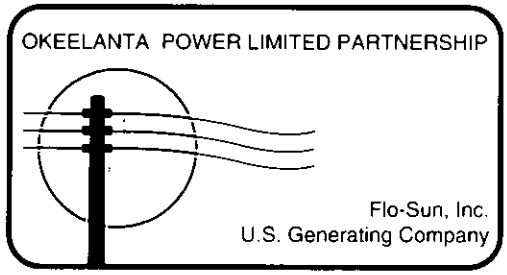




April 30, 1997

Mr. Clair Fancy, P.E.
State of Florida
Department of Environmental Protection
Burea of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399

Re: Okeelanta Power Limited Partnership
AC 50-219413; PSD-FL-196 E ?
0990332-006-AC

Dear Mr. Fancy:

Please find attached four copies of the Okeelanta Power Limited Partnership "Application for Air Permit Modification". The application was prepared by Golder Associates, Inc., and requests revisions of the permitted limits for mercury, lead, sulfur dioxide and the averaging period for carbon monoxide. Check #5447 in the amount of $250.00 is also enclosed to cover the permit processing fee. If you have any questions please contact me at (561) 993-1003.

Sincerely,

James M. Meriwether
Environmental Manager

cc: (w/ attachment)
David Knowles - FDEP/South District - 1 copy
Ajaya Satyal - PBCHD - 1 copy
Michelle Golden - USGen - 1 copy
David Dee - Landers & Parsons - 1 copy
(w/o attachment)
JMG members
J. Ketterling
CC: EPA
NPS

P.O. BOX 8 SOUTH BAY, FL 33493 561-993-1000 FAX 561-996-6596

**OKEELANTA POWER LTD. PARTNERSHIP**
6 MILES SOUTH OF SOUTH BAY
ON US HWY. 27
SOUTH BAY, FL 33493

FIRST UNION NATIONAL BANK
OF FLORIDA
FT. LAUDERDALE, FLORIDA 33301
63-643-670

Pay: **********Two hundred fifty dollars and no ce

| DATE | CHECK NO. | AMOUNT |
|---|---|---|
| 4/28/97 | 5447 | $********2. |

PAY
TO THE
ORDER
OF

FL Dept of Envr. Protection
2600 Blair Stone Road
Tallahassee, FL 32399-2400

⑈005447⑈ ⑆067006432⑆ 20900005113 74⑈

Recieved
May 5, 1997
BAR

# OKEELANTA POWER LIMITED PARTNERSHIP

## APPLICATION FOR AIR PERMIT
## APRIL 1997

**Prepared For:**

**Okeelanta Power Limited Partnership**
**Six Miles South of South Bay**
**South Bay, Florida 33493**

**Prepared By:**

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

***9737509Y/F3***

0990332-006-AC

# TABLE OF CONTENTS

**PART A**

APPLICATION FOR AIR PERMIT

**PART B**

# Department of
# Environmental Protection

## DIVISION OF AIR RESOURCES MANAGEMENT

### APPLICATION FOR AIR PERMIT - LONG FORM

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

### I. APPLICATION INFORMATION

This section of the Application for Air Permit form identifies the facility and provides general information on the scope and purpose of this application. This section also includes information on the owner or authorized representative of the facility (or the responsible official in the case of a Title V source) and the necessary statements for the applicant and professional engineer, where required, to sign and date for formal submittal of the Application for Air Permit to the Department. If the application form is submitted to the Department using ELSA, this section of the Application for Air Permit must also be submitted in hard-copy.

**Identification of Facility Addressed in This Application**

Enter the name of the corporation, business, governmental entity, or individual that has ownership or control of the facility; the facility site name, if any; and the facility's physical location. If known, also enter the facility identification number.

| | |
|---|---|
| 1. Facility Owner/Company Name: **Okeelanta Power Limited Partnership** | |
| 2. Site Name: **Okeelanta Power L.P.** | |
| 3. Facility Identification Number: **0990332** | [ ] Unknown |
| 4. Facility Location Information:<br>Street Address or Other Locator: **Six Miles South of South Bay**<br>City: **South Bay** County: **Palm Beach** Zip Code: **33493** | |
| 5. Relocatable Facility?<br>[ ] Yes [X] No | 6. Existing Permitted Facility?<br>[X] Yes [ ] No |

**Application Processing Information (DEP Use)**

| | |
|---|---|
| 1. Date of Receipt of Application: | May 5, 1997 |
| 2. Permit Number: | 0990332-006-AC |
| 3. PSD Number (if applicable): | |
| 4. Siting Number (if applicable): | |

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official:

   Ricardo A. Lima, Vice-President/General Manager

2. Owner/Authorized Representative or Responsible Official Mailing Address:

Organization/Firm: **Okeelanta Power Limited Partnership**
Street Address: **P.O. Box 8**
City: **South Bay** State: **FL** Zip Code: **33493**

3. Owner/Authorized Representative or Responsible Official Telephone Numbers:

Telephone: **(561) 993-1000** Fax: **(561) 996-6596**

4. Owner/Authorized Representative or Responsible Official Statement:

*I, the undersigned, am the owner or authorized representative* of the non-Title V source addressed in this Application for Air Permit or the responsible official, as defined in Rule 62-210.200, F.A.C., 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.*

R A Lima
Signature

4-28-97
Date

* Attach letter of authorization if not currently on file.

## Scope of Application

This Application for Air Permit addresses the following emissions unit(s) at the facility. An Emissions Unit Information Section (a Section III of the form) must be included for each emissions unit listed.

| Emissions Unit ID | | Description of Emissions Unit | Permit Type |
|---|---|---|---|
| Unit # | Unit ID | | |
| 1R | 001 | Boiler A fired by Biomass/No.2 oil/coal/TDF | AC1F |
| 2R | 002 | Boiler B fired by Biomass/No.2 oil/coal/TDF | AC1F |
| 3R | 003 | Boiler C fired by Biomass/No.2 oil/coal/TDF | AC1F |

**See individual Emissions Unit (EU) sections for more detailed descriptions.**
**Multiple EU IDs indicated with an asterisk (*). Regulated EU indicated with an "R".**

**Purpose of Application and Category**

Check one (except as otherwise indicated):

**Category I: All Air Operation Permit Applications Subject to Processing Under Chapter 62-213, F.A.C.**

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Chapter 62-213, F.A.C., for an existing facility which is classified as a Title V source.

[ ] Initial air operation permit under Chapter 62-213, F.A.C., 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: _____

[ ] Air operation permit renewal under Chapter 62-213, F.A.C., for a Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a Title V source to address one or more newly constructed or modified emissions units addressed in this application.

Current construction permit number: _____

Operation permit to be renewed: _____

[ ] Air operation permit revision or administrative correction for a Title V source to address one or more proposed new or modified emissions units and to be processed concurrently with the air construction permit application. Also check Category III.

Operation permit to be revised/corrected: _____

_____

[ ] Air operation permit revision for a Title V source 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 to be revised: _____

Reason for revision: _____

_____

**Category II: All Air Construction Permit Applications Subject to Processing Under Rule 62-210.300(2)(b),F.A.C.**

This Application for Air Permit is submitted to obtain:

[ ] Initial air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s): _____

_____

[ ] Renewal air operation permit under Rule 62-210.300(2)(b), F.A.C., for a synthetic non-Title V source.

Operation permit to be renewed: _____

[ ] Air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g.; to address one or more newly constructed or modified emissions units.

Operation permit to be revised: _____

Reason for revision: _____

_____

**Category III: All Air Construction Permit Applications for All Facilities and Emissions Units.**

This Application for Air Permit is submitted to obtain:

[ x ] Air construction permit to construct or modify one or more emissions units within a facility (including any facility classified as a Title V source).

Current operation permit number(s), if any: _____

**AC50-219413; PSD-FL-196**

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

Current operation permit number(s): _____

_____

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

## Application Processing Fee

Check one:

[ x ] Attached - Amount: $ **$ 250.00** [ ] Not Applicable.

## Construction/Modification Information

1. Description of Proposed Project or Alterations:

**This application proposes revisions to the current construction permit for the 74.9 MW Biomass fired cogeneration facility. This application requests revised permit limits for SO2, Pb, and Hg when burning wood waste. In addition, the averaging time associated with the CO emissions limit is being changed to a 24-hour average. These revisions are based on actual stack test data and fuel quality of biomass fuel.**

2. Projected or Actual Date of Commencement of Construction :

**1 Jun 1997**

3. Projected Date of Completion of Construction :

**31 Dec 1998**

## Professional Engineer Certification

1. Professional Engineer Name: **David A. Buff**
   Registration Number: **19011**

2. Professional Engineer Mailing Address:
   Organization/Firm: **Golder Associates Inc.**
   Street Address: **6241 NW 23rd Street, Suite 500**
   City: **Gainesville** State: **FL** Zip Code: **32653-1500**

3. Professional Engineer Telephone Numbers:
   Telephone: **(352) 336-5600** Fax: **(352) 336-6603**

4. Professional Engineer's 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 [X] 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.*

David A. Buff — Signature (seal)

4/23/97 — Date

* Attach any exception to certification statement.

## Application Contact

1. Name and Title of Application Contact:
   **James Meriwether, Environmental Manager**

2. Application Contact Mailing Address:

   Organization/Firm: **Okeelanta Power Limited Partnership**
   Street Address: **P.O. Box 8**
   City: **South Bay** State: **FL** Zip Code: **33493**

3. Application Contact Telephone Numbers:

   Telephone: **(561) 993-1003** Fax: **(561) 996-6596**

## Application Comment

**Organization/Firm Official Mailing Address: P.O. Box 8; 6 Miles South of South Bay, Highway 27**

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

**Facility Location and Type**

1. Facility UTM Coordinates:
   Zone: **17** East (km): **524.9** North (km): **2940.1**

2. Facility Latitude/Longitude:
   Latitude (DD/MM/SS): **26 / 35 / 0** Longitude: (DD/MM/SS): **80 / 45 / 0**

| 3. Governmental Facility Code: | 4. Facility Status Code: | 5. Facility Major Group SIC Code: | 6. Facility SIC(s): |
|---|---|---|---|
| **0** | **A** | **49** | **4911** |

7. Facility Comment (limit to 500 characters):

**Facility Street Address: Six Miles South of South Bay on Highway 27. Facility consists of 74.9 MW electricity generating Cogen firing biomass, oil, coal or tire-derived fuel.**

**Facility Contact**

1. Name and Title of Facility Contact:
   **James M. Meriwether, Environmental Manager**

2. Facility Contact Mailing Address:
   Organization/Firm: **Okeelanta Power Limited Partnership**
   Street Address: **P.O. Box 8**
   City: **South Bay** State: **FL** Zip Code: **33493**

3. Facility Contact Telephone Numbers:
   Telephone: **(561) 993-1003** Fax: **(561) 996-6596**

**Facility Regulatory Classifications**

| | | |
|---|---|---|
| 1. Small Business Stationary Source? | | |
| [ ] Yes | [ x ] No | [ ] Unknown |
| 2. Title V Source? | | |
| [ x ] Yes | [ ] No | |
| 3. Synthetic Non-Title V Source? | | |
| [ ] Yes, | [ x ] No | |
| 4. Major Source of Pollutants Other than Hazardous Air Pollutants (HAPs)? | | |
| [ x ] Yes | [ ] No | |
| 5. Synthetic Minor Source of Pollutants Other than HAPs? | | |
| [ ] Yes | [ x ] No | |
| 6. Major Source of Hazardous Air Pollutants (HAPs)? | | |
| [ x ] Yes | [ ] No | |
| 7. Synthetic Minor Source of HAPs? | | |
| [ ] Yes | [ x ] No | |
| 8. One or More Emissions Units Subject to NSPS? | | |
| [ x ] Yes | [ ] No | |
| 9. One or More Emissions Units Subject to NESHAP? | | |
| [ ] Yes | [ x ] No | |
| 10. Title V Source by EPA Designation? | | |
| [ ] Yes | [ x ] No | |
| 11. Facility Regulatory Classifications Comment (limit to 200 characters): | | |

## B. FACILITY REGULATIONS

**Rule Applicability Analysis** (Required for Category II applications and Category III applications involving non Title-V sources. See Instructions.)

**Not Applicable**

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

**62-210.300**
**62-212.300**

## C. FACILITY POLLUTANTS

**Facility Pollutant Information**

| 1. Pollutant Emitted | | 2. Pollutant Classification |
|---|---|---|
| PM | Particulate Matter - Total | A |
| PM10 | Particulate Matter - PM10 | A |
| SO2 | Sulfur Dioxide | A |
| NOx | Nitrogen Oxides | A |
| CO | Carbon Monoxide | A |
| VOC | Volatile Organic Compounds | A |
| PB | Lead - Total | B |
| H114 | Mercury Compounds | B |
| H021 | Beryllium Compounds | B |
| FL | Fluorides - Total | B |
| SAM | Sulfuric Acid Mist | B |
| HAPS | Total Hazardous Air Pollutants | A |
| T006 | Ammonia (anhydrous) | A |
| H106 | Hydrochloric acid | A |
| H107 | Hydrogen fluoride [Hydrofluoric aci | A |

## D. FACILITY POLLUTANT DETAIL INFORMATION

**Facility Pollutant Detail Information:**

| | | |
|---|---|---|
| 1. Pollutant Emitted: | | |
| 2. Requested Emissions Cap: | (lb/hr) | (tons/yr) |
| 3. Basis for Emissions Cap Code: | | |
| 4. Facility Pollutant Comment (limit to 400 characters): | | |

**Facility Pollutant Detail Information:**

| | | |
|---|---|---|
| 1. Pollutant Emitted: | | |
| 2. Requested Emissions Cap: | (lb/hr) | (tons/yr) |
| 3. Basis for Emissions Cap Code: | | |
| 4. Facility Pollutant Comment (limit to 400 characters): | | |

## E. FACILITY SUPPLEMENTAL INFORMATION

**Supplemental Requirements for All Applications**

1. Area Map Showing Facility Location:
   [ X ] Attached, Document ID: PART B
   [ ] Not Applicable [ ] Waiver Requested

2. Facility Plot Plan:
   [ X ] Attached, Document ID: PART B
   [ ] Not Applicable [ ] Waiver Requested

3. Process Flow Diagram(s):
   [ X ] Attached, Document ID(s): PART B
   [ ] Not Applicable [ ] Waiver Requested

4. Precautions to Prevent Emissions of Unconfined Particulate Matter:
   [ X ] Attached, Document ID: PART B
   [ ] Not Applicable [ ] Waiver Requested

5. Fugitive Emissions Identification:
   [ X ] Attached, Document ID: PART B
   [ ] Not Applicable [ ] Waiver Requested

6. Supplemental Information for Construction Permit Application:
   [ X ] Attached, Document ID: PART B
   [ ] Not Applicable

**Additional Supplemental Requirements for Category I Applications Only**

7. List of Proposed Exempt Activities:
   [ ] Attached, Document ID: _____
   [ X ] Not Applicable

8. List of Equipment/Activities Regulated under Title VI:
   [ ] Attached, Document ID: _____
   [ ] Equipment/Activities On site but Not Required to be Individually Listed
   [ X ] Not Applicable

9. Alternative Methods of Operation:
   [ ] Attached, Document ID: _____
   [ X ] Not Applicable

10. Alternative Modes of Operation (Emissions Trading):
    [ ] Attached, Document ID: _____
    [ X ] Not Applicable

| |
|---|
| 11. Identification of Additional Applicable Requirements:<br>[ ] Attached, Document ID: _____<br>[ x ] Not Applicable |
| 12. Compliance Assurance Monitoring Plan:<br>[ ] Attached, Document ID: _____<br>[ x ] Not Applicable |
| 13. Risk Management Plan Verification:<br><br>[ ] Plan Submitted to Implementing Agency - Verification Attached<br>Document ID: _____<br><br>[ ] Plan to be Submitted to Implementing Agency by Required Date<br><br>[ x ] Not Applicable |
| 14. Compliance Report and Plan<br>[ ] Attached, Document ID: _____<br>[ x ] Not Applicable |
| 15. Compliance Statement (Hard-copy Required)<br>[ ] Attached, Document ID: _____<br>[ x ] Not Applicable |

## III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

### A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

**Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

[ X ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ X ] 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).

