operating condition.

d. Immediately confine and clean up VOC or OS spills and make sure wastes are placed in closed containers for reuse, recycling or proper disposal.  
[Rule 62-296.320(1)(a), F.A.C.]

**8. Not Federally Enforceable.** Reasonable precautions to prevent emissions of unconfined particulate matter at this facility may include:

- a. Maintenance of paved areas as needed.
- b. Regular mowing of grass and care of vegetation.
- c. Limiting access to plant property by unnecessary vehicles.
- d. Care in handling and use of bagged chemical products.

[Rule 62-296.320(4)(c)2., F.A.C.; Items a, b, and c proposed by applicant in the initial Title V permit application received June 14, 1996; Item d was required by the Department]

**9.** When appropriate, any recording, monitoring or reporting requirements that are time-specific shall be in accordance with the effective date of this permit, which defines day one.  
[Rule 62-213.440, F.A.C.]

**10.** The permittee shall submit all compliance related notifications and reports required of this permit to the Department's Central District office:

Department of Environmental Protection, Central District Office  
Air Section  
3319 Maguire Boulevard, Suite 232  
Orlando, FL 32803-3767  
Phone: 407/894-7555  
Fax: 407/897-5963

Any reports, data, notifications, certifications and requests required to be sent to the United States Environmental Protection Agency, Region 4, should be sent to:

United States Environmental Protection Agency, Region 4  
Air, Pesticides & Toxics Management Division  
Operating Permits Section  
61 Forsyth Street  
Atlanta, GA 30303  
Phone: 404/562-9099  
Fax: 404/562-9095

**11.** The annual statement of compliance pursuant to Rule 62-213.440(3), F.A.C., shall be submitted within 60 (sixty) days after the end of the calendar year.  
{See condition No. 51., Appendix TV-1, Title V Conditions}  
[Rules 62-213.440(3) and 62-214.420(11), F.A.C.]

**Section III. Emissions Units and Conditions.**

**Subsection A. This section addresses the following emissions unit.**

<b>E.U. ID No.</b>	<b>Brief Description</b>
001	Fossil Fuel Steam Generator, Unit 1, rated at 13 MW, 202 mmBtu/hr for natural gas and 140 mmBtu/hr for fuel oil, capable of burning any combination of natural gas and numbers 2, 4 and 6 fuel oil, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 002.

{Permitting Notes: The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 1 began commercial operation in 1961.}

**The following specific conditions apply to the emissions unit listed above:**

**Essential Potential to Emit (PTE) Parameters**

**A.1. Permitted Capacity.** The maximum operation heat input rate is as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
001	202	Natural Gas
	140	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

**A.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **F.14.**

[Rule 62-297.310(2), F.A.C.]

**A.3. Methods of Operation. Fuels.** The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil.

[Rule 62-213.410, F.A.C.]

**Emission Limitations and Standards**

**A.4. Visible Emissions.** Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.

[Rule 62-296.406(1), F.A.C.]

**A.5. Visible emissions - Soot Blowing and Load Change.** Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

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

[Rule 62-210.700(3), F.A.C.]

**A.6. Particulate Matter.** Particulate matter emissions shall be controlled by the firing of natural gas and/or fuel oil with a sulfur content as limited by specific condition A.7 of this permit.

[Rule 62-296.406(2), F.A.C., BACT Determination 2/14/91]



**A.7. Sulfur Dioxide - Sulfur Content.** The fuel oil sulfur content shall not exceed 1.5 percent, by weight.  
[Rule 62-296.406(3), F.A.C., BACT Determination 2/14/91]

**Test Methods and Procedures**

**A.8. Sulfur Dioxide - Sulfur Content.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by the vendor providing a fuel analysis upon each fuel delivery.  
[Rules 62-213.440 and 62-296.406(3), F.A.C.]

**A.9.** The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using one of ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 or latest editions.  
[Rules 62-213.440, 62-296.406(3) and 62-297.440, F.A.C.]

**Monitoring of Operations**

**A.10. Annual Tests Required - VE.** Except as provided in specific conditions **F.6** through **F.8** of this permit, emission testing for visible emissions shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Testing shall be conducted while burning number 6 fuel oil.  
[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**Common Conditions**

**A.11.** This emissions unit is also subject to conditions **F.1** through **F.18** contained in **Subsection F. Common Conditions.**

**Subsection B. This section addresses the following emissions unit.**

<b>E.U. ID No.</b>	<b>Brief Description</b>
002	Fossil Fuel Steam Generator, Unit 2, rated at 17 MW, 248 mmBtu/hr for natural gas and 243 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 001.

{Permitting Notes: The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 2 began commercial operation in 1964.}

**The following specific conditions apply to the emissions unit listed above:**

**Essential Potential to Emit (PTE) Parameters**

**B.1. Permitted Capacity.** The maximum operation heat input rate is as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
002	248	Natural Gas
	243	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.406, F.A.C.]

**B.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **F.14.**

[Rule 62-297.310(2), F.A.C.]

**B.3. Methods of Operation. Fuels.** The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil. Propane may be used as an ignitor fuel.

[Rule 62-213.410, F.A.C.]

**Emission Limitations and Standards**

**B.4. Visible Emissions.** Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent.

[Rule 62-296.406(1), F.A.C.]

**B.5. Visible emissions - Soot Blowing and Load Change.** Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

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

[Rule 62-210.700(3), F.A.C.]

**B.6. Particulate Matter.** Particulate matter emissions shall be controlled by the firing of natural gas and/or fuel oil with a sulfur content as limited by specific condition **B.7** of this permit. [Rules 62-4.070(3) and 62-296.406(2), F.A.C., BACT for this source will be the same as that of the BACT Determination of 2/14/91 for EU 001]

**B.7. Sulfur Dioxide - Sulfur Content.** The fuel oil sulfur content shall not exceed 1.5 percent, by weight. [Rules 62-4.070(3) and 62-296.406(3), F.A.C., BACT for this source will be the same as that of the BACT Determination of 2/14/91 for EU 001]

**Test Methods and Procedures**

**B.8. Sulfur Dioxide - Sulfur Content.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by the vendor providing a fuel analysis upon each fuel delivery. [Rules 62-213.440 and 62-296.406(3), F.A.C.]

**B.9.** The fuel sulfur content, percent by weight, for liquid fuels shall be evaluated using one of ASTM D2622-94, ASTM D4294-90(95), ASTM D1552-95, ASTM D1266-91, or both ASTM D4057-88 and ASTM D129-95 or latest editions. [Rules 62-213.440, 62-296.406(3) and 62-297.440, F.A.C.]

**Monitoring of Operations**

**B.10. Annual Tests Required - VE.** Except as provided in specific conditions **F.6** through **F.8** of this permit, emission testing for visible emissions shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Testing shall be conducted while burning number 6 fuel oil. [Rules 62-4.070(3) and 62-213.440, F.A.C.]

**Common Conditions**

**B.11.** This emissions unit is also subject to conditions **F.1** through **F.18** contained in **Subsection F. Common Conditions.**

**Subsection C. This section addresses the following emissions unit.**

003	Fossil Fuel Steam Generator, Unit 3, rated at 34 MW, 417 mmBtu/hr for natural gas and 410 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
-----	--

{Permitting Notes: The emissions unit is regulated under Acid Rain, Phase II and Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 3 began commercial operation in 1971.}

**The following specific conditions apply to the emissions units listed above:**

**Essential Potential to Emit (PTE) Parameters**

**C.1. Permitted Capacity.** The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
003	417	Natural Gas
	410	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE) and 62-296.405, F.A.C.]

**C.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition F.14. [Rule 62-297.310(2), F.A.C.]

**C.3. Methods of Operation. Fuels.** The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil. Propane may be used as an ignitor fuel. [Rule 62-213.410, F.A.C.]

**Emission Limitations and Standards**

**C.4. Visible Emissions.** Visible emissions shall not exceed 20 percent opacity, except for one two-minute period per hour during which opacity shall not exceed 40 percent. Emissions units governed by this visible emissions limit shall compliance test for particulate matter emissions annually and as otherwise required by Chapter 62-297, F.A.C. [Rule 62-296.405(1)(a), F.A.C.]

**C.5. Visible Emissions - Soot Blowing and Load Change.** Visible emissions shall not exceed 60 percent opacity during the 3-hours in any 24 hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.

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

Visible emissions above 60 percent opacity shall be allowed for not more than 4, six (6)-minute periods, during the 3-hour period of excess emissions allowed by this condition. [Rule 62-210.700(3), F.A.C., Note: Unit 3 has an operational continuous opacity monitor.]

**C.6. Particulate Matter.** Particulate matter emissions shall not exceed 0.1 pound per million Btu heat input, as measured by applicable compliance methods. [Rule 62-296.405(1)(b), F.A.C.]

**C.7. Particulate Matter - Soot Blowing and Load Change.** Particulate matter emissions shall not exceed an average of 0.3 pound per million Btu heat input during the 3-hours in any 24-hour period of excess emissions allowed for boiler cleaning (soot blowing) and load change.  
[Rule 62-210.700(3), F.A.C.]

**C.8. Sulfur Dioxide.** When burning liquid fuel, sulfur dioxide emissions shall not exceed 2.75 pounds per million Btu heat input, as measured and determined in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D. Any calculations used to demonstrate compliance shall be based solely on the Btu value and the percent sulfur of the liquid fuel being burned.  
[Rules 62-213.440 and 62-296.405(1)(c)1.j., F.A.C.]

### **Test Methods and Procedures**

**C.9. Particulate Matter.** The test methods for particulate emissions shall be EPA Methods 17, 5, 5B, or 5F, incorporated by reference in Chapter 62-297, F.A.C. The minimum sample volume shall be 30 dry standard cubic feet. EPA Method 5 may be used with filter temperature no more than 320 degrees Fahrenheit. For EPA Method 17, stack temperature shall be less than 375 degrees Fahrenheit. The owner or operator may use EPA Method 5 to demonstrate compliance. EPA Method 3 or 3A with Orsat analysis shall be used when the oxygen based F-factor, computed according to EPA Method 19, is used in lieu of heat input. Acetone wash shall be used with EPA Method 5 or 17.  
[Rules 62-213.440, 62-296.405(1)(e)2., and 62-297.401, F.A.C.]

**C.10. Sulfur Dioxide.** **The permittee elected to demonstrate compliance with the sulfur dioxide limitation using fuel sampling and analysis in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.** This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. See specific conditions C.11 and C.12.  
[Rule 62-296.405(1)(f)1.b., F.A.C.]

**C.11. Sulfur Dioxide.** The test methods for sulfur dioxide emissions shall be EPA Methods 6, 6A, 6B, or 6C, incorporated by reference in Chapter 62-297, F.A.C. Fuel sampling and analysis may be used as an alternate sampling procedure if such a procedure is incorporated into the operation permit for the emissions unit. If the emissions unit obtains an alternate procedure under the provisions of Rule 62-297.620, F.A.C., the procedure shall become a condition of the emissions unit's permit. The Department will retain the authority to require EPA Method 6 or 6C if it has reason to believe that exceedences of the sulfur dioxide emissions limiting standard are occurring. Results of an approved fuel sampling and analysis program shall have the same effect as EPA Method 6 test results for purposes of demonstrating compliance or noncompliance with sulfur dioxide standards. **The permittee may use the EPA test methods, referenced above, to demonstrate compliance; however, as an alternate sampling procedure**

**authorized by permit, the permittee elected to demonstrate compliance using fuel sampling and analysis. See specific condition C.12.**

[Rules 62-213.440, 62-296.405(1)(e)3. and 62-297.401, F.A.C.]

**C.12.** Compliance with the sulfur dioxide emission limitation shall be determined using fuel sampling and analysis in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.

[Rules 62-213.440, 62-296.405(1)(e)3., 62-296.405(1)(f)1.b. and 62-297.440, F.A.C.]

### **Monitoring of Operations**

**C.13. Annual Tests Required - PM and VE.** Except as provided in specific conditions **F.6** through **F.8** of this permit, emission testing for particulate matter emissions and visible emissions shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. Testing shall be conducted while burning number 6 fuel oil.

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

### **Record Keeping and Reporting Requirements**

**C.14. Excess Emissions for Sulfur Dioxide - Report.** The owner or operator shall submit to the Central District Air Section a written report of emissions in excess of emission limiting standards for sulfur dioxide as set forth in this permit, for each calendar quarter. The nature and cause of the excess emissions shall be explained. This report does not relieve the owner or operator of the legal liability for violations.

[Rules 62-213.440 and 62-296.405(1)(g), F.A.C., and 0610029-004-AC (PSD-FL-152C)]

### **Common Conditions**

**C.15.** This emissions unit is also subject to conditions **F.1** through **F.18** contained in **Subsection F. Common Conditions.**

**Subsection D. This section addresses the following emissions unit.**

004	Fossil Fuel Steam Generator, Unit 4, rated at 56 MW, 685 mmBtu/hr, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
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{Permitting Notes: The emissions unit is regulated under Acid Rain, Phase II, and Rule 62-210.300, F.A.C., Permits Required and is subject to 40 CFR 60 Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971. The affected facility to which this subpart applies is fossil fuel steam generator, Unit 4, emissions unit 004. Fossil fuel fired steam generator Unit 4 began commercial operation in 1976.}

**The following specific conditions apply to the emissions units listed above:**

**Essential Potential to Emit (PTE) Parameters**

**D.1. Permitted Capacity.** The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
004	685	Natural Gas
	685	Fuel Oil

[Rules 62-4.160(2), 62-210.200(PTE)]

**D.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **F.14.**  
[Rule 62-297.310(2), F.A.C.]

**D.3. Methods of Operation. Fuels.** The only fuels allowed to be burned are any combination of natural gas and numbers 2, 4 and 6 fuel oil. Propane may be used as an ignitor fuel.  
[Rule 62-213.410, F.A.C., AO 31-229058, and applicant request in Title V application received June 14, 1996]

**Emission Limitations and Standards**

**D.4. Pursuant to 40 CFR 60.42 Standard For Particulate Matter.**

(a) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which:

- (1) Contain particulate matter in excess of 43 nanograms per joule heat input (0.10 lb per million Btu) derived from fossil fuel.
- (2) Exhibit greater than 20 percent opacity except for one six-minute period per hour of not more than 27 percent opacity.

[40 CFR 60.42(a)(1) & (2)]

**D.5. Pursuant to 40 CFR 60.43 Standard For Sulfur Dioxide.**

(a) No owner or operator shall cause to be discharged into the atmosphere from any affected facility any gases which contain sulfur dioxide in excess of:

- (1) 340 nanograms per joule heat input (0.80 lb per million Btu) derived from liquid fossil fuel.
- (c) Compliance shall be based on the total heat input from all fossil fuels burned, including gaseous fuels.

[40 CFR 60.43(a) & (c)]

**D.6. Pursuant to 40 CFR 60.44 Standard For Nitrogen Oxides.**

(a) On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed, no owner or operator subject to the provisions of 40 CFR 60, Subpart D, shall cause to be discharged into the atmosphere from any affected facility any gases which contain nitrogen oxides, expressed as NO<sub>2</sub> in excess of:

(1) 86 nanograms per joule heat input (0.20 lb per million Btu) derived from gaseous fossil fuel.

(2) 129 nanograms per joule heat input (0.30 lb per million Btu) derived from liquid fossil fuel

(b) When different fossil fuels are burned simultaneously in any combination, the applicable standard (in ng/J) is determined by proration using the following formula:

$$PS_{NO_x} = (86x + 130y) / (x + y)$$

where:

PS<sub>NO<sub>x</sub></sub> = is the prorated standard for nitrogen oxides when burning different fuels simultaneously, in nanograms per joule heat input derived from all fossil fuels fired;

x = is the percentage of total heat input derived from gaseous fossil fuel; and,

y = is the percentage of total heat input derived from liquid fossil fuel.

[40 CFR 60.44(a) & (b)]

**Test Methods and Procedures**

**D.7. Sulfur Dioxide. Pursuant to 40 CFR 60.45(b)(2), the owner or operator elected to use fuel sampling and analysis in lieu of installing a continuous monitoring system for SO<sub>2</sub>.**

This protocol is allowed because the emissions unit does not have an operating flue gas desulfurization device. Compliance with the sulfur dioxide emission limitation shall be determined in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.

[Rule 62-213.440, F.A.C., and 40 CFR 60.45(b)(2)]

**D.8. Pursuant to 40 CFR 60.46 Test methods and Procedures.**

(a) When conducting emissions tests, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified in 40 CFR 60.46, except as provided in 40 CFR 60.8(b). Acceptable alternative methods and procedures are given in 40 CFR 60.46(d).

(b) The owner or operator shall determine compliance with the particulate matter, SO<sub>2</sub>, and NO<sub>x</sub> standards in 40 CFR 60.42, 60.43, and 60.44 as follows:

(1) The emission rate (E) of particulate matter, SO<sub>2</sub>, or NO<sub>x</sub> shall be computed for each run using the following equation:

$$E = C F_d (20.9) / (20.9 - \% O_2)$$

E = emission rate of pollutant, ng/J (1b/million Btu).

C = concentration of pollutant, ng/dscm (1b/dscf).

% O<sub>2</sub> = oxygen concentration, percent dry basis.

F<sub>d</sub> = factor as determined from Method 19.



(2) Method 5 shall be used to determine the particulate matter concentration (C) at affected facilities without wet flue-gas-desulfurization (FGD) systems and Method 5B shall be used to determine the particulate matter concentration (C) after FGD systems.

(i) The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf). The probe and filter holder heating systems in the sampling train may be set to provide a gas temperature no greater than  $160 \pm 14$  °C ( $320 \pm 25$  °F).

(ii) The emission rate correction factor, integrated or grab sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The O<sub>2</sub> sample shall be obtained simultaneously with, and at the same traverse points as, the particulate sample. If the grab sampling procedure is used, the O<sub>2</sub> concentration for the run shall be the arithmetic mean of all the individual O<sub>2</sub> sample concentrations at each traverse point.

(iii) If the particulate run has more than 12 traverse points, the O<sub>2</sub> traverse points may be reduced to 12 provided that Method 1 is used to locate the 12 O<sub>2</sub> traverse points.

(3) Method 9 and the procedures in 40 CFR 60.11 shall be used to determine opacity.

(4) Method 6 shall be used to determine the SO<sub>2</sub> concentration.

(i) The sampling site shall be the same as that selected for the particulate sample. The sampling location in the duct shall be at the centroid of the cross section or at a point no closer to the walls than 1 m (3.28 ft). The sampling time and sample volume for each sample run shall be at least 20 minutes and 0.020 dscm (0.71 dscf). Two samples shall be taken during a 1-hour period, with each sample taken within a 30-minute interval.

(ii) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The O<sub>2</sub> sample shall be taken simultaneously with, and at the same point as, the SO<sub>2</sub> sample. The SO<sub>2</sub> emission rate shall be computed for each pair of SO<sub>2</sub> and O<sub>2</sub> samples. The SO<sub>2</sub> emission rate (E) for each run shall be the arithmetic mean of the results of the two pairs of samples.

(5) Method 7 shall be used to determine the NO<sub>x</sub> concentration.

(i) The sampling site and location shall be the same as for the SO<sub>2</sub> sample. Each run shall consist of four grab samples, with each sample taken at about 15-minute intervals.

(ii) For each NO<sub>x</sub> sample, the emission rate correction factor, grab sampling and analysis procedure of Method 3B shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>). The sample shall be taken simultaneously with, and at the same point as, the NO<sub>x</sub> sample.

(iii) The NO<sub>x</sub> emission rate shall be computed for each pair of NO<sub>x</sub> and O<sub>2</sub> samples. The NO<sub>x</sub> emission rate (E) for each run shall be the arithmetic mean of the results of the four pairs of samples.

(c) When combinations of fossil fuels are fired, the owner or operator (in order to compute the prorated standard as shown in 40 CFR 60.43(b) and 60.44(b)) shall determine the percentage (x or y) of the total heat input derived from each type of fuel as follows:

(1) The heat input rate of each fuel shall be determined by multiplying the gross calorific value of each fuel fired by the rate of each fuel burned.

(2) ASTM Methods D 240-76 (liquid fuels), or D 1826-77 (gaseous fuels) (incorporated by reference-see 40 CFR 60.17) shall be used to determine the gross calorific values of the fuels.

(3) Suitable methods shall be used to determine the rate of each fuel burned during each test period, and a material balance over the steam generating system shall be used to confirm the rate.

(d) The owner or operator may use the following as alternatives to the reference methods and procedures in 40 CFR 60.46 or in other sections as specified:

(1) The emission rate (E) of particulate matter, SO<sub>2</sub> and NO<sub>x</sub> may be determined by using the Fc factor, provided that the following procedure is used:

(i) The emission rate (E) shall be computed using the following equation:

$$E = C F_c (100 / \%CO_2)$$

where:

E = emission rate of pollutant, ng/J (lb/million Btu).

C = concentration of pollutant, ng/dscm (lb/dscf).

%CO<sub>2</sub> = carbon dioxide concentration, percent dry basis.

F<sub>c</sub> = factor as determined in appropriate sections of Method 19.

(ii) If and only if the average F<sub>c</sub> factor in Method 19 is used to calculate E and either E is from 0.97 to 1.00 of the emission standard or the relative accuracy of a continuous emission monitoring system is from 17 to 20 percent, then three runs of Method 3B shall be used to determine the O<sub>2</sub> and CO<sub>2</sub> concentration according to the procedures in 40 CFR 60.46(b) (2)(ii), (4)(ii), or (5)(ii). Then if F<sub>o</sub> (average of three runs), as calculated from the equation in Method 3B, is more than ± 3 percent than the average F<sub>o</sub> value, as determined from the average values of F<sub>d</sub> and F<sub>c</sub> in Method 19, i.e.,  $F_{oa} = 0.209 (F_{da} / F_{ca})$ , then the following procedure shall be followed:

(A) When F<sub>o</sub> is less than 0.97 F<sub>oa</sub>, then E shall be increased by that proportion under 0.97 F<sub>oa</sub>, e.g., if F<sub>o</sub> is 0.95 F<sub>oa</sub>, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the emission standard.

(B) When F<sub>o</sub> is less than 0.97 F<sub>oa</sub> and when the average difference ( $\bar{d}$ ) between the continuous monitor minus the reference methods is negative, then E shall be increased by that proportion under 0.97 F<sub>oa</sub>, e.g., if F<sub>o</sub> is 0.95 F<sub>oa</sub>, E shall be increased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(C) When F<sub>o</sub> is greater than 1.03 F<sub>oa</sub> and when  $\bar{d}$  is positive, then E shall be decreased by that proportion over 1.03 F<sub>oa</sub>, e.g., if F<sub>o</sub> is 1.05 F<sub>oa</sub>, E shall be decreased by 2 percent. This recalculated value shall be used to determine compliance with the relative accuracy specification.

(2) For Method 5 or 5B, Method 17 may be used at facilities with or without wet FGD systems if the stack gas temperature at the sampling location does not exceed an average temperature of 160 °C (320 °F). The procedures of sections 2.1 and 2.3 of Method 5B may be used with Method 17 only if it is used after wet FGD systems. Method 17 shall not be used after wet FGD systems if the effluent gas is saturated or laden with water droplets.

(3) Particulate matter and SO<sub>2</sub> may be determined simultaneously with the Method 5 train provided that the following changes are made:

(i) The filter and impinger apparatus in sections 2.1.5 and 2.1.6 of Method 8 is used in place of the condenser (section 2.1.7) of Method 5.

(ii) All applicable procedures in Method 8 for the determination of SO<sub>2</sub> (including moisture) are used:

(4) For Method 6, Method 6C may be used. Method 6A may also be used whenever Methods 6 and 3B data are specified to determine the SO<sub>2</sub> emission rate, under the conditions in 40 CFR 60.46(d)(1).

(5) For Method 7, Method 7A, 7C, 7D, or 7E may be used. If Method 7C, 7D, or 7E is used, the sampling time for each run shall be at least 1 hour and the integrated sampling approach shall be used to determine the O<sub>2</sub> concentration (%O<sub>2</sub>) for the emission rate correction factor.

(6) For Method 3, Method 3A or 3B may be used.

(7) For Method 3B, Method 3A may be used.

[40 CFR 60.46(a), (b), (c) & (d)]

### Monitoring of Operations

**D.9. Annual Tests Required - PM, VE, SO<sub>2</sub> and NO<sub>x</sub>.** Except as provided in specific conditions **F.6** through **F.8** of this permit, emission testing for particulate matter emissions, visible emissions, sulfur dioxide and nitrogen oxides shall be performed annually, no later than August 1st of each year, except for units that are not operating because of scheduled maintenance outages and emergency repairs, which will be tested within thirty days of returning to service. [Rules 62-4.070(3) and 62-213.440, F.A.C.]

**D.10. Pursuant to 40 CFR 60.45 Emission and Fuel Monitoring.**

CMS for Opacity and NO<sub>x</sub> are Required, No CMS for SO<sub>2</sub> Required.

(a) Each owner or operator shall install, calibrate, maintain, and operate continuous monitoring systems for measuring the opacity of emissions, sulfur dioxide emissions, nitrogen oxides emissions, and either oxygen or carbon dioxide except as provided in 40 CFR 60.45(b).

(b) Certain of the continuous monitoring system requirements under 40 CFR 60.45(a) do not apply to owners or operators under the following conditions:

(2) For a fossil fuel-fired steam generator that does not use a flue gas desulfurization device, a continuous monitoring system for measuring sulfur dioxide emissions is not required if the owner or operator monitors sulfur dioxide emissions by fuel sampling and analysis under 40 CFR 60.45(d).

The owner or operator may comply with the applicable emission and fuel monitoring requirements of 40 CFR 60 by complying with the applicable emission and fuel monitoring requirements of 40 CFR 75.

[40 CFR 60.45(a) & (b); Request of applicant in comments on Draft permit received August 18, 1997]

Excess Emission Reports.

(g) Excess emission reports shall be submitted to the Department for every calendar quarter. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. Each excess emission report shall include the information required in 40 CFR 60.7(c). Periods of excess emissions that shall be reported are defined as follows:

(1) Opacity. Excess emissions are defined as any six-minute period during which the average opacity of emissions exceeds 20 percent opacity, except that one six-minute average per hour of up to 27 percent opacity need not be reported.

(3) Nitrogen oxides. Excess emissions for affected facilities using a continuous monitoring system for measuring nitrogen oxides are defined as any three-hour period during which the average emissions (arithmetic average of three contiguous one-hour periods) exceed the applicable standards under 40 CFR 60.44.

[40 CFR 60.45(g)]

**Other NSPS Subpart D Conditions**

**D.11. Pursuant to 40 CFR 60.41 Definitions.** As used in 40 CFR 60 Subpart D, all terms not defined in 40 CFR 60.41 shall have the meaning given them in the Act, and in Subpart A of 40 CFR 60.

**Common Conditions**

**D.12.** This emissions unit is also subject to conditions **F.1** and **F.4** through **F.18** contained in **Subsection F. Common Conditions.**

**D.13.** These emissions units are also subject to conditions **G.1** through **G.6** contained in **Subsection G. NSPS Common Conditions.**

**Subsection E. This section addresses the following emissions unit.**

005	Combined Cycle Gas Turbine, Unit 5, rated at 38 MW, 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas, capable of burning any combination of, number 2 fuel oil, and natural gas, with emissions exhausted through a 125 ft. stack.
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{Permitting Notes: This emissions unit is regulated under Acid Rain, Phase II and Rule 62-210.300, F.A.C., Permits Required and is subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. The affected facility to which this subpart applies is the combined cycle gas turbine, Unit 5. This unit underwent a BACT Determination dated June 28, 1991. BACT Limits were incorporated into the subsequent PSD permits including 0610029-004-AC (PSD-FL-152C). Exhaust is vented through the heat recovery steam generator that is not equipped with duct burners and then through a 125 ft. stack. Emissions are controlled by dry low-NOx burners when firing natural gas, and by water injection when firing fuel oil. An evaporative cooling system was installed at the compressor inlet of Unit 5 in accordance with Permit No. 0610029-004-AC (PSD-FL-152C). The system cools the inlet air to the turbine, which increases turbine output and decreases heat rate. The system may be operated at any time that Unit 5 is in operation. The turbine exhaust may also be vented through a bypass stack for simple cycle operation. The turbine began commercial operation in 1992.}

**The following specific conditions apply to the emissions unit listed above:**

**Essential Potential to Emit (PTE) Parameters**

**E.1. Permitted Capacity.** The maximum operation heat input rates are as follows:

Unit No.	mmBtu/hr Heat Input	Fuel Type
005	414*	Natural Gas
	455*	No. 2 Fuel Oil

\* Based on 101.3 kilopascals pressure, 288 Kelvin and 60% relative humidity (ISO standard day conditions), and lower heating value of the fuel fired.  
 [Rules 62-4.160(2) and 62-210.200(PTE), F.A.C., and 0610029-004-AC (PSD-FL-152C)]

**E.2. Emissions Unit Operating Rate Limitation After Testing.** See specific condition **E.10**.  
 [Rule 62-297.310(2), F.A.C.]

**E.3. Methods of Operation - Fuels.** Any combination of only natural gas and number 2 fuel oil shall be fired in the combustion turbine. See specific conditions **E.4** and **E.6** of this permit. {Note: The limitations of specific conditions **E.4** and **E.6** are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334.}  
 [Rule 62-213.410, F.A.C.]

**E.4. Fuel Oil Consumption Limits.** The permitted fuel oil utilization rates for this emissions unit are:

- a. Maximum annual consumption of number 2 fuel oil shall not exceed 10,000,000 gal./yr.
- b. Maximum annual firing using number 2 fuel oil shall not exceed 33% of the annual capacity factor.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

**Emission Limitations and Standards**

**E.5. Visible Emissions** Visible emissions shall not exceed 10% opacity.  
 [0610029-004-AC (PSD-FL-152C)]

**E.6. Sulfur Dioxide - Sulfur Content.** The No. 2 fuel oil sulfur content shall not exceed 0.25 percent, by weight. See specific conditions **E.11** and **E.12** of this permit. The natural gas sulfur content shall not exceed 10 grains per hundred cubic feet (standard conditions). See specific condition **E.15** of this permit.

{Note: The limitations of specific conditions **E.4** and **E.6** are more stringent than the NSPS sulfur dioxide limitation and thus assure compliance with 40 CFR 60.333 and 60.334. The sulfur limitation on natural gas has been added to assure compliance with 40 CFR 60.333.}  
 [Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

**E.7.** The maximum allowable emissions from Unit 5 shall not exceed the emission limitations listed below.

Pollutant	Emission Limits			Basis
	Gas	Number 2 Fuel Oil	Tons/Year <sup>a, b</sup>	
NO <sub>x</sub> <sup>c</sup>	25 ppmvd at 15% oxygen on a dry basis	42 ppmvd at 15% oxygen on a dry basis	243.7	BACT
SO <sub>2</sub>	Natural gas as fuel	0.25% S by weight	178.2	BACT
PM <sub>10</sub>	0.006 lb/mmBtu	0.025 lb/mmBtu	23.7	BACT
VOC	0.0112 lb/mmBtu	0.0113 lb/mmBtu	21.0	PSD-FL-152C
CO	0.0224 lb/mmBtu	0.0226 lb/mmBtu	42.1	PSD-FL-152C

- a Tons per year based on 67% capacity factor for natural gas firing, 33% capacity factor number 2 fuel oil firing.
- b Based on 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas.
- c NO<sub>x</sub> emission limit during co-firing of natural gas and number 2 fuel oil shall be determined by the following:

$$\text{NO}_x \text{ Limit} = \frac{(\text{Lg} \times \text{Qg}) + (\text{Lo} \times \text{Qo})}{\text{Qg} + \text{Qo}}$$

where:

- Lg = Emission limit for natural gas
- Qg = Heat input of natural gas
- Lo = Emission limit for fuel oil
- Qo = Heat input of fuel oil

{Note: The limitations of specific condition **E.7** are more stringent than the NSPS nitrogen oxides limitation and thus ensure compliance with 40 CFR 60.332 and 60.334.}  
 [0610029-004-AC (PSD-FL-152C) and requested by applicant in the initial Title V permit application received June 14, 1996]

**Test Methods and Procedures**

**E.8. Annual Compliance Tests.** Except as provided in specific conditions F.6 and F.8 of this permit, emission testing for visible emissions and nitrogen oxides shall be performed annually, no later than August 1st of each year, in accordance with specific condition E.10, with the fuel(s) used for more than 400 hours in the preceding 12-month period. Tests shall be conducted using the following EPA reference methods in accordance with 40 CFR 60, Appendix A:

- a. Method 9 for VE;
- b. Method 20 for NOx.