[ ] 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.

## B. GENERAL EMISSIONS UNIT INFORMATION
## (Regulated and Unregulated Emissions Units)

**Emissions Unit Description and Status**

| | | |
|---|---|---|
| 1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Boiler A fired by Biomass/No.2 oil/coal/TDF** | | |
| 2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **001** | | |
| 3. Emissions Unit Status Code: **A** | 4. Acid Rain Unit? [ ] Yes [ X ] No | 5. Emissions Unit Major Group SIC Code: **49** |
| 6. Emissions Unit Comment (limit to 500 characters): **74.9 MW gross generating capacity for entire facility.** | | |

## Emissions Unit Control Equipment Information

**A.**

1. Description (limit to 200 characters):

**ESP - Electrostatic Precipitator**

2. Control Device or Method Code: **10**

**B.**

1. Description (limit to 200 characters):

**Selective Non-Catalytic reduction for NOx**

2. Control Device or Method Code: **107**

**C.**

1. Description (limit to 200 characters):

**Activated Carbon injection system.**

2. Control Device or Method Code: **48**

## C. EMISSIONS UNIT DETAIL INFORMATION
## (Regulated Emissions Units Only)

**Emissions Unit Details**

| | |
|---|---|
| 1. Initial Startup Date: | |
| 2. Long-term Reserve Shutdown Date: | |
| 3. Package Unit:<br>Manufacturer: | Model Number: |
| 4. Generator Nameplate Rating: | 75 MW |
| 5. Incinerator Information:<br>Dwell Temperature:<br>Dwell Time:<br>Incinerator Afterburner Temperature: | <br>°F<br>seconds<br>°F |

**Emissions Unit Operating Capacity**

| | | | |
|---|---|---|---|
| 1. Maximum Heat Input Rate: | | 715 | mmBtu/hr |
| 2. Maximum Incineration Rate: | lbs/hr | | tons/day |
| 3. Maximum Process or Throughput Rate: | | | |
| 4. Maximum Production Rate: | | | |
| 5. Operating Capacity Comment (limit to 200 characters):<br>**Maximum heat input rates: Biomass - 715 MMBtu/hr; No.2 Fuel Oil - 490 MMBtu/hr; Coal - 490 MMBtu/hr; Tire-derived fuel - 340 MMBtu/hr** | | | |

**Emissions Unit Operating Schedule**

| | | | |
|---|---|---|---|
| 1. Requested Maximum Operating Schedule: | | | |
| | 24 hours/day | | 7 days/week |
| | 52 weeks/yr | | 8,760 hours/yr |

## D. EMISSIONS UNIT REGULATIONS
## (Regulated Emissions Units Only)

**Rule Applicability Analysis** (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

**40 CFR 60, Subpart Da**
**40 CFR 60, Subpart Ea and Cb (record keeping only)**
**62-296.570 Reasonably Avail. Control Technology**

## E. EMISSION POINT (STACK/VENT) INFORMATION
## (Regulated Emissions Units Only)

**Emission Point Description and Type**

| | |
|---|---|
| 1. Identification of Point on Plot Plan or Flow Diagram: BLR A | |
| 2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4 | |
| 3. Descriptions of Emissions 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: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W | |
| 6. Stack Height: | 225 feet |
| 7. Exit Diameter: | 10 feet |
| 8. Exit Temperature: | 330 °F |

| | |
|---|---|
| 9. Actual Volumetric Flow Rate: | **270,000** acfm |
| 10. Percent 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): **Stack parameters based on biomass firing.** | |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 1 of 5

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Electric Utility boiler - bagasse** | |
| 2. Source Classification Code (SCC): **1-01-011-01** | |
| 3. SCC Units: **Tons Burned** | |
| 4. Maximum Hourly Rate: **84.118** | 5. Maximum Annual Rate: **736,874** |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: **0.05** | 8. Maximum Percent Ash: |
| 9. Million Btu per SCC Unit: | |
| 10. Segment Comment (limit to 200 characters): **Maximum percent Sulfur: 0.05. Maximum Percent Ash: 0.42. Million Btu per SCC Unit: 8.5. Total biomass all three boilers = 1,352,941 TPY.** | |

**Segment Description and Rate**: Segment 2 of 5

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Electric Utility Boiler - Wood Fired Boiler** | |
| 2. Source Classification Code (SCC): **1-01-009-03** | |
| 3. SCC Units: **Tons Burned** | |
| 4. Maximum Hourly Rate: **65** | 5. Maximum Annual Rate: **569,400** |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: **0.11** | 8. Maximum Percent Ash: **3.2** |
| 9. Million Btu per SCC Unit: **11** | |
| 10. Segment Comment (limit to 200 characters): **Maximum Percent Sulfur: 0.11. Total biomass all three boilers = 1,352,941 TPY.** | |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 3 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

**Electric Utility Boiler - Distillate Oil - Grades 1 and 2 oil**

2. Source Classification Code (SCC):

**1-01-005-01**

3. SCC Units:

**Thousand Gallons Burned**

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **3.551** | **7,745** |

6. Estimated Annual Activity Factor:

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **0.05** | |

9. Million Btu per SCC Unit:

**138**

10. Segment Comment (limit to 200 characters):

**Maximum Annual Rate: 7,745,000. This represents 24.9% oil firing on a heat input basis. Total No.2 Fuel Oil all three boilers = 19,533,086 gal/yr.**

**Segment Description and Rate**: Segment 4 of 5

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Electric Utility boiler - Butiminous Coal - Spreader Stoker** | |
| 2. Source Classification Code (SCC): **1-01-002-04** | |
| 3. SCC Units: **Tons Burned** | |
| 4. Maximum Hourly Rate: **20.417** | 5. Maximum Annual Rate: **61,172** |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: **0.7** | 8. Maximum Percent Ash: **3.7** |
| 9. Million Btu per SCC Unit: **24** | |
| 10. Segment Comment (limit to 200 characters): **Total coal all three boilers = 69,720 TPY (15.1% coal burning on a heat input basis). The combined heat input for coal and oil <25% on a calendar quarter basis.** | |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 5 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

**Electric Utility Boiler - Solid Waste - Tire Derived Fuel**

2. Source Classification Code (SCC):

**1-01-012-01**

3. SCC Units:

**Tons Burned**

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **11** | **81,246** |

6. Estimated Annual Activity Factor:

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **1.2** | **5** |

9. Million Btu per SCC Unit:

**31**

10. Segment Comment (limit to 200 characters):

**Maximum hourly rate based on 340 MMBtu/hr TDF. Total TDF all three boilers = 81,246 TPY. This represents 9.0% TDF burning on a weight basis.**

**Segment Description and Rate**: Segment _____ of _____

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): | |
| 2. Source Classification Code (SCC): | |
| 3. SCC Units: | |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
| 9. Million Btu per SCC Unit: | |
| 10. Segment Comment (limit to 200 characters): | |

## G. EMISSIONS UNIT POLLUTANTS
## (Regulated and Unregulated Emissions Units)

| 1. Pollutant Emitted | 2. Primary Control Device Code | 3. Secondary Control Device Code | 4. Pollutant Regulatory Code |
|---|---|---|---|
| PM | 010 | | EL |
| PM10 | 010 | | EL |
| SO2 | | | EL |
| NOx | 107 | | EL |
| CO | | | EL |
| VOC | | | EL |
| PB | 010 | | EL |
| SAM | | | EL |
| FL | | | EL |
| H114 | 048 | | EL |
| H021 | | | EL |
| HAPS | | | NS |
| H106 | | | NS |
| H107 | | | NS |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PM** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **21.5** lb/hour **94.17** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.03 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.03 lb/MMBtu x 715 MMBtu/hr = 21.5 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**172.5 TPY total for all boilers** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **21.5** lb/hour **94.17** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 5.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Maximum lb/hr based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PM10** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **21.5** lb/hour **94.17** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.03 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.03 lb/MMBtu x 715 MMBtu/hr = 21.5 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**172.5 TPY total for all boilers** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **21.5** lb/hour **94.17** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack testing using EPA Method 5.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Maximum lb/hr based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **SO2** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **588** lb/hour **1,067.5** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **1.2 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **x** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**1.2 lb/MMBtu x 490 MMBtu/hr = 588.0 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**1,154.3 TPY total for all three boilers.** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.1 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **71.5** lb/hour **100.2** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Continuous SO2 monitor** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions: 0.1 lb/MMBtu 24-hr avg; Annual- 0.02 lb/MMBtu for bagasse, 0.05 lb/MMBtu for wood. Based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **1.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **408** lb/hour **1,008** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Continuous SO2 monitor.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Requested Allowable Emissions: 1.2 lb/MMBtu, 24-hr avg.; 0.8 lb/MMBtu, annual avg. Based on tire-derived fuel firing. Annual TPY: 81,246 TPY TDF x 15,500 Btu/lb x 0.8 lb/MMBtu = 1,007.6 TPY** | |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **1.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **588** lb/hour **880.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Based on coal firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **22.5** lb/hour **36.7** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing and BACT.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **NOx** |
| 2. Total Percent Efficiency of Control: **40** % |
| 3. Potential Emissions: **107.3** lb/hour **470** tons/year |
| 4. Synthetically Limited? [ **x** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.15 lb/MMBtu**<br>Reference: **NOx control system** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ **x** ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.15 lb/MMBtu x 715 MMBtu/hr = 107.3 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**862.5 TPY total for all boilers** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **107.3** lb/hour **470** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 7 or 7E.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **67.5** lb/hour **110.1** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing** | |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.17 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **83.3** lb/hour **124.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **51** lb/hour **188.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 7 or 7E.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing. Limit TDF firing to 40.2% on a heat input basis.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: CO |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: 250.3 lb/hour 1,096 tons/year |
| 4. Synthetically Limited? [ X ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: 0.35 lb/MMBtu<br>Reference: Boiler Design |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ X ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.35 lb/MMBtu x 715 MMBtu/hr = 250.3 lb/hr. Limit based on 24-hour average.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**2,012.5 TPY total for all boilers** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **98** lb/hour **146.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 10 annually.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing. Limit coal burning to 24.9% each boiler. Limit based on 24-hour average.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.35 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **63** lb/hour **440.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 10 annually.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing. Limit based on 24-hour average. TDF firing limited to 40.2% for each boiler, heat input basis.** | |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.35 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **250.3** lb/hour **1,096.3** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 10 annually.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing. Limit based on 24-hour average.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **90** lb/hour **146.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing. Limit based on 24-hour average.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **VOC** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **42.9** lb/hour **187.9** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.06 lb/MMBtu**<br>Reference: **Boiler Design** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.06 lb/MMBtu x 715 MMBtu/hr = 42.9 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Based on biomass firing. Total for all three boilers = 345.0 TPY** |

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **ESCNAA** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.06** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **42.9** lb/hour **187.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **Annual stack test using EPA Method 25 or 25A** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on biomass firing.** |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **ESCNAA** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.03** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **13.5** lb/hour **22** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **See Comment** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on No.2 fuel oil firing. Limit No.2 fuel oil burning to 24.9% for any single boiler.** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **14.7** lb/hour **22** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** |

**B.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **0.06 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **10.8** lb/hour **75.6** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 25 or 25A annually** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing. TDF firing limited to 40.2% for any single boiler (heat input basis).** |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PB** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **0.114** lb/hour **0.454** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **1.6 E-04 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**1.6 E-04 lb/MMBtu x 715 MMBtu/hr = 0.114 lb/hr.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Maximum emissions due to coal firing. Facility emissions are 0.454 TPY total all boilers.** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **1.6 E-04 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.114** lb/hour | **0.067** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Biomass Firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **8.9 E-07 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0004** lb/hour | **0.0007** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **No.2 fuel oil firing** | |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.4 E-05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.031** lb/hour | **0.047** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Coal Firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4.2 E-05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0143** lb/hour | **0.053** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **TDF firing** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **SAM** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **17.6** lb/hour **27.8** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.036 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ **X** ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.036 lb/MMBtu x 490 MMBtu/hr = 17.6 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Based on coal firing, 34.6 TPY total for all boilers.** |

**Emissions Unit Information Section 1 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.003 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **2.2** lb/hour **1.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.0015 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.74** lb/hour **1.1** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**Emissions Unit Information Section 1 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **17.6** lb/hour **26.4** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **3.4** lb/hour **8.7** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **FL** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **11.8** lb/hour **17.6** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.024 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.024 lb/MMBtu x 490 MMBtu/hr = 11.8 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Based on coal firing. Total emissions from all three boilers limited to 21.23 TPY.** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.3 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0031** lb/hour | **0.0046** tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.024 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **11.8** lb/hour | **17.6** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 13A or 13B once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing.** | |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.5 E-04 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.22** lb/hour | **0.82** tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: lb/hour | tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **H114** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **0.0041** lb/hour **0.0173** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **See Part B**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ **X** ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**Annual TPY limited by permit condition.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Total emissions all three boilers 0.030 TPY.** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0029** lb/hour | **0.0152** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on wood waste firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **5.43 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0045** lb/hour | **0.0152** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on bagasse firing. Limit subject to revision based on stack testing.** | |