If the unit is not operating because of scheduled maintenance outages and emergency repairs, it will be tested within thirty days of returning to service.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

**E.9. Testing for PM, CO, VOC.** Except as provided in specific condition F.6 of this permit, emission testing for emissions of particulate matter and carbon monoxide shall be performed in the year prior to renewal of this permit, in accordance with specific condition E.10, while burning fuel oil. Emission testing for emissions of VOC shall be performed only if the CO test does not demonstrate compliance with the emissions limitation of specific condition E.7 of this permit. Particulate matter tests shall be conducted using EPA test methods 5 or 17. Carbon monoxide tests shall be conducted using EPA test method 10. VOC tests, if required, shall be conducted using EPA test method 25A.

[Rules 62-4.070(3) and 62-213.440, F.A.C., and 0610029-004-AC (PSD-FL-152C)]

**E.10. Additional Test Requirements.** Test results shall be the average of three valid runs. Testing of emissions shall be conducted with the emissions unit operating at permitted capacity, which is defined as 95-100 percent of the maximum heat input rate allowed by this permit, achievable for the average ambient air temperature during the test. If it is impracticable to test at permitted capacity, the emissions unit may be tested at less than permitted capacity. In such cases, subsequent operation is limited by adjusting downward the entire heat input vs. inlet temperature curve by the increment equal to the difference between the maximum permitted heat input value and 105 percent of the value reached during the test. Once the emissions unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. Data, curves, and calculations necessary to demonstrate the heat input rate correction at both design and test conditions shall be submitted to the Department with the compliance test report.

[0610029-004-AC (PSD-FL-152C)]

**E.11. Sulfur Dioxide - Sulfur Content.** The permittee shall demonstrate compliance with the liquid fuel sulfur limit by fuel sampling and analysis. See specific conditions E.6 and E.12. The permittee shall demonstrate compliance with the gaseous fuel sulfur limit via record keeping. See specific condition E.15.

[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**E.12. Fuel Sampling & Analysis - Sulfur.** Compliance with the liquid fuel sulfur limit shall be determined using fuel sampling and analysis in accordance with the fuel sampling and analysis requirements of 40 CFR 75, Appendix D.  
[Rule 62-213.440, F.A.C., and , and 0610029-004-AC (PSD-FL-152C)]

**Monitoring of Operations**

**E.13. Continuous Monitoring Required.** A continuous monitoring system shall be maintained to record fuel consumption. A continuous monitoring system shall be maintained to record emissions of nitrogen oxides in accordance with the requirements of 40 CFR 75.  
[0610029-004-AC (PSD-FL-152C) and requested by applicant in the initial Title V permit application received June 14, 1996]

**E.14. Excess Emissions by CEMS.** The CEMS for NO<sub>x</sub> shall be used to determine periods of excess emissions. Excess emissions are defined for this emissions unit as any 60-minute period during which the average emissions exceed the emission limits of specific condition E.7 of this permit. Periods of startup, shutdown, malfunction shall be monitored, recorded and reported with excess emissions following the format and requirements of 40 CFR 60.7.  
{Note: The requirements of specific condition E.14 are more stringent than the NSPS monitoring provisions and thus assure compliance with 40 CFR 60.334 and 60.335.}  
[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**Record Keeping and Reporting Requirements**

**E.15. Natural Gas Sulfur Content Records Required.** The owner or operator shall monitor the sulfur content of natural gas received in accordance with the custom fuel monitoring schedule in Appendix M of this permit.  
[Rules 62-4.070(3) and 62-213.440, F.A.C.]

**E.16. Additional Reports Required.** The owner or operator shall report the following with the Air Operating Report (AOR): sulfur content, by weight, and lower heating value of the fuel oil fired in the previous year, sulfur content of natural gas recorded in the previous year, annual fuel consumption of number 2 fuel oil and natural gas, and hours of operation per fuel usage (single fired and co-fired).  
[Rule 62-210.370(3), F.A.C., and, 0610029-004-AC (PSD-FL-152C)]

**Other Conditions**

**E.17.** This emissions unit is also subject to conditions F.1 through F.18, **except for F.2, F.3, F.7 and F.8**, contained in **Subsection F. Common Conditions.**

**E.18.** This emissions unit is also subject to condition G.1 through G.6 contained in **Subsection G. NSPS Common Conditions.**



**Subsection F. Common Conditions.**

<b>E.U. ID No.</b>	<b>Brief Description</b>
001	Fossil Fuel Steam Generator, Unit 1
002	Fossil Fuel Steam Generator, Unit 2
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4
005	Combined Cycle Gas Turbine, Unit 5

**The following conditions apply to the emissions units listed above:**

**Essential Potential to Emit (PTE) Parameters**

**F.1. Hours of Operation.** These emissions units may operate continuously, i.e., 8,760 hours/year.

[Rule 62-210.200(PTE), F.A.C.]

**Emission Limitations and Standards**

{Permitting Notes: Table 1-1, Summary of Air Pollutant Standards and Terms, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

**Excess Emissions**

**F.2. (This condition is not applicable to emissions units 004 and 005.)** Excess emissions resulting from malfunction shall be permitted provided that best operational practices to minimize emissions are adhered to and 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.

[Rule 62-210.700(1), F.A.C.]

**F.3. (This condition is not applicable to emissions units 004 and 005.)** Excess emissions resulting from startup or shutdown shall be permitted provided that best operational practices to minimize emissions are adhered to and the duration of excess emissions shall be minimized.

[Rule 62-210.700(2), F.A.C.]

**F.4.** 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.

[Rule 62-210.700(4), F.A.C.]

**Monitoring of Operations**

**F.5. Determination of Process Variables.**

(a) **Required Equipment.** The owner or operator of an emissions unit for which compliance tests are required shall install, operate, and maintain equipment or instruments necessary to determine process variables, such as process weight input or heat input, when such data are needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.

(b) Accuracy of Equipment. Equipment or instruments used to directly or indirectly determine process variables, including devices such as belt scales, weight hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value.

[Rule 62-297.310(5), F.A.C.]

**F.6. Frequency of Compliance Tests.** The following provisions apply only to those emissions units that are subject to an emissions limiting standard for which compliance testing is required.

(a) General Compliance Testing.

2. For excess emission limitations for particulate matter specified in Rule 62-210.700, F.A.C., a compliance test shall be conducted annually while the emissions unit is operating under soot blowing conditions in each federal fiscal year during which soot blowing is part of normal emissions unit operation, except that such test shall not be required in any federal fiscal year in which a fossil fuel steam generator does not burn liquid and/or solid fuel for more than 400 hours other than during startup.

3. The owner or operator of an emissions unit that is subject to any emission limiting standard shall conduct a compliance test that demonstrates compliance with the applicable emission limiting standard prior to obtaining a renewed operation permit. Emissions units that are required to conduct an annual compliance test may submit the most recent annual compliance test to satisfy the requirements of this provision. In renewing an air operation permit pursuant to Rule 62-210.300(2)(a)3.b., c., or d., F.A.C., the Department shall not require submission of emission compliance test results for any emissions unit that, during the year prior to renewal:

- a. Did not operate; or
- b. In the case of a fuel burning emissions unit, burned liquid fuel for a total of no more than 400 hours.

4. During each federal fiscal year (October 1 -- September 30), unless otherwise specified by rule, order, or permit, the owner or operator of each emissions unit shall have a formal compliance test conducted for:

- a. Visible emissions, if there is an applicable standard;
- b. Each of the following pollutants, if there is an applicable standard, and if the emissions unit emits or has the potential to emit: 5 tons per year or more of lead or lead compounds measured as elemental lead; 30 tons per year or more of acrylonitrile; or 100 tons per year or more of any other regulated air pollutant; and

5. An annual compliance test for particulate matter emissions shall not be required for any fuel burning emissions unit that, in a federal fiscal year, does not burn liquid and/or solid fuel, other than during startup, for a total of more than 400 hours.

8. Any combustion turbine that does not operate for more than 400 hours per year shall conduct a visible emissions compliance test once per each five-year period, coinciding with the term of its air operation permit.

9. The owner or operator shall notify the Department, at least 15 days prior to the date on which each formal compliance test is to begin, of the date, time, and place of each such test, and the test contact person who will be responsible for coordinating and having such test conducted for the owner or operator.

(b) Special Compliance Tests. When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in a Department rule or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the emissions unit to conduct compliance tests which identify the nature and quantity of pollutant

emissions from the emissions unit and to provide a report on the results of said tests to the Department.

(c) Waiver of Compliance Test Requirements. If the owner or operator of an emissions unit that is subject to a compliance test requirement demonstrates to the Department, pursuant to the procedure established in Rule 62-297.620, F.A.C., that the compliance of the emissions unit with an applicable weight emission limiting standard can be adequately determined by means other than the designated test procedure, such as specifying a surrogate standard of no visible emissions for particulate matter sources equipped with a bag house or specifying a fuel analysis for sulfur dioxide emissions, the Department shall waive the compliance test requirements for such emissions units and order that the alternate means of determining compliance be used, provided, however, the provisions of Rule 62-297.310(7)(b), F.A.C., shall apply.  
[Rule 62-297.310(7), F.A.C.; SIP approved]

**F.7. (This condition is not applicable to emissions unit 005.) When PM Tests Not Required.** Annual and permit renewal compliance testing for particulate matter emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rules 62-297.310(7)(a)3. & 5., F.A.C.; and, ASP Number 97-B-01.]

**F.8. (This condition is not applicable to emissions unit 005.) When VE Tests Not Required.** By this permit, annual emissions compliance testing for visible emissions is not required for these emissions units while burning:

- a. only gaseous fuel(s); or
- b. gaseous fuel(s) in combination with any amount of liquid fuel(s) for less than 400 hours per year; or
- c. only liquid fuel(s) for less than 400 hours per year.

[Rule 62-4.070(3), F.A.C.]

### **Test Methods and Procedures**

{Permitting Notes: The attached Table 2-1, Summary of Compliance Requirements, summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.}

**F.9. Visible Emissions - Boiler 4, Turbine.** The test method for visible emissions for emissions units 004 (Unit 4) and 005 (Turbine, Unit 5) shall be EPA Method 9, adopted and incorporated by reference in Rule 62-204.800, F.A.C., and referenced in Chapter 62-297, F.A.C.  
[Rules 62-204.800 and 62-297.401, F.A.C.]

**F.10. Visible Emissions - Boilers, Units 1, 2 and 3.** The test method for visible emissions for emissions units 001 (Unit 1), 002 (Unit 2) and 003 (Unit 3) shall be DEP Method 9, incorporated in Chapter 62-297, F.A.C. A transmissometer may be used and calibrated according to Rule 62-297.520, F.A.C. See specific condition **F.11**.  
[Rules 62-296.405(1)(e)1. and 62-297.401, F.A.C.]

**F.11. DEP Method 9.** The provisions of EPA Method 9 (40 CFR 60, Appendix A) are adopted by reference with the following exceptions:

1. EPA Method 9, Section 2.4, Recording Observations. Opacity observations shall be made and recorded by a certified observer at sequential fifteen second intervals during the required period of observation.
2. EPA Method 9, Section 2.5, Data Reduction. For a set of observations to be acceptable, the observer shall have made and recorded, or verified the recording of, at least 90 percent of the possible individual observations during the required observation period. For single-valued opacity standards (e.g., 20 percent opacity), the test result shall be the highest valid six-minute average for the set of observations taken. For multiple-valued opacity standards (e.g., 20 percent opacity, except that an opacity of 40 percent is permissible for not more than two minutes per hour) opacity shall be computed as follows:
  - a. For the basic part of the standard (i.e., 20 percent opacity) the opacity shall be determined as specified above for a single-valued opacity standard.
  - b. For the short-term average part of the standard, opacity shall be the highest valid short-term average (i.e., two-minute, three-minute average) for the set of observations taken.

In order to be valid, any required average (i.e., a six-minute or two-minute average) shall be based on all of the valid observations in the sequential subset of observations selected, and the selected subset shall contain at least 90 percent of the observations possible for the required averaging time. Each required average shall be calculated by summing the opacity value of each of the valid observations in the appropriate subset, dividing this sum by the number of valid observations in the subset, and rounding the result to the nearest whole number. The number of missing observations in the subset shall be indicated in parenthesis after the subset average value. [Rule 62-297.401, F.A.C.]

**F.12. Required Number of Test Runs.** For mass emission limitations, a compliance test shall consist of three complete and separate determinations of the total air pollutant emission rate through the test section of the stack or duct and three complete and separate determinations of any applicable process variables corresponding to the three distinct time periods during which the stack emission rate was measured provided, however, that three complete and separate determinations shall not be required if the process variables are not subject to variation during a compliance test, or if three determinations are not necessary in order to calculate the unit's emission rate. The three required test runs shall be completed within one consecutive five day period. In the event that a sample is lost or one of the three runs must be discontinued because of circumstances beyond the control of the owner or operator, and a valid third run cannot be obtained within the five day period allowed for the test, the Secretary or his or her designee may accept the results of the two complete runs as proof of compliance, provided that the arithmetic mean of the results of the two complete runs is at least 20 percent below the allowable emission limiting standards.

[Rule 62-297.310(1), F.A.C.]

**F.13. Calculation of Emission Rate.** The indicated emission rate or concentration shall be the arithmetic average of the emission rate or concentration determined by each of the separate test runs unless otherwise specified in a particular test method or applicable rule.

[Rule 62-297.310(3), F.A.C.]

**F.14. Operating Rate During Testing.** Testing of emissions shall be conducted with each emissions unit operation at permitted capacity, which is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an emissions unit may be tested at less than the minimum permitted 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, operation at higher capacities is allowed

for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity.

[Rules 62-297.310(2) & (2)(b), F.A.C.]

**F.15. Applicable Test Procedures.**

**(a) Required Sampling Time.**

1. Unless otherwise specified in the applicable rule, the required sampling time for each test run shall be no less than one hour and no greater than four hours, and the sampling time at each sampling point shall be of equal intervals of at least two minutes.

2. Opacity Compliance Tests. When either EPA Method 9 or DEP Method 9 is specified as the applicable opacity test method, the required minimum period of observation for a compliance test shall be sixty (60) minutes for emissions units which emit or have the potential to emit 100 tons per year or more of particulate matter, and thirty (30) minutes for emissions units which have potential emissions less than 100 tons per year of particulate matter and are not subject to a multiple-valued opacity standard. The opacity test observation period shall include the period during which the highest opacity emissions can reasonably be expected to occur. Exceptions to these requirements are as follows:

c. The minimum observation period for opacity tests conducted by employees or agents of the Department to verify the day-to-day continuing compliance of a unit or activity with an applicable opacity standard shall be twelve minutes.

**(b) Minimum Sample Volume.** Unless otherwise specified in the applicable rule, the minimum sample volume per run shall be 25 dry standard cubic feet.

**(c) Required Flow Rate Range.** For EPA Method 5 particulate sampling, acid mist/sulfur dioxide, and fluoride sampling which uses Greenburg Smith type impingers, the sampling nozzle and sampling time shall be selected such that the average sampling rate will be between 0.5 and 1.0 actual cubic feet per minute, and the required minimum sampling volume will be obtained.

**(d) Calibration of Sampling Equipment.** Calibration of the sampling train equipment shall be conducted in accordance with the schedule shown in Table 297.310-1.

**(e) Allowed Modification to EPA Method 5.** When EPA Method 5 is required, the following modification is allowed: the heated filter may be separated from the impingers by a flexible tube. [Rule 62-297.310(4), F.A.C.]

**F.16. Required Stack Sampling Facilities.** When a mass emissions stack test is required, the owner or operator shall comply with the requirements contained in Appendix SS-1, Stack Sampling Facilities, attached to this permit.

[Rule 62-297.310(6), F.A.C.]

**Record Keeping and Reporting Requirements**

**F.17. Malfunctions - Notification.** In the case of excess emissions resulting from malfunctions, each owner or operator shall notify the Central District Air Section in accordance with Rule 62-4.130, F.A.C. A full written report on the malfunctions shall be submitted in a quarterly report, if requested by the Central District Air Section.

[Rule 62-210.700(6), F.A.C.]

**F.18. Test Reports.**

(a) The owner or operator of an emissions unit for which a compliance test is required shall file a report with the Central District Air Section on the results of each such test.

(b) The required test report shall be filed with the Central District Air Section as soon as practical but no later than 45 days after the last sampling run of each test is completed.

(c) The test report shall provide sufficient detail on the emissions unit tested and the test procedures used to allow the Central District Air Section to determine if the test was properly conducted and the test results properly computed. As a minimum, the test report, other than for an EPA or DEP Method 9 test, shall provide the following information:

1. The type, location, and designation of the emissions unit tested.
2. The facility at which the emissions unit is located.
3. The owner or operator of the emissions unit.
4. The normal type and amount of fuels used and materials processed, and the types and amounts of fuels used and material processed during each test run.
5. The means, raw data and computations used to determine the amount of fuels used and materials processed, if necessary to determine compliance with an applicable emission limiting standard.
6. The type of air pollution control devices installed on the emissions unit, their general condition, their normal operating parameters (pressure drops, total operating current and GPM scrubber water), and their operating parameters during each test run.
7. A sketch of the duct within 8 stack diameters upstream and 2 stack diameters downstream of the sampling ports, including the distance to any upstream and downstream bends or other flow disturbances.
8. The date, starting time and duration of each sampling run.
9. The test procedures used, including any alternative procedures authorized pursuant to Rule 62-297.620, F.A.C. Where optional procedures are authorized in this chapter, indicate which option was used.
10. The number of points sampled and configuration and location of the sampling plane.
11. For each sampling point for each run, the dry gas meter reading, velocity head, pressure drop across the stack, temperatures, average meter temperatures and sample time per point.
12. The type, manufacturer and configuration of the sampling equipment used.
13. Data related to the required calibration of the test equipment.
14. Data on the identification, processing and weights of all filters used.
15. Data on the types and amounts of any chemical solutions used.
16. Data on the amount of pollutant collected from each sampling probe, the filters, and the impingers, are reported separately for the compliance test.
17. The names of individuals who furnished the process variable data, conducted the test, analyzed the samples and prepared the report.
18. All measured and calculated data required to be determined by each applicable test procedure for each run.
19. The detailed calculations for one run that relate the collected data to the calculated emission rate.
20. The applicable emission standard, and the resulting maximum allowable emission rate for the emissions unit, plus the test result in the same form and unit of measure.
21. A certification that, to the knowledge of the owner or his authorized agent, all data submitted are true and correct. When a compliance test is conducted for the Department or its agent, the person who conducts the test shall provide the certification with respect to the test procedures used. The owner or his authorized agent shall certify that all data required and provided to the person conducting the test are true and correct to his knowledge.

[Rules 62-213.440 and 62-297.310(8), F.A.C.]

**Subsection G. NSPS Common Conditions.**

<b>E.U. ID No.</b>	<b>Brief Description</b>
004	Fossil Fuel Steam Generator, Unit 4
005	Combined Cycle Gas Turbine, Unit 5

{Permitting Notes: The emissions units above are subject to the following conditions from 40 CFR 60 Subpart A, General Provisions. The affected facilities to which this subpart applies are fossil fuel steam generator, Unit 4 and the combined cycle gas turbine, Unit 5. To the extent allowed by law, the Administrator shall mean the Department.}

**The following conditions apply to the NSPS emissions units listed above:**

**G.1. Pursuant to 40 CFR 60.7 Notification And Record Keeping.**

(a) Any owner or operator subject to the provisions of 40 CFR 60 shall furnish the Administrator written notification as follows:

(4) A notification of any physical or operational change to an existing facility which may increase the emission rate of any air pollutant to which a standard applies, unless that change is specifically exempted under an applicable subpart or in 40 CFR 60.14(e). This notice shall be postmarked 60 days or as soon as practicable before the change is commenced and shall include information describing the precise nature of the change, present and proposed emission control systems, productive capacity of the facility before and after the change, and the expected completion date of the change. The Administrator may request additional relevant information subsequent to this notice.

(b) The owner or operator subject to the provisions of 40 CFR 60 shall maintain records of the occurrence and duration of any startup, shutdown, or malfunction in the operation of an affected facility; any malfunction of the air pollution control equipment; or any periods during which a continuous monitoring system or monitoring device is inoperative.

(c) The owner or operator required to install a continuous monitoring system (CMS) or monitoring device shall submit an excess emissions and monitoring systems performance report (excess emissions are defined in applicable subparts) and/or a summary report form (see 40 CFR 60.7(d)) to the Administrator semiannually, except when: more frequent reporting is specifically required by an applicable subpart; or the CMS data are to be used directly for compliance determination, in which case quarterly reports shall be submitted; or the Administrator, on a case-by-case basis, determines that more frequent reporting is necessary to accurately assess the compliance status of the source. All reports shall be postmarked by the 30th day following the end of each calendar half (or quarter, as appropriate). Written reports of excess emissions shall include the following information:

(1) The magnitude of excess emissions computed in accordance with 40 CFR 60.13(h), any conversion factor(s) used, and the date and time of commencement and completion of each time period of excess emissions. The process operating time during the reporting period.

(2) Specific identification of each period of excess emissions that occurs during startups, shutdowns, and malfunctions of the affected facility. The nature and cause of any malfunction (if known), the corrective action taken or preventative measures adopted.

(3) The date and time identifying each period during which the continuous monitoring system was inoperative except for zero and span checks and the nature of the system repairs or adjustments.

(4) When no excess emissions have occurred or the continuous monitoring system(s) have not been inoperative, repaired, or adjusted, such information shall be stated in the report.

(d) The summary report form shall contain the information and be in the format shown in Figure 1 unless otherwise specified by the Administrator. One summary report form shall be submitted for each pollutant monitored at each affected facility.

(1) If the total duration of excess emissions for the reporting period is less than 1 percent of the total operating time for the reporting period and CMS downtime for the reporting period is less than 5 percent of the total operating time for the reporting period, only the summary report form shall be submitted and the excess emission report described in 40 CFR 60.7(c) need not be submitted unless requested by the Administrator.

(2) If the total duration of excess emissions for the reporting period is 1 percent or greater of the total operating time for the reporting period or the total CMS downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the summary report form and the excess emission report described in 40 CFR 60.7(c) shall both be submitted.

*[See Attached Figure 1-Summary Report-Gaseous and Opacity Excess Emission and Monitoring System Performance]*

(e)(1) Notwithstanding the frequency of reporting requirements specified in paragraph (c) of this section, an owner or operator who is required by an applicable subpart to submit excess emissions and monitoring systems performance reports (and summary reports) on a quarterly (or more frequent) basis may reduce the frequency of reporting for that standard to semiannual if the following conditions are met:

(i) For one full year (e.g., four quarterly or twelve monthly reporting periods) the affected facility's excess emissions and monitoring systems reports submitted to comply with a standard under 40 CFR 60 continually demonstrate that the facility is in compliance with the applicable standard;

(ii) The owner or operator continues to comply with all record keeping and monitoring requirements specified in this subpart and the applicable standard; and

(iii) The Administrator does not object to reduced frequency of reporting for the affected facility, as provided in paragraph (e)(2) of this section.

(2) The frequency of reporting of excess emissions and monitoring systems performance (and summary) reports may be reduced only after the owner or operator notifies the Administrator in writing of his or her intention to make such a change and the Administrator does not object to the intended change. In deciding whether to approve a reduced frequency of reporting, the Administrator may review information concerning the source's entire previous performance history during the required record keeping period prior to the intended change, including performance test results, monitoring data, and evaluations of an owner or operator's conformance with operation and maintenance requirements. Such information may be used by the Administrator to make a judgment about the source's potential for noncompliance in the future. If the Administrator disapproves the owner or operator's request to reduce the frequency of reporting, the Administrator will notify the owner or operator in writing within 45 days after receiving notice of the owner or operator's intention. The notification from the Administrator to the owner or operator will specify the grounds on which the disapproval is based. In the absence of a notice of disapproval within 45 days, approval is automatically granted.

(3) As soon as monitoring data indicate that the affected facility is not in compliance with any emission limitation or operating parameter specified in the applicable standard, the frequency of reporting shall revert to the frequency specified in the applicable standard, and the owner or operator shall submit an excess emissions and monitoring systems performance report (and summary report, if required) at the next appropriate reporting period following the noncomplying event. After demonstrating compliance with the applicable standard for another full year, the owner or operator may again request approval from the Administrator to reduce the frequency of reporting for that standard as provided for in paragraphs (e)(1) and (e)(2) of this section.



(f) The owner or operator subject to the provisions of 40 CFR 60 shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices; and all other information required by 40 CFR 60 recorded in a permanent form suitable for inspection. The file shall be retained for at least five years following the date of such measurements, maintenance, reports, and records.  
[40 CFR 60.7 and Rule 62-213.440(1)(b)2.b., F.A.C.]

**G.2. Pursuant to 40 CFR 60.8 Performance Tests.**

(b) Performance tests shall be conducted and data reduced in accordance with the test methods and procedures contained in each applicable subpart, except as otherwise authorized by an approved alternative method.

(c) Performance tests shall be conducted under such conditions as the Administrator shall specify to the plant operator based on representative performance of the affected facility. The owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of the performance tests. Operations during periods of startup, shutdown, and malfunction shall not constitute representative conditions for the purpose of a performance test nor shall emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.

(f) Unless otherwise specified in the applicable subpart, each performance test shall consist of three separate runs using the applicable test method. Each run shall be conducted for the time and under the conditions specified in the applicable standard. For the purpose of determining compliance with an applicable standard, the arithmetic means of results of the three runs shall apply. In the event that a sample is accidentally lost or conditions occur in which one of the three runs must be discontinued because of forced shutdown, failure of an irreplaceable portion of the sample train, extreme meteorological conditions, or other circumstances, beyond the owner or operator's control, compliance may, upon the Administrator's approval, be determined using the arithmetic mean of the results of the two other runs.

[40 CFR 60.8]

**G.3. Pursuant to 40 CFR 60.11 Compliance With Standards And Maintenance Requirements.**

(a) Compliance with standards in 40 CFR 60, other than opacity standards, shall be determined only by performance tests established by 40 CFR 60.8, unless otherwise specified in the applicable standard.

(b) **(This paragraph is only applicable to emissions unit 004.)** Compliance with opacity standards in 40 CFR 60 shall be determined by conducting observations in accordance with Reference Method 9 in appendix A of 40 CFR 60, any alternative method that is approved by the Administrator, or as provided in 40 CFR 60.11(e)(5).

(c) **(This paragraph is only applicable to emissions unit 004.)** The opacity standards set forth in 40 CFR 60 shall apply at all times except during periods of startup, shutdown, malfunction, and as otherwise provided in the applicable standard.

(d) At all times, including periods of startup, shutdown, and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Administrator which may

include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(e)(5) **(This paragraph is only applicable to emissions unit 004.)** The owner or operator of an affected facility subject to an opacity standard may submit, for compliance purposes, continuous opacity monitoring system (COMS) data results produced during any performance test required under 40 CFR 60.8 in lieu of Method 9 observation data. If an owner or operator elects to submit COMS data for compliance with the opacity standard, he shall notify the Administrator of that decision, in writing, at least 30 days before any performance test required under 40 CFR 60.8 is conducted. Once the owner or operator of an affected facility has notified the Administrator to that effect, the COMS data results will be used to determine opacity compliance during subsequent tests required under 40 CFR 60.8 until the owner or operator notifies the Administrator, in writing, to the contrary. For the purpose of determining compliance with the opacity standard during a performance test required under 40 CFR 60.8 using COMS data, the minimum total time of COMS data collection shall be averages of all 6-minute continuous periods within the duration of the mass emission performance test. Results of the COMS opacity determinations shall be submitted along with the results of the performance test required under 60.8. The owner or operator of an affected facility using a COMS for compliance purposes is responsible for demonstrating that the COMS meets the requirements specified in 40 CFR 60.13(c), that the COMS has been properly maintained and operated, and that the resulting data have not been altered in any way. If COMS data results are submitted for compliance with the opacity standard for a period of time during which Method 9 data indicates noncompliance, the Method 9 data will be used to determine opacity compliance.

[40 CFR 60.11]

**G.4. Pursuant to 40 CFR 60.12 Circumvention.**

No owner or operator subject to the provisions of 40 CFR 60 shall 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]

**G.5. Pursuant to 40 CFR 60.13 Monitoring Requirements.**

(a) For the purposes of this section, all continuous monitoring systems required under applicable subparts shall be subject to the provisions of this section upon promulgation of performance specifications for continuous monitoring systems under appendix B of 40 CFR 60 and, if the continuous monitoring system is used to demonstrate compliance with emission limits on a continuous basis, appendix F to 40 CFR 60, unless otherwise specified in an applicable subpart or by the Administrator. Appendix F is applicable December 4, 1987.

(c) If the owner or operator of an affected facility elects to submit continuous opacity monitoring system (COMS) data for compliance with the opacity standard as provided under 40 CFR 60.11(e)(5), he/she shall conduct a performance evaluation of the COMS as specified in Performance Specification 1, appendix B, of 40 CFR 60 before the performance test required under 40 CFR 60.8 is conducted. Otherwise, the owner or operator of an affected facility shall conduct a performance evaluation of the COMS or continuous emission monitoring system (CEMS) during any performance test required under 40 CFR 60.8 or within 30 days thereafter in accordance with the applicable performance specification in appendix B of 40 CFR 60. The

owner or operator of an affected facility shall conduct COMS or CEMS performance evaluations at such other times as may be required by the Administrator under section 114 of the Act.

(1) The owner or operator of an affected facility using a COMS to determine opacity compliance during any performance test required under 40 CFR 60.8 and as described in 40 CFR 60.11(e)(5), shall furnish the Administrator two or, upon request, more copies of a written report of the results of the COMS performance evaluation described in 40 CFR 60.13(c) at least 10 days before the performance test required under 40 CFR 60.8 is conducted.

(2) Except as provided in 40 CFR 60.13(c)(1), the owner or operator of an affected facility shall furnish the Administrator within 60 days of completion two or, upon request, more copies of a written report of the results of the performance evaluation.

(d)(1) Owners and operators of all continuous emission monitoring systems installed in accordance with the provisions of 40 CFR 60 shall check the zero (or low-level value between 0 and 20 percent of span value) and span (50 to 100 percent of span value) calibration drifts at least once daily in accordance with a written procedure. The zero and span shall, as a minimum, be adjusted whenever the 24-hour zero drift or 24-hour span drift exceeds two times the limits of the applicable performance specifications in appendix B. The system must allow the amount of excess zero and span drift measured at the 24-hour interval checks to be recorded and quantified, whenever specified. For continuous monitoring systems measuring opacity of emissions, the optical surfaces exposed to the effluent gases shall be cleaned prior to performing the zero and span drift adjustments except that for systems using automatic zero adjustments. The optical surfaces shall be cleaned when the cumulative automatic zero compensation exceeds 4 percent opacity.

(2) Unless otherwise approved by the Administrator, the following procedures shall be followed for continuous monitoring systems measuring opacity of emissions. Minimum procedures shall include a method for producing a simulated zero opacity condition and an upscale (span) opacity condition using a certified neutral density filter or other related technique to produce a known obscuration of the light beam. Such procedures shall provide a system check of the analyzer internal optical surfaces and all electronic circuitry including the lamp and photo detector assembly.

(e) Except for system breakdowns, repairs, calibration checks, and zero and span adjustments required under 40 CFR 60.13(d), all continuous monitoring systems shall be in continuous operation and shall meet minimum frequency of operation requirements as follows:

(1) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring opacity of emissions shall complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

(2) All continuous monitoring systems referenced by 40 CFR 60.13(c) for measuring emissions, except opacity, shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period.

(f) All continuous monitoring systems or monitoring devices shall be installed such that representative measurements of emissions or process parameters from the affected facility are obtained. Additional procedures for location of continuous monitoring systems contained in the applicable Performance Specifications of appendix B of 40 CFR 60 shall be used.

(g) When the effluents from a single affected facility or two or more affected facilities subject to the same emission standards are combined before being released to the atmosphere, the owner or operator may install applicable continuous monitoring systems on each effluent or on the combined effluent. When the affected facilities are not subject to the same emission standards, separate continuous monitoring systems shall be installed on each effluent. When the effluent from one affected facility is released to the atmosphere through more than one point, the owner or operator shall install an applicable continuous monitoring system on each separate effluent unless the installation of fewer systems is approved by the Administrator. When more than one continuous monitoring system is used to measure the emissions from one affected facility (e.g.,

multiple breechings, multiple outlets), the owner or operator shall report the results as required from each continuous monitoring system.

(h) Owners or operators of all continuous monitoring systems for measurement of opacity shall reduce all data to 6-minute averages and for continuous monitoring systems other than opacity to 1-hour averages for time periods as defined in 40 CFR 60.2. Six-minute opacity averages shall be calculated from 36 or more data points equally spaced over each 6-minute period. For continuous monitoring systems other than opacity, 1-hour averages shall be computed from four or more data points equally spaced over each 1-hour period. Data recorder during periods of continuous monitoring system breakdowns, repairs, calibration checks, and zero and span adjustments shall not be included in the data averages computed under this paragraph. An arithmetic or integrated average of all data may be used. The data may be recorded in reduced or non reduced form (e.g., ppm pollutant and percent O<sub>2</sub> or ng/J of pollutant). All excess emissions shall be converted into units of the standard using the applicable conversion procedures specified in subparts. After conversion into units of the standard, the data may be rounded to the same number of significant digits as used in the applicable subparts to specify the emission limit (e.g., rounded to the nearest 1 percent opacity).

[40 CFR 60.13]

**Section IV. This section is the Acid Rain Part.**

**Operated by:** City of Vero Beach  
**ORIS code:** 0693

**Subsection A. This subsection addresses Acid Rain, Phase II.**

The emissions units listed below are regulated under Acid Rain, Phase II.

<b>E.U. ID No.</b>	<b>Brief Description</b>
003	Fossil Fuel Steam Generator, Unit 3
004	Fossil Fuel Steam Generator, Unit 4
005	Combined Cycle Gas Turbine, Unit 5

**A.1.** The Phase II permit application(s) submitted for this facility, as approved by the Department, is a part of this permit. The owners and operators of these Phase II acid rain unit(s) must comply with the standard requirements and special provisions set forth in the application(s) listed below:

- a. DEP Form No. 62-210.900(1)(a), dated 12/27/95.  
 [Chapter 62-213, F.A.C. and Rule 62-214.320, F.A.C.]

**A.2.** Sulfur dioxide (SO<sub>2</sub>) allowance allocations for each Acid Rain unit are as follows:

<b>E.U. ID No.</b>	<b>EPA ID</b>	<b>Year</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
003	3	SO <sub>2</sub> allowances, under Table 2 or 3 of 40 CFR Part 73	312*	312*	312*
004	4	SO <sub>2</sub> allowances, under Table 2 or 3 of 40 CFR Part 73	106*	106*	106*
005	5	SO <sub>2</sub> allowances, under Table 2 or 3 of 40 CFR Part 73	314*	314*	314*

\* The number of allowances held by an Acid Rain source in a unit account may differ from the number allocated by the USEPA under Table 2 or 3 of 40 CFR 73.

**A.3. Emission Allowances.** Emissions from sources subject to the Federal Acid Rain Program (Title IV) shall not exceed any allowances that the source lawfully holds under the Federal Acid Rain Program. Allowances shall not be used to demonstrate compliance with a non-Title IV applicable requirement of the Act.

1. No permit revision shall be required for increase in emissions that are authorized by allowances acquired pursuant to the Federal Acid Rain Program, provided that such increases do not require a permit revision pursuant to Rule 62-213.400(3), F.A.C.
2. No limit shall be placed on the number of allowances held by the source under the Federal Acid Rain Program.
3. Allowances shall be accounted for under the Federal Acid Rain Program.

[Rule 62-213.440(1)(c), F.A.C.]

**A.4. Statement of Compliance.** See Section II, condition 11 of this permit.

**A.5. Comments, notes, and justifications:** None

**Appendix I-1, List of Insignificant Emissions Units and/or Activities**

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The facilities, emissions units, or pollutant-emitting activities listed in Rule 62-210.300(3)(a), F.A.C., Categorical Exemptions, are exempt from the permitting requirements of Chapters 62-210 and 62-4, F.A.C.; provided, however, that exempt emissions units shall be subject to any applicable emission limiting standards and the emissions from exempt emissions units or activities shall be considered in determining the potential emissions of the facility containing such emissions units. Emissions units and pollutant-emitting activities exempt from permitting under Rule 62-210.300(3)(a), F.A.C., shall not be exempt from the permitting requirements of Chapter 62-213, F.A.C., if they are contained within a Title V source; however, such emissions units and activities shall be considered insignificant for Title V purposes provided they also meet the criteria of Rule 62-213.430(6)(b), F.A.C. No emissions unit shall be entitled to an exemption from permitting under Rule 62.210.300(3)(a), F.A.C., if its emissions, in combination with the emissions of other units and activities at the facility, would cause the facility to emit or have the potential to emit any pollutant in such amount as to make the facility a Title V source.

The below listed emissions units and/or activities are considered insignificant pursuant to Rule 62-213.430(6), F.A.C.

**Brief Description of Emissions Units and/or Activities**

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1. Startup generator diesel engine associated with Unit 5.
2. Vapor extractor rooftop vents, one each for Units 1-4.
3. Cooling tower.
4. Diesel fuel tank for vehicles and gasoline fuel tank for vehicles (500 gal. capacity each).

**Appendix H-1, Permit History/ID Number Changes**

**Permit History (for tracking purposes):**

E.U. ID No.	Description	Permit No.	Issue Date	Expiration Date	Extended Date <sup>1,2</sup>	Revised Date(s)
Unit 1	Fossil Fuel Steam Generator, Unit 1	AO31-184320	12/28/90	12/25/95		2/14/91
Unit 2	Fossil Fuel Steam Generator, Unit 2	AO31-226295	11/29/93	5/30/98		
Unit 3	Fossil Fuel Steam Generator, Unit 3	AO31-224290	11/2/93	2/25/98		
Unit 4	Fossil Fuel Steam Generator, Unit 4	AO31-229058	10/13/93	6/30/98		
		AC31-2182	10/11/73	11/1/75		
Unit 5	Combined Cycle Gas Turbine, Unit 5	AC31-184928	6/28/91	12/31/93		
		AC31-184928/ PSD-FL-152	7/1/91	9/30/94		1/13/94, 4/5/94, 7/12/94
		AC31-184928A/ PSD-FL-152A	3/27/95	7/31/95		10/6/93, 10/4/94, 1/31/95
		0610029-004-AC/ PSD-FL-152C*	4/04/01			9/27/95
		AO31-227564	10/7/93	9/30/98		

\* 0610029-004-AC/PSD-FL-152C effectively superseded the previous construction permits.

**ID Number Changes (for tracking purposes):**

From: **Facility ID No.:** 30ORL310005

To: **Facility ID No.:** 0610029

Notes:

- 1 - AO permit(s) automatic extension(s) in Rule 62-210.300(2)(a)3.a., F.A.C., effective 03/21/96.
  - 2 - AC permit(s) automatic extension(s) in Rule 62-213.420(1)(a)4., F.A.C., effective 03/20/96.
- {Rule 62-213.420(1)(b)2., F.A.C., effective 03/20/96, allows Title V Sources to operate under existing valid permits}



**Appendix U-1, List of Unregulated Emissions Units and/or Activities**

Unregulated Emissions Units and/or Activities. An emissions unit which emits no “emissions-limited pollutant” and which is subject to no unit-specific work practice standard, though it may be subject to regulations applied on a facility-wide basis (e.g., unconfined emissions, odor, general opacity) or to regulations that require only that it be able to prove exemption from unit-specific emissions or work practice standards.

The below listed emissions units and/or activities are neither ‘regulated emissions units’ nor ‘insignificant emissions units’.

<b>E.U. ID No.</b>	<b>Brief Description of Emissions Units and/or Activity</b>
006	Fuel oil and lube oil storage tanks. Tanks are: Tank 1 (1,560,000 gal. capacity) fuel oil; Tank 2 (3,108,000 gal. capacity) fuel oil; Tank 3 (350,000 gal. capacity) fuel oil; Diesel tank for Unit 5 startup generator; Lube oil tanks and vents, one each for Units 1 - 5.
007	Waste water treatment plant, including headworks, liquid treatment processes and storage tanks.

Table 1-1, Summary of Air Pollutant Emission Standards

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit		Brief Description							
001		Fossil Fuel Steam Generator, Unit 1, rated at 13 MW.							
002		Fossil Fuel Steam Generator, Unit 2, rated at 17 MW.							
			Allowable Emissions			Equivalent Emissions			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lb/hour	TPY	lb/hour	TPY	Regulatory Citations	See Permit Condition(s)
VE Steady State	Oil, Natural Gas	8760	20% opacity, except for 40% for 2 min. each hour					Rule 62-296.406(1), F.A.C.	A.4, B.4
VE Soot Blowing or Load Change	Oil, Natural Gas	8760	60% opacity					Rule 62-210.700(3), F.A.C.	A.5, B.5
PM, SO <sub>2</sub> Unit 1	Oil	8760	1.5% S by weight, fuel oil			230.2*	1008*	Rule 62-296.406(2), F.A.C., & BACT	A.6 & A.7
PM, SO <sub>2</sub> Unit 2	Oil	8760	1.5% S by weight, fuel oil			399.5*	1750*	Rules 62-4.070(3) & 62-296.406(2), F.A.C., & BACT	B.6 & B.7

Notes for EU 001 & 002:

\* Lb/hour and TPY values are for SO<sub>2</sub> emissions using fuel oil.

**Table 1-1, Continued**

Emissions Unit		Brief Description							
003		Fossil Fuel Steam Generator, Unit 3, rated at 34 MW.							
Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lb/hour	TPY	lb/hour	TPY		
<b>VE</b> Steady State	Oil, Natural Gas	8760	20% opacity, except for 40% for 2 min. each hour					Rule 62-296.405(1)(a), F.A.C.	C.4
<b>VE</b> Soot Blowing or Load Change	Oil, Natural Gas	8760	60 % opacity (>60% opacity for not more than 4, six-minute periods)					Rule 62-210.700(3), F.A.C.	C.5
<b>PM</b> Steady State	Oil, Natural Gas	8760	0.1 lb/mmBtu			41*	179.6*	Rule 62-296.405(1)(b), F.A.C.	C.6
<b>PM</b> Soot Blowing or Load Change	Oil, Natural Gas	8760	0.3 lb/mmBtu			123*	67.3*	Rule 62-210.700(3), F.A.C.	C.7
<b>SO<sub>2</sub></b>	Oil, Natural Gas	8760	2.75 lb/mmBtu			1127.5**	4938**	Rules 62-213.440, & 62-296.405(1)(c)1.j. F.A.C.	C.8

Notes for EU 003:

\* Lb/hour and TPY values are for PM emissions using fuel oil.

\*\* Lb/hour and TPY values are for SO<sub>2</sub> emissions using fuel oil.

**Table 1-1, Continued**

Emissions Unit		Brief Description							
004		Fossil Fuel Steam Generator, Unit 4, rated at 56 MW.							
			Allowable Emissions			Equivalent Emissions <sup>1</sup>			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lb/hour	TPY	lb/hour	TPY	Regulatory Citations	See Permit Condition(s)
VE	Oil, Natural Gas	8760	20% opacity, except for 27% for 6 min. each hour					40 CFR 60.42(a)(2)	D.4
PM	Oil, Natural Gas	8760	0.10 lb/mmBtu			68.5*	300*	40 CFR 60.42(a)(1)	D.4
SO <sub>2</sub>	Oil, Natural Gas	8760	0.80 lb/mmBtu			548	2400	40 CFR 60.43(a)(1)	D.5
NO <sub>x</sub>	Natural Gas	8760	0.20 lb/mmBtu			137	600.1	40 CFR 60.44(a)(1)	D.6
NO <sub>x</sub>	Oil	8760	0.30 lb/mmBtu			205.5*	900.1*	40 CFR 60.44(a)(2)	D.6

Notes for EU 004:

\* Lb/hour and TPY values for PM and NO<sub>x</sub> emissions based on using number 4 fuel oil for total heat input.

Table 1-1, Continued

Emissions Unit		Brief Description							
005		Combined Cycle Gas Turbine, Unit 5, rated at 38 MW.							
Pollutant	Fuel(s)	Hours per Year	Allowable Emissions			Equivalent Emissions <sup>1</sup>		Regulatory Citations	See Permit Condition(s)
			Standard(s)	lb/hour	TPY <sup>a</sup>	lb/hour <sup>b</sup>	TPY <sup>b</sup>		
VE	No. 2 Fuel Oil, Natural Gas	8760	10 % opacity					0610029-004-AC (PSD-FL-152C)	E.5
SO <sub>2</sub>	"	8760	0.25% S by weight, fuel oil 10 gr S/ccf, natural gas		178.2	123		0610029-004-AC (PSD-FL-152C)	E.6
NO <sub>x</sub>	No. 2 Fuel Oil	8760	42 ppmvd at 15% oxygen on a dry basis		243.7	79	114.2	0610029-004-AC (PSD-FL-152C)	E.7
NO <sub>x</sub>	Natural Gas	8760	25 ppmvd at 15% oxygen on a dry basis		243.7	44.3	194	0610029-004-AC (PSD-FL-152C)	E.7
PM <sub>10</sub>	No. 2 Fuel Oil	8760	0.025 lb/mmBtu		23.7	11.4	16.4	0610029-004-AC (PSD-FL-152C)	E.7
PM <sub>10</sub>	Natural Gas	8760	0.006 lb/mmBtu		23.7	2.5	10.9	0610029-004-AC (PSD-FL-152C)	E.7

**Table 1-1, Continued**

Emissions Unit		Brief Description							
005		Combined Cycle Gas Turbine, Unit 5, rated at 38 MW.							
		Allowable Emissions				Equivalent Emissions <sup>1</sup>			
Pollutant	Fuel(s)	Hours per Year	Standard(s)	lb/hour	TPY <sup>a</sup>	lb/hour <sup>b</sup>	TPY <sup>b</sup>	Regulatory Citations	See Permit Condition(s)
VOC	No. 2 Fuel Oil	8760	0.0113 lb/mmBtu		21.0	5.1	7.4	0610029-004-AC (PSD-FL-152C)	E.7
VOC	Natural Gas	8760	0.0112 lb/mmBtu		21.0	4.6	20.3	0610029-004-AC (PSD-FL-152C)	E.7
CO	No. 2 Fuel Oil	8760	0.0226 lb/mmBtu		42.1	10.3	14.9	0610029-004-AC (PSD-FL-152C)	E.7
CO	Natural Gas	8760	0.0224 lb/mmBtu		42.1	9.3	40.6	0610029-004-AC (PSD-FL-152C)	E.7

Notes for EU 005:

a, b Tons per year and equivalent emissions based on 67% capacity factor for natural gas firing, 33% capacity factor number 2 fuel oil firing, based on 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas.

Notes:

<sup>1</sup> The "Equivalent Emissions" listed are for informational purposes only. [Rule 62-213.205, F.A.C.]

NA = not applicable

**Table 2-1, Summary of Compliance Requirements**

This table summarizes information for convenience purposes only. This table does not supersede any of the terms or conditions of this permit.

Emissions Unit		Brief Description					
001		Fossil Fuel Steam Generator, Unit 1, rated at 13 MW.					
002		Fossil Fuel Steam Generator, Unit 2, rated at 17 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
VE	Oil, Natural Gas	DEP Method 9	Annual	August 1st	1 hour	No	A.10, B.10
PM, SO <sub>2</sub>	Oil	Fuel Sampling & Analysis	As Received			No	A.8 & A.9, B.8 & B.9

Emissions Unit		Brief Description					
003		Fossil Fuel Steam Generator, Unit 3, rated at 34 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
VE	Oil, Natural Gas	DEP Method 9	Annual	August 1st	1 hour	No	C.13
PM	Oil, Natural Gas	EPA Test Methods 17, 5, 5B, or 5F	Annual	August 1st	3 hours	No	C.9, C.13
SO <sub>2</sub>	Oil, Natural Gas	Fuel Sampling & Analysis	Per 40 CFR 75, Appendix D			No	C.10, C.11, C.12

City of Vero Beach  
 City of Vero Beach Municipal Utilities

**PROPOSED Permit No.:** 0610029-005-AV  
**Facility ID No.:** 0610029

**Table 2-1, Continued**

Emissions Unit		Brief Description					
004		Fossil Fuel Steam Generator, Unit 4, rated at 56 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
VE	Oil, Natural Gas	EPA Method 9	Annual	August 1st	1 hour	Yes	D.8
PM	Oil, Natural Gas	EPA Test Methods 5 or 17	Annual	August 1st	3 hours	No	D.8
SO <sub>2</sub>	Oil, Natural Gas	Fuel Sampling & Analysis	Per 40 CFR 75, Appendix D			No	D.7
NO <sub>x</sub>	Oil, Natural Gas	EPA Test Methods 7, 7A, 7C, 7D, or 7E	Annual	August 1st	3 hours	Yes	D.8



**Table 2-1, Continued**

Emissions Unit		Brief Description					
005		Combined Cycle Gas Turbine, Unit 5, rated at 38 MW.					
Pollutant or Parameter	Fuel(s)	Compliance Method	Testing Frequency	Frequency Base Date <sup>1</sup>	Minimum Compliance Test Duration	CMS <sup>2</sup>	See Permit Condition(s)
VE	No 2 Fuel Oil, Natural Gas	EPA Method 9	Annual	August 1st	1 hour	No	E.8
SO <sub>2</sub>	"	Fuel Sampling & Analysis	Per 40 CFR 75, Appendix D			Yes*	E.11, E.12
NO <sub>x</sub>	"	EPA Test Method 20	Annual	August 1st	3 hours	Yes	E.8
PM <sub>10</sub>	"	EPA Test Methods 5 or 17	Prior to Renewal		3 hours	No	E.9
VOC	"	EPA Test Method 25A	Only if CO test fails			No	E.9
CO	"	EPA Test Method 10	Prior to Renewal			No	E.9

Notes for EU 005:

\* Continuous monitoring of fuel consumption required.

Notes:

<sup>1</sup> Frequency base date established for planning purposes only; see Rule 62-297.310, F.A.C.

<sup>2</sup> CMS = continuous monitoring system

See also Section F for general testing requirements.

**Appendix M, Custom Fuel Monitoring Schedule for Natural Gas**

Pursuant to 40 CFR 60.334(b)(2), a custom fuel monitoring schedule shall be followed for the natural gas fired at this facility and shall be as follows:

1. Monitoring of fuel nitrogen content shall not be required when natural gas is the only fuel being fired in the turbines.
2. Sulfur Monitoring
  - a. Analysis for fuel sulfur content of the natural gas fired at this facility shall be conducted using one of the approved ASTM reference methods for the measurement of sulfur in gaseous fuels, or an approved alternate method. The reference methods are ASTM D1072-80, ASTM D3031-81, ASTM D3246-81 and ASTM D4084-82, as referenced in 40 CFR 60.335(b)(2).
  - b. This custom fuel monitoring schedule shall become effective on the date this permit is effective. Effective the date of this custom schedule, sulfur monitoring of natural gas fired at the facility shall be conducted twice monthly for six months. If this monitoring shows little variability in the fuel sulfur content and indicates consistent compliance with the sulfur limits of 40 CFR 60.333, then sulfur monitoring shall be conducted once per quarter for six quarters.
  - c. If, after monitoring required in item 2.b. above, the sulfur content shows little variability and, calculated as sulfur dioxide, represents consistent compliance with the sulfur dioxide emission limits specified under 40 CFR 60.333, and the fuel sulfur limits of this permit, sample analysis shall be conducted twice per year. This monitoring shall be conducted during the first and third quarters of each calendar year.
  - d. Should any sulfur analysis, as required in items 2.b. or 2.c. above indicate noncompliance with the sulfur limits of 40 CFR 60.333 or this permit, the owner or operator shall notify the Department of such excess emissions and the custom schedule shall be re-examined by the Environmental Protection Agency (EPA). Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
3. If there is a change in fuel supply, the owner or operator shall notify the Department and EPA of such change for re-examination of this custom schedule. A substantial change in fuel quality shall be considered as a change in fuel supply. Sulfur monitoring shall be conducted weekly during the interim period when this custom schedule is being re-examined.
4. Records of sample analysis and fuel supply pertinent to this custom fuel monitoring schedule for natural gas shall be retained for a period of five years, and shall be available at the facility for inspection by personnel of the Department or EPA.

## STATEMENT OF BASIS

City of Vero Beach  
City of Vero Beach Municipal Utilities  
Facility ID No.: 0610029  
Indian River County

Title V Air Operation Permit Revision  
**PROPOSED Permit No.:** 0610029-005-AV

The initial Title V Air Operation Permit, No. 0610029-002-AV, was effective on January 1, 1998. This Title V Air Operation Permit Revision is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) 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.

The subject of this permit revision is to include an evaporative cooling system from Permit No. 0610029-004-AC (PSD-FL-152C) on the existing 38 MW combined cycle combustion turbine-electrical generator designated as Unit 5.

This facility is an electric power generating plant located adjacent to a wastewater treatment facility and consists of:

Fossil Fuel Steam Generating Unit 1 (Emissions Unit 001), rated at 13 MW;  
Fossil Fuel Steam Generating Unit 2 (Emissions Unit 002), rated at 17 MW;  
Fossil Fuel Steam Generating Unit 3 (Emissions Unit 003), rated at 34 MW;  
Fossil Fuel Steam Generating Unit 4 (Emissions Unit 004), rated at 56 MW; and,  
Combined Cycle Gas Turbine Unit 5 (Emissions Unit 005), rated at 38 MW.

E.U. ID No.	Brief Description
001	Fossil Fuel Steam Generator, Unit 1, rated at 13 MW, 202 mmBtu/hr for natural gas and 140 mmBtu/hr for fuel oil, capable of burning any combination of natural gas and numbers 2, 4 and 6 fuel oil, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 002.

{Permitting Notes: The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 1 began commercial operation in 1961.}

E.U. ID No.	Brief Description
002	Fossil Fuel Steam Generator, Unit 2, rated at 17 MW, 248 mmBtu/hr for natural gas and 243 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack shared with Emissions Unit 001.

{Permitting Notes: The emissions unit is regulated under Rule 62-296.406, F.A.C., Fossil Fuel Steam Generators with Less than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 2 began commercial operation in 1964.}

003	Fossil Fuel Steam Generator, Unit 3, rated at 34 MW, 417 mmBtu/hr for natural gas and 410 mmBtu/hr for fuel oil, capable of burning any combination of natural gas, numbers 2, 4 and 6
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	fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
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{Permitting Notes: The emissions unit is regulated under Acid Rain, Phase II and Rule 62-296.405, F.A.C., Fossil Fuel Steam Generators with More than 250 million Btu per Hour Heat Input. Fossil fuel fired steam generator Unit 3 began commercial operation in 1971

004	Fossil Fuel Steam Generator, Unit 4, rated at 56 MW, 685 mmBtu/hr, capable of burning any combination of natural gas, numbers 2, 4 and 6 fuel oil, and propane as an ignitor fuel, with emissions exhausted through a 200 ft. stack.
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{Permitting Notes: The emissions unit is regulated under Acid Rain, Phase II, and Rule 62-210.300, F.A.C., Permits Required and is subject to 40 CFR 60 Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction Is Commenced After August 17, 1971. The affected facility to which this subpart applies is fossil fuel steam generator, Unit 4, emissions unit 004. Fossil fuel fired steam generator Unit 4 began commercial operation in 1976.}

005	Combined Cycle Gas Turbine, Unit 5, rated at 38 MW, 455 mmBtu/hr for number 2 fuel oil and 414 mmBtu/hr for natural gas, capable of burning any combination of, number 2 fuel oil, and natural gas, with emissions exhausted through a 125 ft. stack.
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{Permitting Notes: This emissions unit is regulated under Acid Rain, Phase II and Rule 62-210.300, F.A.C., Permits Required and is subject to 40 CFR 60, Subpart GG, Standards of Performance for New Stationary Gas Turbines. The affected facility to which this subpart applies is the combined cycle gas turbine, Unit 5. This unit underwent a BACT Determination dated June 28, 1991. BACT Limits were incorporated into the subsequent PSD permits including 0610029-004-AC (PSD-FL-152C). Exhaust is vented through the heat recovery steam generator that is not equipped with duct burners and then through a 125 ft. stack. Emissions are controlled by dry low-NOx burners when firing natural gas, and by water injection when firing fuel oil. An evaporative cooling system was installed at the compressor inlet of Unit 5 in accordance with Permit No. 0610029-004-AC (PSD-FL-152C). The system cools the inlet air to the turbine, which increases turbine output and decreases heat rate. The system may be operated at any time that Unit 5 is in operation. The turbine exhaust may also be vented through a bypass stack for simple cycle operation. The turbine began commercial operation in 1992.}

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

Based on the Title V permit application received June 14, 1996, this facility is a major source of hazardous air pollutants (HAPs).

**ATTACHMENT VB-FI-C14**

**COMPLIANCE REPORT**

**ATTACHMENT VB-FI-C14**  
**COMPLIANCE REPORT AND PLAN**

City of Vero Beach Municipal Utilities certifies that the facility, as of the date of submittal of this Title V application, is in compliance with each applicable requirement addressed in this Title V air permit application.

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p><b>Fossil Fuel Steam Generator Unit 1</b></p>			
<p>4. Emissions Unit Identification Number: <span style="float: right;"><input type="checkbox"/> No ID</span></p> <p>ID: <b>001</b> <span style="float: right;"><input type="checkbox"/> ID Unknown</span></p>			
<p>5. Emissions Unit Status Code:</p> <p><b>A</b></p>	<p>6. Initial Startup Date:</p> <p><b>1 Oct 1961</b></p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p><b>49</b></p>	<p>8. Acid Rain Unit? <span style="float: right;"><input type="checkbox"/></span></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p><b>Unit exempt from Acid Rain rules (i.e., less than 25 MW). Refer to Attachment VB-FI-A7 for pictures of Unit 1.</b></p>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

2. Control Device or Method Code(s):

**Emissions Unit Details**

1. Package Unit:		
Manufacturer:		Model Number:
2. Generator Nameplate Rating:	13 MW	
3. Incinerator Information:		
	Dwell Temperature:	°F
	Dwell Time:	seconds
	Incinerator Afterburner Temperature:	°F



**B. EMISSIONS UNIT CAPACITY INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	202	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:	24	7
	hours/day	days/week
	52	8,760
	weeks/year	hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p><b>Maximum heat input based on natural gas firing. Maximum heat input for fuel oil firing is 140 MMBtu/hr.</b></p>		

**C. EMISSIONS UNIT REGULATIONS  
(Regulated Emissions Units Only)**

**List of Applicable Regulations**

See Attachment VB-EU1-C	

**D. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Regulated Emissions Units Only)**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>EU-1 (Att. VB-FI-C2)</b>		2. Emission Point Type Code: <b>2</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: <b>Stack shared with fossil fuel steam generator Unit 2 (EU ID 002).</b>			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>200 feet</b>	7. Exit Diameter: <b>3.5 feet</b>	
8. Exit Temperature: <b>289 °F</b>	9. Actual Volumetric Flow Rate: <b>60,883 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: <b>dscfm</b>		12. Nonstack Emission Point Height: <b>feet</b>	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Temperature and flow rate presented indicative of natural gas firing. For oil firing, temperature and flow rate are 327°F and 61,407 acfm, respectively. Flow rate pertains to Unit 1 flow only.</b>			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 1 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boiler, Electric Generation, Natural Gas, Boilers &gt; 100 MMBtu/hr</b>		
2. Source Classification Code (SCC): <b>1-01-006-01</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.196</b>	5. Maximum Annual Rate: <b>1,716</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,030</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content. Maximum sulfur content: 1 grain/100 cubic ft</b>		

**Segment Description and Rate:** Segment 2 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Residual Oil, Grade 6 Oil; Normal firing</b>		
2. Source Classification Code (SCC): <b>1-01-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>0.933</b>	5. Maximum Annual Rate: <b>8,176</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>1.5</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>150</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 3 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Distillate Oil, Grade No. 4 Oil, Normal Firing</b>		
2. Source Classification Code (SCC): <b>1-01-005-04</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>0.972</b>	5. Maximum Annual Rate: <b>8,517</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>144</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**Segment Description and Rate:** Segment 4 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Distillate Oil, Grade No. 1 and 2</b>		
2. Source Classification Code (SCC): <b>1-01-005-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.011</b>	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.25</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>138.5</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content. Used for startup as ignition fuel.</b>		

**F. EMISSIONS UNIT POLLUTANTS**  
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			NS
NO <sub>x</sub>			NS
PM			EL
PM <sub>10</sub>			NS
SO <sub>2</sub>			EL
VOC			NS
H106			NS
HAPs			NS

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted: <b>PM</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>15.9 lb/hour                      69.5 tons/year</b>	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1            [ ] 2            [ ] 3            _____ to _____ tons/year	
6. Emission Factor: <b>1.5% Sulfur</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.A.6</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU1-G8.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Maximum emissions based on No. 6 fuel oil firing. PM emission are controlled by firing natural gas or fuel oil with a sulfur content of 1.5% or less.</b>	

Allowable Emissions Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>1.5% sulfur</b>	4. Equivalent Allowable Emissions: <b>15.9 lb/hour                      69.5 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Based on BACT determination [Rule 62-296.406(3)].</b>	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>230.2 lb/hour                      1,008 tons/year</b>	4. Synthetically Limited? <input type="checkbox"/>
5. Range of Estimated Fugitive Emissions: <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3      _____ to _____ tons/year	
6. Emission Factor: <b>1.5% Sulfur Fuel</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.A.7</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU1-G8.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Maximum emissions representative of No. 6 fuel oil firing.</b>	

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>1.5% Sulfur</b>	4. Equivalent Allowable Emissions: <b>230.2 lb/hour                      1,008 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Based on BACT determination [Rule 62-296.406(3)].</b>	





**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: <b>VE60</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>60 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>24 min/hour</b>	
4. Method of Compliance: <b>FDEP Method 9 Annual Compliance Test</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-210.700(3). Maximum period of excess opacity allowed is limited to four 6-minute periods during the 3-hr period of allowable excess emissions.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	



**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements**

1. Process Flow Diagram [ <b>X</b> ] Attached, Document ID: <u>VB-EU1-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ <b>X</b> ] Attached, Document ID: <u>VB-EU1-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ <b>X</b> ] Not Applicable
6. Procedures for Startup and Shutdown [ <b>X</b> ] Attached, Document ID: <u>VB-EU1-J6</u> [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
10. Supplemental Requirements Comment:  <b>A CAM plan is not required for this unit. Refer to Attachment VB-EU1-J10 for justification.</b>

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation <input checked="" type="checkbox"/> Attached, Document ID: <u>VB-EU1-J11</u> [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable
13. Identification of Additional Applicable Requirements <input checked="" type="checkbox"/> Attached, Document ID: <u>VB-FI-C12</u> [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required)  <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____  <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____  <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____  <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____  <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____  <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____  <input checked="" type="checkbox"/> Not Applicable

**ATTACHMENT VB-EU1-C**  
**EMISSION UNIT REGULATIONS**

**ATTACHMENT VB-EU1-C**  
**EMISSIONS UNIT REGULATIONS**  
**Fossil Fuel Steam Generator Unit 1**

**FDEP Rules:**Stationary Sources-General:

- 62-210.700(1) - Excess Emissions; Startup/Shut Down
- 62-210.700(2) - Excess Emissions; Existing Units
- 62-210.700(3) - Excess Emissions; Soot Blowing/Load Change
- 62-210.700(4) - Excess Emissions; Maintenance
- 62-210.700(6) - Excess Emissions; Malfunction

Stationary Sources-Emission Standards:

- 62-296.406 - Fossil Fuel Steam Generator <250 MMBtu/hr

Stationary Sources-General Compliance Test Requirements:

- 62-297.310(1) - Required Number of Test Runs
- 62-297.310(2)(b) - Operating Rate
- 62-297.310(3) - Calculation of Emission Rate
- 62-297.310(4)(a) - Sampling Time
- 62-297.310(4)(b) - Sample Volume
- 62-297.310(4)(c) - Required Flow Rate Range
- 62-297.310(4)(d) - Calibration
- 62-297.310(4)(e) - EPA Method 5
- 62-297.310(5) - Determination of Process Variables
- 62-297.310(6) - Stack Sampling Facilities
- 62-297.310(7)(a)1. - Initial Compliance Test
- 62-297.310(7)(a)2. - Excess Emissions
- 62-297.310(7)(a)3. - Testing for Permit Renewal
- 62-297.310(7)(a)4. - Annual Test
- 62-297.310(7)(a)5. - PM exemption if <400 hrs/yr
- 62-297.310(7)(a)9. - FDEP Notification - 15 days
- 62-297.310(7)(b) - Special Compliance Tests
- 62-297.310(7)(c) - Waiver of Compliance Tests
- 62-297.310(8) - Test Reports

Stationary Sources-Compliance Test Methods:

- 62-297.401(1)(a) - EPA Method 1
- 62-297.401(2) - EPA Method 2
- 62-297.401(3) - EPA Method 3
- 62-297.401(4) - EPA Method 4
- 62-297.401(5) - EPA Method 5
- 62-297.401(6) - EPA Method 6
- 62-297.401(8) - EPA Method 8
- 62-297.401(9) - EPA Method 9

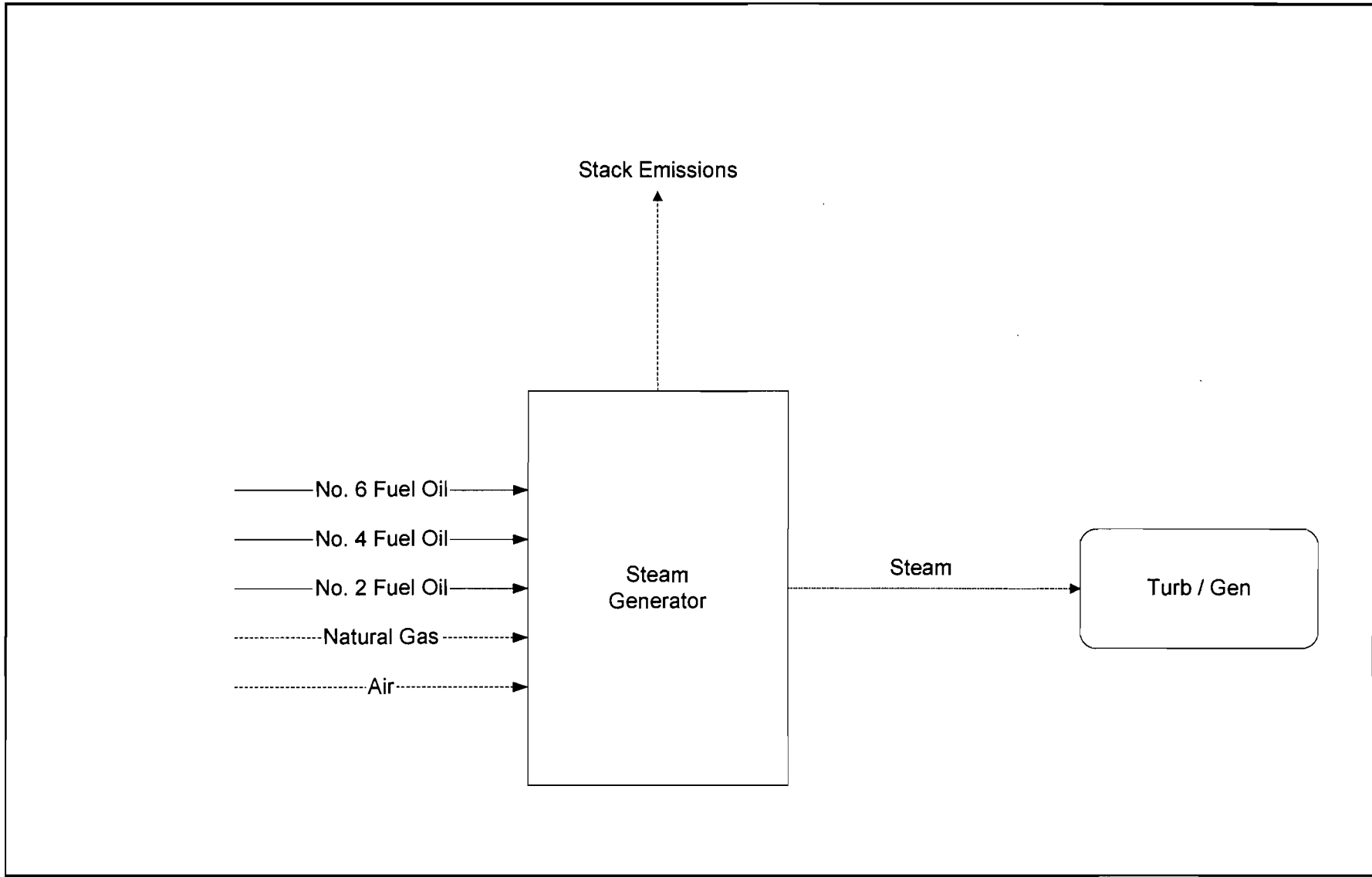
**ATTACHMENT VB-EU1-G8**  
**EMISSION CALCULATIONS**



Attachment VB-EU1-G8. Maximum Emissions for Emission Limited Pollutants, City of Vero Beach  
 Steam Generator Unit 1

Pollutant	No. 6 Fuel Oil
Hours of Operation (hrs/yr)	8,760
Sulfur Dioxide (lb/hr) (oil) = Fuel sulfur content (%) x 100 x (MW SO <sub>2</sub> /MW S) x Fuel Consumption (lb/hr)	
Basis	BACT
Sulfur Content (%)	1.5
MW SO <sub>2</sub>	64
MW S	32
Fuel Consumption (lb/hr)	7,672
Emission Rate (lb/hr)	230.2
(TPY)	1,008
Particulate Matter (lb/hr) (Oil) = AP-42 Factor x Fuel Use (1,000 gal/hr)	
Basis	BACT (SO <sub>2</sub> )/AP-42
Sulfur Content (%)	1.5
AP-42 Factor: 9.19 x Sulfur Content(%) + 3.22	17.0
Fuel Consumption (1,000 gal/hr)	0.933
Emission Rate (lb/hr)	15.9
(TPY)	69.5

**ATTACHMENT VB-EU1-J1**  
**PROCESS FLOW DIAGRAM**



Attachment VB-EU1-J1  
Steam Generator Unit 1 Process Flow Diagram  
City of Vero Beach Municipal Power Plant - Vero Beach, Florida

Process Flow Legend	
Solid/Liquid	—————>
Gas	- - - - ->
Steam	- - - - ->



**ATTACHMENT VB-EU1-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT VB-EU1-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

Fuel	Density (lb/gal) <sup>a</sup>	Moisture (%)	Maximum % Weight Content			Heat Capacity
			Sulfur	Nitrogen	Ash	
Natural Gas	0.045 <sup>b</sup>	—	1 <sup>c</sup>	0.43 <sup>d</sup>	—	23,100 BTU/lb 1,030 Btu/ft <sup>3</sup>
No. 2 Fuel Oil	7.1	0.01	0.25	0.02	<0.01	19,500 BTU/lb 138,500 Btu/gal
No. 4 Fuel Oil	7.6	0.05	0.7	0.18	<0.01	19,000 BTU/lb 144,000 Btu/gal
No. 6 Fuel Oil	8.15	0.20	1.5	0.32	0.05	18,400 BTU/lb 150,000 BTU/gal

<sup>a</sup> At 60 degrees F.

<sup>b</sup> Represented as lb/ft<sup>3</sup>. Based on heat capacities presented.

<sup>c</sup> Represented as grains/100 ft<sup>3</sup>.

<sup>d</sup> Atmospheric nitrogen.

**ATTACHMENT VB-EU1-J6**

**PROCEDURES FOR STARTUP AND SHUTDOWN**

**ATTACHMENT VB-EU1-J6****PROCEDURES FOR STARTUP AND SHUTDOWN**

Startup of the fossil-fuel boilers begins when fuel (either natural gas or oil) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased and continues until the final burner gun is removed from service and the final Induced-draft or Forced-draft fan is removed from service.

Countermeasures, which may be taken in the event of excess emissions include, but are not limited to:

- Proper excess air adjustments
- Recognizing and removal of faulty burners
- Fuel oil temperature adjustments
- Proper and timely operation of boiler cleaning devices
- Removal of the unit from system-dispatch mode
- Reduction of unit megawatt load
- Stopping and restarting of boiler cleaning devices
- Lowering load rate
- Pressure rate changes

Knowledge of the appropriate countermeasures to take under an excess emissions condition is a part of the routine operator training for the engineers who operate the boilers. In addition, plant operations and supervisory staff are periodically given training. Topics include current permit limits, maximum allowable duration of excess emissions, appropriate countermeasures for excess emissions, duty to notify, etc.

**ATTACHMENT VB-EU1-J10**

**SUPPLEMENTAL REQUIREMENTS COMMENT**



**ATTACHMENT VB-EU1-J10**  
**SUPPLEMENTAL REQUIREMENTS COMMENT**  
**Fossil Fuel Steam Generator Unit 1**

Unit 1 is subject to emission limits for PM and SO<sub>2</sub>, but does not have any control device to achieve compliance with these emission limits. Therefore, 40 CFR 64 is not applicable to this unit and a Compliance Assurance Monitoring (CAM) Plan is not required.

**ATTACHMENT VB-EU1-J11**  
**ALTERNATIVE METHODS OF OPERATION**

**ATTACHMENT VB-EU1-J11**  
**ALTERNATIVE METHODS OF OPERATON**  
**Fossil Fuel Steam Generator Unit 1**

Unit 1 is permitted to natural gas, No. 2 fuel oil, No. 4 fuel oil, and No. 6 fuel oil. The maximum sulfur content of the fuel oil may not exceed 1.5 percent (by weight). Unit 1 can co-fire natural gas and fuel oil. The unit may operate continuously (i.e., 8,760 hours per year) on either fuel type.

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p style="text-align: center;"><b>Fossil Fuel Steam Generator Unit 2</b></p>			
<p>4. Emissions Unit Identification Number: <span style="float: right;"><input type="checkbox"/> No ID</span></p> <p>ID: <b>002</b> <span style="float: right;"><input type="checkbox"/> ID Unknown</span></p>			
<p>5. Emissions Unit Status Code:</p> <p><b>A</b></p>	<p>6. Initial Startup Date:</p> <p><b>1 Jun 1964</b></p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p><b>49</b></p>	<p>8. Acid Rain Unit?</p> <p><input type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p style="text-align: center;"><b>Unit exempt from Acid Rain rules (i.e., less than 25 MW). Refer to Attachment VB-FI-A7 for pictures of Unit 2.</b></p>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

2. Control Device or Method Code(s):

**Emissions Unit Details**

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating:	17 MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F





**D. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Regulated Emissions Units Only)**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>EU-2 (Att. VB-FI-C2)</b>		2. Emission Point Type Code: <b>2</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: <b>Stack shared with fossil fuel steam generator Unit 1 (EU ID 001).</b>			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>200 feet</b>	7. Exit Diameter: <b>3.5 feet</b>	
8. Exit Temperature: <b>347 °F</b>	9. Actual Volumetric Flow Rate: <b>79,217 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: <b>dscfm</b>		12. Nonstack Emission Point Height: <b>feet</b>	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Temperature and flow rate presented indicative of natural gas firing. For oil firing, temperature and flow rate are 322°F and 71,651 acfm, respectively. Flow rate applicable to Unit 2 only.</b>			



**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 1 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boiler, Electric Generation, Natural Gas, Boilers &gt; 100 MMBtu/hr</b>		
2. Source Classification Code (SCC): <b>1-01-006-01</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.241</b>	5. Maximum Annual Rate: <b>2,109</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,030</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content. Maximum sulfur content: 1 grain/100 cubic ft. Propane also used as ignition fuel when gas not available.</b>		

**Segment Description and Rate:** Segment 2 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Residual Oil, Grade 6 Oil; Normal firing</b>		
2. Source Classification Code (SCC): <b>1-01-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.62</b>	5. Maximum Annual Rate: <b>14,191</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>1.5</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>150</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 3 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Distillate Oil, Grade No. 4 Oil, Normal Firing</b>		
2. Source Classification Code (SCC): <b>1-01-005-04</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.688</b>	5. Maximum Annual Rate: <b>14,783</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>144</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**Segment Description and Rate:** Segment 4 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Distillate Oil, Grade No. 1 and 2</b>		
2. Source Classification Code (SCC): <b>1-01-005-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.755</b>	5. Maximum Annual Rate: <b>15,374</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.25</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>138.5</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**F. EMISSIONS UNIT POLLUTANTS  
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			NS
NO <sub>x</sub>			NS
PM			EL
PM <sub>10</sub>			NS
SO <sub>2</sub>			EL
VOC			NS
H106			NS
HAPs			NS

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units -  
Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>PM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>27.5 lb/hour                      120.7 tons/year</b>		4. Synthetically Limited? [ ]	
5. Range of Estimated Fugitive Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year			
6. Emission Factor: <b>1.5% Sulfur</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.B.6</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU2-G8.</b>			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Maximum emissions based on No. 6 fuel oil firing. PM emission are controlled by firing natural gas or fuel oil with a sulfur content of 1.5% or less.</b>			

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>1.5% sulfur</b>		4. Equivalent Allowable Emissions: <b>27.5 lb/hour      120.7 tons/year</b>	
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Based on BACT determination [Rule 62-296.406(3)].</b>			

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>399.5 lb/hour</b>		4. Synthetically Limited? [ ]	
		<b>1,750 tons/year</b>	
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year			
6. Emission Factor: <b>1.5% Sulfur Fuel</b>		7. Emissions Method Code:	
Reference: <b>Permit No. 0610029-005-AV, Condition 111.B.7</b>		<b>0</b>	
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU2-G8.</b>			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Maximum emissions representative of No. 6 fuel oil firing.</b>			

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units:		4. Equivalent Allowable Emissions:	
		<b>399.5 lb/hour 1,750 tons/year</b>	
5. Method of Compliance (limit to 60 characters):  <b>Fuel Analysis</b>			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Based on BACT determination [Rule 62-296.406(3)].</b>			

**H. VISIBLE EMISSIONS INFORMATION**  
 (Only Regulated Emissions Units Subject to a VE Limitation)

**Visible Emissions Limitation:** Visible Emissions Limitation  1  of  3

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: <b>40 %</b> Maximum Period of Excess Opacity Allowed: <b>2 min/hour</b>	
4. Method of Compliance: <b>FDEP Method 9 Annual Compliance Test</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-296.406(1), F.A.C.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
 (Only Regulated Emissions Units Subject to Continuous Monitoring)

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: <b>VE60</b>	2. Basis for Allowable Opacity: [ <input checked="" type="checkbox"/> ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: <b>60 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>24 min/hour</b>	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-210.700(3). Maximum period of excess opacity allowed is limited to four 6-minute periods during the 3-hr period of allowable excess emissions.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

**H. VISIBLE EMISSIONS INFORMATION  
(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 3 of 3

1. Visible Emissions Subtype: <b>VE99</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>60 min/hour</b>	
4. Method of Compliance: <b>Best operational practices</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-210.700(1). Excess emissions for malfunction allowed for a period not to exceed 2 hrs in every 24-hr period. Rule 62-210.700(2). Excess emissions allowed during startup and shutdown.</b>	

**I. CONTINUOUS MONITOR INFORMATION  
(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: <span style="float:right">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	



**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements**

1. Process Flow Diagram [ X ] Attached, Document ID: <u>VB-EU2-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ X ] Attached, Document ID: <u>VB-EU2-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ ] Previously submitted, Date: _____ [ X ] Not Applicable
6. Procedures for Startup and Shutdown [ X ] Attached, Document ID: <u>VB-EU2-J6</u> [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ [ X ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ X ] Not Applicable
10. Supplemental Requirements Comment:  <b>A CAM plan is not required for this unit. Refer to Attachment VB-EU2-J10 for justification.</b>

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation  
 Attached, Document ID: **VB-EU2-J11**  Not Applicable

12. Alternative Modes of Operation (Emissions Trading)  
 Attached, Document ID: \_\_\_\_\_  Not Applicable

13. Identification of Additional Applicable Requirements  
 Attached, Document ID: **VB-FI-C12**  Not Applicable

14. Compliance Assurance Monitoring Plan  
 Attached, Document ID: \_\_\_\_\_  Not Applicable

15. Acid Rain Part Application (Hard-copy Required)

- Acid Rain Part - Phase II (Form No. 62-210.900(1)(a))  
Attached, Document ID: \_\_\_\_\_
- Repowering Extension Plan (Form No. 62-210.900(1)(a)1.)  
Attached, Document ID: \_\_\_\_\_
- New Unit Exemption (Form No. 62-210.900(1)(a)2.)  
Attached, Document ID: \_\_\_\_\_
- Retired Unit Exemption (Form No. 62-210.900(1)(a)3.)  
Attached, Document ID: \_\_\_\_\_
- Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.)  
Attached, Document ID: \_\_\_\_\_
- Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.)  
Attached, Document ID: \_\_\_\_\_
- Not Applicable

**ATTACHMENT VB-EU2-C**  
**EMISSION UNIT REGULATIONS**

**ATTACHMENT VB-EU2-C**  
**EMISSIONS UNIT REGULATIONS**  
**Fossil Fuel Steam Generator Unit 2**

**FDEP Rules:**Stationary Sources-General:

- 62-210.700(1) - Excess Emissions; Startup/Shut Down
- 62-210.700(2) - Excess Emissions; Existing Units
- 62-210.700(3) - Excess Emissions; Soot Blowing/Load Change
- 62-210.700(4) - Excess Emissions; Maintenance
- 62-210.700(6) - Excess Emissions; Malfunction

Stationary Sources-Emission Standards:

- 62-296.406 - Fossil Fuel Steam Generator <250 MMBtu/hr

Stationary Sources-General Compliance Test Requirements:

- 62-297.310(1) - Required Number of Test Runs
- 62-297.310(2)(b) - Operating Rate
- 62-297.310(3) - Calculation of Emission Rate
- 62-297.310(4)(a) - Sampling Time
- 62-297.310(4)(b) - Sample Volume
- 62-297.310(4)(c) - Required Flow Rate Range
- 62-297.310(4)(d) - Calibration
- 62-297.310(4)(e) - EPA Method 5
- 62-297.310(5) - Determination of Process Variables
- 62-297.310(6) - Stack Sampling Facilities
- 62-297.310(7)(a)1. - Initial Compliance Test
- 62-297.310(7)(a)2. - Excess Emissions
- 62-297.310(7)(a)3. - Testing for Permit Renewal
- 62-297.310(7)(a)4. - Annual Test
- 62-297.310(7)(a)5. - PM exemption if <400 hrs/yr
- 62-297.310(7)(a)9. - FDEP Notification - 15 days
- 62-297.310(7)(b) - Special Compliance Tests
- 62-297.310(7)(c) - Waiver of Compliance Tests
- 62-297.310(8) - Test Reports

Stationary Sources-Compliance Test Methods:

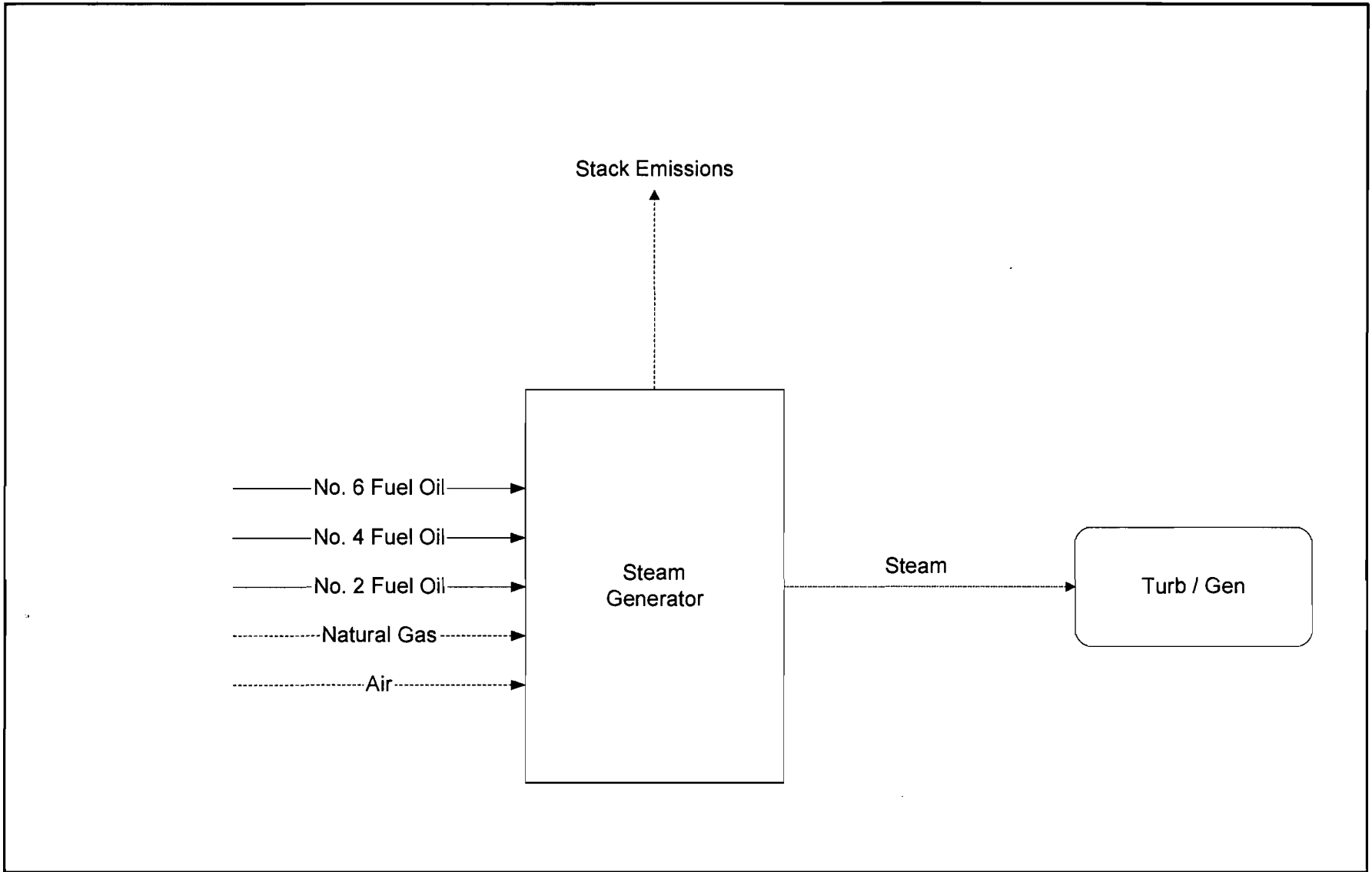
- 62-297.401(1)(a) - EPA Method 1
- 62-297.401(2) - EPA Method 2
- 62-297.401(3) - EPA Method 3
- 62-297.401(4) - EPA Method 4
- 62-297.401(5) - EPA Method 5
- 62-297.401(6) - EPA Method 6
- 62-297.401(8) - EPA Method 8
- 62-297.401(9) - EPA Method 9

**ATTACHMENT VB-EU2-G8**  
**EMISSION CALCULATIONS**

Attachment VB-EU2-G8. Maximum Emissions for Emission Limited Pollutants, City of Vero Beach  
 Steam Generator Unit 2

Pollutant	No. 6 Fuel Oil
Hours of Operation (hrs/yr)	8,760
Sulfur Dioxide (lb/hr) (oil) = Fuel sulfur content (%) x 100 x (MW SO <sub>2</sub> /MW S) x Fuel Consumption (lb/hr)	
Basis	BACT
Sulfur Content (%)	1.5
MW SO <sub>2</sub>	64
MW S	32
Fuel Consumption (lb/hr)	13,316
Emission Rate (lb/hr)	399.5
(TPY)	1,750
Particulate Matter (lb/hr) (Oil) = AP-42 Factor x Fuel Use (1,000 gal/hr)	
Basis	BACT (SO <sub>2</sub> )/AP-42
Sulfur Content (%)	1.5
AP-42 Factor: 9.19 x Sulfur Content(%) + 3.22	17.0
Fuel Consumption (1,000 gal/hr)	1.620
Emission Rate (lb/hr)	27.5
(TPY)	120.7

**ATTACHMENT VB-EU2-J1**  
**PROCESS FLOW DIAGRAM**



Attachment VB-EU2-J1  
Steam Generator Unit 2 Process Flow Diagram  
City of Vero Beach Municipal Power Plant - Vero Beach, Florida

Process Flow Legend	
Solid/Liquid	—————>
Gas	- - - - ->
Steam	- - - - ->





**ATTACHMENT VB-EU2-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT VB-EU2-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

Fuel	Density (lb/gal) <sup>a</sup>	Moisture (%)	Maximum % Weight Content			Heat Capacity
			Sulfur	Nitrogen	Ash	
Natural Gas	0.045 <sup>b</sup>	—	1 <sup>c</sup>	0.43 <sup>d</sup>	—	23,100 BTU/lb 1,030 Btu/ft <sup>3</sup>
No. 2 Fuel Oil	7.1	0.01	0.25	0.02	<0.01	19,500 BTU/lb 138,500 Btu/gal
No. 4 Fuel Oil	7.6	0.05	0.7	0.18	<0.01	19,000 BTU/lb 144,000 Btu/gal
No. 6 Fuel Oil	8.15	0.20	1.5	0.32	0.05	18,400 BTU/lb 150,000 BTU/gal

<sup>a</sup> At 60 degrees F.

<sup>b</sup> Represented as lb/ft<sup>3</sup>. Based on heat capacities presented.

<sup>c</sup> Represented as grains/100 ft<sup>3</sup>.

<sup>d</sup> Atmospheric nitrogen.

**ATTACHMENT VB-EU2-J6**

**PROCEDURES FOR STARTUP AND SHUTDOWN**

**ATTACHMENT VB-EU2-J6****PROCEDURES FOR STARTUP AND SHUTDOWN**

Startup of the fossil-fuel boilers begins when fuel (either natural gas or oil) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased and continues until the final burner gun is removed from service and the final Induced-draft or Forced-draft fan is removed from service.

Countermeasures, which may be taken in the event of excess emissions include, but are not limited to:

- Proper excess air adjustments
- Recognizing and removal of faulty burners
- Fuel oil temperature adjustments
- Proper and timely operation of boiler cleaning devices
- Removal of the unit from system-dispatch mode
- Reduction of unit megawatt load
- Stopping and restarting of boiler cleaning devices
- Lowering load rate
- Pressure rate changes

Knowledge of the appropriate countermeasures to take under an excess emissions condition is a part of the routine operator training for the engineers who operate the boilers. In addition, plant operations and supervisory staff are periodically given training. Topics include current permit limits, maximum allowable duration of excess emissions, appropriate countermeasures for excess emissions, duty to notify, etc.

**ATTACHMENT VB-EU2-J10**

**SUPPLEMENTAL REQUIREMENTS COMMENT**

**ATTACHMENT VB-EU2-J10**  
**SUPPLEMENTAL REQUIREMENTS COMMENT**  
**Fossil Fuel Steam Generator Unit 2**

Unit 2 is subject to emission limits for PM and SO<sub>2</sub>, but does not have any control device to achieve compliance with these emission limits. Therefore, 40 CFR 64 is not applicable to this unit and a Compliance Assurance Monitoring (CAM) Plan is not required.

**ATTACHMENT VB-EU2-J11**  
**ALTERNATIVE METHODS OF OPERATION**

**ATTACHMENT VB-EU2-J11**  
**ALTERNATIVE METHODS OF OPERATON**  
**Fossil Fuel Steam Generator Unit 2**

Unit 2 is permitted to burn natural gas, No. 2 fuel oil, No. 4 fuel oil, and No. 6 fuel oil. The maximum sulfur content of the fuel oil may not exceed 1.5 percent (by weight). Unit 2 can co-fire natural gas and fuel oil. The unit may operate continuously (i.e., 8,760 hours per year) on either fuel type. Natural gas and propane are used as ignitor fuels for initial startup of this unit.



**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p style="text-align: center;"><b>Fossil Fuel Steam Generator Unit 3</b></p>			
<p>4. Emissions Unit Identification Number: <span style="float: right;"><input type="checkbox"/> No ID</span></p> <p>ID: <b>003</b> <span style="float: right;"><input type="checkbox"/> ID Unknown</span></p>			
<p>5. Emissions Unit Status Code:</p> <p><b>A</b></p>	<p>6. Initial Startup Date:</p> <p><b>1 Sep 1971</b></p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p><b>49</b></p>	<p>8. Acid Rain Unit?</p> <p><input checked="" type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p style="text-align: center;"><b>Refer to Attachment VB-FI-A7 for pictures of Unit 3.</b></p>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):
2. Control Device or Method Code(s):

**Emissions Unit Details**

1. Package Unit:		
Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	34 MW	
3. Incinerator Information:		
Dwell Temperature:		°F
Dwell Time:		seconds
Incinerator Afterburner Temperature:		°F

**B. EMISSIONS UNIT CAPACITY INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	417	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p><b>Maximum heat input based on natural gas firing. Maximum heat input for fuel oil firing is 410 MMBtu/hr.</b></p>		



**D. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Regulated Emissions Units Only)**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>EU-3 (Att. VB-FI-C2)</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>200 feet</b>	7. Exit Diameter: <b>7.3 feet</b>	
8. Exit Temperature: <b>342 °F</b>	9. Actual Volumetric Flow Rate: <b>116,375 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: <b>dscfm</b>		12. Nonstack Emission Point Height: <b>feet</b>	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Temperature and flow rate presented indicative of natural gas firing. For oil firing, temperature and flow rate are 370°F and 185,500 acfm, respectively.</b>			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 1 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boiler, Electric Generation, Natural Gas, Boilers &gt; 100 MMBtu/hr</b>		
2. Source Classification Code (SCC): <b>1-01-006-01</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.405</b>	5. Maximum Annual Rate: <b>3,546</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,030</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content. Propane also used as ignition fuel when gas not available.</b>		

**Segment Description and Rate:** Segment 2 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Grade 6 Oil; Normal firing</b>		
2. Source Classification Code (SCC): <b>1-01-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>2.733</b>	5. Maximum Annual Rate: <b>23,944</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>2.5</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>150</b>
10. Segment Comment (limit to 200 characters):  <b>Maximum percent sulfur based on permitted SO<sub>2</sub> emission rate of 2.75 lb/MMBtu. High Heating Value (HHV) reported for heat content.</b>		

**E. SEGMENT (PROCESS/FUEL) INFORMATION  
(All Emissions Units)**

**Segment Description and Rate:** Segment  3  of  4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Distillate Oil, Grade No. 4 Oil, Normal Firing</b>		
2. Source Classification Code (SCC): <b>1-01-005-04</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>2.847</b>	5. Maximum Annual Rate: <b>24,942</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>144</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**Segment Description and Rate:** Segment  4  of  4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Distillate Oil, Grade No. 1 and 2</b>		
2. Source Classification Code (SCC): <b>1-01-005-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>2.96</b>	5. Maximum Annual Rate: <b>25,930</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.25</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>138.5</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		





**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
 (Regulated Emissions Units -  
 Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: <b>PM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>123.0</b> lb/hour <b>224.5</b> tons/year		4. Synthetically Limited? [ ]	
5. Range of Estimated Fugitive Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year			
6. Emission Factor: <b>0.3 lb/MMBtu</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.C.7</b>		7. Emissions Method Code: <b>0</b>	
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU3-G8.</b>			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Max emissions represents No. 6 fuel oil firing. Emission factor based on allowable emission rate of 0.3 lb/MMBtu for 3 hr/day (soot blowing). Normal operation max allowable emissions = 0.1 lb/MMBtu.</b>			

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>RULE</b>		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.1 lb/MMBtu</b>		4. Equivalent Allowable Emissions: <b>41.0</b> lb/hour <b>179.6</b> tons/year	
5. Method of Compliance (limit to 60 characters):  <b>EPA Method 5 or 17 annual stack test</b>			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Rule 62-296.405(1)(b). Applicable to normal, steady-state operating conditions.</b>			

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>PM</b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour	tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: Reference:	7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):		

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.3 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>123 lb/hour</b>	<b>67.3 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>EPA Method 5 or 17 annual stack test</b>		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): <b>Rule 62-296.700(3). Applicable to soot blowing or load changing conditions. Annual emissions based on a maximum 3 hr/day soot blowing or load changing.</b>		

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>1,127.5 lb/hour</b>	4. Synthetically Limited? [ ] <b>4,938 tons/year</b>
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: <b>2.75 lb/MMBtu</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.C.8</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters): <b>See Attachment VB-EU3-G8.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): <b>Maximum emissions representative of fuel oil firing.</b>	

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>2.75 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>1,127.5 lb/hour 4,938 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>Fuel analysis of oil as delivered</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): <b>Rule 62-296.405(1)(c)1.j.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: <b>40 %</b> Maximum Period of Excess Opacity Allowed: <b>2 min/hour</b>	
4. Method of Compliance: <b>FDEP Method 9 Annual Compliance Test</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-296.405(1)(a), F.A.C.- Steady state.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 1 of 5

1. Parameter Code: <b>VE</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>United Sciences, Inc.</b> Model Number: <b>550</b> Serial Number: <b>392167</b>	
5. Installation Date: <b>02 Nov 2000</b>	6. Performance Specification Test Date: <b>02 Nov 2000</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>40 CFR 75 (Acid Rain) requirement; CEM system upgrade.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
(Only Regulated Emissions Units Subject to a VE Limitation)