**Emissions Unit Information Section 1 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **2.4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0012** lb/hour | **0.0018** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **8.4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0041** lb/hour | **0.0062** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing.** | |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.5 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0022** lb/hour | **0.0082** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | | |
|---|---|---|
| 1. Basis for Allowable Emissions Code: | | |
| 2. Future Effective Date of Allowable Emissions: | | |
| 3. Requested Allowable Emissions and Units: | | |
| 4. Equivalent Allowable Emissions: | lb/hour | tons/year |
| 5. Method of Compliance (limit to 60 characters): | | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **H021** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **0.0029** lb/hour **0.0043** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor:<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ **X** ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**490 MMBtu/hr x 5.9 E-06 lb/MMBtu = 0.0029 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Max lb/hr based on coal firing. Total emissions all three boilers limited to 0.0052 TPY.** |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **5.9 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0029** lb/hour **0.0043** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **3.5 E-07 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0002** lb/hour **0.0003** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**Emissions Unit Information Section** 1 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4.5 E-07 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0002** lb/hour **0.0006** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## I. VISIBLE EMISSIONS INFORMATION
**(Regulated Emissions Units Only)**

**Visible Emissions Limitations**: Visible Emissions Limitation 1 of 1

| | |
|---|---|
| 1. | Visible Emissions Subtype: VE20 |
| 2. | Basis for Allowable Opacity: [X] Rule [ ] Other |
| 3. | Requested Allowable Opacity<br>Normal Conditions: 20 % Exceptional Conditions: 27 %<br>Maximum Period of Excess Opacity Allowed: 6 min/hour |
| 4. | Method of Compliance:<br>EPA Method 9 |
| 5. | Visible Emissions Comment (limit to 200 characters): |

**Visible Emissions Limitations**: Visible Emissions Limitation _____ of _____

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

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

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

| | |
|---|---|
| 1. Parameter Code: VE | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Durag<br>Model Number: D-R281AV Serial Number: 31019 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

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

| | |
|---|---|
| 1. Parameter Code: NOx | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 42D Serial Number: 42D-52618-292 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

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

| | |
|---|---|
| 1. Parameter Code: SO2 | 2. Pollutant(s): |
| 3. CMS Requirement: [ ] Rule [ X ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 43B Serial Number: 43B-51400-292 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

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

| | |
|---|---|
| 1. Parameter Code: CO | 2. Pollutant(s): |
| 3. CMS Requirement: [ ] Rule [ X ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 48 Serial Number: 48-45334-273 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters): | |

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

**Continuous Monitoring System** Continuous Monitor 5 of 5

| | |
|---|---|
| 1. Parameter Code: O2 | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Yokogawa<br>Model Number: ZA8C Serial Number: JJ113MA345 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

**Continuous Monitoring System** Continuous Monitor _____ of _____

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

## K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
## (Regulated and Unregulated Emissions Units)

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [X] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[X ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

| | | | | |
|---|---|---|---|---|
| 3. | Increment Consuming/Expanding Code: | | | |
| | PM | [X ] C | [ ] E | [ ] Unknown |
| | $SO_2$ | [X ] C | [ ] E | [ ] Unknown |
| | $NO_2$ | [X ] C | [ ] E | [ ] Unknown |
| 4. | Baseline Emissions: | | | |
| | PM | 0 lb/hour | 0 tons/year | |
| | $SO_2$ | 0 lb/hour | 0 tons/year | |
| | $NO_2$ | | 0 tons/year | |
| 5. | PSD Comment (limit to 200 characters): | | | |

## L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
## (Regulated Emissions Units Only)

**Supplemental Requirements for All Applications**

| | | |
|---|---|---|
| 1. | Process Flow Diagram | |
| | [ X ] Attached, Document ID: PART B | |
| | [ ] Not Applicable | [ ] Waiver Requested |
| 2. | Fuel Analysis or Specification | |
| | [ X ] Attached, Document ID: PART B | |
| | [ ] Not Applicable | [ ] Waiver Requested |
| 3. | Detailed Description of Control Equipment | |
| | [ X ] Attached, Document ID: PART B | |
| | [ ] 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: _____ | [ X ] Not Applicable |
| | [ ] Previously Submitted, Date: _____ | |
| 6. | Procedures for Startup and Shutdown | |
| | [ ] Attached, Document ID: _____ | [ X ] Not Applicable |
| 7. | Operation and Maintenance Plan | |
| | [ ] Attached, Document ID: _____ | [ X ] Not Applicable |
| 8. | Supplemental Information for Construction Permit Application | |
| | [ X ] Attached, Document ID: PART B | [ ] Not Applicable |
| 9. | Other Information Required by Rule or Statute | |
| | [ X ] Attached, Document ID: PART B | [ ] Not Applicable |

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation

[ ] Attached, Document ID: _____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [X] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Permit 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: _____

[X] Not Applicable

## III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

### A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

**Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

[ X ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ X ] 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).

[ ] 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.

## B. GENERAL EMISSIONS UNIT INFORMATION
## (Regulated and Unregulated Emissions Units)

**Emissions Unit Description and Status**

| | | |
|---|---|---|
| 1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Boiler B fired by Biomass/No.2 oil/coal/TDF** | | |
| 2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **002** | | |
| 3. Emissions Unit Status Code: **A** | 4. Acid Rain Unit? [ ] Yes [ **X** ] No | 5. Emissions Unit Major Group SIC Code: **49** |
| 6. Emissions Unit Comment (limit to 500 characters): **74.9 MW gross generating capacity for entire facility.** | | |

**Emissions Unit Control Equipment Information**

**A.**

1. Description (limit to 200 characters):

**ESP - Electrostatic Precipitator**

2. Control Device or Method Code: **10**

**B.**

1. Description (limit to 200 characters):

**Selective Non-Catalytic Reduction for NOx**

2. Control Device or Method Code: **107**

**C.**

1. Description (limit to 200 characters):

**Activated Carbon injection system.**

2. Control Device or Method Code: **48**

## C. EMISSIONS UNIT DETAIL INFORMATION
## (Regulated Emissions Units Only)

**Emissions Unit Details**

| | |
|---|---|
| 1. Initial Startup Date: | |
| 2. Long-term Reserve Shutdown Date: | |
| 3. Package Unit:<br>Manufacturer: | Model Number: |
| 4. Generator Nameplate Rating: | 75 MW |
| 5. Incinerator Information:<br>Dwell Temperature:<br>Dwell Time:<br>Incinerator Afterburner Temperature: | <br>°F<br>seconds<br>°F |

**Emissions Unit Operating Capacity**

| | | | |
|---|---|---|---|
| 1. Maximum Heat Input Rate: | | 715 | mmBtu/hr |
| 2. Maximum Incineration Rate: | lbs/hr | | tons/day |
| 3. Maximum Process or Throughput Rate: | | | |
| 4. Maximum Production Rate: | | | |
| 5. Operating Capacity Comment (limit to 200 characters):<br>**Maximum heat input rates: Biomass - 715 MMBtu/hr; No.2 Fuel Oil - 490 MMBtu/hr; Coal - 490 MMBtu/hr; Tire-derived fuel - 340 MMBtu/hr** | | | |

**Emissions Unit Operating Schedule**

| | | | |
|---|---|---|---|
| 1. Requested Maximum Operating Schedule: | | | |
| | 24 hours/day | | 7 days/week |
| | 52 weeks/yr | | 8,760 hours/yr |

## D. EMISSIONS UNIT REGULATIONS
## (Regulated Emissions Units Only)

**Rule Applicability Analysis** (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

**40 CFR 60, Subpart Da**
**40 CFR 60, Subpart Ea and Cb (record keeping only)**
**62-296.570 Reasonably Avail. Control Technology**

## E. EMISSION POINT (STACK/VENT) INFORMATION
## (Regulated Emissions Units Only)

**Emission Point Description and Type**

| | |
|---|---|
| 1. Identification of Point on Plot Plan or Flow Diagram: BLR B | |
| 2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4 | |
| 3. Descriptions of Emissions 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: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W | |
| 6. Stack Height: | 225 feet |
| 7. Exit Diameter: | 10 feet |
| 8. Exit Temperature: | 330 °F |

| | |
|---|---|
| 9. Actual Volumetric Flow Rate: | **270,000** acfm |
| 10. Percent 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): **Stack parameters based on biomass firing.** | |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 1 of 5

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Electric Utility boiler - bagasse** | |
| 2. Source Classification Code (SCC): **1-01-011-01** | |
| 3. SCC Units: **Tons Burned** | |
| 4. Maximum Hourly Rate: **84.118** | 5. Maximum Annual Rate: **736,874** |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: **0.05** | 8. Maximum Percent Ash: |
| 9. Million Btu per SCC Unit: | |
| 10. Segment Comment (limit to 200 characters): **Maximum percent Sulfur: 0.05. Maximum Percent Ash: 0.42. Million Btu per SCC Unit: 8.5. Total biomass all three boilers = 1,352,941 TPY.** | |

**Segment Description and Rate**: Segment 2 of 5

| |
|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):<br>**Electric Utility Boiler - Wood Fired Boiler** |
| 2. Source Classification Code (SCC): **1-01-009-03** |
| 3. SCC Units: **Tons Burned** |

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **65** | **569,400** |

| 6. Estimated Annual Activity Factor: |
|---|

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **0.11** | **3.2** |

| 9. Million Btu per SCC Unit: |
|---|
| **11** |

| 10. Segment Comment (limit to 200 characters): |
|---|
| **Maximum Percent Sulfur: 0.11. Total biomass all three boilers = 1,352,941 TPY.** |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 3 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

**Electric Utility Boiler - Distillate Oil - Grades 1 and 2 oil**

2. Source Classification Code (SCC):

**1-01-005-01**

3. SCC Units:

**Thousand Gallons Burned**

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **3.551** | **7,745** |

6. Estimated Annual Activity Factor:

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **0.05** | |

9. Million Btu per SCC Unit:

**138**

10. Segment Comment (limit to 200 characters):

**Maximum Annual Rate: 7,745,000. This represents 24.9% oil firing on a heat input basis. Total No.2 Fuel Oil all three boilers = 19,533,086 gal/yr.**

**Segment Description and Rate**: Segment 4 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):
   **Electric Utility boiler - Butiminous Coal - Spreader Stoker**

2. Source Classification Code (SCC): **1-01-002-04**

3. SCC Units: **Tons Burned**

4. Maximum Hourly Rate: **20.417**

5. Maximum Annual Rate: **61,172**

6. Estimated Annual Activity Factor:

7. Maximum Percent Sulfur: **0.7**

8. Maximum Percent Ash: **3.7**

9. Million Btu per SCC Unit: **24**

10. Segment Comment (limit to 200 characters):
    **Total coal all three boilers = 69,720 TPY (15.1% coal burning on a heat input basis). The combined heat input for coal and oil <25% on a calendar quarter basis.**

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 5 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

**Electric Utility Boiler - Solid Waste - Tire Derived Fuel**

2. Source Classification Code (SCC):

**1-01-012-01**

3. SCC Units:

**Tons Burned**

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **11** | **81,246** |

6. Estimated Annual Activity Factor:

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **1.2** | **5** |

9. Million Btu per SCC Unit:

**31**

10. Segment Comment (limit to 200 characters):

**Maximum hourly rate based on 340 MMBtu/hr TDF. Total TDF all three boilers = 81,246 TPY. This represents 9.0% TDF burning on a weight basis.**

**Segment Description and Rate**: Segment _____ of _____

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): | |
| 2. Source Classification Code (SCC): | |
| 3. SCC Units: | |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
| 9. Million Btu per SCC Unit: | |
| 10. Segment Comment (limit to 200 characters): | |

## G. EMISSIONS UNIT POLLUTANTS
## (Regulated and Unregulated Emissions Units)

| 1. Pollutant Emitted | 2. Primary Control Device Code | 3. Secondary Control Device Code | 4. Pollutant Regulatory Code |
|---|---|---|---|
| PM | 010 | | EL |
| PM10 | 010 | | EL |
| SO2 | | | EL |
| NOx | | | EL |
| CO | | | EL |
| VOC | | | EL |
| PB | 010 | | EL |
| SAM | | | EL |
| FL | | | EL |
| H114 | 048 | | EL |
| H021 | | | EL |
| HAPS | | | NS |
| H106 | | | NS |
| H107 | | | NS |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PM** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **21.5** lb/hour **94.17** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.03 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.03 lb/MMBtu x 715 MMBtu/hr = 21.5 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**172.5 TPY total for all boilers** |

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **21.5** lb/hour **94.17** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 5** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Maximum lb/hr based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PM10** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **21.5** lb/hour **94.17** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.03 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.03 lb/MMBtu x 715 MMBtu/hr = 21.5 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**172.5 TPY total for all boilers** |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **21.5** lb/hour **94.17** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack testing using EPA Method 5.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Maximum lb/hr based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **SO2** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **588** lb/hour **1,067.5** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **1.2 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**1.2 lb/MMBtu x 490 MMBtu/hr = 588.0 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**1,154.3 TPY total for all three boilers.** |

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.1 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **71.5** lb/hour **100.2** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **Continuous SO2 monitor** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Requested Allowable Emissions: 0.1 lb/MMBtu 24-hr avg; Annual- 0.02 lb/MMBtu for bagasse, 0.05 lb/MMBtu for wood. Based on biomass firing.** |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **1.2 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **408** lb/hour **1,008** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **Continuous SO2 monitor.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Requested Allowable Emissions: 1.2 lb/MMBtu, 24-hr avg.; 0.8 lb/MMBtu, annual avg. Based on tire-derived fuel firing. Annual TPY: 81,246 TPY TDF x 15,500 Btu/lb x 0.8 lb/MMBtu = 1,007.6 TPY** |

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **1.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **588** lb/hour | **880.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Based on coal firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **22.5** lb/hour | **36.7** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing and BACT.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **NOx** |
| 2. Total Percent Efficiency of Control: **40** % |
| 3. Potential Emissions: **107.3** lb/hour **470** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.15 lb/MMBtu**<br>Reference: **NOx control system** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.15 lb/MMBtu x 715 MMBtu/hr = 107.3 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**862.5 TPY total for all boilers** |

**Emissions Unit Information Section 2 of 3**
**Allowable Emissions (Pollutant identified on front page)**

**A.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **107.3** lb/hour **470** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 7 or 7E** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing** |

**B.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **67.5** lb/hour **110.1** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing** |

**Emissions Unit Information Section 2 of 3**
**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.17 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **83.3** lb/hour **124.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **51** lb/hour **188.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 7 or 7E.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing. Limit TDF firing to 40.2% on a heat input basis.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: CO |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: 250.3 lb/hour 1,096 tons/year |
| 4. Synthetically Limited? [ X ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: 0.35 lb/MMBtu<br>Reference: Boiler Design |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ X ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.35 lb/MMBtu x 715 MMBtu/hr = 250.3 lb/hr. Limit based on 24-hour average.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**2,012.5 TPY total for all boilers** |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **98** lb/hour **146.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 10 annually.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing. Limit coal burning to 24.9% each boiler. Limit based on 24-hour average.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.35 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **63** lb/hour **440.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 10 annually.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing. Limit based on 24-hour average. TDF firing limited to 40.2% for each boiler, heat input basis.** | |

**Emissions Unit Information Section** 2 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.35 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **250.3** lb/hour **1,096.3** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 10 annually** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing. Limit based on 24-hour average.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **90** lb/hour **146.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing. Limit based on 24-hour average.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

1. Pollutant Emitted: **VOC**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **42.9** lb/hour **187.9** tons/year

4. Synthetically Limited? [ **X** ] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:

   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.06 lb/MMBtu**

   Reference: **Boiler Design**

7. Emissions Method Code:

   [ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   **0.06 lb/MMBtu x 715 MMBtu/hr = 42.9 lb/hr**

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   **Based on biomass firing. Total for all three boilers = 345.0 TPY**

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **42.9** lb/hour **187.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 25 or 25A** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **13.5** lb/hour **22** tons/year |
| 5. Method of Compliance (limit to 60 characters): **See Comment** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing. Limit No.2 fuel oil burning to 24.9% entire facility and for any single boiler.** | |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **14.7** lb/hour **22** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **10.8** lb/hour **75.6** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 25 or 25A annually** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing. TDF firing limited to 40.2% for any single boiler (heat input basis).** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PB** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **0.114** lb/hour **0.454** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **1.6 E-04 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**1.6 E-04 lb/MMBtu x 715 MMBtu/hr = 0.114 lb/hr.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Maximum emissions due to coal firing. Facility emissions are 0.454 TPY total all boilers.** |

**Emissions Unit Information Section** 2 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **OTHER** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **1.6 E-04 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **0.114** lb/hour **0.067** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Biomass Firing** |

**B.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **OTHER** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **8.9 E-07 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **0.0004** lb/hour **0.0007** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **No.2 fuel oil firing** |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.4 E-05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.031** lb/hour | **0.047** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Coal Firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4.2 E-05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0143** lb/hour | **0.053** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **TDF firing** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **SAM** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **17.6** lb/hour **27.8** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.036 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ **X** ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.036 lb/MMBtu x 490 MMBtu/hr = 17.6 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Based on coal firing, 34.6 TPY total for all boilers.** |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.003 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **2.2** lb/hour **1.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.0015 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.74** lb/hour **1.1** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **17.6** lb/hour **26.4** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **3.4** lb/hour **8.7** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

1. Pollutant Emitted: **FL**

2. Total Percent Efficiency of Control: %

3. Potential Emissions: **11.8** lb/hour **17.6** tons/year

4. Synthetically Limited? [ **X** ] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:

   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.024 lb/MMBtu**

   Reference: **See Part B**

7. Emissions Method Code:

   [ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   **0.024 lb/MMBtu x 490 MMBtu/hr = 11.8 lb/hr**

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   **Based on coal firing. Total emissions from all three boilers limited to 21.23 TPY.**

**Emissions Unit Information Section** 2 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.3 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0031** lb/hour | **0.0046** tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.024 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **11.8** lb/hour | **17.6** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 13A or 13B once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing.** | |

**Emissions Unit Information Section** 2 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.5 E-04 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.22** lb/hour **0.82** tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **H114** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **0.0041** lb/hour **0.0173** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **See Part B**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ **X** ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**Annual TPY limited by permit condition.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Total emissions all three boilers 0.030 TPY.** |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0029** lb/hour **0.0152** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on wood waste firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **5.43 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0045** lb/hour **0.0152** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on bagasse firing. Limit subject to revision based on stack testing.** | |

**Emissions Unit Information Section 2 of 3**
**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **2.4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0012** lb/hour | **0.0018** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 oil firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **8.4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0041** lb/hour | **0.0062** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing.** | |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.5 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0022** lb/hour **0.0082** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **H021** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **0.0029** lb/hour **0.0043** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor:<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ **X** ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**490 MMBtu/hr x 5.9 E-06 lb/MMBtu = 0.0029 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Max lb/hr based on coal firing. Total emissions all three boilers limited to 0.0052 TPY.** |

**Emissions Unit Information Section 2 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **5.9 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0029** lb/hour | **0.0043** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **3.5 E-07 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0002** lb/hour | **0.0003** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**Emissions Unit Information Section** 2 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4.5 E-07 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0002** lb/hour **0.0006** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## I. VISIBLE EMISSIONS INFORMATION
**(Regulated Emissions Units Only)**

**Visible Emissions Limitations**: Visible Emissions Limitation 1 of 1

| | |
|---|---|
| 1. | Visible Emissions Subtype: **VE20** |
| 2. | Basis for Allowable Opacity: [x ] Rule [ ] Other |
| 3. | Requested Allowable Opacity<br>Normal Conditions: **20** % Exceptional Conditions: **27** %<br>Maximum Period of Excess Opacity Allowed: **6** min/hour |
| 4. | Method of Compliance:<br>**EPA Method 9** |
| 5. | Visible Emissions Comment (limit to 200 characters): |

**Visible Emissions Limitations**: Visible Emissions Limitation _____ of _____

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

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

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

| | |
|---|---|
| 1. Parameter Code: VE | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Durag<br>Model Number: D-R281AV Serial Number: 31015 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

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

| | |
|---|---|
| 1. Parameter Code: NOx | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 42D Serial Number: 42D-51082-292 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

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

| | |
|---|---|
| 1. Parameter Code: SO2 | 2. Pollutant(s): |
| 3. CMS Requirement: [ ] Rule [X] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 43B Serial Number: 43B-49519-292 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

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

| | |
|---|---|
| 1. Parameter Code: CO | 2. Pollutant(s): |
| 3. CMS Requirement: [ ] Rule [X] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 48 Serial Number: 48-45334-273 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters): | |

## J. CONTINUOUS MONITOR INFORMATION
**(Regulated Emissions Units Only)**

**Continuous Monitoring System** Continuous Monitor 5 of 5

| | |
|---|---|
| 1. Parameter Code: O2 | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Yokogawa<br>Model Number: ZA8C Serial Number: JJ113PA133 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

**Continuous Monitoring System** Continuous Monitor _____ of _____

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

## K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
## (Regulated and Unregulated Emissions Units)

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

[ X ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

[ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[X ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

| | | | | |
|---|---|---|---|---|
| 3. | Increment Consuming/Expanding Code: | | | |
| | PM | [X ] C | [ ] E | [ ] Unknown |
| | $SO_2$ | [X ] C | [ ] E | [ ] Unknown |
| | $NO_2$ | [X ] C | [ ] E | [ ] Unknown |
| 4. | Baseline Emissions: | | | |
| | PM | 0 lb/hour | 0 tons/year | |
| | $SO_2$ | 0 lb/hour | 0 tons/year | |
| | $NO_2$ | | 0 tons/year | |
| 5. | PSD Comment (limit to 200 characters): | | | |

## L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
## (Regulated Emissions Units Only)

**Supplemental Requirements for All Applications**

| | | |
|---|---|---|
| 1. | Process Flow Diagram | |
| | [ X ] Attached, Document ID: PART B | |
| | [ ] Not Applicable | [ ] Waiver Requested |
| 2. | Fuel Analysis or Specification | |
| | [ X ] Attached, Document ID: PART B | |
| | [ ] Not Applicable | [ ] Waiver Requested |
| 3. | Detailed Description of Control Equipment | |
| | [ X ] Attached, Document ID: PART B | |
| | [ ] 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: _____ | [ X ] Not Applicable |
| | [ ] Previously Submitted, Date: _____ | |
| 6. | Procedures for Startup and Shutdown | |
| | [ ] Attached, Document ID: _____ | [ X ] Not Applicable |
| 7. | Operation and Maintenance Plan | |
| | [ ] Attached, Document ID: _____ | [ X ] Not Applicable |
| 8. | Supplemental Information for Construction Permit Application | |
| | [ X ] Attached, Document ID: PART B | [ ] Not Applicable |
| 9. | Other Information Required by Rule or Statute | |
| | [ X ] Attached, Document ID: PART B | [ ] Not Applicable |

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation

[ ] Attached, Document ID: _____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [X] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Permit 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: _____

[X] Not Applicable

## III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through L 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. Some of the subsections comprising the Emissions Unit Information Section of the form are intended for regulated emissions units only. Others are intended for both regulated and unregulated emissions units. Each subsection is appropriately marked.

### A. TYPE OF EMISSIONS UNIT (Regulated and Unregulated Emissions Units)

**Type of Emissions Unit Addressed in This Section**

1. Regulated or Unregulated Emissions Unit? Check one:

[ X ] The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

[ ] The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

2. Single Process, Group of Processes, or Fugitive Only? Check one:

[ X ] 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).

[ ] 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.

## B. GENERAL EMISSIONS UNIT INFORMATION
## (Regulated and Unregulated Emissions Units)

**Emissions Unit Description and Status**

| | | |
|---|---|---|
| 1. Description of Emissions Unit Addressed in This Section (limit to 60 characters): **Boiler C fired by Biomass/No.2 oil/coal/TDF** | | |
| 2. Emissions Unit Identification Number: [ ] No Corresponding ID [ ] Unknown **003** | | |
| 3. Emissions Unit Status Code: **A** | 4. Acid Rain Unit? [ ] Yes [ X ] No | 5. Emissions Unit Major Group SIC Code: **49** |
| 6. Emissions Unit Comment (limit to 500 characters): **74.9 MW gross generating capacity for entire facility.** | | |

## Emissions Unit Control Equipment Information

**A.**

1. Description (limit to 200 characters):

**ESP - Electrostatic Precipitator**

2. Control Device or Method Code: **10**

**B.**

1. Description (limit to 200 characters):

**Selective Non-Catalytic Reduction for NOx**

2. Control Device or Method Code: **107**

**C.**

1. Description (limit to 200 characters):

**Activated Carbon injection system.**

2. Control Device or Method Code: **48**

## C. EMISSIONS UNIT DETAIL INFORMATION
## (Regulated Emissions Units Only)

### Emissions Unit Details

| | |
|---|---|
| 1. Initial Startup Date: | |
| 2. Long-term Reserve Shutdown Date: | |
| 3. Package Unit:<br>Manufacturer: | Model Number: |
| 4. Generator Nameplate Rating: | MW |
| 5. Incinerator Information:<br>Dwell Temperature:<br>Dwell Time:<br>Incinerator Afterburner Temperature: | <br>°F<br>seconds<br>°F |

### Emissions Unit Operating Capacity

| | | | |
|---|---|---|---|
| 1. Maximum Heat Input Rate: | | 715 | mmBtu/hr |
| 2. Maximum Incineration Rate: | lbs/hr | | tons/day |
| 3. Maximum Process or Throughput Rate: | | | |
| 4. Maximum Production Rate: | | | |

5. Operating Capacity Comment (limit to 200 characters):

**Maximum heat input rates: Biomass - 715 MMBtu/hr; No.2 Fuel Oil - 490 MMBtu/hr; Coal - 490 MMBtu/hr; Tire-derived fuel - 340 MMBtu/hr**

### Emissions Unit Operating Schedule

1. Requested Maximum Operating Schedule:

| | | | |
|---|---|---|---|
| 24 | hours/day | 7 | days/week |
| 52 | weeks/yr | 8,760 | hours/yr |

## D. EMISSIONS UNIT REGULATIONS
## (Regulated Emissions Units Only)

**Rule Applicability Analysis** (Required for Category II Applications and Category III applications involving non Title-V sources. See Instructions.)

**List of Applicable Regulations** (Required for Category I applications and Category III applications involving Title-V sources. See Instructions.)