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: <b>VE60</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>60 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>24 min/hour</b>	
4. Method of Compliance: <b>FDEP Method 9 Annual Compliance Test</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-210.700(3). Maximum period of excess opacity allowed is limited to four 6-minute periods during the 3-hr period of allowable excess emissions.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
(Only Regulated Emissions Units Subject to Continuous Monitoring)

**Continuous Monitoring System:** Continuous Monitor 2 of 5

1. Parameter Code: <b>O<sub>2</sub></b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Amatek-Thermox</b> Model Number: <b>WDG-HP</b> Serial Number: <b>10203112B-2</b>	
5. Installation Date: <b>07 Nov 2000</b>	6. Performance Specification Test Date: <b>30 Dec 2000</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>40 CFR 75 (Acid Rain) requirement, CEM system upgrade.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation  3  of  3

1. Visible Emissions Subtype: <b>VE99</b>	2. Basis for Allowable Opacity: [ <input checked="" type="checkbox"/> ] Rule [ <input type="checkbox"/> ] Other
3. Requested Allowable Opacity: Normal Conditions: %      Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>60 min/hour</b>	
4. Method of Compliance: <b>Best operational practices</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-210.700(1). Excess emissions for malfunction allowed for a period not to exceed 2 hrs in every 24-hr period.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor  3  of  5

1. Parameter Code: <b>EM</b>	2. Pollutant(s): <b>NO<sub>x</sub></b>
3. CMS Requirement:	[ <input checked="" type="checkbox"/> ] Rule [ <input type="checkbox"/> ] Other
4. Monitor Information: Manufacturer: <b>Thermo Environmental</b> Model Number: <b>42C</b> Serial Number: <b>42C-68771-361</b>	
5. Installation Date: <b>01 Apr 2001</b>	6. Performance Specification Test Date: <b>04 Jun 2001</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>40 CFR 75 (Acid Rain) requirement, CEM system upgrade.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %     Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 4 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ <input checked="checked" type="checkbox"/> ] Rule [ ] Other
4. Monitor Information: Manufacturer: <b>Micro Motion</b> Model Number: <b>F200SR342SU</b> Serial Number: <b>900379</b>	
5. Installation Date: <b>02 Jan 1997</b>	6. Performance Specification Test Date: <b>02 Jan 1997</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>Fuel oil flow monitor required by 40 CFR 75 (Acid Rain), CEM system upgrade.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %    Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 5 of 5

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	[ X ] Rule [ ] Other
4. Monitor Information: Manufacturer: <b>Rosemount</b> Model Number: <b>1151DP4E12B1</b> Serial Number: <b>1313563</b>	
5. Installation Date: <b>28 Feb 1991</b>	6. Performance Specification Test Date: <b>23 Nov 1994</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>Natural gas flow monitor required by 40 CFR 75 (Acid Rain).</b>	



**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements**

1. Process Flow Diagram [ <input checked="" type="checkbox"/> ] Attached, Document ID: <u>VB-EU3-J1</u> [ <input type="checkbox"/> ] Not Applicable [ <input type="checkbox"/> ] Waiver Requested
2. Fuel Analysis or Specification [ <input checked="" type="checkbox"/> ] Attached, Document ID: <u>VB-EU3-J2</u> [ <input type="checkbox"/> ] Not Applicable [ <input type="checkbox"/> ] Waiver Requested
3. Detailed Description of Control Equipment [ <input type="checkbox"/> ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable [ <input type="checkbox"/> ] Waiver Requested
4. Description of Stack Sampling Facilities [ <input checked="" type="checkbox"/> ] Attached, Document ID: <u>VB-EU3-J4</u> [ <input type="checkbox"/> ] Not Applicable [ <input type="checkbox"/> ] Waiver Requested
5. Compliance Test Report [ <input type="checkbox"/> ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Previously submitted, Date: <u>9 Jul 1999</u> [ <input type="checkbox"/> ] Not Applicable
6. Procedures for Startup and Shutdown [ <input checked="" type="checkbox"/> ] Attached, Document ID: <u>VB-EU3-J6</u> [ <input type="checkbox"/> ] Not Applicable [ <input type="checkbox"/> ] Waiver Requested
7. Operation and Maintenance Plan [ <input type="checkbox"/> ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable [ <input type="checkbox"/> ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ <input type="checkbox"/> ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable
9. Other Information Required by Rule or Statute [ <input type="checkbox"/> ] Attached, Document ID: _____ [ <input checked="" type="checkbox"/> ] Not Applicable
10. Supplemental Requirements Comment:  <b>A CAM plan is not required for this unit. Refer to Attachment VB-EU3-J10 for justification.</b>

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation [ X ] Attached, Document ID: <u>VB-EU3-J11</u> [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ X ] Not Applicable
13. Identification of Additional Applicable Requirements [ X ] Attached, Document ID: <u>VB-FI-C12</u> [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ X ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: <u>VB-EU3-J15</u> [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [ ] Not Applicable

**ATTACHMENT VB-EU3-C**  
**EMISSION UNIT REGULATIONS**

**ATTACHMENT VB-EU3-C**  
**EMISSIONS UNIT REGULATIONS**  
**Fossil Fuel Steam Generator Unit 3**

**FDEP Rules:**Stationary Sources-General:

- 62-210.700(1) - Excess Emissions; Startup/Shut Down
- 62-210.700(2) - Excess Emissions; Existing Units
- 62-210.700(3) - Excess Emissions; Soot Blowing/Load Change
- 62-210.700(4) - Excess Emissions; Maintenance
- 62-210.700(6) - Excess Emissions; Malfunction

Acid Rain Program

- 62-214.300 - Applicability
- 62-214.320 - Applications
- 62-214.330 - Compliance Plan and Compliance Options
- 62-214.340 - Exemptions
- 62-214.350(2) - Certificate of Representation
- 62-214.350(3) - Designated Representative
- 62-214.350(6) - Timing of Notice
- 62-214.370 - Revisions and Corrections
- 62-214.430 - Implementation and Termination of Compliance Options

Stationary Sources-Emission Standards:

- 62-296.405(1)(a) - Fossil Fuel Steam Generator; Visible Emissions
- 62-296.405(1)(b) - Fossil Fuel Steam Generator; Particulate Matter
- 62-296.405(1)(c)1.j. - Fossil Fuel Steam Generator; Oil-SO<sub>2</sub>
- 62-296.405(1)(e) - Fossil Fuel Steam Generator; Test Methods
- 62-296.405(1)(f)1.a.(i) - Fossil Fuel Steam Generator; Opacity CEMS Exemption
- 62-296.405(1)(f)1.b. - Fossil Fuel Steam Generator; SO<sub>2</sub> CEMS Exemption

Stationary Sources-General Compliance Test Requirements:

- 62-297.310(1) - Required Number of Test Runs
- 62-297.310(2)(b) - Operating Rate
- 62-297.310(3) - Calculation of Emission Rate
- 62-297.310(4)(a) - Sampling Time
- 62-297.310(4)(b) - Sample Volume
- 62-297.310(4)(c) - Required Flow Rate Range
- 62-297.310(4)(d) - Calibration
- 62-297.310(4)(e) - EPA Method 5
- 62-297.310(5) - Determination of Process Variables
- 62-297.310(6) - Stack Sampling Facilities
- 62-297.310(7)(a)1. - Initial Compliance Test
- 62-297.310(7)(a)2. - Excess Emissions
- 62-297.310(7)(a)3. - Testing for Permit Renewal
- 62-297.310(7)(a)4. - Annual Test
- 62-297.310(7)(a)5. - PM exemption if <400 hrs/yr
- 62-297.310(7)(a)9. - FDEP Notification - 15 days
- 62-297.310(7)(b) - Special Compliance Tests

- 62-297.310(7)(c) - Waiver of Compliance Tests  
 62-297.310(8) - Test Reports

Stationary Sources-Compliance Test Methods:

- 62-297.401(1)(a) - EPA Method 1  
 62-297.401(2) - EPA Method 2  
 62-297.401(3) - EPA Method 3  
 62-297.401(4) - EPA Method 4  
 62-297.401(5) - EPA Method 5  
 62-297.401(6) - EPA Method 6  
 62-297.401(8) - EPA Method 8  
 62-297.401(9) - EPA Method 9

**Federal Rules**

Acid Rain Permits:

- 40 CFR 72.9(a) - Permit Requirements  
 40 CFR 72.9(b) - Monitoring Requirements  
 40 CFR 72.9(c)(1)(i) - SO<sub>2</sub> Allowances-Hold Allowances  
 40 CFR 72.9(c)(2) - SO<sub>2</sub> Allowances-Violation  
 40 CFR 72.9(c)(3)(iii) - SO<sub>2</sub> Allowances-Phase II Units  
 40 CFR 72.9(c)(4) - SO<sub>2</sub> Allowances-Allowances Held in ATS  
 40 CFR 72.9(c)(5) - SO<sub>2</sub> Allowances-No Deduction for 72.9(c)(1)(i)  
 40 CFR 72.9(e) - Excess Emission Requirements  
 40 CFR 72.9(f) - Recordkeeping and Reporting  
 40 CFR 72.9(g) - Liability  
 40 CFR 72.20(a) - Designated Representative; Required  
 40 CFR 72.20(b) - Designated Representative; Legally Binding  
 40 CFR 72.20(c) - Designated Representative; Certification Requirements  
 40 CFR 72.21 - Submissions  
 40 CFR 72.22 - Alternate Designated Representative  
 40 CFR 72.23 - Changing Representatives; Owners  
 40 CFR 72.30(a) - Requirements to Apply; Operate  
 40 CFR 72.30(c) - Requirements to Apply; Reapply Before Expiration  
 40 CFR 72.30(d) - Requirements to Apply; Submittal Requirements  
 40 CFR 72.32 - Permit Application Shield  
 40 CFR 72.40(a) - General; Compliance Plan  
 40 CFR 72.40(b) - General; Multi-unit Compliance Options  
 40 CFR 72.40(c) - General; Conditional Approval  
 40 CFR 72.40(d) - General; Termination of Compliance Options  
 40 CFR 72.51 - Permit Shield  
 40 CFR 72.90 - Annual Compliance Certification

Monitoring Part 75:

- 40 CFR 75.5 - Prohibitions  
 40 CFR 75.10(a)(1) - Primary Measurement; SO<sub>2</sub>; Except 75.11 and.16; Subpart D  
 40 CFR 75.10(a)(2) - Primary Measurement; NO<sub>x</sub>; Except 75.12 and.17; Subpart E  
 40 CFR 75.10(a)(3)(iii) - Primary Measurement; O<sub>2</sub>; Appendix F  
 40 CFR 75.10(a)(4) - Primary Measurement; Opacity; except 75.14&.18  
 40 CFR 75.10(b) - Primary Measurement; Performance Requirements  
 40 CFR 75.10(c) - Primary Measurement; Heat Input; Appendix F

40 CFR 75.10(d)(2)	- Primary Measurement; Hourly Operating; Opacity; SO <sub>2</sub>
40 CFR 75.10(f)	- Primary Measurement; Minimum Measurement
40 CFR 75.10(g)	- Primary Measurement; Minimum Recording
40 CFR 75.11(d)(2)	- SO <sub>2</sub> Monitoring; Gas- and Oil-Fired Units
40 CFR 75.11(e)	- SO <sub>2</sub> Monitoring; Gaseous firing
40 CFR 75.12(a)	- NO <sub>x</sub> Monitoring; Coal; Non-Peaking Oil/Gas Units
40 CFR 75.12(b)	- NO <sub>x</sub> Monitoring; Determination of NO <sub>x</sub> Emission Rate; Appendix F
40 CFR 75.13(c)	- O <sub>2</sub> Monitoring; Determination of CO Emission Rate; Appendix F
40 CFR 75.14(a)	- Opacity Monitoring; Coal and Oil Units
40 CFR 75.20(a)(5)	- Initial Certification Approval Process; Loss of Certification
40 CFR 75.20(b)	- Recertification Procedures
40 CFR 75.20(c)	- Certification Procedures (if recertification necessary)
40 CFR 75.20(g)	- Exceptions to CEMS; Oil/Gas/Diesel; Appendix D & E
40 CFR 75.21(a)	- QA/QC; CEMS
40 CFR 75.21(b)	- QA/QC; Opacity; Part 51 Appendix M
40 CFR 75.21(c)	- QA/QC; Calibration Gases
40 CFR 75.21(d)	- QA/QC; Notification of RATA
40 CFR 75.21(e)	- QA/QC; Audits
40 CFR 75.21(f)	- QA/QC; CEMS
40 CFR 75.22	- Reference Methods
40 CFR 75.24	- Out-of-Control Periods; CEMS
40 CFR 75.30(a)(1)	- General Missing Data Procedures; SO <sub>2</sub>
40 CFR 75.30(a)(2)	- General Missing Data Procedures; Flow
40 CFR 75.30(a)(3)	- General Missing Data Procedures; NO <sub>x</sub>
40 CFR 75.30(a)(4)	- General Missing Data Procedures; SO <sub>2</sub>
40 CFR 75.30(d)	- General Missing Data Procedures; SO <sub>2</sub>
40 CFR 75.32	- Monitoring Data Availability for Missing Data
40 CFR 75.33	- Standard Missing Data Procedures
40 CFR 75.35	- Missing Data for SO <sub>2</sub>
40 CFR 75.36	- Missing Data for Heat Input
40 CFR 75.53	- Monitoring Plan; revisions
40 CFR 75.54(a)	- Recordkeeping-General
40 CFR 75.54(b)	- Recordkeeping-Operating Parameter
40 CFR 75.54(c)	- Recordkeeping-SO <sub>2</sub>
40 CFR 75.54(d)	- Recordkeeping-NO <sub>x</sub>
40 CFR 75.54(e)	- Recordkeeping-CO <sub>2</sub>
40 CFR 75.54(f)	- Recordkeeping-Opacity
40 CFR 75.56	- Certification; QA/QC Provisions
40 CFR 75.55	- General Recordkeeping
40 CFR 75.60	- Reporting Requirements-General
40 CFR 75.61	- Reporting Requirements-Notification cert/recertification
40 CFR 75.62	- Reporting Requirements-Monitoring Plan
40 CFR 75.63	- Reporting Requirements-Certification/Recertification
40 CFR 75.64(a)	- Reporting Requirements-Quarterly reports; Submission
40 CFR 75.64(b)	- Reporting Requirements-Quarterly reports; DR statement
40 CFR 75.64(c)	- Reporting Requirements-Quarterly reports; Compliance Certification
40 CFR 75.64(d)	- Reporting Requirements-Quarterly reports; Electronic format
40 CFR 75.65	- Opacity Reports
Appendix A	- Specifications and Test Procedures
Appendix B	- QA/QC Procedures

Appendix C	- Missing Data
Appendix D	- Optional SO <sub>2</sub> ; Oil-/Gas-Fired Units
Appendix F	- Conversion Procedures
Appendix G	- Determination of CO <sub>2</sub> Emissions
Appendix H	- Traceability Protocol

Acid Rain Program-Excess Emissions:

40 CFR 77.3	- Offset Plans
40 CFR 77.5(b)	- Deductions of Allowances
40 CFR 77.6	- Excess Emissions Penalties (SO <sub>2</sub> and NO <sub>x</sub> )

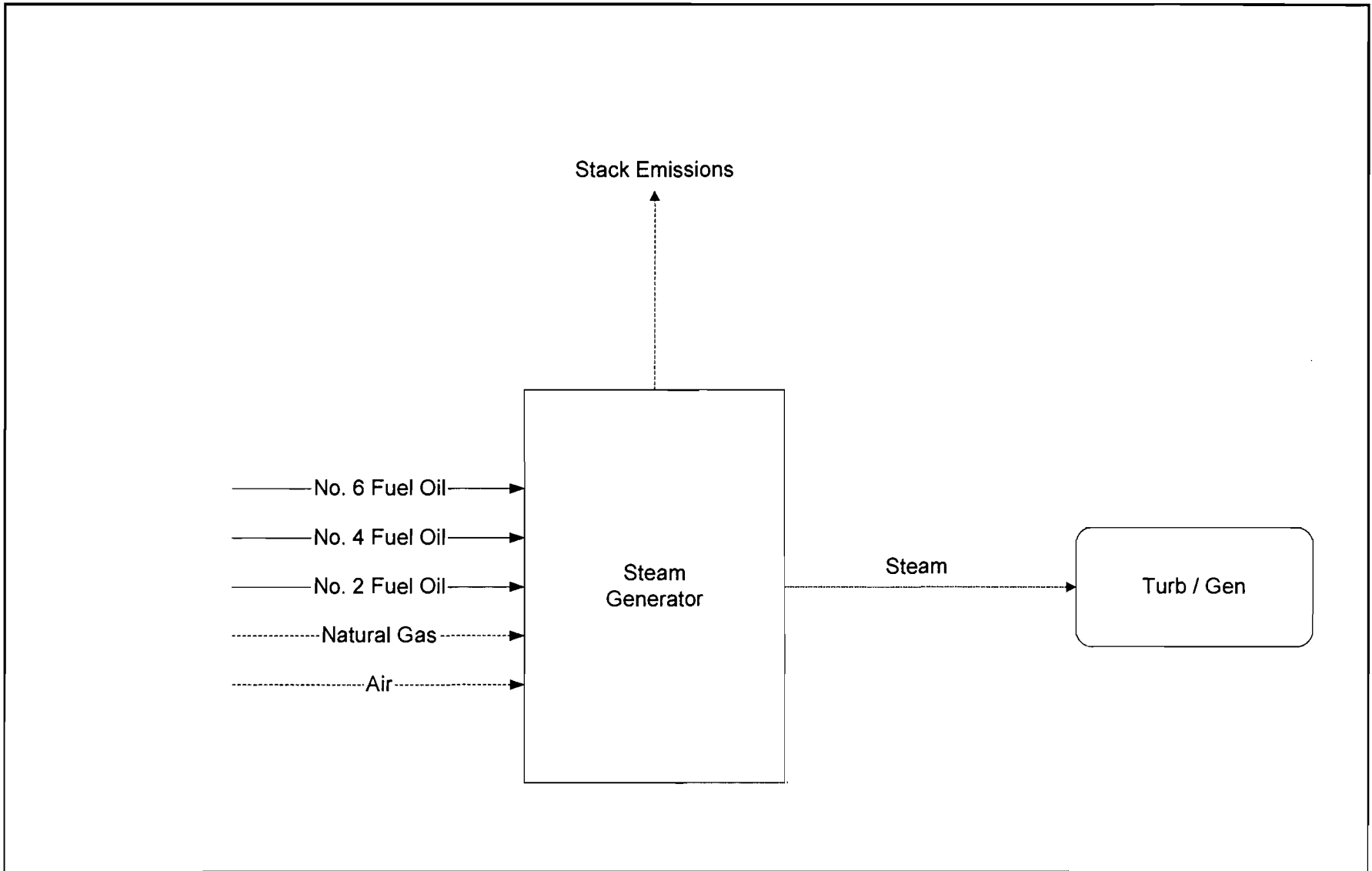
**ATTACHMENT VB-EU3-G8**  
**EMISSION CALCULATIONS**



Attachment VB-EU3-G8. Maximum Emissions for Emission Limited Pollutants, City of Vero Beach  
Steam Generator Unit 3

Pollutant	Residual Oil
Hours of Operation (hrs/yr)	8,760
Sulfur Dioxide (lb/hr) (oil) = EF (lb/MMBtu) x Heat Input Rate (MMBtu/hr)	
Basis	Permit Limit
EF (lb/MMBtu)	2.75
Heat Input Rate (MMBtu/hr)	410
Emission Rate (lb/hr)	1,127.5
(TPY)	4,938
Particulate Matter (lb/hr) = EF (lb/MMBtu) x Heat Input Rate (MMBtu/hr)	
Basis - Normal Conditions	Permit Limit
- Soot Blowing	Permit Limit
<u>Normal Conditions</u>	
EF (lb/MMBtu)	0.1
Heat Input Rate (MMBtu/hr)	410
Emission Rate (lb/hr)	41.0
(TPY)	179.6
<u>Soot Blowing</u>	
EF (lb/MMBtu)	0.3
Heat Input Rate (MMBtu/hr)	410
Hours of Operation	1,095
Emission Rate (lb/hr)	123.0
(TPY)	67.3
<u>Annual Emissions (Normal/Soot Blowing)</u>	
Hours of Operation - Normal Conditions	7,665
- Soot Blowing	1,095
Emission Rate (lb/hr) - Normal Conditions	41.0
- Soot Blowing	123.0
Emission Rate (TPY)	224.5


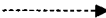
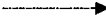
**ATTACHMENT VB-EU3-J1**  
**PROCESS FLOW DIAGRAM**



Attachment VB-EU1-J1  
Steam Generator Unit 1 Process Flow Diagram

City of Vero Beach Municipal Power Plant - Vero Beach, Florida

**Process Flow Legend**

- Solid/Liquid 
- Gas 
- Steam 



**ATTACHMENT VB-EU3-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT VB-EU3-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

Fuel	Density (lb/gal) <sup>a</sup>	Moisture (%)	Maximum % Weight Content			Heat Capacity
			Sulfur	Nitrogen	Ash	
Natural Gas	0.045 <sup>b</sup>	—	1 <sup>c</sup>	0.43 <sup>d</sup>	—	23,100 BTU/lb 1,030 Btu/ft <sup>3</sup>
No. 2 Fuel Oil	7.1	0.01	0.25	0.02	<0.01	19,500 BTU/lb 138,500 Btu/gal
No. 4 Fuel Oil	7.6	0.05	0.7	0.18	<0.01	19,000 BTU/lb 144,000 Btu/gal
No. 6 Fuel Oil	8.15	0.20	1.5	0.32	0.05	18,400 BTU/lb 150,000 BTU/gal

<sup>a</sup> At 60 degrees F.

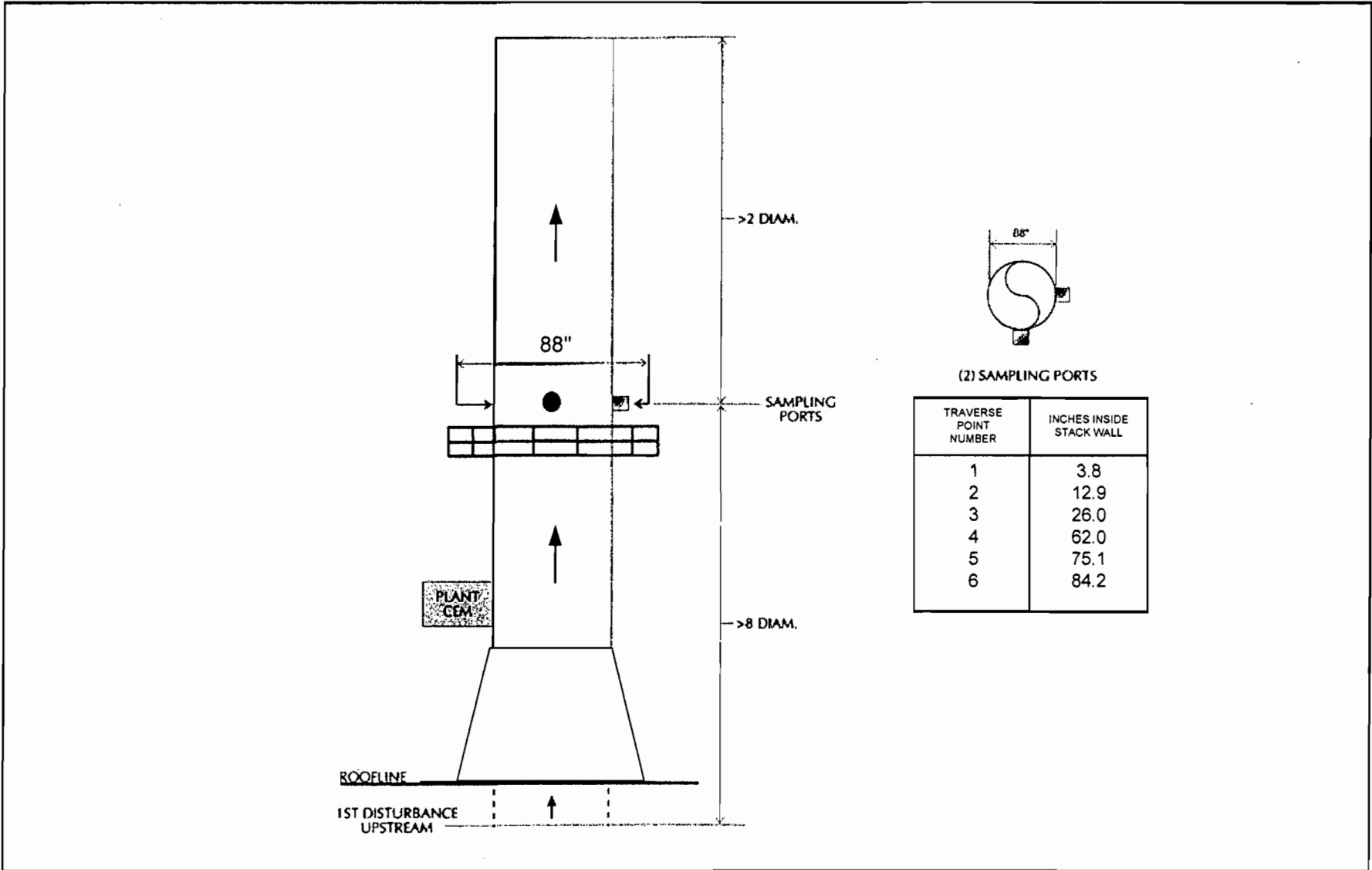
<sup>b</sup> Represented as lb/ft<sup>3</sup>. Based on heat capacities presented.

<sup>c</sup> Represented as grains/100 ft<sup>3</sup>.

<sup>d</sup> Atmospheric nitrogen.

**ATTACHMENT VB-EU3-J4**

**DESCRIPTION OF STACK SAMPLING FACILITIES**



Attachment VB-EU3-J4. Sampling Point Location, Unit 3 Exhaust Stack  
 City of Vero Beach Municipal Power Plant - Vero Beach, Florida

Source: Air Consulting & Engineering, Inc., 1999; Golder, 2002.

Not to Scale



**ATTACHMENT VB-EU3-J6**

**PROCEDURES FOR STARTUP AND SHUTDOWN**



**ATTACHMENT VB-EU3-J6**  
**PROCEDURES FOR STARTUP AND SHUTDOWN**

Startup of the fossil-fuel boilers begins when fuel (either natural gas or oil) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased and continues until the final burner gun is removed from service and the final Induced-draft or Forced-draft fan is removed from service.

Excess Emissions may be detected during all modes of boiler operation by any one of several continuous emission monitors. Continuous monitors are currently in place for NO<sub>x</sub> and opacity. An audible and visual alarm is activated whenever permitted values for any of the above parameters are approached.

Countermeasures, which may be taken in the event of excess emissions include, but are not limited to:

- Proper excess air adjustments
- Recognizing and removal of faulty burners
- Fuel oil temperature adjustments
- Proper and timely operation of boiler cleaning devices
- Removal of the unit from system-dispatch mode
- Reduction of unit megawatt load
- Stopping and restarting of boiler cleaning devices
- Lowering load rate
- Pressure rate changes

Knowledge of the appropriate countermeasures to take under an excess emissions condition is a part of the routine operator training for the engineers who operate the boilers. In addition, plant operations and supervisory staff are periodically given training. Topics include current permit limits, maximum allowable duration of excess emissions, appropriate countermeasures for excess emissions, duty to notify, etc.

**ATTACHMENT VB-EU3-J10**

**SUPPLEMENTAL REQUIREMENTS COMMENT**

**ATTACHMENT VB-EU4-J10****SUPPLEMENTAL REQUIREMENTS COMMENT****Fossil Fuel Steam Generator Unit 4**

Unit 4 is subject to emission limits for PM, SO<sub>2</sub>, and NO<sub>x</sub>, but does not have any control device to achieve compliance with these emission limits. Therefore, 40 CFR 64 is not applicable to this unit and a Compliance Assurance Monitoring (CAM) Plan is not required.

**ATTACHMENT VB-EU3-J11**

**ALTERNATIVE METHODS OF OPERATION**

**ATTACHMENT VB-EU3-J11****ALTERNATIVE METHODS OF OPERATON****Fossil Fuel Steam Generator Unit 3**

Unit 3 is permitted to burn natural gas, No. 2 fuel oil, No. 4 fuel oil, and No. 6 fuel oil. Unit 3 can co-fire natural gas and fuel oil. The unit may operate continuously (i.e., 8,760 hours per year) on either fuel type. Natural gas and propane are used as ignitor fuels for initial startup of this unit.

**ATTACHMENT VB-EU3-J15**  
**ACID RAIN PERMIT APPLICATION**

# Phase II Permit Application

For more information, see instructions and refer to 40 CFR 72.30 and 72.31 and Chapter 62-214, F.A.C.

This submission is:  New  Revised

**STEP 1**  
Identify the source by plant name, State, and ORIS code from NADB

Plant Name	<i>City of Vero Beach Municipal Power Plant</i>	State	<i>FL</i>	ORIS Code	<i>693</i>
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Compliance Plan

**STEP 2**  
Enter the boiler ID# from NADB for each affected unit, and indicate whether a repowering plan is being submitted for the unit by entering "yes" or "no" at column c. For new units, enter the requested information in columns d and e

a	b	c	d	e
Boiler ID#	Unit Will Hold Allowances in Accordance with 40 CFR 72.9(c)(1)	Repowering Plan	New Units  Commence Operation Date	New Units  Monitor Certification Deadline
3	Yes	No		
4	Yes	No		
**5	Yes	No	12/92	1/1/96
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			
	Yes			

**STEP 3**  
Check the box if the response in column c of Step 2 is "Yes" for any unit

For each unit that will be repowered, the Repowering Extension Plan form is included and the Repowering Technology Petition form has been submitted or will be submitted by June 1, 1997.

Plant Name (from Step 1)  
*City of Vero Beach Municipal Power Plant*

**STEP 4**  
**Read the standard requirements and certification, enter the name of the designated representative, and sign and date**

#### Standard Requirements

##### Permit Requirements.

- (1) The designated representative of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Submit a complete Acid Rain part application (including a compliance plan) under 40 CFR part 72, Rules 62-214.320 and 330, F.A.C. in accordance with the deadlines specified in Rule 62-214.320, F.A.C.; and
  - (ii) Submit in a timely manner any supplemental information that the permitting authority determines is necessary in order to review an Acid Rain part application and issue or deny an Acid Rain permit;
- (2) The owners and operators of each Acid Rain source and each Acid Rain unit at the source shall:
  - (i) Operate the unit in compliance with a complete Acid Rain part application or a superseding Acid Rain part issued by the permitting authority; and
  - (ii) Have an Acid Rain Part.

##### Monitoring Requirements.

- (1) The owners and operators and, to the extent applicable, designated representative of each Acid Rain source and each Acid Rain unit at the source shall comply with the monitoring requirements as provided in 40 CFR part 75, and Rule 62-214.420, F.A.C.
- (2) The emissions measurements recorded and reported in accordance with 40 CFR part 75 shall be used to determine compliance by the unit with the Acid Rain emissions limitations and emissions reduction requirements for sulfur dioxide and nitrogen oxides under the Acid Rain Program.
- (3) The requirements of 40 CFR part 75 shall not affect the responsibility of the owners and operators to monitor emissions of other pollutants or other emissions characteristics at the unit under other applicable requirements of the Act and other provisions of the operating permit for the source.

##### Sulfur Dioxide Requirements.

- (1) The owners and operators of each source and each Acid Rain unit at the source shall:
  - (i) Hold allowances, as of the allowance transfer deadline, in the unit's compliance subaccount (after deductions under 40 CFR 73.34(c)) not less than the total annual emissions of sulfur dioxide for the previous calendar year from the unit; and
  - (ii) Comply with the applicable Acid Rain emissions limitations for sulfur dioxide.
- (2) Each ton of sulfur dioxide emitted in excess of the Acid Rain emissions limitations for sulfur dioxide shall constitute a separate violation of the Act.
- (3) An Acid Rain unit shall be subject to the requirements under paragraph (1) of the sulfur dioxide requirements as follows:
  - (i) Starting January 1, 2000, an Acid Rain unit under 40 CFR 72.6(a)(2); or
  - (ii) Starting on the later of January 1, 2000 or the deadline for monitor certification under 40 CFR part 75, an Acid Rain unit under 40 CFR 72.6(a)(3).
- (4) Allowances shall be held in, deducted from, or transferred among Allowance Tracking System accounts in accordance with the Acid Rain Program.
- (5) An allowance shall not be deducted in order to comply with the requirements under paragraph (1)(i) of the sulfur dioxide requirements prior to the calendar year for which the allowance was allocated.
- (6) An allowance allocated by the Administrator under the Acid Rain Program is a limited authorization to emit sulfur dioxide in accordance with the Acid Rain Program. No provision of the Acid Rain Program, the Acid Rain permit application, the Acid Rain permit, or the written exemption under 40 CFR 72.7 and 72.8 and no provision of law shall be construed to limit the authority of the United States to terminate or limit such authorization.
- (7) An allowance allocated by the Administrator under the Acid Rain Program does not constitute a property right.