**40 CFR 60, Subpart Da**
**40 CFR 60, Subpart Ea and Cd (record keeping only)**
**62-296.570 Reasonably Avail. Control Technology**

## E. EMISSION POINT (STACK/VENT) INFORMATION
## (Regulated Emissions Units Only)

**Emission Point Description and Type**

| | |
|---|---|
| 1. Identification of Point on Plot Plan or Flow Diagram: BLR C | |
| 2. Emission Point Type Code: [x] 1 [ ] 2 [ ] 3 [ ] 4 | |
| 3. Descriptions of Emissions 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: [ ] D [ ] F [ ] H [ ] P [ ] R [x] V [ ] W | |
| 6. Stack Height: | 225 feet |
| 7. Exit Diameter: | 10 feet |
| 8. Exit Temperature: | 330 °F |

| | |
|---|---|
| 9. Actual Volumetric Flow Rate: | **270,000** acfm |
| 10. Percent 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): **Stack parameters based on biomass firing.** | |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 1 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   **Electric Utility boiler - bagasse**

2. Source Classification Code (SCC):

   **1-01-011-01**

3. SCC Units:

   **Tons Burned**

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **84.118** | **736,874** |

6. Estimated Annual Activity Factor:

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **0.05** | |

9. Million Btu per SCC Unit:

10. Segment Comment (limit to 200 characters):

    **Maximum percent Sulfur: 0.05. Maximum Percent Ash: 0.42. Million Btu per SCC Unit: 8.5. Total biomass all three boilers = 1,352,941 TPY.**

**Segment Description and Rate**: Segment 2 of 5

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Electric Utility Boiler - Wood Fired Boiler** | |
| 2. Source Classification Code (SCC): **1-01-009-03** | |
| 3. SCC Units: **Tons Burned** | |
| 4. Maximum Hourly Rate: **65** | 5. Maximum Annual Rate: **569,400** |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: **0.11** | 8. Maximum Percent Ash: **3.2** |
| 9. Million Btu per SCC Unit: **11** | |
| 10. Segment Comment (limit to 200 characters): **Maximum Percent Sulfur: 0.11. Total biomass all three boilers = 1,352,941 TPY.** | |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 3 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

   **Electric Utility Boiler - Distillate Oil - Grades 1 and 2 oil**

2. Source Classification Code (SCC):

   **1-01-005-01**

3. SCC Units:

   **Thousand Gallons Burned**

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **3.551** | **7,745** |

6. Estimated Annual Activity Factor:

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **0.05** | |

9. Million Btu per SCC Unit:

   **138**

10. Segment Comment (limit to 200 characters):

    **Maximum Annual Rate: 7,745,000. This represents 24.9% oil firing on a heat input basis. Total No.2 Fuel Oil all three boilers = 19,533,086 gal/yr.**

**Segment Description and Rate**: Segment 4 of 5

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): **Electric Utility boiler - Butiminous Coal - Spreader Stoker** | |
| 2. Source Classification Code (SCC): **1-01-002-04** | |
| 3. SCC Units: **Tons Burned** | |
| 4. Maximum Hourly Rate: **20.417** | 5. Maximum Annual Rate: **61,172** |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: **0.7** | 8. Maximum Percent Ash: **3.7** |
| 9. Million Btu per SCC Unit: **24** | |
| 10. Segment Comment (limit to 200 characters): **Total coal all three boilers = 69,720 TPY (15.1% coal burning on a heat input basis). The combined heat input for coal and oil <25% on a calendar quarter basis.** | |

## F. SEGMENT (PROCESS/FUEL) INFORMATION
## (Regulated and Unregulated Emissions Units)

**Segment Description and Rate**: Segment 5 of 5

1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters):

**Electric Utility Boiler - Solid Waste - Tire Derived Fuel**

2. Source Classification Code (SCC):

**1-01-012-01**

3. SCC Units:

**Tons Burned**

| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
|---|---|
| **11** | **81,246** |

6. Estimated Annual Activity Factor:

| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
|---|---|
| **1.2** | **5** |

9. Million Btu per SCC Unit:

**31**

10. Segment Comment (limit to 200 characters):

**Maximum hourly rate based on 340 MMBtu/hr TDF. Total TDF all three boilers = 81,246 TPY. This represents 9.0% TDF burning on a weight basis.**

**Segment Description and Rate**: Segment _____ of _____

| | |
|---|---|
| 1. Segment Description (Process/Fuel Type and Associated Operating Method/Mode) (limit to 500 characters): | |
| 2. Source Classification Code (SCC): | |
| 3. SCC Units: | |
| 4. Maximum Hourly Rate: | 5. Maximum Annual Rate: |
| 6. Estimated Annual Activity Factor: | |
| 7. Maximum Percent Sulfur: | 8. Maximum Percent Ash: |
| 9. Million Btu per SCC Unit: | |
| 10. Segment Comment (limit to 200 characters): | |

## G. EMISSIONS UNIT POLLUTANTS
## (Regulated and Unregulated Emissions Units)

| 1. Pollutant Emitted | 2. Primary Control Device Code | 3. Secondary Control Device Code | 4. Pollutant Regulatory Code |
|---|---|---|---|
| PM | 010 | | EL |
| PM10 | 010 | | EL |
| SO2 | | | EL |
| NOx | 107 | | EL |
| CO | | | EL |
| VOC | | | EL |
| PB | 010 | | EL |
| SAM | | | EL |
| FL | | | EL |
| H114 | 048 | | EL |
| H021 | | | EL |
| HAPS | | | NS |
| H106 | | | NS |
| H107 | | | NS |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

1. Pollutant Emitted: **PM**

2. Total Percent Efficiency of Control: **99** %

3. Potential Emissions: **21.5** lb/hour **94.17** tons/year

4. Synthetically Limited? [ **X** ] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:

   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.03 lb/MMBtu**

   Reference: **40 CFR 60 Subpart Da**

7. Emissions Method Code:

   [ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5

8. Calculation of Emissions (limit to 600 characters):

   **0.03 lb/MMBtu x 715 MMBtu/hr = 21.5 lb/hr**

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   **172.5 TPY total for all boilers**

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **21.5** lb/hour | **94.17** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 5** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Maximum lb/hr based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: lb/hour | tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PM10** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **21.5** lb/hour **94.17** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.03 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.03 lb/MMBtu x 715 MMBtu/hr = 21.5 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**172.5 TPY total for all boilers** |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **21.5** lb/hour **94.17** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack testing using EPA Method 5.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Maximum lb/hr based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **SO2** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **588** lb/hour **1,067.5** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **1.2 lb/MMBtu**<br>Reference: **40 CFR 60 Subpart Da** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**1.2 lb/MMBtu x 490 MMBtu/hr = 588.0 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**1,154.3 TPY total for all three boilers.** |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| |
|---|
| 1. Basis for Allowable Emissions Code:<br>**OTHER** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units:<br>**0.1 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **71.5** lb/hour **100.2** tons/year |
| 5. Method of Compliance (limit to 60 characters):<br>**Continuous SO2 monitor** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):<br>**Requested Allowable Emissions: 0.1 lb/MMBtu 24-hr avg; Annual- 0.02 lb/MMBtu for bagasse, 0.05 lb/MMBtu for wood. Based on biomass firing.** |

**B.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **OTHER** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units:<br>**1.2 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **408** lb/hour **1,008** tons/year |
| 5. Method of Compliance (limit to 60 characters):<br>**Continuous SO2 monitor.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters):<br>**Requested Allowable Emissions: 1.2 lb/MMBtu, 24-hr avg.; 0.8 lb/MMBtu, annual avg. Based on tire-derived fuel firing. Annual TPY: 81,246 TPY TDF x 15,500 Btu/lb x 0.8 lb/MMBtu = 1,007.6 TPY** |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **1.2 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **588** lb/hour **880.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Basis for Allowable Emissions Code: NSPS. Based on coal firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **RULE** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **22.5** lb/hour **36.7** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing and BACT.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

1. Pollutant Emitted: **NOx**

2. Total Percent Efficiency of Control: **40** %

3. Potential Emissions: **107.3** lb/hour **470** tons/year

4. Synthetically Limited? [ **X** ] Yes [ ] No

5. Range of Estimated Fugitive/Other Emissions:

   [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr

6. Emission Factor: **0.15 lb/MMBtu**

   Reference: **NOx control system**

7. Emissions Method Code:

   [ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5

8. Calculation of Emissions (limit to 600 characters):

   **0.15 lb/MMBtu x 715 MMBtu/hr = 107.3 lb/hr**

9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):

   **862.5 TPY total for all boilers**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **107.3** lb/hour **470** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 7 or 7E** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing** |

**B.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **67.5** lb/hour **110.1** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit fuel oil burning to 24.9% for any single boiler.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing** |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.17 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **83.3** lb/hour **124.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Limit coal burning to 24.9% for any single boiler.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCPSD** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.15 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **51** lb/hour **188.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 7 or 7E.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing. Limit TDF firing to 40.2% on a heat input basis.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **CO** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **250.3** lb/hour **1,096** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.35 lb/MMBtu**<br>Reference: **Boiler Design** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.35 lb/MMBtu x 715 MMBtu/hr = 250.3 lb/hr. Limit based on 24-hour average.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**2,012.5 TPY total for all boilers** |

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.2** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **98** lb/hour **146.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **EPA Method 10 annually.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on coal firing. Limit coal burning to 24.9% each boiler. Limit based on 24-hour average.** |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.35** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **63** lb/hour **440.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **EPA Method 10 annually.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on tire-derived fuel firing. Limit based on 24-hour average. TDF firing limited to 40.2% for each boiler, heat input basis.** |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.35** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **250.3** lb/hour **1,096.3** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **EPA Method 10 annually** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on biomass firing. Limit based on 24-hour average.** |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.2** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **90** lb/hour **146.8** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **Limit fuel oil burning to 24.9% for any single boiler.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on No.2 fuel oil firing. Limit based on 24-hour average.** |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **VOC** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **42.9** lb/hour **187.9** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.06 lb/MMBtu**<br>Reference: **Boiler Design** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.06 lb/MMBtu x 715 MMBtu/hr = 42.9 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Based on biomass firing. Total for all three boilers = 345.0 TPY** |

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **42.9** lb/hour | **187.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Annual stack test using EPA Method 25 or 25A** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **ESCNAA** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.03 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **13.5** lb/hour | **22** tons/year |
| 5. Method of Compliance (limit to 60 characters): **See Comment** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing. Limit No.2 fuel oil burning to 24.9% entire facility and for any single boiler.** | |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **ESCNAA** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.03** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **14.7** lb/hour **22** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **Limit coal burning to 24.9% for any single boiler** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on coal firing** |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **ESCNAA** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **0.06** **lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **10.8** lb/hour **75.6** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **EPA Method 25 or 25A annually** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Based on tire-derived fuel firing. TDF firing limited to 40.2% for any single boiler (heat input basis).** |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **PB** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **0.114** lb/hour **0.454** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **1.6 E-04 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ **X** ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**1.6 E-04 lb/MMBtu x 715 MMBtu/hr = 0.114 lb/hr.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Maximum emissions due to coal firing. Facility emissions are 0.454 TPY total all boilers.** |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **1.6 E-04 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **0.114** lb/hour **0.067** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **Stack test using EPA Method 12 once every 5 years.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **Biomass Firing** |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | **OTHER** |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | **8.9 E-07 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: | **0.0004** lb/hour **0.0007** tons/year |
| 5. Method of Compliance (limit to 60 characters): | **Stack test using EPA Method 12 once every 5 years.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | **No.2 fuel oil firing** |

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.4 E-05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.031** lb/hour **0.047** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Coal Firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4.2 E-05 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0143** lb/hour **0.053** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack test using EPA Method 12 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **TDF firing** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **SAM** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **17.6** lb/hour **27.8** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.036 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ ] 2 [ **X** ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.036 lb/MMBtu x 490 MMBtu/hr = 17.6 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Based on coal firing, 34.6 TPY total for all boilers.** |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.003 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **2.2** lb/hour **1.9** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on biomass firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.0015 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.74** lb/hour **1.1** tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **17.6** lb/hour **26.4** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **0.01 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **3.4** lb/hour **8.7** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on tire-derived fuel firing.** | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **FL** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **11.8** lb/hour **17.6** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **0.024 lb/MMBtu**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ ] 0 [ ] 1 [ **X** ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**0.024 lb/MMBtu x 490 MMBtu/hr = 11.8 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Based on coal firing. Total emissions from all three boilers limited to 21.23 TPY.** |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **OTHER** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **6.3 E-06 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **0.0031** lb/hour **0.0046** tons/year |
| 5. Method of Compliance (limit to 60 characters): |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing** |

**B.**

| |
|---|
| 1. Basis for Allowable Emissions Code: **OTHER** |
| 2. Future Effective Date of Allowable Emissions: |
| 3. Requested Allowable Emissions and Units: **0.024 lb/MMBtu** |
| 4. Equivalent Allowable Emissions: **11.8** lb/hour **17.6** tons/year |
| 5. Method of Compliance (limit to 60 characters): **EPA Method 13A or 13B once every 5 years.** |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing** |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.5 E-04 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.22** lb/hour **0.82** tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: | lb/hour tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **H114** |
| 2. Total Percent Efficiency of Control: % |
| 3. Potential Emissions: **0.0041** lb/hour **0.0173** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor: **See Part B**<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ **X** ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**Annual TPY limited by permit condition.** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Total emissions all three boilers cannot exceed 0.030 TPY.** |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0029** lb/hour | **0.0152** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on wood waste firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **5.43 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0045** lb/hour | **0.0152** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on bagasse firing. Limit subject to revision based on stack testing.** | |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **2.4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0012** lb/hour **0.0018** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 oil firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **8.4 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: | **0.0041** lb/hour **0.0062** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing. Limit subject to revision based on stack testing.** | |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **6.5 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0022** lb/hour | **0.0082** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 101A.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: lb/hour | tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## H. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION
## (Regulated Emissions Units Only - Emissions Limited Pollutants Only)

**Pollutant Detail Information**:

| |
|---|
| 1. Pollutant Emitted: **H021** |
| 2. Total Percent Efficiency of Control: **99** % |
| 3. Potential Emissions: **0.0029** lb/hour **0.0043** tons/year |
| 4. Synthetically Limited? [ **X** ] Yes [ ] No |
| 5. Range of Estimated Fugitive/Other Emissions:<br>[ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/yr |
| 6. Emission Factor:<br>Reference: **See Part B** |
| 7. Emissions Method Code:<br>[ **X** ] 0 [ ] 1 [ ] 2 [ ] 3 [ ] 4 [ ] 5 |
| 8. Calculation of Emissions (limit to 600 characters):<br>**490 MMBtu/hr x 5.9 E-06 lb/MMBtu = 0.0029 lb/hr** |
| 9. Pollutant Potential/Estimated Emissions Comment (limit to 200 characters):<br>**Max lb/hr based on coal firing. Total emissions all three boilers limited to 0.0052 TPY.** |

**Emissions Unit Information Section 3 of 3**

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **5.9 E-06 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0029** lb/hour | **0.0043** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on coal firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: **OTHER** | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **3.5 E-07 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0002** lb/hour | **0.0003** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on No.2 fuel oil firing.** | |

**Emissions Unit Information Section** 3 **of** 3

**Allowable Emissions (Pollutant identified on front page)**

**A.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: **4.5 E-07 lb/MMBtu** | |
| 4. Equivalent Allowable Emissions: **0.0002** lb/hour | **0.0006** tons/year |
| 5. Method of Compliance (limit to 60 characters): **Stack testing using EPA Method 104.** | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): **Based on TDF firing.** | |

**B.**

| | |
|---|---|
| 1. Basis for Allowable Emissions Code: | |
| 2. Future Effective Date of Allowable Emissions: | |
| 3. Requested Allowable Emissions and Units: | |
| 4. Equivalent Allowable Emissions: lb/hour | tons/year |
| 5. Method of Compliance (limit to 60 characters): | |
| 6. Pollutant Allowable Emissions Comment (Desc. of Related Operating Method/Mode) (limit to 200 characters): | |

## I. VISIBLE EMISSIONS INFORMATION
## (Regulated Emissions Units Only)

**Visible Emissions Limitations**: Visible Emissions Limitation 1 of 1

| | |
|---|---|
| 1. | Visible Emissions Subtype: VE20 |
| 2. | Basis for Allowable Opacity: [X ] Rule [ ] Other |
| 3. | Requested Allowable Opacity<br>Normal Conditions: 20 % Exceptional Conditions: 27 %<br>Maximum Period of Excess Opacity Allowed: 6 min/hour |
| 4. | Method of Compliance:<br>EPA Method 9 |
| 5. | Visible Emissions Comment (limit to 200 characters): |

**Visible Emissions Limitations**: Visible Emissions Limitation _____ of _____

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

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

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

| | |
|---|---|
| 1. Parameter Code: VE | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Durag<br>Model Number: D-R281AV Serial Number: 31018 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

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

| | |
|---|---|
| 1. Parameter Code: NOx | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 42D Serial Number: 42D-51031-292 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

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

| | |
|---|---|
| 1. Parameter Code: SO2 | 2. Pollutant(s): |
| 3. CMS Requirement: [ ] Rule [ X ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 43B Serial Number: 43B-48524-292 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

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

| | |
|---|---|
| 1. Parameter Code: CO | 2. Pollutant(s): |
| 3. CMS Requirement: [ ] Rule [ X ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Thermo Environmental Instruments<br>Model Number: 48 Serial Number: 48-52605-292 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters): | |

## J. CONTINUOUS MONITOR INFORMATION
## (Regulated Emissions Units Only)

**Continuous Monitoring System** Continuous Monitor 5 of 5

| | |
|---|---|
| 1. Parameter Code: O2 | 2. Pollutant(s): |
| 3. CMS Requirement: [X ] Rule [ ] Other | |
| 4. Monitor Information:<br>Monitor Manufacturer: Yokogawa<br>Model Number: ZA8C Serial Number: JJ113PA135 | |
| 5. Installation Date: 01 Oct 1995 | |
| 6. Performance Specification Test Date: | |
| 7. Continuous Monitor Comment (limit to 200 characters):<br>40 CFR 60, Subpart Da | |

**Continuous Monitoring System** Continuous Monitor _____ of _____

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

## K. PREVENTION OF SIGNIFICANT DETERIORATION (PSD) INCREMENT TRACKING INFORMATION
## (Regulated and Unregulated Emissions Units)

**PSD Increment Consumption Determination**

1. Increment Consuming for Particulate Matter or Sulfur Dioxide?

   If the emissions unit addressed in this section emits particulate matter or sulfur dioxide, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for particulate matter or sulfur dioxide. Check the first statement, if any, that applies and skip remaining statements.

   [ X ] The emissions unit is undergoing PSD review as part of this application, or has undergone PSD review previously, for particulate matter or sulfur dioxide. If so, emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after January 6, 1975. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after January 6, 1975, but before December 27, 1977. If so, baseline emissions are zero, and the emissions unit consumes increment.

   [ ] For any facility, the emissions unit began (or will begin) initial operation after December 27, 1977. If so, baseline emissions are zero, and emissions unit consumes increment.

   [ ] None of the above apply. If so, the baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

2. Increment Consuming for Nitrogen Dioxide?

If the emissions unit addressed in this section emits nitrogen oxides, answer the following series of questions to make a preliminary determination as to whether or not the emissions unit consumes PSD increment for nitrogen dioxide. Check first statement, if any, that applies and skip remaining statements.

[ X ] The emissions unit addressed in this section is undergoing PSD review as part of this application, or has undergone PSD review previously, for nitrogen dioxide. If so, emissions unit consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source pursuant to paragraph (c) of the definition of "major source of air pollution" in Chapter 62-213, F.A.C., and the emissions unit addressed in this section commenced (or will commence) construction after February 8, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] The facility addressed in this application is classified as an EPA major source and the emissions unit began initial operation after February 8, 1988, but before March 28, 1988. If so, baseline emissions are zero, and the source consumes increment.

[ ] For any facility, the emissions unit began (or will begin) initial operation after March 28, 1988. If so, baseline emissions are zero, and the emissions unit consumes increment.

[ ] None of the above apply. If so, baseline emissions of the emissions unit are nonzero. In such case, additional analysis, beyond the scope of this application, is needed to determine whether changes in emissions have occurred (or will occur) after the baseline date that may consume or expand increment.

| | | | | |
|---|---|---|---|---|
| 3. | Increment Consuming/Expanding Code: | | | |
| | PM | [ X ] C | [ ] E | [ ] Unknown |
| | $SO_2$ | [ X ] C | [ ] E | [ ] Unknown |
| | $NO_2$ | [ X ] C | [ ] E | [ ] Unknown |
| 4. | Baseline Emissions: | | | |
| | PM | 0 lb/hour | 0 tons/year | |
| | $SO_2$ | 0 lb/hour | 0 tons/year | |
| | $NO_2$ | | 0 tons/year | |
| 5. | PSD Comment (limit to 200 characters): | | | |

## L. EMISSIONS UNIT SUPPLEMENTAL INFORMATION
## (Regulated Emissions Units Only)

**Supplemental Requirements for All Applications**

| | | |
|---|---|---|
| 1. | Process Flow Diagram | |
| | [X] Attached, Document ID: PART B | |
| | [ ] Not Applicable | [ ] Waiver Requested |
| 2. | Fuel Analysis or Specification | |
| | [X] Attached, Document ID: PART B | |
| | [ ] Not Applicable | [ ] Waiver Requested |
| 3. | Detailed Description of Control Equipment | |
| | [X] Attached, Document ID: PART B | |
| | [ ] 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: _____ | [X] Not Applicable |
| | [ ] Previously Submitted, Date: _____ | |
| 6. | Procedures for Startup and Shutdown | |
| | [ ] Attached, Document ID: _____ | [X] Not Applicable |
| 7. | Operation and Maintenance Plan | |
| | [ ] Attached, Document ID: _____ | [X] Not Applicable |
| 8. | Supplemental Information for Construction Permit Application | |
| | [X] Attached, Document ID: PART B | [ ] Not Applicable |
| 9. | Other Information Required by Rule or Statute | |
| | [X] Attached, Document ID: PART B | [ ] Not Applicable |

**Additional Supplemental Requirements for Category I Applications Only**

10. Alternative Methods of Operation

[ ] Attached, Document ID: _____ [X] Not Applicable

11. Alternative Modes of Operation (Emissions Trading)

[ ] Attached, Document ID: _____ [X] Not Applicable

12. Identification of Additional Applicable Requirements

[ ] Attached, Document ID: _____ [X] Not Applicable

13. Compliance Assurance Monitoring Plan

[ ] Attached, Document ID: _____ [X] Not Applicable

14. Acid Rain Permit 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: _____

[X] Not Applicable

# PART B

## SUPPLEMENTAL INFORMATION FOR PERMIT APPLICATION

## OKEELANTA POWER LIMITED PARTNERSHIP

# 1.0 INTRODUCTION

Okeelanta Power Limited Partnership (OkPLP) was issued a prevention of significant deterioration (PSD) permit in 1993 for construction of a 74.9 megawatt electric (MWe) cogeneration facility (Permit No. AC50-219413; PSD-FL-196). The cogeneration facility is located at the site of the existing Okeelanta Corporation sugar mill, south of South Bay, Florida. The facility was designed to combust primarily biomass (bagasse and wood waste materials) in three steam boilers to generate steam and electricity. The facility was also designed to supply the adjacent sugar mill with process steam during the sugar cane grinding season, approximately November through March.

Construction was completed on the facility in 1995, and initial operations began in late 1995. Due to technical and operational difficulties and periods of facility shutdown, the facility was operated at less than design capacity during 1996. Almost all fuel burned in the facility boilers has been wood waste and No. 2 fuel oil. Only a small amount of bagasse has been combusted.

To date, the cogeneration facility has been unable to successfully connect to the sugar mill. Once the facility succesfully connects to the sugar mill, the existing sugar mill boilers will be shutdown and will only operate when one or more of the cogeneration units are shutdown. The existing boilers will be permanently shutdown and rendered incapable of operation no later than January 1, 1999.

The cogeneration facility will provide enough steam energy to generate electricity and to meet the needs of the Okeelanta sugar mill. Excess electricity will be sold to Florida Power & Light Company (FPL). Further, the facility will reduce overall air emissions and water consumption compared to the existing sugar mill facility while generating approximately 18 times more electric energy than the existing facility.

The state construction permit (AC50-219413) and federal PSD permit (PSD-FL-196) were issued to Okeelanta Power on September 27, 1993. In 1996, OkPLP submitted an application to burn tire-derived fuel (TDF) as a supplemental fuel to biomass. This application is currently being held in abeyance pending the results of a TDF trial burn at the facility.

Initial compliance testing was performed at OkPLP during May and December of 1996. According to the air construction permit, Specific Condition No. 22, compliance tests are to be conducted every 6 months for a period of 2 years in order to confirm the emission limits for certain pollutants in the permit. Based on the results of these tests, emission limits an be revised as long as a fuel management plan is submitted to demonstrate that annual emission limits (in tons per year) for the facility will not be exceeded.

Test data gathered from the facility to date, which include the compliance test data as well as data from the continuous emission monitoring system (CEMS), indicates that the emission limits for sulfur dioxide ($SO_2$), lead (Pb), and mercury (Hg) need to be revised. In addition, it is requested that the averaging time associated with the emission limit for carbon monoxide (CO) be increased.

The requested changes in the permit limits will not increase total permitted annual emissions to the atmosphere of any PSD regulated pollutants, except for a small increase in the annual emissions of Pb. The changes do not require PSD or nonattainment new source review.

This report presents a description of the proposed emission limit changes, and the rational and supporting information for such changes. A complete description of the requested changes, including air emission rates, is presented in Section 2.0. The air quality review requirements for the project and new source review applicability are discussed in Section 3.0. An updated air modeling analysis for air toxics is presented in Section 4.0. Supportive information is contained in the appendices.

# 2.0 PROJECT DESCRIPTION

## 2.1 GENERAL

OkPLP was issued a state construction permit (AC50-219413) and federal PSD permit (PSD-FL-196) on September 27, 1993, for the construction of a 74.9 MWe (gross) capacity biomass/coal-fired cogeneration facility. Each boiler is capable of producing up to an average of 455,418 lbs/hr steam. During the sugar processing season, the cogeneration facility is to provide steam to the existing Okeelanta sugar mill by burning primarily bagasse, which is the residual cellulose fiber resulting from the sugar cane grinding process, while also generating electricity. During the off-season, the cogeneration facility will burn primarily wood waste to generate electricity.

The construction permit limits the maximum heat input to each of the three boilers to 715 million British thermal units per hour (MMBtu/hr) when firing biomass, and 490 MMBtu/hr when firing fossil fuels (No. 2 fuel oil or low sulfur coal). Maximum annual heat input to the entire facility is limited to 11.5 x $10^{12}$ Btu/yr, and maximum coal burning is limited to 73,714 tons per year (TPY), which is approximately 16 percent of the total annual heat input.

In addition to the currently permitted fuels, it has been proposed by OkPLP (in June 1996) to permit TDF as a supplemental fuel to be used primarily in the off-season when bagasse is not available. TDF may also be burned during the crop season in order to extend the bagasse supply. TDF will be fired in combination with biomass. The proposed maximum TDF input was 25 percent on a weight basis (22,000 lb/hr or 11.0 TPH, maximum) on a short-term basis, and not exceeding 9.1 percent (weight basis) on a facility-wide annual average basis (81,600 TPY total TDF).

The changes to the facility operating and emission limits now being proposed by OkPLP consist of the following:

1. Adjustment of the $SO_2$, Pb, and Hg emission limits for wood waste fuel,
2. Adjustment of the Hg emission limit for bagasse burning,
3. Adjustment in the expected mix of bagasse and wood waste fuels,
4. Adjustment of the averaging time associated with the facility CO emission limits, and
5. Slight adjustment of annual coal and TDF firing rates to not exceed facility emission caps.

The three new boilers are subject to the federal new source performance standards (NSPS) for electric utility boilers (40 CFR 60, Subpart Da). The boilers are also subject to a reporting and recordkeeping requirement under the NSPS for municipal waste combustors (MWCs) (40 CFR 60, Subparts Ea and Cb). The boilers are subject to these requirements because they will potentially burn woodwaste and TDF originating from residential, commercial and/or institutional sources. Such fuels are defined as municipal solid waste (MSW) under the NSPS. However, because OkPLP has accepted a limit restricting the amount of MSW burned in each boiler to less than 30 percent (by weight) on a calendar quarter basis (permit amendment issued February 20, 1996), the boilers will be exempt from the Subpart Ea and Cb standards, and only subject to recordkeeping and reporting requirements.

Air pollution control equipment serving each boiler consists of an electrostatic precipitator (ESP) to control particulate matter (PM) and heavy metal emissions, a selective non-catalytic reduction (SNCR) system for the control of $NO_x$ emissions, and a carbon injection system for mercury control.

A regional map showing the location of the site is presented in Figure 2-1. A location map showing the existing sugar mill, cogeneration site, and plant property boundaries is presented in Figure 2-2.

## 2.2 COGENERATION FACILITY DESIGN INFORMATION

Updated design and operating information concerning the cogeneration facility was presented in the application for TDF submitted in May, 1996. Most of this information has not changed; where there are changes, the information is presented in the following sections. A simplified process flow diagram of the cogeneration facility is presented in Figure 2-3.

### 2.2.1 FUELS

OkPLP is planning on burning 100 percent biomass fuels. It is planned that the bagasse from the sugar grinding operation will provide approximately two-thirds of the annual fuel requirements of the facility. The remaining fuel requirements will be provided by wood waste materials, which could include clean construction and demolition wood debris, yard trimmings, land clearing debris, and other clean cellulose and vegetative matter. However, because wood waste materials are not commodity fuels and the supply of wood waste may fluctuate, it is necessary to have the

ability to burn limited amounts of fossil fuel and TDF in the event that the supply of biomass fuel is not adequate. Therefore, each combustion unit has the capability to burn biomass, biomass/TDF, very low sulfur fuel oil, and coal.

Fuel specifications for each fuel that may be utilized by the cogeneration facility are presented in Table 2-1. Based on these fuel specifications, maximum hourly firing rates are shown in Table 2-2 for each fuel when fired alone. The maximum heat input to each boiler due to biomass fuels will be 715 MMBtu/hr. Due to limitations of the fuel oil firing system, maximum heat input of No. 2 fuel oil will be limited to 490 MMBtu/hr. Maximum heat input due to coal will be 490 MMBtu/hr. Biomass and fossil fuels may also be burned in combination, not to exceed a total heat input of 715 MMBtu/hr per boiler. These maximum heat input rates are the same as the current permitted rates.