Nitrogen Oxides Requirements. The owners and operators of the source and each Acid Rain unit at the source shall comply with the applicable Acid Rain emissions limitation for nitrogen oxides.

##### Excess Emissions Requirements.

- (1) The designated representative of an Acid Rain unit that has excess emissions in any calendar year shall submit a proposed offset plan, as required under 40 CFR part 77.
- (2) The owners and operators of an Acid Rain unit that has excess emissions in any calendar year shall:
  - (i) Pay without demand the penalty required, and pay upon demand the interest on that penalty, as required by 40 CFR part 77; and
  - (ii) Comply with the terms of an approved offset plan, as required by 40 CFR part 77.

##### Recordkeeping and Reporting Requirements.

- (1) Unless otherwise provided, the owners and operators of the source and each Acid Rain unit at the source shall keep on site at the source each of the following documents for a period of 5 years from the date the document is created. This period may be extended for cause, at any time prior to the end of 5 years, in writing by the Administrator or permitting authority:
  - (i) The certificate of representation for the designated representative for the source and each Acid Rain unit at the source and all documents that demonstrate the truth of the statements in the certificate of representation, in accordance with Rule 62-214.350, F.A.C.; provided that the certificate and documents shall be retained on site at the source beyond such 5-year period until such documents are superseded because of the submission of a new certificate of representation changing the designated representative;
  - (ii) All emissions monitoring information, in accordance with 40 CFR part 75;
  - (iii) Copies of all reports, compliance certifications, and other submissions and all records made or required under the Acid Rain Program; and,



Plant Name (from Step 1)  
City of Vero Beach Municipal Power Plant

Recordkeeping and Reporting Requirements (cont.)

(iv) Copies of all documents used to complete an Acid Rain part application and any other submission under the Acid Rain Program or to demonstrate compliance with the requirements of the Acid Rain Program.

(2) The designated representative of an Acid Rain source and each Acid Rain unit at the source shall submit the reports and compliance certifications required under the Acid Rain Program, including those under 40 CFR part 72 subpart I and 40 CFR part 75.

Liability.

- (1) Any person who knowingly violates any requirement or prohibition of the Acid Rain Program, a complete Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8, including any requirement for the payment of any penalty owed to the United States, shall be subject to enforcement pursuant to section 113(c) of the Act.
- (2) Any person who knowingly makes a false, material statement in any record, submission, or report under the Acid Rain Program shall be subject to criminal enforcement pursuant to section 113(c) of the Act and 18 U.S.C. 1001.
- (3) No permit revision shall excuse any violation of the requirements of the Acid Rain Program that occurs prior to the date that the revision takes effect.
- (4) Each Acid Rain source and each Acid Rain unit shall meet the requirements of the Acid Rain Program.
- (5) Any provision of the Acid Rain Program that applies to an Acid Rain source (including a provision applicable to the designated representative of an Acid Rain source) shall also apply to the owners and operators of such source and of the Acid Rain units at the source.
- (6) Any provision of the Acid Rain Program that applies to an Acid Rain unit (including a provision applicable to the designated representative of an Acid Rain unit) shall also apply to the owners and operators of such unit. Except as provided under 40 CFR 72.44 (Phase II repowering extension plans), and except with regard to the requirements applicable to units with a common stack under 40 CFR part 75 (including 40 CFR 75.16, 75.17, and 75.18), the owners and operators and the designated representative of one Acid Rain unit shall not be liable for any violation by any other Acid Rain unit of which they are not owners or operators or the designated representative and that is located at a source of which they are not owners or operators or the designated representative.
- (7) Each violation of a provision of 40 CFR parts 72, 73, 75, 77, and 78 by an Acid Rain source or Acid Rain unit, or by an owner or operator or designated representative of such source or unit, shall be a separate violation of the Act.

Effect on Other Authorities. No provision of the Acid Rain Program, an Acid Rain part application, an Acid Rain part, or a written exemption under 40 CFR 72.7 or 72.8 shall be construed as:

- (1) Except as expressly provided in title IV of the Act, exempting or excluding the owners and operators and, to the extent applicable, the designated representative of an Acid Rain source or Acid Rain unit from compliance with any other provision of the Act, including the provisions of title I of the Act relating to applicable National Ambient Air Quality Standards or State Implementation Plans;
- (2) Limiting the number of allowances a unit can hold; *provided*, that the number of allowances held by the unit shall not affect the source's obligation to comply with any other provisions of the Act;
- (3) Requiring a change of any kind in any State law regulating electric utility rates and charges, affecting any State law regarding such State regulation, or limiting such State regulation, including any prudence review requirements under such State law;
- (4) Modifying the Federal Power Act or affecting the authority of the Federal Energy Regulatory Commission under the Federal Power Act; or,
- (5) Interfering with or impairing any program for competitive bidding for power supply in a State in which such program is established.

Certification

I am authorized to make this submission on behalf of the owners and operators of the Acid Rain source or Acid Rain units for which the submission is made. I certify under penalty of law that I have personally examined, and am familiar with, the statements and information submitted in this document and all its attachments. Based on my inquiry of those individuals with primary responsibility for obtaining the information, I certify that the statements and information are to the best of my knowledge and belief true, accurate, and complete. I am aware that there are significant penalties for submitting false statements and information or omitting required statements and information, including the possibility of fine or imprisonment.

Name <i>Shuler W. Massey, Director of Power Resources</i>	
Signature <i>Shuler W. Massey</i>	Date <i>12-27-95</i>

STEP 5 (optional)  
Enter the source AIRS  
and FINDS identification  
numbers, if known

AIRS 0610029
FINDS

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p style="text-align: center;"><b>Fossil Fuel Steam Generator Unit 4</b></p>			
<p>4. Emissions Unit Identification Number: <span style="float: right;"><input type="checkbox"/> No ID</span></p> <p>ID: <b>004</b> <span style="float: right;"><input type="checkbox"/> ID Unknown</span></p>			
<p>5. Emissions Unit Status Code:</p> <p><b>A</b></p>	<p>6. Initial Startup Date:</p> <p><b>1 Jun 1976</b></p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p><b>49</b></p>	<p>8. Acid Rain Unit?</p> <p><input checked="" type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p style="text-align: center;"><b>Refer to Attachment VB-FI-A7 for pictures of Unit 4.</b></p>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

2. Control Device or Method Code(s):

**Emissions Unit Details**

1. Package Unit:	
Manufacturer:	Model Number:
2. Generator Nameplate Rating:	56 MW
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION**  
(Regulated Emissions Units Only)**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	685	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		

**C. EMISSIONS UNIT REGULATIONS**  
**(Regulated Emissions Units Only)**

**List of Applicable Regulations**

See Attachment VB-EU4-C	

**D. EMISSION POINT (STACK/VENT) INFORMATION**  
(Regulated Emissions Units Only)

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>EU-4 (Att. VB-FI-C2)</b>		2. Emission Point Type Code: <b>1</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>200 feet</b>	7. Exit Diameter: <b>7 feet</b>	
8. Exit Temperature: <b>283 °F</b>	9. Actual Volumetric Flow Rate: <b>179,475 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: <b>dscfm</b>		12. Nonstack Emission Point Height: <b>feet</b>	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):  <b>Temperature and flow rate presented indicative of natural gas firing. For oil firing, temperature and flow rate are 306°F and 184,531 acfm, respectively.</b>			

**E. SEGMENT (PROCESS/FUEL) INFORMATION  
(All Emissions Units)**

**Segment Description and Rate:** Segment 1 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Natural Gas, Boilers &gt; 100 MMBtu/hr</b>		
2. Source Classification Code (SCC): <b>1-01-006-01</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.665</b>	5. Maximum Annual Rate: <b>5,825</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>1,030</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content. Maximum sulfur content: 1 grain/100 cubic ft. Propane also used as ignition fuel when gas not available.</b>		

**Segment Description and Rate:** Segment 2 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Residual Oil, Grade 6 Oil; Normal firing, Co-firing with gas.</b>		
2. Source Classification Code (SCC): <b>1-01-004-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>1.461</b>	5. Maximum Annual Rate: <b>12,801</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>2.5</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>150</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content. Max when co-firing natural gas.</b>		



**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 3 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Grade No. 4 Oil, Normal Firing</b>		
2. Source Classification Code (SCC): <b>1-01-005-04</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>4.757</b>	5. Maximum Annual Rate: <b>41,671</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.7</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>144</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**Segment Description and Rate:** Segment 4 of 4

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>External Combustion Boilers, Electric Generation, Distillate Oil, Grade No. 1 and 2</b>		
2. Source Classification Code (SCC): <b>1-01-005-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>4.946</b>	5. Maximum Annual Rate: <b>43,327</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.25</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>138.5</b>
10. Segment Comment (limit to 200 characters):  <b>High Heating Value (HHV) reported for heat content.</b>		

**F. EMISSIONS UNIT POLLUTANTS  
(All Emissions Units)**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			NS
NO <sub>x</sub>			EL
PM			EL
PM <sub>10</sub>			NS
SO <sub>2</sub>			EL
VOC			NS
H106			NS
HAPs			NS

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>NO<sub>x</sub></b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>205.5 lb/hour      900.1 tons/year</b>	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year	
6. Emission Factor: <b>0.3 lb/MMBtu</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.D.6</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU4-G8.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Maximum emissions representative of fuel oil firing.</b>	

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.3 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>205.5 lb/hour      900.1 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>EPA Method 7, 7A, 7C, 7D, or 7E annual stack test</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>40 CFR 60 Subpart D NO<sub>x</sub> limit for liquid fossil fuel firing. Allowable emissions based on fuel oil firing for 100 percent of heat input.</b>	



**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>PM</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>68.5 lb/hour      300 tons/year</b>	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: <b>0.1 lb/MMBtu</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.D.4</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU4-G8.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):  <b>Maximum emissions for fuel oil firing.</b>	

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.1 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>68.5 lb/hour      300 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>EPA Method 5 of 17 annual stack test</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Permit Condition based on 40 CFR 60, Subpart D; Rule 62-296.405(1)(b). Applicable to normal, steady state operating conditions.</b>	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>548 lb/hour</b>		4. Synthetically Limited? <input type="checkbox"/>	
		<b>2,400 tons/year</b>	
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year			
6. Emission Factor: <b>0.8 lb/MMBtu</b>		7. Emissions Method Code:	
Reference: <b>Permit No. 0610029-005-AV, Condition 111.D.5</b>		<b>0</b>	
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU4-G8.</b>			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>RULE</b>		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.8 lb/MMBtu</b>		4. Equivalent Allowable Emissions: <b>548 lb/hour 2,400 tons/year</b>	
5. Method of Compliance (limit to 60 characters):  <b>EPA Method 6 ann. stack test-oil, fuel anal.&lt;400 hr/yr oil</b>			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>Permit condition based on 40 CFR 60 Subpart D. Allowable emissions based on a maximum heat input rate of 685 MMBtu/hr.</b>			

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 3

1. Visible Emissions Subtype: <b>VE20</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>20 %</b> Exceptional Conditions: <b>27 %</b> Maximum Period of Excess Opacity Allowed: <b>6 min/hour</b>	
4. Method of Compliance: <b>FDEP Method 9 Annual Compliance Test</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>40 CFR 60, Subpart D.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 1 of 5

1. Parameter Code: <b>VE</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>United Sciences, Inc.</b> Model Number: <b>550</b> Serial Number: <b>5500188</b>	
5. Installation Date: <b>25 Oct 2000</b>	6. Performance Specification Test Date: <b>25 Oct 2000</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>Required by 40 CFR 75 (Acid Rain) and 40 CFR 60 (NSPS) Subpart D, CEM system upgrade.</b>	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 2 of 3

1. Visible Emissions Subtype: <b>VE60</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>60 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>24 min/hour</b>	
4. Method of Compliance: <b>FDEP Method 9 Annual Compliance Test</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Rule 62-210.700(3). Maximum period of excess opacity allowed is limited to four 6-minute periods during the 3-hr period of allowable excess emissions.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 2 of 5

1. Parameter Code: <b>O<sub>2</sub></b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Amatek-Thermox</b> Model Number: <b>WDG-HP</b> Serial Number: <b>10203464</b>	
5. Installation Date: <b>25 Oct 2000</b>	6. Performance Specification Test Date: <b>30 Dec 2000</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>Required by 40 CFR 75 (Acid Rain) and 40 CFR 60 (NSPS) Subpart D, CEM system upgrade.</b>	









**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements**

1. Process Flow Diagram [ X ] Attached, Document ID: <u>VB-EU4-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ X ] Attached, Document ID: <u>VB-EU4-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ X ] Attached, Document ID: <u>VB-EU4-J4</u> [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ X ] Previously submitted, Date: <u>25 Jul 2001</u> [ ] Not Applicable
6. Procedures for Startup and Shutdown [ X ] Attached, Document ID: <u>VB-EU4-J6</u> [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ [ X ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ X ] Not Applicable
10. Supplemental Requirements Comment:  <b>A CAM plan is not required for this unit. Refer to Attachment VB-EU4-J10 for justification.</b>

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation [ X ] Attached, Document ID: <u>VB-EU4-J11</u> [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ X ] Not Applicable
13. Identification of Additional Applicable Requirements [ X ] Attached, Document ID: <u>VB-FI-C12</u> [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ X ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: <u>VB-EU3-J15</u> [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Phase II NO <sub>x</sub> Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [ ] Phase NO <sub>x</sub> Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [ ] Not Applicable

**ATTACHMENT VB-EU4-C**  
**EMISSION UNIT REGULATIONS**

**ATTACHMENT VB-EU4-C**  
**EMISSIONS UNIT REGULATIONS**  
**Fossil Fuel Steam Generator Unit 4**

**FDEP Rules:**Stationary Sources-General:

- 62-210.700(1) - Excess Emissions; Startup/Shut Down
- 62-210.700(2) - Excess Emissions; Existing Units
- 62-210.700(3) - Excess Emissions; Soot Blowing/Load Change
- 62-210.700(4) - Excess Emissions; Maintenance
- 62-210.700(6) - Excess Emissions; Malfunction

Acid Rain Program

- 62-214.300 - Applicability
- 62-214.320 - Applications
- 62-214.330 - Compliance Plan and Compliance Options
- 62-214.340 - Exemptions
- 62-214.350(2) - Certificate of Representation
- 62-214.350(3) - Designated Representative
- 62-214.350(6) - Timing of Notice
- 62-214.370 - Revisions and Corrections
- 62-214.430 - Implementation and Termination of Compliance Options

Stationary Sources-Emission Standards:

- 62-296.405(2) - Fossil Fuel Steam Generator; New Sources

Stationary Sources-General Compliance Test Requirements:

- 62-297.310(1) - Required Number of Test Runs
- 62-297.310(2)(b) - Operating Rate
- 62-297.310(3) - Calculation of Emission Rate
- 62-297.310(4)(a) - Sampling Time
- 62-297.310(4)(b) - Sample Volume
- 62-297.310(4)(c) - Required Flow Rate Range
- 62-297.310(4)(d) - Calibration
- 62-297.310(4)(e) - EPA Method 5
- 62-297.310(5) - Determination of Process Variables
- 62-297.310(6) - Stack Sampling Facilities
- 62-297.310(7)(a)1. - Initial Compliance Test
- 62-297.310(7)(a)2. - Excess Emissions
- 62-297.310(7)(a)3. - Testing for Permit Renewal
- 62-297.310(7)(a)4. - Annual Test
- 62-297.310(7)(a)5. - PM exemption if <400 hrs/yr
- 62-297.310(7)(a)9. - FDEP Notification - 15 days
- 62-297.310(7)(b) - Special Compliance Tests
- 62-297.310(7)(c) - Waiver of Compliance Tests
- 62-297.310(8) - Test Reports

Stationary Sources-Compliance Test Methods:

- 62-297.401(1)(a) - EPA Method 1

62-297.401(2)	- EPA Method 2
62-297.401(3)	- EPA Method 3
62-297.401(3)(a)	- EPA Method 3A
62-297.401(3)(b)	- EPA Method 3B
62-297.401(4)	- EPA Method 4
62-297.401(5)	- EPA Method 5
62-297.401(6)	- EPA Method 6
62-297.401(6)(a)	- EPA Method 6A
62-297.401(6)(c)	- EPA Method 6C
62-297.401(7)	- EPA Method 7
62-297.401(7)(a)	- EPA Method 7A
62-297.401(7)(c)	- EPA Method 7C
62-297.401(7)(d)	- EPA Method 7D
62-297.401(7)(e)	- EPA Method 7E
62-297.401(8)	- EPA Method 8
62-297.401(9)	- EPA Method 9
62-297.401(19)	- EPA Method 19

### **Federal Rules**

#### NSPS Subpart D

40 CFR 60.42(a)(1)	- PM (0.1 lb/mmBtu)
40 CFR 60.42(a)(2)	- VE (20%;1-6 min 27%)
40 CFR 60.43(a)(1)	- SO <sub>2</sub> ; liquid fuel (0.8 lb/mmBtu)
40 CFR 60.43(c)	- SO <sub>2</sub> ; compliance; allows gas co-firing
40 CFR 60.44(a)(1)	- NO <sub>x</sub> ; gas (0.2 lb/mmBtu)
40 CFR 60.44(a)(2)	- NO <sub>x</sub> ; oil (0.3 lb/mmBtu)
40 CFR 60.44(b)	- NO <sub>x</sub> ; Simultaneous firing
40 CFR 60.45 (a)	- Monitoring; Requires CEMS; VE, SO <sub>2</sub> & NO <sub>x</sub>
40 CFR 60.45(b)(1)	- Exempts CEMS for gas
40 CFR 60.45(b)(2)	- Exempts SO <sub>2</sub> CEMS for Non-FGD units
40 CFR 60.45(b)(3)	- Exempts CEMS when tests 70% of standard
40 CFR 60.45(b)(4)	- If no CEMS than no O <sub>2</sub> or CO <sub>2</sub> required
40 CFR 60.45(c)	- Performance Requirements for CEMS
40 CFR 60.45(e)	- Conversion Procedures for CEMS
40 CFR 60.45(g)(1)	- Excess Emission Reports-Opacity
40 CFR 60.45(g)(2)	- Excess Emission Reports-SO <sub>2</sub>
40 CFR 60.45(g)(3)	- Excess Emission Reports-NO <sub>x</sub>
40 CFR 60.46 (a)	- Test Methods for Performance tests
40 CFR 60.46 (b)	- Test Methods for PM, SO <sub>2</sub> and NO <sub>x</sub>
40 CFR 60.46 (c)	- Fuel combinations

#### NSPS General Requirements:

40 CFR 60.7(b)	- Notification and Recordkeeping-Startup/Shutdown/Malfunction
40 CFR 60.7(f)	- Notification and Recordkeeping-Maintain records-2 yrs
40 CFR 60.8(c)	- Performance Tests-Representative Conditions
40 CFR 60.8(e)	- Provide Stack Sampling Facilities
40 CFR 60.8(f)	- Test Runs
40 CFR 60.11(a)	- Compliance
40 CFR 60.11(b)	- Compliance-Opacity Determined EPA Method 9
40 CFR 60.11(c)	- Compliance-Opacity; Excludes Startup/Shutdown/Malfunction



- 40 CFR 60.11(d) - Compliance-Maintain Air Pollution Control Equipment
- 40 CFR 60.11(e)(2) - Compliance-Opacity
- 40 CFR 60.12 - Circumvention
- 40 CFR 60.13(a) - Monitoring-Appendix B; CEMS Non-Compliance Method
- 40 CFR 60.13(c) - Monitoring-Opacity COMS
- 40 CFR 60.13(d)(1) - Monitoring-CEMS; Span, Drift, Etc.
- 40 CFR 60.13(d)(2) - Monitoring-COMS; Span, System Check
- 40 CFR 60.13(e) - Monitoring-Frequency of Operation
- 40 CFR 60.13(h) - Monitoring-COMS; Data Requirements

Acid Rain Permits:

- 40 CFR 72.9(a) - Permit Requirements
- 40 CFR 72.9(b) - Monitoring Requirements
- 40 CFR 72.9(c)(1)(i) - SO<sub>2</sub> Allowances-Hold Allowances
- 40 CFR 72.9(c)(2) - SO<sub>2</sub> Allowances-Violation
- 40 CFR 72.9(c)(3)(iii) - SO<sub>2</sub> Allowances-Phase II Units
- 40 CFR 72.9(c)(4) - SO<sub>2</sub> Allowances-Allowances Held in ATS
- 40 CFR 72.9(c)(5) - SO<sub>2</sub> Allowances-No Deduction for 72.9(c)(1)(i)
- 40 CFR 72.9(e) - Excess Emission Requirements
- 40 CFR 72.9(f) - Recordkeeping and Reporting
- 40 CFR 72.9(g) - Liability
- 40 CFR 72.20(a) - Designated Representative; Required
- 40 CFR 72.20(b) - Designated Representative; Legally Binding
- 40 CFR 72.20(c) - Designated Representative; Certification Requirements
- 40 CFR 72.21 - Submissions
- 40 CFR 72.22 - Alternate Designated Representative
- 40 CFR 72.23 - Changing Representatives; Owners
- 40 CFR 72.30(a) - Requirements to Apply; Operate
- 40 CFR 72.30(c) - Requirements to Apply; Reapply Before Expiration
- 40 CFR 72.30(d) - Requirements to Apply; Submittal Requirements
- 40 CFR 72.32 - Permit Application Shield
- 40 CFR 72.40(a) - General; Compliance Plan
- 40 CFR 72.40(b) - General; Multi-unit Compliance Options
- 40 CFR 72.40(c) - General; Conditional Approval
- 40 CFR 72.40(d) - General; Termination of Compliance Options
- 40 CFR 72.51 - Permit Shield
- 40 CFR 72.90 - Annual Compliance Certification

Monitoring Part 75:

- 40 CFR 75.5 - Prohibitions
- 40 CFR 75.10(a)(2) - Primary Measurement; NO<sub>x</sub>; Except 75.12 and .17; Subpart E
- 40 CFR 75.10(a)(3)(iii) - Primary Measurement; O<sub>2</sub>; Appendix F
- 40 CFR 75.10(a)(4) - Primary Measurement; Opacity; except 75.14&.18
- 40 CFR 75.10(b) - Primary Measurement; Performance Requirements
- 40 CFR 75.10(c) - Primary Measurement; Heat Input; Appendix F
- 40 CFR 75.10(d)(2) - Primary Measurement; Hourly Operating; Opacity; SO<sub>2</sub>
- 40 CFR 75.10(f) - Primary Measurement; Minimum Measurement
- 40 CFR 75.10(g) - Primary Measurement; Minimum Recording
- 40 CFR 75.11(d)(2) - SO<sub>2</sub> Monitoring; Gas- and Oil-Fired Units
- 40 CFR 75.11(e) - SO<sub>2</sub> Monitoring; Gaseous firing

40 CFR 75.12(a)	- NO <sub>x</sub> Monitoring; Coal; Non-Peaking Oil/Gas Units
40 CFR 75.12(b)	- NO <sub>x</sub> Monitoring; Determination of NO <sub>x</sub> Emission Rate; Appendix F
40 CFR 75.13(c)	- O <sub>2</sub> Monitoring; Determination of CO <sub>2</sub> Emission Rate; Appendix F
40 CFR 75.14(a)	- Opacity Monitoring; Coal and Oil Units
40 CFR 75.20(a)(5)	- Initial Certification Approval Process; Loss of Certification
40 CFR 75.20(b)	- Recertification Procedures
40 CFR 75.20(c)	- Certification Procedures (if recertification necessary)
40 CFR 75.20(g)	- Exceptions to CEMS; Oil/Gas/Diesel; Appendix D & E
40 CFR 75.21(a)	- QA/QC; CEMS
40 CFR 75.21(b)	- QA/QC; Opacity; Part 51 Appendix M
40 CFR 75.21(c)	- QA/QC; Calibration Gases
40 CFR 75.21(d)	- QA/QC; Notification of RATA
40 CFR 75.21(e)	- QA/QC; Audits
40 CFR 75.21(f)	- QA/QC; CEMS
40 CFR 75.22	- Reference Methods
40 CFR 75.24	- Out-of-Control Periods; CEMS
40 CFR 75.30(a)(1)	- General Missing Data Procedures; SO <sub>2</sub>
40 CFR 75.30(a)(2)	- General Missing Data Procedures; Flow
40 CFR 75.30(a)(3)	- General Missing Data Procedures; NO <sub>x</sub>
40 CFR 75.30(a)(4)	- General Missing Data Procedures; SO <sub>2</sub>
40 CFR 75.30(d)	- General Missing Data Procedures; SO <sub>2</sub>
40 CFR 75.32	- Monitoring Data Availability for Missing Data
40 CFR 75.33	- Standard Missing Data Procedures
40 CFR 75.35	- Missing Data for SO <sub>2</sub>
40 CFR 75.36	- Missing Data for Heat Input
40 CFR 75.53	- Monitoring Plan; revisions
40 CFR 75.54(a)	- Recordkeeping-General
40 CFR 75.54(b)	- Recordkeeping-Operating Parameter
40 CFR 75.54(c)	- Recordkeeping-SO <sub>2</sub>
40 CFR 75.54(d)	- Recordkeeping-NO <sub>x</sub>
40 CFR 75.54(e)	- Recordkeeping-CO <sub>2</sub>
40 CFR 75.54(f)	- Recordkeeping-Opacity
40 CFR 75.56	- Certification; QA/QC Provisions
40 CFR 75.55	- General Recordkeeping
40 CFR 75.60	- Reporting Requirements-General
40 CFR 75.61	- Reporting Requirements-Notification cert/recertification
40 CFR 75.62	- Reporting Requirements-Monitoring Plan
40 CFR 75.63	- Reporting Requirements-Certification/Recertification
40 CFR 75.64(a)	- Reporting Requirements-Quarterly reports; Submission
40 CFR 75.64(b)	- Reporting Requirements-Quarterly reports; DR statement
40 CFR 75.64(c)	- Reporting Requirements-Quarterly reports; Compliance Certification
40 CFR 75.64(d)	- Reporting Requirements-Quarterly reports; Electronic Format
40 CFR 75.65	- Opacity Reports
Appendix A	- Specifications and Test Procedures
Appendix B	- QA/QC Procedures
Appendix C	- Missing Data
Appendix D	- Optional SO <sub>2</sub> ; Oil-/Gas-Fired Units
Appendix F	- Conversion Procedures
Appendix G	- Determination of CO <sub>2</sub> Emissions
Appendix H	- Traceability Protocol

Acid Rain Program-Excess Emissions:

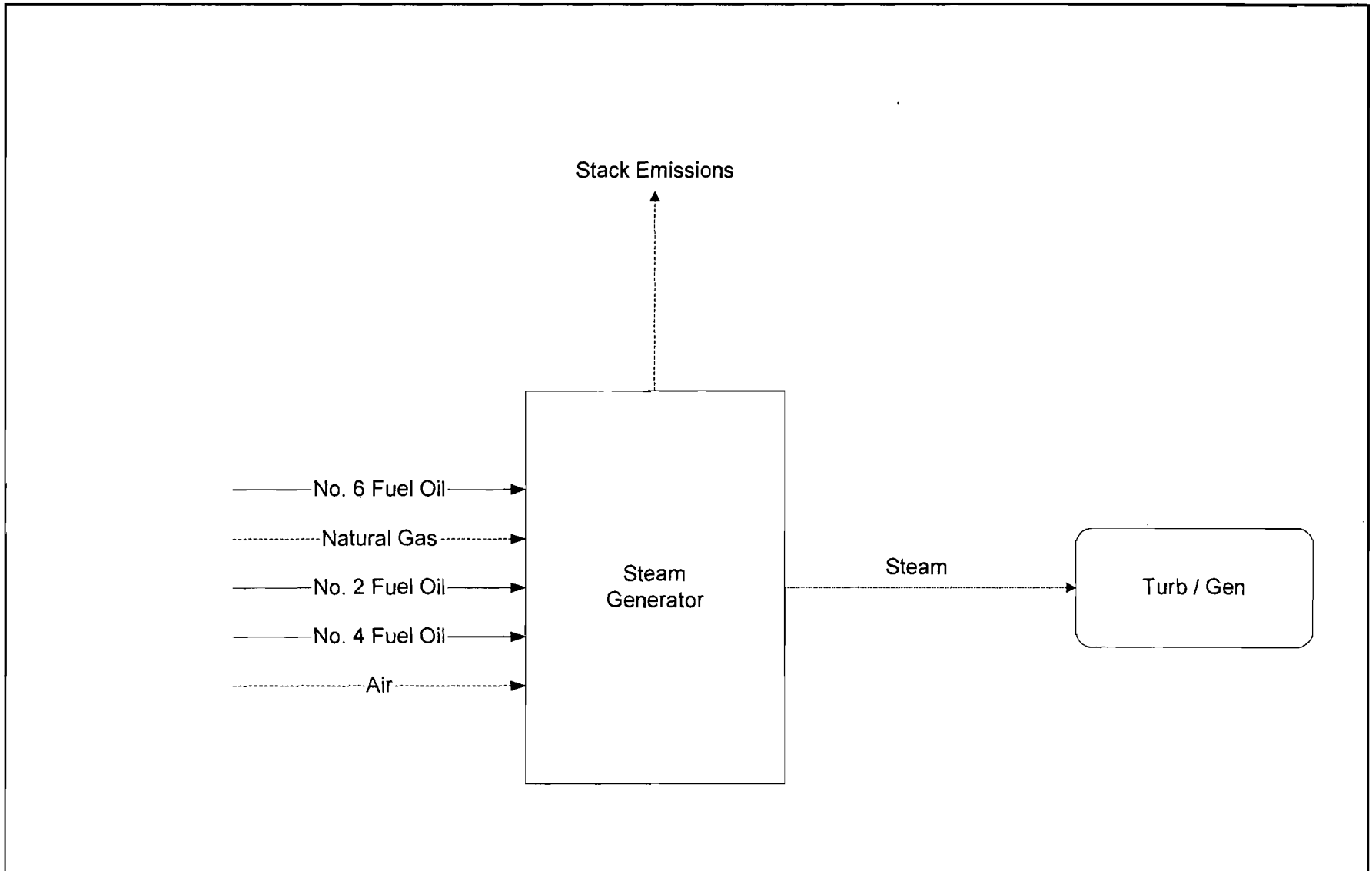
- 40 CFR 77.3 - Offset Plans
- 40 CFR 77.5(b) - Deductions of Allowances
- 40 CFR 77.6 - Excess Emissions Penalties (SO<sub>2</sub> and NO<sub>x</sub>)

**ATTACHMENT VB-EU4-G8**  
**EMISSION CALCULATIONS**

Attachment VB-EU4-G8. Maximum Emissions for Emission Limited Pollutants, City of Vero Beach  
 Steam Generator Unit 4

Pollutant	Fuel Oil	Natural Gas
Hours of Operation (hrs/yr)	8,760	8,760
Sulfur Dioxide (lb/hr) (Oil) = EF (lb/MMBtu) x Heat Input Rate (MMBtu/hr)		
Sulfur Dioxide (lb/hr) (Gas) = Fuel sulfur content (gr/100 cf)/7000 (gr/lb) x (MW SO <sub>2</sub> /MW S) x Fuel Consumption (100 cf/hr)		
Basis	Permit	Permit
EF (lb/MMBtu)	0.8	0.8
Heat Input Rate (MMBtu/hr)	685.0	685.0
Emission Rate (lb/hr)	548.0	548.0
(TPY)	2,400	2,400
Particulate Matter (lb/hr) = EF (lb/MMBtu) x Heat Input Rate (MMBtu/hr)		
Basis	Permit	
EF (lb/MMBtu)	0.1	
Heat Input Rate (MMBtu/hr)	685.0	
Emission Rate (lb/hr)	68.5	
(TPY)	300.0	
Nitrogen Oxides (lb/hr) = EF (lb/MMBtu) x Heat Input Rate (MMBtu/hr)		
Basis	Permit	Permit
EF (lb/MMBtu)	0.30	0.20
Heat Input Rate (MMBtu/hr)	685.0	685.0
Emission Rate (lb/hr)	205.5	137.0
(TPY)	900.1	600.1

**ATTACHMENT VB-EU4-J1**  
**PROCESS FLOW DIAGRAM**



Attachment VB-EU4-J1  
Steam Generator Unit 4 Process Flow Diagram  
City of Vero Beach Municipal Power Plant - Vero Beach, Florida

Process Flow Legend	
Solid/Liquid	—————▶
Gas	- - - - -▶
Steam	- - - - -▶



**ATTACHMENT VB-EU4-J2**  
**FUEL ANALYSIS OR SPECIFICATION**



**ATTACHMENT VB-EU4-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

Fuel	Density (lb/gal) <sup>a</sup>	Moisture (%)	Maximum % Weight Content			Heat Capacity
			Sulfur	Nitrogen	Ash	
Natural Gas	0.045 <sup>b</sup>	—	1 <sup>c</sup>	0.43 <sup>d</sup>	—	23,100 BTU/lb 1,030 Btu/ft <sup>3</sup>
No. 2 Fuel Oil	7.1	0.01	0.25	0.02	<0.01	19,500 BTU/lb 138,500 Btu/gal
No. 4 Fuel Oil	7.6	0.05	0.7	0.18	<0.01	19,000 BTU/lb 144,000 Btu/gal
No. 6 Fuel Oil	8.15	0.20	1.5	0.32	0.05	18,400 BTU/lb 150,000 BTU/gal

<sup>a</sup> At 60 degrees F.