TDF will always be burned in combination with biomass. Maximum TDF input for each boiler will not exceed 25 percent on a weight basis (approximately 48 percent on a heat input basis), up to a maximum of 22,000 lb/hr (11.0 TPH and 340 MMBtu/hr). Biomass and TDF, burned in combination, will not exceed a total heat input of 715 MMBtu/hr.

On an annual basis, the total heat input to all three boilers will not exceed $11.50 \times 10^{12}$ Btu/yr. Burning of No. 2 fuel oil will be limited to a total of 24.9 percent of the total annual heat input. Coal burning will be limited to 15.1 percent annually on a heat input basis, or to 69,720 TPY. Total fossil fuel burning will also be limited to 24.9 percent on a calendar quarter basis. TDF burning will be limited to 21.9 percent annually on a facility-wide basis (heat input basis), or to 81,246 TPY.

Four cases are shown in Table 2-2 to document the anticipated scenario of firing 100 percent biomass fuel and the potential cases of firing the maximum amount of fuel oil, coal, or TDF, with the remaining heat input due to biomass. When only biomass is fired, the annual heat input requirement is $11.5 \times 10^{12}$ Btu/yr for the entire facility (total all three boilers). On an annual basis, it is expected that bagasse will provide 60 percent of the biomass heat input, with wood waste providing 40 percent.

Under the worst-case fuel oil burning case of firing No. 2 fuel oil at 24.9 percent of the total annual heat input, the annual heat input requirement for the entire facility becomes $10.83 \times 10^{12}$ Btu/yr, due to the different heat transfer efficiency for No. 2 fuel oil versus biomass. Similarly, under the worst-case coal firing scenario of firing coal at 15.1 percent of the total annual heat input, the annual heat input requirement for the entire facility becomes $11.08 \times 10^{12}$ Btu/yr. Under the worst-case TDF firing scenario of 21.9 percent of the total annual heat input (9.0 percent on a weight basis), the annual heat input requirement for the entire facility is $11.50 \times 10^{12}$ Btu/yr.

### 2.2.3 FACILITY PLOT PLAN

A plot plan of the OkPLP cogeneration facility is presented in Figure 2-4. The major structure at the site is the boiler building. This building has a height of approximately 121 feet above ground.

### 2.2.4 CONTROL EQUIPMENT INFORMATION

The cogeneration facility will utilize several emission control techniques to reduce emissions. A selective non-catalytic reduction (SNCR) system will be used to reduce $NO_x$ emissions. SNCR is a system which injects urea into the boiler to reduce $NO_x$ emissions. Further, the cogeneration boilers will minimize CO and VOC through proper furnace design and good combustion practices, including: control of combustion air and combustion temperature; distribution of fuel on the combustion grate; and better controls over the furnace loads and transient conditions. Particulate emissions will be controlled by an ESP. Mercury emissions will be controlled through a carbon injection system and the ESP system.

Mercury Control System

The mercury control system is supplied by ABB Environmental Systems and Chemco, Inc. A volumetric feeder with integral supply hopper meters activated carbon for injection at a point in the ductwork between the furnace and the ESP. This promotes turbulent mixing and provide adequate residence time. A blower system transports the carbon to the injection point. The ESP will effectively capture the activated carbon particles along with the boiler fly ash (which also contains some carbon). The system is designed to inject up to 32 lb/hr of carbon into the flue gases of each boiler.

### 2.2.5 STACK PARAMETERS

Stack parameters for the cogeneration facility are presented in Table 2-3. The parameters reflect actual operating data based on the compliance testing. Each of the three boilers are served by a separate stack. The top of each stack is 225 feet (ft) above ground. Each stack is 10.0 ft in diameter. The locations of the three stacks are shown in Figure 2-4.

## 2.3 REVISIONS TO PERMITTED BOILER EMISSION LIMITS

### 2.3.1 LIMITS FOR CRITERIA/DESIGNATED POLLUTANTS

The emission limits for all criteria/designated pollutants emitted by the OkPLP boilers are presented in Table 2-4. The emission limits in terms of lb/MMBtu are the same as currently permitted, except in the case of $SO_2$, Pb and Hg emissions due to wood waste firing. These revisions are being requested due to higher than expected levels of sulfur, lead and mercury in the wood waste fuel. The basis for these permit revisions are described below. A change in the averaging time associated with the CO emission limit for all fuels is also requested.

#### 2.3.1.1 Sulfur Dioxide

The current permit limits for $SO_2$ emissions for biomass fuel are 0.1 lb/MMBtu for a 24-hour average, and 0.02 lb/MMBtu as a 30-day rolling average. Thus, the limits for bagasse and wood waste are the same. At the time of the original permit application, very little information was available regarding the sulfur content of wood wastes. Based on limited data from the Okeelanta sugar mill, it was concluded that the sulfur contents of the two fuels were similar. The limits were based on sulfur contents of 0.045% (max) and 0.009% (avg.), wet basis. Although inherent $SO_2$ removal in the boiler system due to the alkaline nature of wood and bagasse ash was expected, no removal was considered in calculating the equivalent $SO_2$ emissions.

Based on analysis of the wood waste OkPLP is receiving, the sulfur content of the wood waste is higher than anticipated. OkPLP obtains fuel analysis data on the wood waste delivered to the facility. The data show a wide range of sulfur contents, depending on the source and/or supplier of the wood waste. Data from different suppliers are summarized in Table 2-5. As shown, the average sulfur content of wood waste from specific suppliers can range from 0.02% to 0.17% sulfur (dry basis), equivalent to 0.05 to 0.44 lb/MMBtu $SO_2$ emissions. However, the overall average of all deliveries cannot be estimated because the frequency of deliveries and quantity of wood waste delivered varies considerably for each supplier.

Data obtained to date from OkPLP's and OsPLP's compliance test data shows that $SO_2$ emissions due to wood waste firing are in the range of 0.02 to 0.08 lb/MMBtu, and average 0.05 lb/MMBtu (see Table 2-6). CEMS data for $SO_2$ from January-March 1997 are summarized in Table 2-7. These data indicate that significant $SO_2$ removal is indeed occurring in the boiler system. Although significant SO2 capture in the alkaline fly ash is indicated, the current annual average $SO_2$ emission limit of 0.02 lb/MMBtu may not be achievable for wood waste. Based on the compliance testing and CEMS results, an annual average $SO_2$ emission limit of 0.05 lb/MMBtu is proposed for wood waste. The current limit of 0.02 lb/MMBtu for bagasse is being retained at this time. This limit, however, may be subject to revision based upon further testing with bagasse.

#### 2.3.1.2 CARBON MONOXIDE

The current limit for CO emissions from biomass burning is 0.35 lb/MMBtu based on an 8-hour averaging time. This limit was based on the boiler manufacturer's design. CO emissions data obtained to date from OkPLP's and OsPLP's compliance testing are presented in Table 2-6. These data indicate that the emission limit has been achieved during the compliance tests. However, data from OkPLP's CEMS for CO indicates that CO emissions due to wood waste firing can exceed the emission limit based on an 8-hour averaging time. During January - April 1997, the boilers at OkPLP experienced several excursions of the emission limit, with 8-hour CO averages up to 0.7 lb/MMBtu. Most of these excursions were attributed to unusually wet wood waste or bagasse fuel. Wood waste fuel is by nature high in moisture (30-50%). Abnormally wet biomass fuel is usually due to a heavy rain event which causes the fuel to become wetter than normal.

Based on review of the CEMS data, OkPLP believes that the current CO limit is achievable if it is based on a 24-hour averaging time basis. The longer averaging time will allow fluctuations in fuel quality (and therefore CO emissions) to occur on a short-term basis, but will not increase daily or annual CO emissions. Thus, it is requested that the averaging time for the CO emissions limit be revised to reflect a 24-hour averaging time. In order to be consistent, it is requested that the averaging time for the CO limits for No. 2 fuel oil, coal, and TDF also be specified as a 24-hour basis.

### 2.3.1.3 LEAD

The current emission limit for Pb for biomass fuel is $2.5x10^{-5}$ lb/MMBtu. The limits for bagasse and wood waste are the same. At the time of the original permit application, very little information was available regarding the lead content of wood wastes or emissions of lead from wood-fired boilers. The emission limit of $2.5x10^{-5}$ lb/MMBtu was based on the average emissions from three wood-fired boilers controlled by an ESP, as reported by Sassenrath (1991).

OkPLP has conducted analysis of wood wastes for Pb content. The results of these analysis are presented in Table 2-8. As shown, the Pb content of the wood waste has ranged between 0.5 and 350 ppm. The high value of 350 ppm appears to be an outlier, as the next highest value is only 37.8 ppm. Excluding the high value, the average Pb content is 7.9 ppm. This is equivalent to uncontrolled Pb emissions of $1.0x10^{-3}$ lb/MMBtu, assuming 8,000 Btu/lb (dry) for wood waste.

Data obtained to date from OkPLP's and OsPLP's compliance test data shows that Pb emissions due to wood waste firing are in the range of $1.23x10^{-5}$ to $13.6x10^{-5}$ lb/MMBtu, with an average of $5.25x10^{-5}$ lb/MMBtu (see Table 2-6 ). Compared to the Pb levels measured in the wood waste fuel, these data indicate that significant Pb removal is occurring in the ESP system. Based on the average Pb levels in the fuel, the average Pb removal efficiency is calculated to be 97 percent.

Although significant Pb capture in the ESP system is indicated, the current Pb emission limit of $2.5x10^{-5}$ lb/MMBtu may not be achievable for wood waste. Based on the compliance testing results, an emission limit of $1.6x10^{-4}$ lb/MMBtu is proposed for wood waste. This value represents the upper 95% confidence level of the compliance test data (i.e., there is 95% confidence that this value will not be exceeded during a compliance test; refer to Table 2-6). The current $2.5x10^{-5}$ lb/MMBtu limit for bagasse is being retained at this time. This limit, however, may be subject to revision based upon further testing with bagasse.

### 2.3.1.4 MERCURY

The current emission limit for Hg for bagasse fuel is $6.3x10^{-6}$ lb/MMBtu, and for wood waste, is $0.29x10^{-6}$ lb/MMBtu. Thus, the limits for bagasse and wood waste are different. At the time of the original permit application, very little information was available regarding the Hg content of wood wastes or emissions of Hg from wood-fired boilers. The original emission limit of $0.29x10^{-6}$ lb/MMBtu for wood waste was based on the average emissions from three wood fired

boilers controlled by an ESP, as reported by Sassenrath (1991). A control efficiency of 30% was then applied to this emission rate based on the use of a carbon injection system for Hg control.

OkPLP has conducted analysis of wood wastes for Hg content, and these analysis are presented in Table 2-8. As shown, the Hg content of the wood waste has ranged between 0.025 and 1.00 ppm, with an average of 0.095 ppm. This average is equivalent to uncontrolled emissions of Hg, of $1.2 \times 10^{-5}$ lb/MMBtu, assuming 8,000 Btu/lb (dry) for wood waste.

Data obtained to date from OkPLP's and OsPLP's compliance test data, presented in Table 2-9, shows that Hg emissions due to wood waste firing are in the range of $0.95 \times 10^{-6}$ to $3.23 \times 10^{-6}$ lb/MMBtu, with an average of $1.90 \times 10^{-6}$ lb/MMBtu. Compared to the Hg levels measured in the wood waste fuel, these data indicate that significant Hg removal is occurring in the ESP system. Based on the average Hg levels in the fuel, the average Hg removal efficiency is calculated to be 84%.

OkPLP has conducted several Hg emission tests for the purposing of better quantifying Hg emissions, as well as the effectiveness of the Hg removal system (carbon injection system). The results of these tests are shown in Table 2-10. As shown, three tests were conducted at each of three carbon injection rates. The amount of fuel burned and the Hg content of the fuel were utilized to calculate the Hg input to the boiler. The stack tests results were then used to calculate the amount of Hg emitted to the atmosphere. This calculation shows that the Hg removal efficiency of the system ranged from 17% to 93%, with an average of 69%. This removal efficiency is well above the 30% removal which formed the basis of the original air permit for the OkPLP facility. The test data also show that the level of Hg emissions or calculated removal efficiency does not appear to be related to the amount of carbon injection.

Although significant Hg capture in the ESP system is indicated, the current Hg emission limit of $0.29 \times 10^{-6}$ lb/MMBtu for wood waste appears to be too low. Based on the compliance testing results, an emission limit of $4.0 \times 10^{-6}$ lb/MMBtu is proposed for wood waste. This limit represents a value somewhat greater than the highest measured Hg emission rate of $3.23 \times 10^{-6}$ lb/MMBtu (refer to Table 2-9).

The current Hg limit of $6.3x10^{-6}$ lb/MMBtu limit for bagasse is being lowered slightly at this time (to $5.43x10^{-6}$ lb/MMBtu) in order to maintain total annual Hg emissions from the facility at 0.0300 TPY. This limit, however, may be subject to revision based upon further testing with bagasse.

## 2.4 EMISSION RATES FOR REGULATED POLLUTANTS

Maximum hourly emissions from each of the OkPLP boilers for each fuel are presented in Table 2-11. This table reflects the proposed $SO_2$, CO, Pb and Hg emission limits for wood waste firing. Since TDF will always be burned in combination with biomass, with up to 25 percent TDF on a weight basis, emission rates are also presented for 25 percent TDF/75 percent biomass firing (weight basis). As shown, the maximum hourly emissions occur when burning either biomass, biomass/TDF, or coal. The maximum hourly emissions are the same as currently permitted emissions, except in the case of Pb.

The total annual emissions from all three boilers for each fuel scenario, including the proposed TDF firing, are presented in Table 2-12. These are based upon the same emission factors as presented in Table 2-4, including the revised limits for $SO_2$, Pb and Hg. The total maximum annual emission rate for each pollutant is based upon the worst-case fuel operating scenario and is identified in the far right column of Table 2-12. The maximum annual emissions for all of the criteria/designated pollutants are the same as currently permitted, except for the case of Pb. For Pb, annual emissions are slightly higher than currently permitted. As described in the TDF application, although maximum annual emissions of beryllium, fluorides, and sulfuric acid mist are all lower than permitted due to the reduction in coal firing to 15.1 percent coal burning in any one year, it is requested that the current permit limits be retained to allow flexibility in fuel mix in the future.

Maximum annual emissions per boiler for the OkPLP facility are presented in Attachment A.