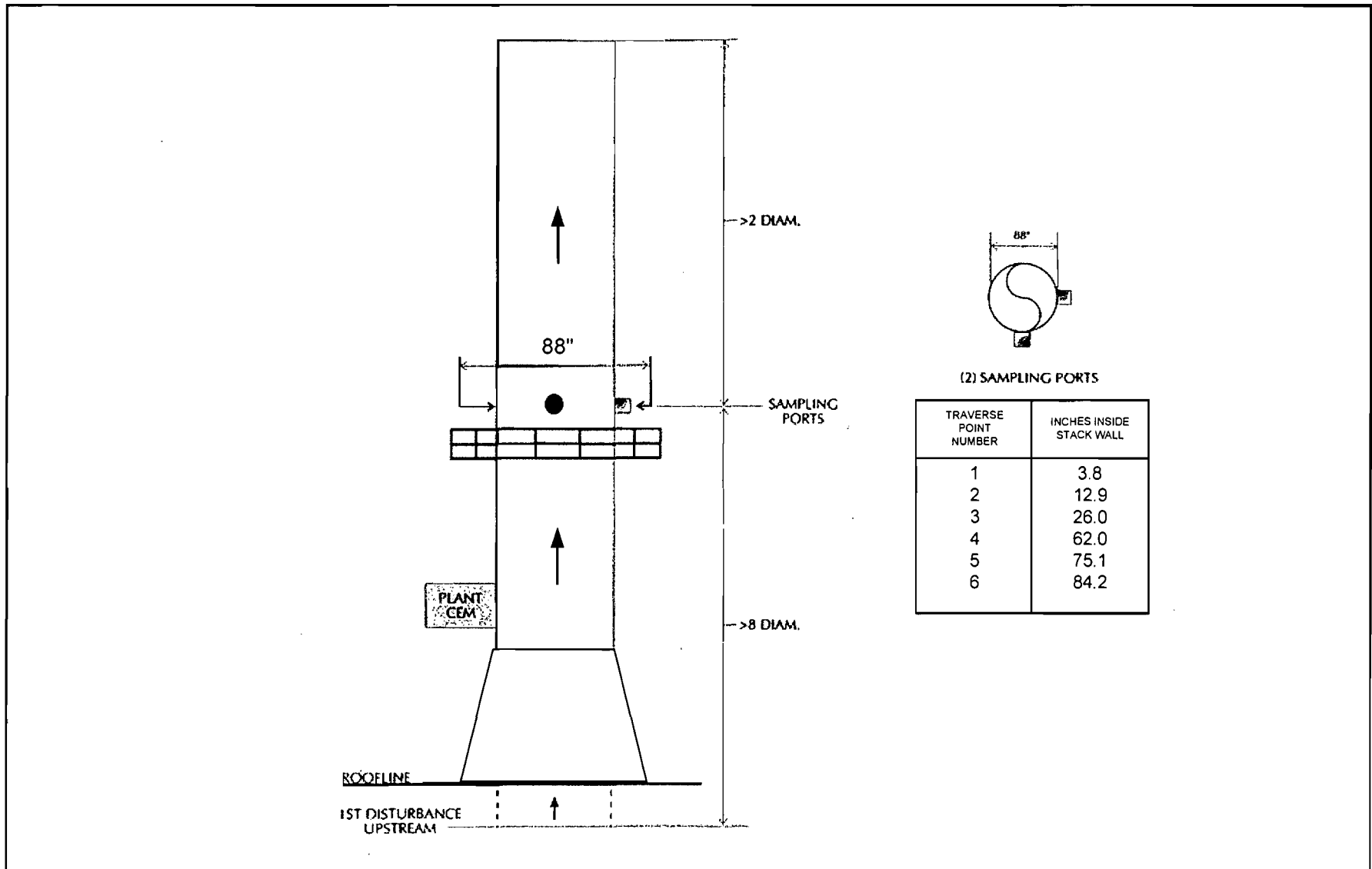
<sup>b</sup> Represented as lb/ft<sup>3</sup>. Based on heat capacities presented.

<sup>c</sup> Represented as grains/100 ft<sup>3</sup>.

<sup>d</sup> Atmospheric nitrogen.

**ATTACHMENT VB-EU4-J4**

**DESCRIPTION OF STACK SAMPLING FACILITIES**



Attachment VB-EU3-J4. Sampling Point Location, Unit 3 Exhaust Stack  
 City of Vero Beach Municipal Power Plant - Vero Beach, Florida

Source: Air Consulting & Engineering, Inc., 1999; Golder, 2002.

Not to Scale



**ATTACHMENT VB-EU4-J6**

**PROCEDURES FOR STARTUP AND SHUTDOWN**

## ATTACHMENT VB-EU4-J6

### PROCEDURES FOR STARTUP AND SHUTDOWN

Startup of the fossil-fuel boilers begins when fuel (either natural gas or oil) is introduced into one or more burners within the boiler and lighted (commencement of combustion). Startup is complete and steady-state operation begins when the combustion process has stabilized and the megawatt load on the unit is stable.

Shutdown of the fossil-fuel boilers begins when unit megawatt load is decreased and continues until the final burner gun is removed from service and the final Induced-draft or Forced-draft fan is removed from service.

Excess Emissions may be detected during all modes of boiler operation by any one of several continuous emission monitors. Continuous monitors are currently in place for NO<sub>x</sub>, SO<sub>2</sub>, and opacity. An audible and visual alarm is activated whenever permitted values for any of the above parameters are approached.

Countermeasures, which may be taken in the event of excess emissions include, but are not limited to:

- Proper excess air adjustments
- Recognizing and removal of faulty burners
- Fuel oil temperature adjustments
- Proper and timely operation of boiler cleaning devices
- Removal of the unit from system-dispatch mode
- Reduction of unit megawatt load
- Stopping and restarting of boiler cleaning devices
- Lowering load rate
- Pressure rate changes

Knowledge of the appropriate countermeasures to take under an excess emissions condition is a part of the routine operator training for the engineers who operate the boilers. In addition, plant operations and supervisory staff are periodically given training. Topics include current permit limits, maximum allowable duration of excess emissions, appropriate countermeasures for excess emissions, duty to notify, etc.

**ATTACHMENT VB-EU4-J10**

**SUPPLEMENTAL REQUIREMENTS COMMENT**

**ATTACHMENT VB-EU4-J10**  
**SUPPLEMENTAL REQUIREMENTS COMMENT**  
**Fossil Fuel Steam Generator Unit 4**

Unit 4 is subject to emission limits for PM, SO<sub>2</sub>, and NO<sub>x</sub>, but does not have any control device to achieve compliance with these emission limits. Therefore, 40 CFR 64 is not applicable to this unit and a Compliance Assurance Monitoring (CAM) Plan is not required.

**ATTACHMENT VB-EU4-J11**

**ALTERNATIVE METHODS OF OPERATION**



**ATTACHMENT VB-EU4-J11**  
**ALTERNATIVE METHODS OF OPERATON**  
**Fossil Fuel Steam Generator Unit 4**

Unit 4 is permitted to burn either natural gas, or a combination of natural gas and No. 2 fuel oil, No. 4 fuel oil, or No. 6 fuel oil. The unit may operate continuously (i.e., 8,760 hours per year). Natural gas and propane are used as ignitor fuels for initial startup of this unit.

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION  
(All Emissions Units)**

**Emissions Unit Description and Status**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input checked="" type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.</p> <p><input type="checkbox"/> This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.</p>			
<p>2. Regulated or Unregulated Emissions Unit? (Check one)</p> <p><input checked="" type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.</p> <p><input type="checkbox"/> The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.</p>			
<p>3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p><b>Combined Cycle Gas Turbine Unit No. 5 with an inlet evaporative cooler.</b></p>			
<p>4. Emissions Unit Identification Number: <span style="float: right;"><input type="checkbox"/> No ID</span></p> <p>ID: <b>005</b> <span style="float: right;"><input type="checkbox"/> ID Unknown</span></p>			
<p>5. Emissions Unit Status Code:</p> <p><b>A</b></p>	<p>6. Initial Startup Date:</p> <p><b>1 Dec 1992</b></p>	<p>7. Emissions Unit Major Group SIC Code:</p> <p><b>49</b></p>	<p>8. Acid Rain Unit?</p> <p><input checked="" type="checkbox"/></p>
<p>9. Emissions Unit Comment: (Limit to 500 Characters)</p> <p><b>Generator nameplate rating at ISO conditions. An evaporative cooling system is at the compressor inlet of Unit 5. The system cools the inlet air to the turbine, which increases turbine output and decreases heat rate. Refer to Attachment VB-FI-A7 for pictures of Unit 5.</b></p>			

**Emissions Unit Control Equipment**

1. Control Equipment/Method Description (Limit to 200 characters per device or method):

Dry low-NO<sub>x</sub> combustors

Water injection (oil firing only)

2. Control Device or Method Code(s): **25, 28****Emissions Unit Details**

1. Package Unit:	
Manufacturer: <b>General Electric</b>	Model Number: <b>PG 6541(B), Frame 6</b>
2. Generator Nameplate Rating: <b>38 MW</b>	
3. Incinerator Information:	
Dwell Temperature:	°F
Dwell Time:	seconds
Incinerator Afterburner Temperature:	°F

**B. EMISSIONS UNIT CAPACITY INFORMATION  
(Regulated Emissions Units Only)**

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Heat Input Rate:	455	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:	24 hours/day	7 days/week
	52 weeks/year	8,760 hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p>Maximum heat input rates based on ISO conditions. Maximum heat input based on No. 2 fuel oil firing (base load). Maximum heat input for natural gas firing is 414 MMBtu/hr (base load). The evaporative cooling system can be operated at anytime that Unit 5 is operating.</p>		



**D. EMISSION POINT (STACK/VENT) INFORMATION**  
(Regulated Emissions Units Only)

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>EU-5 (Att. VB-FI-C2)</b>		2. Emission Point Type Code: <b>3</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  <b>Combustion turbine has a bypass stack which is used when the unit operates in simple cycle mode.</b>			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>125 feet</b>	7. Exit Diameter: <b>11 feet</b>	
8. Exit Temperature: <b>410 °F</b>	9. Actual Volumetric Flow Rate: <b>468,000 acfm</b>	10. Water Vapor: <b>%</b>	
11. Maximum Dry Standard Flow Rate: <b>dscfm</b>		12. Nonstack Emission Point Height: <b>feet</b>	
13. Emission Point UTM Coordinates: Zone: East (km): North (km):			
14. Emission Point Comment (limit to 200 characters):			

**E. SEGMENT (PROCESS/FUEL) INFORMATION**  
(All Emissions Units)

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>Internal Combustion Boilers, Electric Generation, Natural Gas, Turbine</b>		
2. Source Classification Code (SCC): <b>2-01-002-01</b>		3. SCC Units: <b>Million Cubic Feet Burned</b>
4. Maximum Hourly Rate: <b>0.44</b>	5. Maximum Annual Rate: <b>3,858</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>940</b>
10. Segment Comment (limit to 200 characters):  <b>Heating value based on lower heating value (LHV). Maximum annual rate based on natural gas firing for 8,760 hr/yr. Fuel use based on ISO conditions.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type ) (limit to 500 characters):  <b>Internal Combustion Engines, Electric Generation, Distillate Oil (Diesel), Turbine</b>		
2. Source Classification Code (SCC): <b>2-01-001-01</b>		3. SCC Units: <b>Thousand Gallons Burned</b>
4. Maximum Hourly Rate: <b>3.482</b>	5. Maximum Annual Rate: <b>10,000</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: <b>0.25</b>	8. Maximum % Ash:	9. Million Btu per SCC Unit: <b>130.64</b>
10. Segment Comment (limit to 200 characters):  <b>Heating value based on lower heating value (LHV). Max annual rate based on fuel oil firing at 33% annual capacity factor. Fuel use based on ISO conditions.</b>		

**F. EMISSIONS UNIT POLLUTANTS**  
(All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
CO			EL
PB			NS
NO <sub>x</sub>	025	028	EL
PM			NS
PM <sub>10</sub>			EL
SO <sub>2</sub>			EL
VOC			EL
SAM			NS
H021			NS
H114			NS
H106			NS
HAPs			NS



**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>CO</b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>19.6 lb/hour</b>	<b>42.1 tons/year</b>	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: <b>0.0226 lb/MMBtu (oil)</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.E.7</b>		7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU5-G8. CO emission limit for gas is 0.0224 lb/MMBtu. Maximum emissions, lb/hr, based on maximum oil-firing rate supplemented with gas-firing. Maximum annual emissions representative of natural gas and fuel oil firing at rates not to exceed 67% and 33% of the annual capacity factor, respectively.</b>		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):		

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.0224 lb/MMBtu</b>	<b>9.3 lb/hour</b>	<b>40.6 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>EPA Method 10 (permit renewal), annual operating report</b>		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>BACT determination, gas firing at 414 MMBtu/hr.</b>		

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>CO</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour _____ tons/year _____	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.0226 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>10.3 lb/hour 14.9 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>EPA Method 10 (permit renewal), annual operating report</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): <b>BACT determination, No. 2 fuel oil firing at 455 MMBtu/hr at 33% annual capacity factor.</b>	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>NO<sub>x</sub></b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>123 lb/hour                      243.7 tons/year</b>	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1            [ ] 2            [ ] 3            _____ to _____ tons/year	
6. Emission Factor: <b>42 ppmvd (oil)</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.E.7</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU5-G8. Emission factor basis: at 15% O<sub>2</sub>. Emission limit for gas is 25 ppmvd at 15% O<sub>2</sub>. Maximum emissions, lb/hr, based on maximum oil-firing rate supplemented with gas-firing. Maximum annual emissions representative of natural gas and fuel oil firing at rates not to exceed 67% and 33% of the annual capacity factor, respectively.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>25 ppmvd at 15% O<sub>2</sub></b>	4. Equivalent Allowable Emissions: <b>44.3 lb/hour                      194 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>EPA Method 20, annual stack test</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>BACT determination, gas firing.</b>	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units -  
Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>NO<sub>x</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour		4. Synthetically Limited? [ ]	
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year			
6. Emission Factor: Reference:		7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):			
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):			

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>		2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>42 ppmvd at 15% O<sub>2</sub></b>		4. Equivalent Allowable Emissions: <b>79 lb/hour 114.2 tons/year</b>	
5. Method of Compliance (limit to 60 characters): <b>EPA Method 20, annual stack test</b>			
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): <b>BACT determination, No. 2 fuel oil firing. Annual emissions based on No. 2 fuel oil firing at 33% capacity factor.</b>			

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>PM<sub>10</sub></b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>13.9 lb/hour                      23.7 tons/year</b>	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year	
6. Emission Factor: <b>0.025 lb/MMBtu (oil)</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.E.7</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU5-G8. Emission limit for gas is 0.006 lb/MMBtu. Maximum emissions, lb/hr, based on maximum oil-firing rate supplemented with gas-firing. Maximum annual emissions representative of natural gas and fuel oil firing at rates not to exceed 67% and 33% of the annual capacity factor, respectively.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.006 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>2.5 lb/hour                      10.9 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>EPA Method 5 or 17, annual stack test (oil only)</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>BACT determination, gas firing</b>	



**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>123 lb/hour                      178.2 tons/year</b>	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1      [ ] 2      [ ] 3      _____ to _____ tons/year	
6. Emission Factor: <b>0.25% S fuel</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.E.7</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU5-G8. Maximum sulfur content for fuel oil Maximum sulfur content for natural gas is 1 grain/100 cf. Maximum emissions, lb/hr, based on maximum oil-firing rate supplemented with gas-firing. Maximum annual emissions representative of natural gas and fuel oil firing at rates not to exceed 67% and 33% of the annual capacity factor, respectively.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.25% sulfur fuel</b>	4. Equivalent Allowable Emissions: <b>122.6 lb/hour      177.3 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>Natural gas is primary fuel and 0.25% sulfur No. 2 fuel oil</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>BACT determination, No. 2 fuel oil firing at 33% capacity factor.</b>	

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>VOC</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>9.8 lb/hour</b>	4. Synthetically Limited? [ ] <b>21 tons/year</b>
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: <b>0.0113 lb/MMBtu (oil)</b> Reference: <b>Permit No. 0610029-005-AV, Condition 111.E.7</b>	7. Emissions Method Code: <b>0</b>
8. Calculation of Emissions (limit to 600 characters):  <b>See Attachment VB-EU5-G8. Emission limit for gas is 0.0112 lb/MMBtu. Maximum emissions, lb/hr, based on maximum oil-firing rate supplemented with gas-firing. Maximum annual emissions representative of natural gas and fuel oil firing at rates not to exceed 67% and 33% of the annual capacity factor, respectively.</b>	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: <b>0.0112 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>4.6 lb/hour 20.3 tons/year</b>
5. Method of Compliance (limit to 60 characters):  <b>Natural gas firing, annual operating report</b>	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):  <b>BACT determination, gas firing</b>	



**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION  
(Regulated Emissions Units -  
Emissions-Limited and Preconstruction Review Pollutants Only)**

**Potential/Fugitive Emissions**

1. Pollutant Emitted: <b>VOC</b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: lb/hour	tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year		
6. Emission Factor: Reference:	7. Emissions Method Code:	
8. Calculation of Emissions (limit to 600 characters):		
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):		

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:	
3. Requested Allowable Emissions and Units: <b>0.0113 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>5.1 lb/hour</b>	<b>7.4 tons/year</b>
5. Method of Compliance (limit to 60 characters): <b>No. 2 fuel oil firing, 0.25% Sulfur maximum</b>		
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): <b>BACT determination, No. 2 fuel oil firing at 33% capacity factor.</b>		

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE10</b>	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
3. Requested Allowable Opacity: Normal Conditions: <b>10 %</b> Exceptional Conditions: <b>100 %</b> Maximum Period of Excess Opacity Allowed: <b>min/hour</b>	
4. Method of Compliance: <b>FDEP Method 9 Annual Compliance Test</b>	
5. Visible Emissions Comment (limit to 200 characters):  <b>Permit No. 0610029-005-AV Condition 111.E.5.</b>	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 1 of 6

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information: Manufacturer: <b>Rosemount</b> Model Number: <b>1151DP4E22B2</b> Serial Number: <b>1321980</b>	
5. Installation Date: <b>01 Jun 1992</b>	6. Performance Specification Test Date: <b>23 Nov 1994</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>Fuel gas flow. 40 CFR 75 (Acid Rain) and Permit requirements.</b>	



**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %    Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 3 of 6

1. Parameter Code: <b>O<sub>2</sub></b>	2. Pollutant(s):
3. CMS Requirement:	[ <input checked="" type="checkbox"/> ] Rule [ ] Other
4. Monitor Information: Manufacturer: <b>Amatek-Thermox</b> Model Number: <b>WDG-HP-Humox</b> Serial Number: <b>10203112A</b>	
5. Installation Date: <b>01 Nov 2000</b>	6. Performance Specification Test Date: <b>20 Dec 2000</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>40 CFR 75 (Acid Rain) requirement (used as diluent gas); CEM system upgrade.</b>	



**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ %    Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor 5 of 6

1. Parameter Code: <b>WTF</b>	2. Pollutant(s):
3. CMS Requirement:	[ <input checked="" type="checkbox"/> ] Rule [ ] Other
4. Monitor Information: Manufacturer: <b>Hoffer Flow Controls, Inc.</b> Model Number: <b>HTM-12-2-MT6</b> Serial Number: <b>48719</b>	
5. Installation Date: <b>01 Jan 1994</b>	6. Performance Specification Test Date: <b>01 Jan 1994</b>
7. Continuous Monitor Comment (limit to 200 characters):  <b>Water Flow Monitoring.</b>	



**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)**

**Supplemental Requirements**

1. Process Flow Diagram [ X ] Attached, Document ID: <u>VB-EU5-J1</u> [ ] Not Applicable [ ] Waiver Requested
2. Fuel Analysis or Specification [ X ] Attached, Document ID: <u>VB-EU5-J2</u> [ ] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
4. Description of Stack Sampling Facilities [ X ] Attached, Document ID: <u>VB-EU5-J4</u> [ ] Not Applicable [ ] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID: _____ [ X ] Previously submitted, Date: <u>26 Jul 2001</u> [ ] Not Applicable
6. Procedures for Startup and Shutdown [ X ] Attached, Document ID: <u>VB-EU5-J6</u> [ ] Not Applicable [ ] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID: _____ [ X ] Not Applicable [ ] Waiver Requested
8. Supplemental Information for Construction Permit Application [ ] Attached, Document ID: _____ [ X ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID: _____ [ X ] Not Applicable
10. Supplemental Requirements Comment:  <b>A CAM plan is not required for this unit. Refer to Attachment VB-EU5-J10 for justification.</b>



**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation [ <b>X</b> ] Attached, Document ID: <u>VB-EU5-J11</u> [ ] Not Applicable
12. Alternative Modes of Operation (Emissions Trading) [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
13. Identification of Additional Applicable Requirements [ <b>X</b> ] Attached, Document ID: <u>VB-FI-C12</u> [ ] Not Applicable
14. Compliance Assurance Monitoring Plan [ ] Attached, Document ID: _____ [ <b>X</b> ] Not Applicable
15. Acid Rain Part Application (Hard-copy Required) [ <b>X</b> ] Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: <u>VB-EU3-J15</u> [ ] Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ [ ] New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ [ ] Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ [ ] Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ [ ] Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ [ ] Not Applicable

**ATTACHMENT VB-EU5-C**  
**EMISSION UNIT REGULATIONS**

**ATTACHMENT VB-EU5-C**  
**EMISSIONS UNIT REGULATIONS**  
**Combined Cycle Gas Turbine Unit 5**

**FDEP Rules:**Stationary Sources-General:

- 62-210.650 - Circumvention; EU's with control device
- 62-210.700(1) - Excess Emissions; Startup/Shut Down
- 62-210.700(2) - Excess Emissions; Existing Units
- 62-210.700(3) - Excess Emissions; Soot Blowing/Load Change
- 62-210.700(4) - Excess Emissions; Maintenance
- 62-210.700(6) - Excess Emissions; Malfunction

Acid Rain Program

- 62-214.300 - Applicability
- 62-214.320 - Applications
- 62-214.330 - Compliance Plan and Compliance Options
- 62-214.340 - Exemptions
- 62-214.350(2) - Certificate of Representation
- 62-214.350(3) - Designated Representative
- 62-214.350(6) - Timing of Notice
- 62-214.370 - Revisions and Corrections
- 62-214.430 - Implementation and Termination of Compliance Options

Stationary Sources-General Compliance Test Requirements:

- 62-297.310(1) - Required Number of Test Runs
- 62-297.310(2)(a) - Operating Rate
- 62-297.310(3) - Calculation of Emission Rate
- 62-297.310(4)(a) - Sampling Time
- 62-297.310(4)(b) - Sample Volume
- 62-297.310(4)(c) - Required Flow Rate Range
- 62-297.310(4)(d) - Calibration
- 62-297.310(4)(e) - EPA Method 5
- 62-297.310(5) - Determination of Process Variables
- 62-297.310(6) - Stack Sampling Facilities
- 62-297.310(7)(a)3. - Testing for Permit Renewal
- 62-297.310(7)(a)4.b. - Annual Test
- 62-297.310(7)(a)5. - PM exemption if <400 hrs/yr
- 62-297.310(7)(a)9. - FDEP Notification - 15 days
- 62-297.310(7)(b) - Special Compliance Tests
- 62-297.310(7)(c) - Waiver of Compliance Tests
- 62-297.310(8) - Test Reports

Stationary Sources-Compliance Test Methods:

- 62-297.401(1)(a) - EPA Method 1
- 62-297.401(2) - EPA Method 2
- 62-297.401(3) - EPA Method 3
- 62-297.401(4) - EPA Method 4
- 62-297.401(5) - EPA Method 5

62-297.401(6)	- EPA Method 6
62-297.401(7)	- EPA Method 7
62-297.401(8)	- EPA Method 8
62-297.401(9)	- EPA Method 9
62-297.401(10)	- EPA Method 10
62-297.401(17)	- EPA Method 17
62-297.401(20)	- EPA Method 20
62-297.401(25)(a)	- EPA Method 25A

### **Federal Rules**

#### NSPS Subpart GG

40 CFR 60.332(a)(1)	- NO <sub>x</sub> for Electric Utility CTs
40 CFR 60.333	- SO <sub>2</sub> limits
40 CFR 60.334	- Monitoring of Operations
40 CFR 60.335	- Test Methods

#### NSPS General Requirements:

40 CFR 60.7(b)	- Notification and Recordkeeping-Startup/Shutdown/Malfunction
40 CFR 60.7(f)	- Notification and Recordkeeping-Maintain records-2 yrs
40 CFR 60.8(c)	- Performance Tests-Representative Conditions
40 CFR 60.8(e)	- Provide Stack Sampling Facilities
40 CFR 60.8(f)	- Test Runs
40 CFR 60.11(a)	- Compliance
40 CFR 60.11(d)	- Compliance-Maintain Air Pollution Control Equipment
40 CFR 60.11(e)(2)	- Compliance-Opacity
40 CFR 60.12	- Circumvention
40 CFR 60.13(a)	- Monitoring-Appendix B; CEMS Non-Compliance Method
40 CFR 60.13(d)(1)	- Monitoring-CEMS; Span, Drift, Etc.
40 CFR 60.13(e)	- Monitoring-Frequency of Operation

#### Acid Rain Permits:

40 CFR 72.9(a)	- Permit Requirements
40 CFR 72.9(b)	- Monitoring Requirements
40 CFR 72.9(c)(1)	- SO <sub>2</sub> Allowances-Hold Allowances
40 CFR 72.9(c)(2)	- SO <sub>2</sub> Allowances-Violation
40 CFR 72.9(c)(3)(iv)	- SO <sub>2</sub> Allowances-Phase II Units
40 CFR 72.9(c)(4)	- SO <sub>2</sub> Allowances-Allowances Held in ATS
40 CFR 72.9(c)(5)	- SO <sub>2</sub> Allowances-No Deduction for 72.9(c)(1)(i)
40 CFR 72.9(e)	- Excess Emission Requirements
40 CFR 72.9(f)	- Recordkeeping and Reporting
40 CFR 72.9(g)	- Liability
40 CFR 72.20(a)	- Designated Representative; Required
40 CFR 72.20(b)	- Designated Representative; Legally Binding
40 CFR 72.20(c)	- Designated Representative; Certification Requirements
40 CFR 72.21	- Submissions
40 CFR 72.22	- Alternate Designated Representative
40 CFR 72.23	- Changing Representatives; Owners
40 CFR 72.30(a)	- Requirements to Apply; Operate
40 CFR 72.30(c)	- Requirements to Apply; Reapply Before Expiration
40 CFR 72.30(d)	- Requirements to Apply; Submittal Requirements

- 40 CFR 72.32 - Permit Application Shield
- 40 CFR 72.40(a) - General; Compliance Plan
- 40 CFR 72.40(b) - General; Multi-unit Compliance Options
- 40 CFR 72.40(c) - General; Conditional Approval
- 40 CFR 72.40(d) - General; Termination of Compliance Options
- 40 CFR 72.51 - Permit Shield
- 40 CFR 72.90 - Annual Compliance Certification

Monitoring Part 75:

- 40 CFR 75.5 - Prohibitions
- 40 CFR 75.10(a)(2) - Primary Measurement; NO<sub>x</sub>; Except 75.12 and.17; Subpart E
- 40 CFR 75.10(a)(3)(ii) - Primary Measurement; CO<sub>2</sub>; Appendix G
- 40 CFR 75.10(b) - Primary Measurement; Performance Requirements
- 40 CFR 75.10(c) - Primary Measurement; Heat Input; Appendix F
- 40 CFR 75.10(f) - Primary Measurement; Minimum Measurement
- 40 CFR 75.10(g) - Primary Measurement; Minimum Recording
- 40 CFR 75.11(d) - SO<sub>2</sub> Monitoring; Gas- and Oil-Fired Units
- 40 CFR 75.11(e) - SO<sub>2</sub> Monitoring; Gaseous firing
- 40 CFR 75.12(a) - NO<sub>x</sub> Monitoring; Coal; Non-Peaking Oil/Gas Units
- 40 CFR 75.12(b) - NO<sub>x</sub> Monitoring; Determination of NO<sub>x</sub> Emission Rate; Appendix F
- 40 CFR 75.13(b) - CO<sub>2</sub> Monitoring; Appendix G
- 40 CFR 75.14(c) - Opacity Monitoring; Gas Units Exemption
- 40 CFR 75.20(a)(5) - Initial Certification Approval Process; Loss of Certification
- 40 CFR 75.20(e) - Certification Peaking/By-Pass
- 40 CFR 75.20(f) - Alternate Monitoring System
- 40 CFR 75.20(g) - Exceptions to CEMS; Oil/Gas/Diesel; Appendix D & E
- 40 CFR 75.21(a) - QA/QC; CEMS
- 40 CFR 75.21(b) - QA/QC; Opacity; Part 51 Appendix M
- 40 CFR 75.21(c) - QA/QC; Calibration Gases
- 40 CFR 75.21(d) - QA/QC; Notification of RATA
- 40 CFR 75.21(e) - QA/QC; Audits
- 40 CFR 75.21(f) - QA/QC; CEMS
- 40 CFR 75.22 - Reference Methods
- 40 CFR 75.24 - Out-of-Control Periods; CEMS
- 40 CFR 75.30(a)(3) - General Missing Data Procedures; NO<sub>x</sub>
- 40 CFR 75.32 - Monitoring Data Availability for Missing Data
- 40 CFR 75.33 - Standard Missing Data Procedures
- 40 CFR 75.36 - Missing Data for Heat Input
- 40 CFR 75.53 - Monitoring Plan; revisions
- 40 CFR 75.54(a) - Recordkeeping-General
- 40 CFR 75.54(b) - Recordkeeping-Operating Parameter
- 40 CFR 75.54(d) - Recordkeeping-NO<sub>x</sub>
- 40 CFR 75.56 - Certification; QA/QC Provisions
- 40 CFR 75.55 - General Recordkeeping
- 40 CFR 75.60 - Reporting Requirements-General
- 40 CFR 75.61 - Reporting Requirements-Notification cert/recertification
- 40 CFR 75.62 - Reporting Requirements-Monitoring Plan
- 40 CFR 75.63 - Reporting Requirements-Certification/Recertification
- 40 CFR 75.64(a) - Reporting Requirements-Quarterly reports; Submission
- 40 CFR 75.64(b) - Reporting Requirements-Quarterly reports; DR statement

40 CFR 75.64(c)	- Reporting Requirements-Quarterly reports; Compliance Certification
40 CFR 75.64(d)	- Reporting Requirements-Quarterly reports; Electronic Format
Appendix A	- Specifications and Test Procedures
Appendix B	- QA/QC Procedures
Appendix C	- Missing Data
Appendix D	- Optional SO <sub>2</sub> ; Oil-/Gas-Fired Units
Appendix F	- Conversion Procedures
Appendix G	- Determination of CO <sub>2</sub> Emissions
Appendix H	- Traceability Protocol

Acid Rain Program-Excess Emissions:

40 CFR 77.3	- Offset Plans
40 CFR 77.5(b)	- Deductions of Allowances
40 CFR 77.6	- Excess Emissions Penalties (SO <sub>2</sub> and NO <sub>x</sub> )

**ATTACHMENT VB-EU5-G8**  
**EMISSION CALCULATIONS**

Attachment VB-EU5-G8. Maximum Emissions for Emission Limited Pollutants, City of Vero Beach  
Combined Cycle Gas Turbine Unit 5

Pollutant	Combined			Natural Gas
	No. 2 Fuel Oil	Natural Gas	Total	
Hours of Operation (hrs/yr)	8,760	8,760	8,760	8,760
Annual Capacity Factor	33	67		100
Sulfur Dioxide (lb/hr) (Oil) = Fuel sulfur content (%) x (MW SO <sub>2</sub> /MW S) x Fuel Consumption (lb/hr)				
Sulfur Dioxide (lb/hr) (Gas) = Fuel sulfur content (gr/100 cf)/7000 (gr/lb) x (MW SO <sub>2</sub> /MW S) x Fuel Consumption (100 cf/hr)				
Basis	Permit	1 gr S/100 cf		1 gr S/100 cf
Sulfur Content (%)	0.25	NA		NA
Fuel Consumption (lb/hr)	24,728	NA		NA
Sulfur Content (gr/100 cf)	NA	1		1
Fuel Consumption (100 cf/hr)	NA	4,404.3		4,404.3
MW SO <sub>2</sub>	64	64		64
MW S	32	32		32
Emission Rate (lb/hr)	123.6	1.3	124.9	1.3
(TPY)	178.7	3.7	182.4	5.5
Particulate Matter (lb/hr) = EF (lb/MMBtu) x Heat Input Rate (MMBtu/hr)				
Basis	Permit	Permit		Permit
EF (lb/MMBtu)	0.025	0.006		0.006
Heat Input Rate (MMBtu/hr)	455	414		414
Emission Rate (lb/hr)	11.4	2.5	13.9	2.5
(TPY)	16.4	7.3	23.7	10.9
Nitrogen Oxides (lb/hr) = NO <sub>x</sub> (ppm) x {[20.9 x (1 -Moisture (%)/100)] - Oxygen (%)} x 2,116.8 x Volume flow (acfm) x 46 (mole wgt NO <sub>x</sub> ) x 60 min/hr / [1,545 x (CT temp (°F) + 460°F) x 5.9 x 1,000,000 (ppm)]				
Basis	Permit	Permit		Permit
Basis, ppmvd @ 15% O <sub>2</sub>	42.0	25.0		25.0
Moisture (%)	8.05	9.70		9.70
Oxygen (%)	13.10	13.16		13.16
Volume flow (acfm)	702,135	707,780		707,780
Temperature (°F)	1,003	1,003		1,003
Emission Rate (lb/hr)	79.0	44.3	123.3	44.3
(TPY)	114.2	130.0	244.2	194.0
Carbon Monoxide (lb/hr) = CO (lb/MMBtu) x Heat Input Rate (MMBtu/hr)				
Basis	Permit	Permit		Permit
Emission Rate Basis (lb/MMBtu)	0.0226	0.0224		0.0224
Heat Input Rate (MMBtu/hr)	455	414		414
Emission Rate (lb/hr)	10.3	9.3	19.6	9.3
(TPY)	14.9	27.2	42.1	40.6
Volatile Organic Compounds (lb/hr) = VOC (lb/MMBtu) x Heat Input Rate (MMBtu/hr)				
Basis	Permit	Permit		Permit
Emission Rate Basis (lb/MMBtu)	0.0113	0.0112		0.0112
Heat Input Rate (MMBtu/hr)	455	414		414
Emission Rate (lb/hr)	5.1	4.6	9.8	4.6
(TPY)	7.4	13.6	21.0	20.3

Source: City of Vero Beach, 1996.

Note: Universal Gas Constant = 1,545 ft-lb(force)/°R

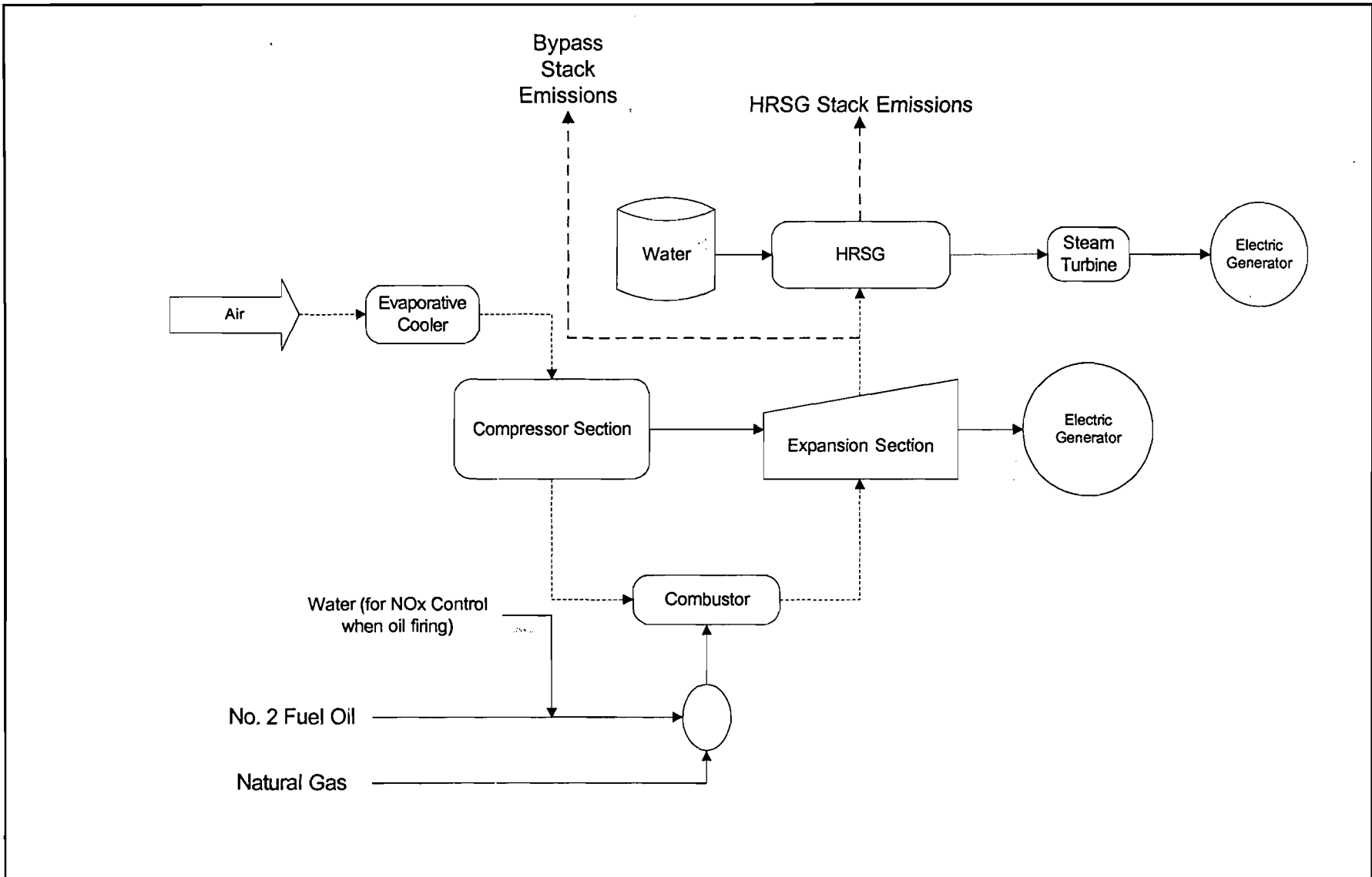
Atmospheric pressure = 2,116.8 lb(force)/ft<sup>2</sup>

ppmvd = parts per million, volume dry.

O<sub>2</sub> = oxygen



**ATTACHMENT VB-EU5-J1**  
**PROCESS FLOW DIAGRAM**



Attachment VB-EU5-J1  
Combined Cycle Unit 5 Process Flow Diagram

City of Vero Beach Municipal Power Plant - Vero Beach, Florida

Process Flow Legend

- Solid/Liquid ———>
- Gas - - - - ->
- Steam ·····>



**ATTACHMENT VB-EU5-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

**ATTACHMENT VB-EU5-J2**  
**FUEL ANALYSIS OR SPECIFICATION**

Fuel	Density (lb/gal) <sup>a</sup>	Moisture (%)	Maximum % Weight Content			Heat Capacity
			Sulfur	Nitrogen	Ash	
Natural Gas	0.045 <sup>b</sup>	—	1 <sup>c</sup>	0.43 <sup>d</sup>	—	23,100 BTU/lb 1,030 Btu/ft <sup>3</sup>
No. 2 Fuel Oil	7.1	0.01	0.25	0.02	<0.01	19,500 BTU/lb 138,500 Btu/gal

<sup>a</sup> At 60 degrees F.

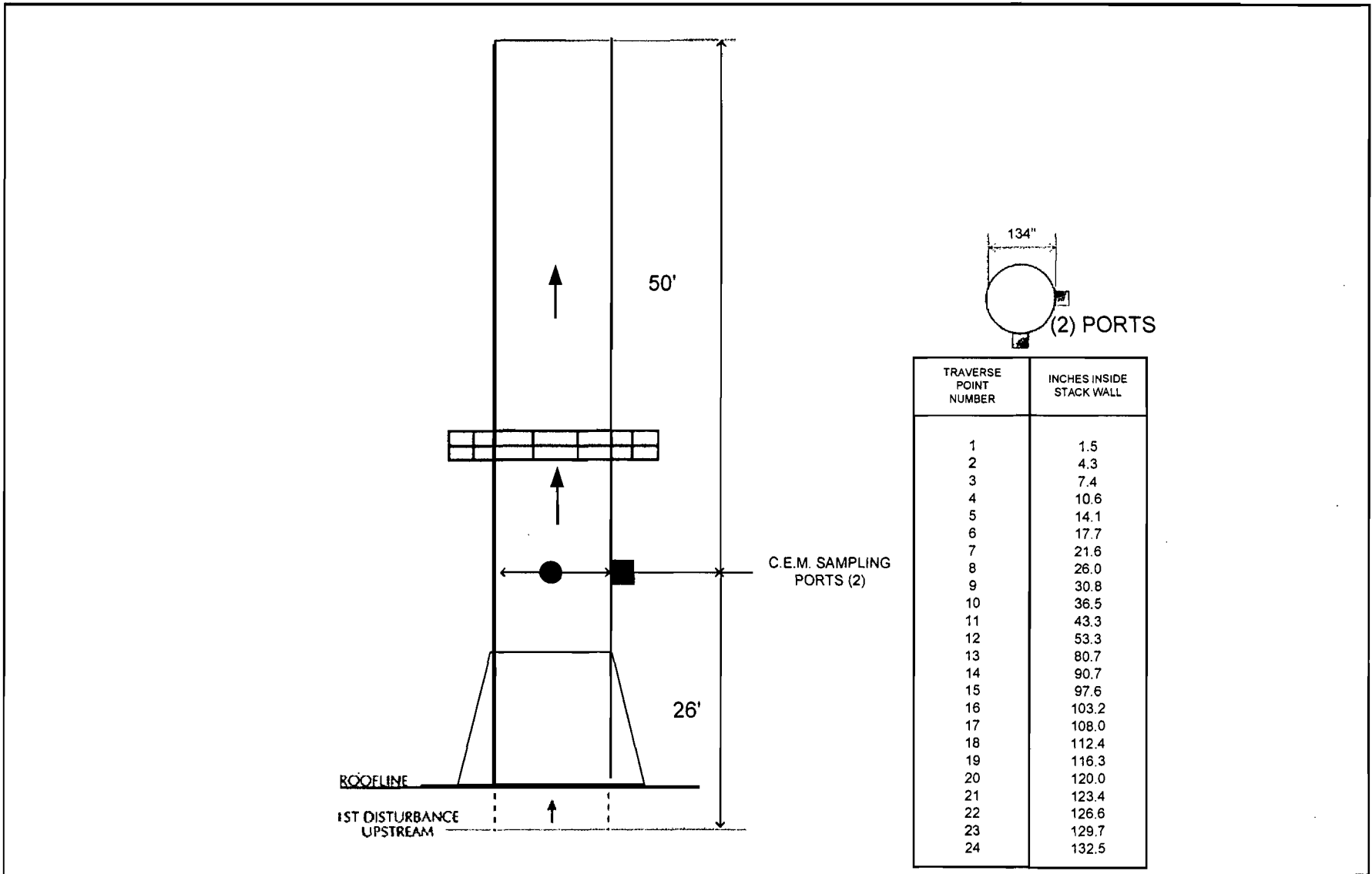
<sup>b</sup> Represented as lb/ft<sup>3</sup>. Based on heat capacities presented.

<sup>c</sup> Represented as grains/100 ft<sup>3</sup>.

<sup>d</sup> Atmospheric nitrogen.

**ATTACHMENT VB-EU5-J4**

**DESCRIPTION OF STACK SAMPLING FACILITIES**



Attachment VB-EU5-J4. Sampling Point Location  
 Unit 5 Exhaust Stack, Combined Cycle Gas Turbine  
 City of Vero Beach Municipal Power Plant - Vero Beach, Florida  
 Source: Air Consulting & Engineering, Inc., 1999; Golder, 2002.

Not to Scale



**ATTACHMENT VB-EU5-J6**

**PROCEDURES FOR STARTUP AND SHUTDOWN**

**ATTACHMENT VB-EU5-J6**  
**PROCEDURES FOR STARTUP AND SHUTDOWN**

Startup of the gas turbine begins with a start command initiated in the Mark V Computer. Fuel selection is also made during the start command. The fuel is introduced into the combustion chamber and ignited. The gas turbine is equipped with Dry Low NO<sub>x</sub> (DLN) Combustors. During the startup process the DLN Combustors will go through four different firing stages to achieve its' steady state, the first is the primary followed by lean-lean, secondary and finally steady state premix.

Shutdown begins when the stop command is executed on the Mark V Computer. At this time, the unit begins a scheduled controlled shutdown. When the unit reaches approximately 18 percent speed, the fuel reference valve closes and the unit coasts down to zero speed.

Excess emissions are kept to a minimum during natural gas firing by operating the gas turbine in the steady state premix mode. When burning liquid fuel, emissions are minimized with the use of a water injection system. Countermeasures taken during periods of high excess emissions include the following: reduction of unit load, removal of the unit from service, resetting the steady state premix mode if necessary. Continuous monitors are currently in place for NO<sub>x</sub> emissions. Audible and visual alarms notify the operator when the CT has exceeded the permit limits for NO<sub>x</sub>.

Knowledge of the appropriate countermeasures to take during periods of excess emissions is part of the operators training. Training includes, current permit limits and conditions, countermeasures to be taken during excess emissions, and proper notification process when excess emissions have occurred.



**ATTACHMENT VB-EU5-J10**

**SUPPLEMENTAL REQUIREMENTS COMMENT**

**ATTACHMENT VB-EU5-J10**  
**COMPLIANCE ASSURANCE MONITORING PLAN**

Unit 5 is subject to emission limits for PM<sub>10</sub>, SO<sub>2</sub>, CO, VOC, and NO<sub>x</sub>. The control devices for NO<sub>x</sub> are water injection and dry low-NO<sub>x</sub> burners. As required by 40 CFR 75, NO<sub>x</sub> emissions are monitored with a continuous emission monitor (CEM). The use of a CEM that satisfies the monitoring requirements of 40 CFR 75 satisfies the general criteria and performance criteria required by 40 CFR 64. Therefore, the Compliance Assurance Monitoring Plan does not need to be submitted for Unit 5.

**ATTACHMENT VB-EU5-J11**  
**ALTERNATIVE METHODS OF OPERATION**

**ATTACHMENT VB-EU5-J11****ALTERNATIVE METHODS OF OPERATON****Combined Cycle Unit 5**

Unit 5 is permitted to burn either natural gas, or No. 2 fuel oil. The unit may operate continuously (i.e., 8,760 hours per year). No. 2 fuel oil may be fired at a rate not to exceed 33 percent annual capacity factor.

**III. EMISSIONS UNIT INFORMATION**

A separate Emissions Unit Information Section (including subsections A through J as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

**A. GENERAL EMISSIONS UNIT INFORMATION**  
(All Emissions Units)

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in This Section: (Check one)			
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).			
[ X ] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.			
[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.			
2. Regulated or Unregulated Emissions Unit? (Check one)			
[ ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.			
[ X ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.			
3. Description of Emissions Unit Addressed in This Section (limit to 60 characters): <b>Facility-Wide Fugitive Emissions</b>			
4. Emissions Unit Identification Number: [ X ] No ID ID: [ ] ID Unknown			
5. Emissions Unit Status Code: <b>A</b>	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit? [ ]
9. Emissions Unit Comment: (Limit to 500 Characters)			
<b>See Attachment VB-EU6-A9. This section contains information on fugitive, unregulated, and insignificant emission sources including the wastewater treatment plant (EU 007) and fuel oil, gasoline, and lube oil storage tanks (EU 006).</b>			









**D. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Regulated Emissions Units Only)**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram?		2. Emission Point Type Code:	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:			
5. Discharge Type Code:	6. Stack Height: feet	7. Exit Diameter: feet	
8. Exit Temperature: °F	9. Actual Volumetric Flow Rate:	10. Water Vapor:	
11. Maximum Dry Standard Flow Rate: dscfm		12. Nonstack Emission Point Height: feet	
13. Emission Point UTM Coordinates: Zone:                      East (km):                      North (km):			
14. Emission Point Comment (limit to 200 characters):			

**E. SEGMENT (PROCESS/FUEL) INFORMATION  
(All Emissions Units)**

**Segment Description and Rate:** Segment 1 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>Petroleum Product Storage - Fugitive Emissions (Storage).</b>		
2. Source Classification Code (SCC): <b>4-03-888-01</b>		3. SCC Units: <b>Thousand gallons stored</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: <b>5,019</b>
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):  <b>Segment refers to combined storage capacity of various petroleum product storage tanks contained in emission unit at time of permit application submittal. See Attachment VB-EU6-A9.</b>		

**Segment Description and Rate:** Segment 2 of 2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>Petroleum Product Storage - Fugitive Emissions (Throughput)</b>		
2. Source Classification Code (SCC): <b>4-03-999-99</b>		3. SCC Units: <b>Thousand gallons throughput</b>
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor: <b>131,350</b>
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):  <b>Segment refers to combined maximum throughput of various petroleum products for emission units at time of permit application submittal. See Attachment VB-EU6-A9.</b>		

**F. EMISSIONS UNIT POLLUTANTS**  
 (All Emissions Units)

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code

**G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**  
**(Regulated Emissions Units -**  
**Emissions-Limited and Preconstruction Review Pollutants Only)**

Potential/Fugitive Emissions

1. Pollutant Emitted:	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour                      tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1            [ ] 2            [ ] 3            _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions \_\_\_\_\_ of \_\_\_\_\_

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: lb/hr	4. Equivalent Allowable Emissions: lb/hour                      tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

**H. VISIBLE EMISSIONS INFORMATION**  
**(Only Regulated Emissions Units Subject to a VE Limitation)**

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_\_\_\_ of \_\_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: _____ % Exceptional Conditions: _____ % Maximum Period of Excess Opacity Allowed: _____ min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

**I. CONTINUOUS MONITOR INFORMATION**  
**(Only Regulated Emissions Units Subject to Continuous Monitoring)**

**Continuous Monitoring System:** Continuous Monitor \_\_\_\_\_ of \_\_\_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: _____ Serial Number: _____	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

**J. EMISSIONS UNIT SUPPLEMENTAL INFORMATION  
(Regulated Emissions Units Only)****Supplemental Requirements**

1. Process Flow Diagram <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

**Additional Supplemental Requirements for Title V Air Operation Permit Applications**

11. Alternative Methods of Operation <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
12. Alternative Modes of Operation (Emissions Trading) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
13. Identification of Additional Applicable Requirements <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
14. Compliance Assurance Monitoring Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
15. Acid Rain Part Application (Hard-copy Required) <input type="checkbox"/> Acid Rain Part - Phase II (Form No. 62-210.900(1)(a)) Attached, Document ID: _____ <input type="checkbox"/> Repowering Extension Plan (Form No. 62-210.900(1)(a)1.) Attached, Document ID: _____ <input type="checkbox"/> New Unit Exemption (Form No. 62-210.900(1)(a)2.) Attached, Document ID: _____ <input type="checkbox"/> Retired Unit Exemption (Form No. 62-210.900(1)(a)3.) Attached, Document ID: _____ <input type="checkbox"/> Phase II NOx Compliance Plan (Form No. 62-210.900(1)(a)4.) Attached, Document ID: _____ <input type="checkbox"/> Phase NOx Averaging Plan (Form No. 62-210.900(1)(a)5.) Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

**ATTACHMENT VB-EU6-A9**  
**EMISSION UNIT COMMENT**



**ATTACHMENT VB-EU6-A9**  
**EMISSION UNIT COMMENT**

**Trivial Activities**

There are trivial activities at the facility that are identified as examples of, but are not limited to, the trivial activities identified by the Division of Air Resources Management's (DARM's) guidance. For example, these activities include plant maintenance and upkeep activities (e.g., ground-keeping, general repairs, cleaning, painting, welding, paving parking lots), office, equipment operations, steam vents and safety relieve valves. It is understood that such activities identified herein are consistent, in terms of emissions and types, with those activities listed in DARM's guidance.

**Notification of Temporary Exemptions**

Pursuant to Rule 62-210.300(3)(b)1., notice is herein provided that the emissions units listed below are not subject to a permit issued by the Department of Environmental Protection and are exempt from permitting until a final determination is made under the Title V permitting requirements (Rule 62-213 F.A.C.). These units would not have triggered review under Rules 62-212.400 or 62-212.500 or any new source performance standard listed in Rule 62-204.800 F.A.C. Pursuant to Rule 62-210.300(3)(b)1., F.A.C., the City authorizes the Department to inspect these emission units at the Department's discretion.

**ATTACHMENT VB-EU6-A9  
GENERAL EMISSIONS UNIT INFORMATION**

Table 1. City of Vero Beach, Municipal Power Plant, Unregulated Emissions Unit

Area	Emission Unit Description	Status
Power Plant Unit 1	Lube oil tank/ vent	UR
	Vapor extractor (roof top vent)	UR
Power Plant Unit 2	Lube oil tank/ vent	UR
	Vapor extractor (roof top vent)	UR
Power Plant Unit 3	Lube oil tank/ vent	UR
	Vapor extractor (roof top vent)	UR
Power Plant Unit 4	Lube oil tank/ vent	UR
	Vapor extractor (roof top vent)	UR
Power Plant Unit 5 (Combustion turbine)	Lube oil vent with demister	UR
	Startup generator/diesel engine	ER
	Diesel Tank	UR
Wastewater Treatment Plant	750 kW Emergency Diesel Generator (Used 4 hrs/mo. for testing and maintenance)	ER
Laboratory	Solvent use and hoods	ER
Fuel Storage	Tank No. 1/ No. 2 fuel oil (1,560,000 gal. capacity)	UR
	Tank No. 2/ No. 6 (Bunker C) fuel oil (3,108,000 gal. capacity)	UR
	Diesel Tank- Vehicles (500 gal.)	UR
	Gasoline Tank- Vehicles (500 gal.)	UR
Cooling Tower	Potable/ reuse cooling water	UR
Wastewater Treatment Plant	Reclaimed water storage tank (5,000,000 gal.)	UR
	Reclaimed water storage tank (3,000,000 gal.)	UR
	Sewer headworks	UR

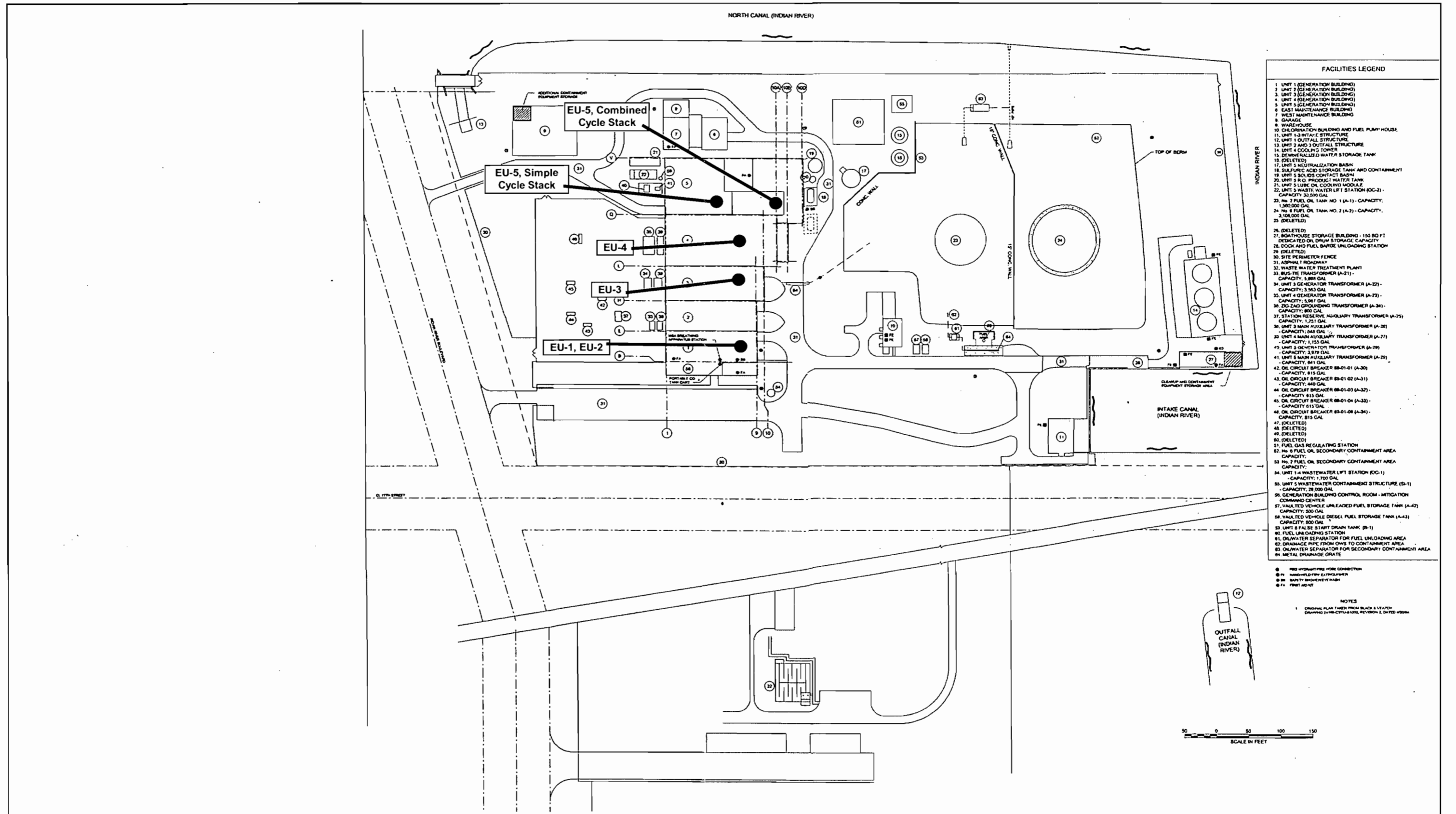
Note: UR= Unregulated; ER= Exempt by Rule 62-210.300(3)(a).

**ATTACHMENT VB-EU6-A9  
GENERAL EMISSIONS UNIT INFORMATION**

Table 2. City of Vero Beach, Municipal Power Plant, Petroleum Product Storage and Throughput Operations

Tank ID	Storage Product	Storage Tank Size (gallons)	Potential Annual Throughput (gallons)
1	No. 2 fuel oil	1,560,000	43,426,000
2	No. 6 fuel oil	3,108,000	58,220,000
V-GAS	Gasoline (vehicle)	500	2,500
V-DIES	Diesel (vehicle)	500	2,500
	<b>TOTAL</b>	<b>4,669,000</b>	<b>101,651,000</b>

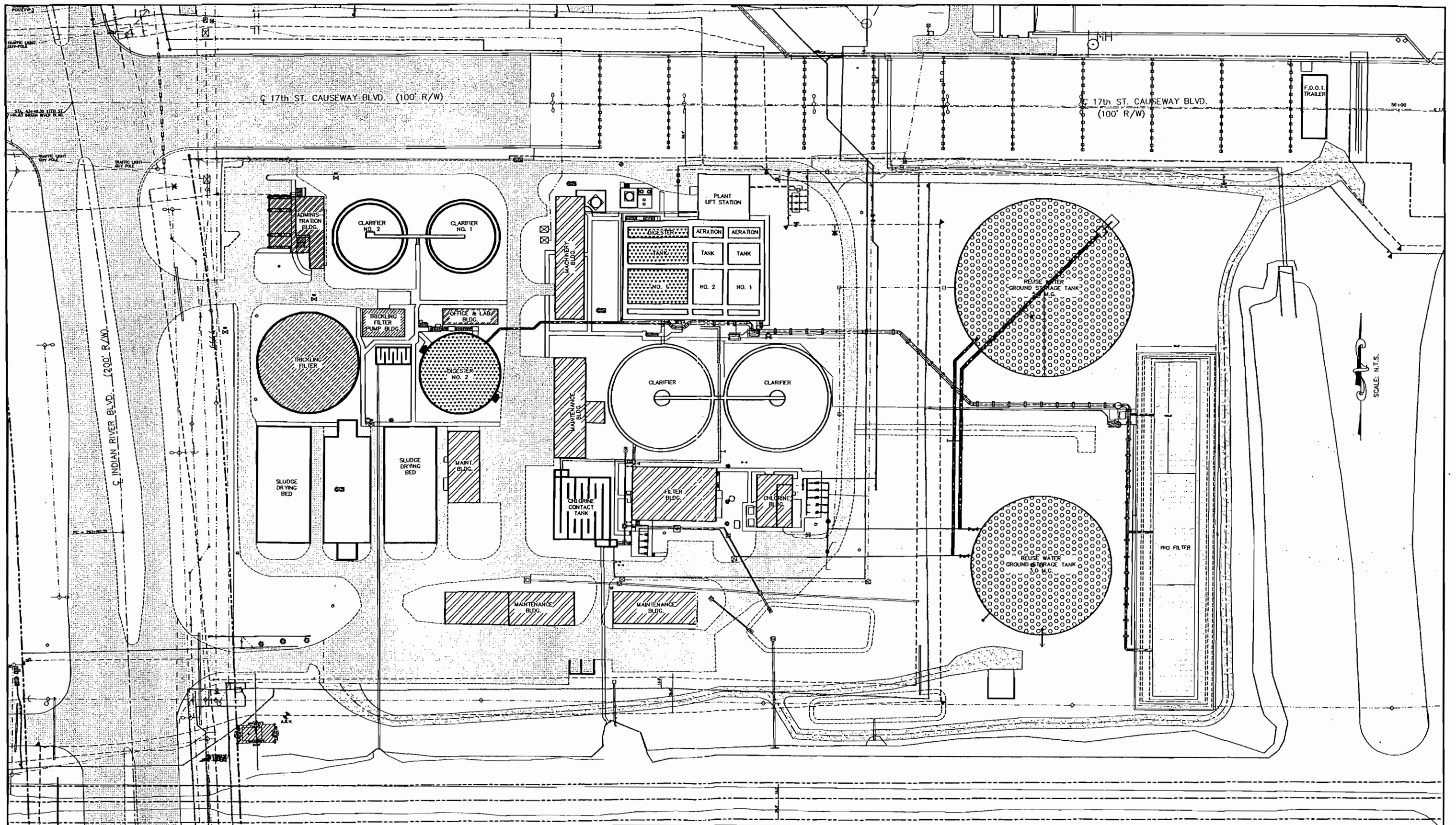
Note: Non-vehicular tank throughput based on power plant units operating at 100 percent capacity.



Attachment VB-FI-C2  
Facility Plot Plan, City of Vero Beach Municipal Utilities

Source: R.W. Beck, 2000; Black & Veatch, 2001; Golder, 2002.





REV. NO.	DESCRIPTION	AUTHRZD. BY	DRWN. BY	DATE
CITY OF VERO BEACH WASTE WATER TREATMENT PLANT				
SITE MAP		SCALE N.T.S.	DRAWN. BY T.A.Y.	DATE 6/3/02
CITY OF VERO BEACH WATER AND SEWER DEPARTMENT				
CITY PROJECT NO. ATLASDETAILS				SHEET 1 OF 1