## 2.7 COMPLIANCE DEMONSTRATION

OkPLP will continue to demonstrate compliance with the maximum heat input limits for the facility by monitoring fuel input rates and fuel characteristics on a periodic basis. Steam production parameters (i.e., steam quantity, pressure, and temperature) and feedwater parameters will be continuously monitored to allow calculation of heat input by use of an assumed heat

transfer efficiency for each fuel. In addition, per the zoning conditions recommended by Palm Beach County and agreed to by OkPLP, stack testing will be performed for PM, $NO_x$, CO, $SO_2$, lead, mercury, and VOC every 6 months during the first 2 years of operation. If these tests show compliance with the permitted emission limits, the stack testing frequency will be reduced to that typically required by FDEP (i.e., once every year or once every 5 years, depending upon pollutant). Based on these tests, additional revisions of permit limitations may be required. Any such revisions will be submitted to the Department for approval.

Table 2-1. Design Fuel Specifications[a] for the OkPLP Facility

| Parameter | Biomass | | No. 2 Fuel Oil | Bituminous Coal | Tire-Derived Fuel |
|---|---|---|---|---|---|
| | Bagasse | Wood Waste | | | |
| Specific Gravity | — | — | 0.865 | — | — |
| Heating Value (Btu/lb) | 4,250 | 5,500 | 19,175 | 12,000 | 15,500 |
| Heating Value (Btu/gal) | — | — | 138,000 | — | — |
| Ultimate Analysis (dry basis percentage): | | | | | |
| Carbon | 48.93 | 49.58 | 87.01 | 82.96 | 84.4 |
| Hydrogen | 6.14 | 5.87 | 12.47 | 5.41 | 7.1 |
| Nitrogen | 0.25 | 0.40 | 0.02 | 1.58 | 0.24 |
| Oxygen | 43.84 | 40.90 | 0.00 | 5.72 | 2.18 |
| Sulfur | 0.02 - 0.10 | 0.02 - 0.17 | 0.50 | 0.67 | 1.23 |
| Ash/Inorganic | 0.83 | 3.24 | 0.00 | 3.66 | 4.9 |
| Moisture | 52 | 37 | — | 4.5 | 0.6 |

[a] Represents average fuel characteristics.

Sources: Okeelanta Corp., 1992.
Combustion Engineering, 1981.
Waste Recovery, Inc., 1986.
Okeelanta Power Limited Partnership, 1997.

Table 2-2. Maximum Fuel Usage and Heat Input Rates, Okeelanta Power Limited Partnership

| Fuel | Heat Input | | Heat Transfer Efficiency (%) | Heat Output | | Fuel Firing Rate | |
|---|---|---|---|---|---|---|---|
| | | | Maximum Short-Term (per boiler) | | | | |
| Biomass: Bagasse | 715 | MMBtu/hr | 68 | 486 | MMBtu/hr | 168,235 | lb/hr^a |
| Wood Waste | 715 | MMBtu/hr | 68 | 486 | MMBtu/hr | 130,000 | lb/hr^b |
| No. 2 Oil | 490 | MMBtu/hr | 85 | 417 | MMBtu/hr | 3,551 | gal/hr |
| Coal | 490 | MMBtu/hr | 85 | 417 | MMBtu/hr | 40,833 | lb/hr |
| Tire-Derived Fuel | 340 | MMBtu/hr | 68 | 231 | MMBtu/hr | 21,935 | lb/hr |
| | | | Annual Average (total all three boilers) | | | | |
| NORMAL OPERATIONS | | | | | | | |
| Biomass | 1.150E+13 | Btu/yr | 68 | 7.820E+12 | Btu/yr | 1,352,941 | TPY^a |
| No. 2 Oil | 0 | Btu/yr | 85 | 0 | Btu/yr | 0 | gal/yr |
| Coal | 0 | Btu/yr | 85 | 0 | Btu/yr | 0 | TPY |
| Tire-Derived Fuel | 0 | Btu/yr | 68 | 0 | Btu/yr | 0 | TPY |
| TOTAL | 1.150E+13 | Btu/yr | | 7.820E+12 | Btu/yr | | |
| 24.9% OIL FIRING | | | | | | | |
| Biomass | 8.130E+12 | Btu/yr | 68 | 5.528E+12 | Btu/yr | 956,471 | TPY |
| No. 2 Oil | 2.696E+12 | Btu/yr | 85 | 2.291E+12 | Btu/yr | 19,533,086 | gal/yr |
| Coal | 0 | Btu/yr | 85 | 0 | Btu/yr | 0 | TPY |
| Tire-Derived Fuel | 0 | Btu/yr | 68 | 0 | Btu/yr | 0 | TPY |
| TOTAL | 1.083E+13 | Btu/yr | | 7.820E+12 | Btu/yr | | |
| 15.1% COAL FIRING | | | | | | | |
| Biomass | 9.408E+12 | Btu/yr | 68 | 6.397E+12 | Btu/yr | 1,106,824 | TPY |
| No. 2 Oil | 0 | Btu/yr | 85 | 0 | Btu/yr | 0 | gal/yr |
| Coal | 1.673E+12 | Btu/yr | 85 | 1.422E+12 | Btu/yr | 69,720 | TPY |
| Tire-Derived Fuel | 0 | Btu/yr | 68 | 0 | Btu/yr | 0 | TPY |
| TOTAL | 1.108E+13 | Btu/yr | | 7.820E+12 | Btu/yr | | |
| 21.9% TIRE-DERIVED FUEL FIRING (9.0% TDF, weight basis) | | | | | | | |
| Biomass | 8.982E+12 | Btu/yr | 68 | 6.108E+12 | Btu/yr | 816,545 | TPY^b |
| No. 2 Oil | 0 | Btu/yr | 85 | 0 | Btu/yr | 0 | gal/yr |
| Coal | 0 | Btu/yr | 85 | 0 | Btu/yr | 0 | TPY |
| Tire-Derived Fuel | 2.519E+12 | Btu/yr | 68 | 1.713E+12 | Btu/yr | 81,246 | TPY |
| TOTAL | 1.150E+13 | Btu/yr | | 7.820E+12 | Btu/yr | | |

Note: Total heat output required = 486 MMBtu/hr each boiler, and
7.820E+12 Btu/yr total all boilers.
Fuels may be burned in combination, not to exceed indicated total heat outputs.

^a Based on heating value for bagasse of 4,250 Btu/lb, wet basis.
^b Based on heating value for wood waste of 5,500 Btu/lb.

Table 2-3. Stack Parameters for the OKPLP Facility

| | Boilers (each) | | | | Boiler House Baghouse | Fly Ash Silo Filter | Carbon Silo Filter |
|---|---|---|---|---|---|---|---|
| | Biomass | Oil | Coal | TDF/Biomass | | | |
| Heat Input Rate (MMBtu/hr) | 715 | 490 | 490 | 715 | — | — | — |
| Stack Height (ft) | 225 | 225 | 225 | 225 | 10 | 110 | 24 |
| Stack Diam. (ft) | 10.0 | 10.0 | 10.0 | 10.0 | 4.0 x 4.0 | 2.0 x 2.0 | 2.0 x 2.0 |
| Gas Flowrate (acfm) | 246,000 - 326,000 | 140,000 - 150,000 | 211,000 - 227,000 | 246,000 - 326,000 | 30,000 | 1,000 | 1,000 |
| Gas Velocity (ft/s) | 52.2 - 69.2 | 29.7 - 31.8 | 44.8 - 48.2 | 52.2 - 69.2 | 31.3 | 4.2 | 4.2 |
| Gas Temperature (°F) | 295 - 340 | 295 - 350 | 295 - 350 | 295 - 350 | 80 | 100 | 80 |

Note: acfm = actual cubic feet per minute.
°F = degrees Fahrenheit.
ft = feet.
ft/s = feet per second.

Table 2-4. Emission Limits for the OkPLP Facility

| Pollutant | Emission Limit[d] (per boiler) | | | | | | | | Total All Three Boilers[e] (TPY) |
|---|---|---|---|---|---|---|---|---|---|
| | Biomass | | No. 2 Oil | | Bit. Coal | | Tire-Derived Fuel | | |
| | (lb/MMBtu) | (lb/hr) | (lb/MMBtu) | (lb/hr) | (lb/MMBtu) | (lb/hr) | (lb/MMBtu) | (lb/hr) | |
| Particulate (TSP) | 0.03 | 21.5 | 0.03 | 14.7 | 0.03 | 14.7 | 0.03 | 10.2 | 172.5 |
| Particulate (PM10) | 0.03 | 21.5 | 0.03 | 14.7 | 0.03 | 14.7 | 0.03 | 10.2 | 172.5 |
| Sulfur Dioxide | | | | | | | | | |
| 3-Hour Average | — | — | — | — | 1.2 | 588.0 | — | — | — |
| 24-Hour Average | 0.10 | 71.5 | 0.05 | 24.5 | 1.2 | 588.0 | 1.2 | 408.0 | — |
| Annual Average | | | | | | | | | |
| Bagasse | 0.02[a,b] | — | — | — | 1.2[a] | — | 0.8[a] | — | 1,154.3[f] |
| Woodwaste | 0.05[c] | | | | | | | | |
| Nitrogen Oxides | | | | | | | | | |
| Annual Average | 0.15[a] | 107.3[a] | 0.15[a] | 73.5[a] | 0.17[a] | 83.3[a] | 0.15[a] | 51.0[a] | 862.5 |
| Carbon Monoxide | | | | | | | | | |
| 24-Hour Average | 0.35 | 250.3 | 0.2 | 98.0 | 0.2 | 98.0 | 0.35 | 119.0 | 2,012.5 |
| VOCs | 0.06 | 42.9 | 0.03 | 14.7 | 0.03 | 14.7 | 0.06 | 20.4 | 345.0 |
| Lead | | | | | | | | | |
| Bagasse | $2.5 \times 10^{-5}$ [b] | 0.0179[b] | $8.9 \times 10^{-7}$ | 0.00044 | $6.4 \times 10^{-5}$ | 0.031 | $4.2 \times 10^{-5}$ | 0.0143 | 0.454 |
| Wood Waste | $1.6 \times 10^{-4}$ [c] | 0.1144[c] | | | | | | | |
| Mercury | | | | | | | | | |
| Bagasse | $5.43 \times 10^{-6}$ [b] | 0.0039[b] | $2.4 \times 10^{-6}$ | 0.00118 | $8.4 \times 10^{-6}$ | 0.0041 | $6.5 \times 10^{-6}$ | 0.0022 | 0.0300 |
| Wood Waste | $4.0 \times 10^{-6}$ [c] | 0.0029[c] | | | | | | | |
| Beryllium | — | — | $3.5 \times 10^{-7}$ | 0.00017 | $5.9 \times 10^{-6}$ | 0.0029 | $4.5 \times 10^{-7}$ | $1.5 \times 10^{-4}$ | 0.0052 |
| Fluorides | — | — | $6.3 \times 10^{-6}$ | 0.0031 | 0.024 | 11.8 | $6.5 \times 10^{-4}$ | 0.22 | 21.2 |
| Sulfuric Acid Mist | 0.003 | 2.15 | 0.0015 | 0.74 | 0.036 | 17.6 | 0.010 | 3.40 | 34.6 |

[a] Compliance based on 30-day rolling average, per 40 CFR 60, Subpart Da.
[b] Emission limit for bagasse. Subject to revision after testing pursuant to Specific Conditions Nos. 24 and 25.
[c] Emission limit for wood waste.
[d] The emission limit shall be prorated when more than one type of fuel is burned in a boiler.
[e] Limit heat input from No. 2 fuel to less than 25 percent of total heat input on a calendar quarter basis, coal to 69,720 tons and TDF to 81,246 TPY during any 12-month period, and the combination of oil and coal to less than 25 percent of the total heat input on a calendar quarter basis.
[f] Compliance based on a 12-month rolling average.

Table 2-5. Sulfur Analysis of Wood Waste, OKPLP, January 1997

| Supplier | Sulfur Content (%S, dry) | Heating Value (Btu/lb, dry) | Equilivent SO2 Emissions (lb/MMBtu) |
|---|---|---|---|
| Supplier A | 0.07 | 7,531 | 0.186 |
| Supplier B | 0.06 | 8,283 | 0.145 |
| Supplier C | 0.08 | 7,471 | 0.214 |
| Supplier D | 0.08 | 7,320 | 0.219 |
| Supplier E | 0.07 | 7,130 | 0.196 |
| Supplier F | 0.08 | 7,486 | 0.214 |
| Supplier G | 0.04 | 8,405 | 0.095 |
| Supplier H | 0.05 | 8,447 | 0.118 |
| Supplier I | 0.11 | 8,074 | 0.272 |
| Supplier J | 0.05 | 8,557 | 0.117 |
| Supplier K | 0.07 | 7,752 | 0.181 |
| Supplier L | 0.02 | 8,591 | 0.047 |
| Supplier M | 0.06 | 8,214 | 0.146 |
| Supplier N | 0.15 | 8,338 | 0.360 |
| Supplier O | 0.05 | 8,349 | 0.120 |
| Supplier P | 0.13 | 8,542 | 0.304 |
| Supplier Q | 0.07 | 6,994 | 0.200 |
| Supplier R | 0.12 | 8,213 | 0.292 |
| Supplier S | 0.03 | 7,999 | 0.075 |
| Supplier T | 0.11 | 7,987 | 0.275 |
| Supplier U | 0.13 | 7,560 | 0.344 |
| Supplier V | 0.11 | 8,042 | 0.274 |
| Supplier W | 0.17 | 7,670 | 0.443 |
| Minimum | 0.02 | 6,994 | 0.047 |
| Maximum | 0.17 | 8,591 | 0.443 |

Table 2-6. Stack Test Data for OkPLP and OsPLP Cogeneration Units Burning Wood Waste - SO2, CO, Pb

| Boiler/Run | Sulfur Dioxide (SO2) Test Date | (ppmvd @ 7 % O2) | (lb/hr) | (lb/MMBtu) | Carbon Monoxide (CO) Test Date | (ppmvd @ 7 % O2) | (lb/hr) | (lb/MMBtu) | Lead (Pb) Test Date | (mg/dscm @ 7 % O2) | (lb/hr) | (lb/MMBtu) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Okeelanta Unit A | | | | | | | | | | | | |
| 1 | 5/11/96 | 24.2 | 35.64 | 0.0514 | 5/10/96 | 268.5 | 166.38 | 0.249 | 5/10/96 | 0.0436 | 2.46E-02 | 3.48E-05 |
| 2 | 5/12/96 | 27.6 | 40.07 | 0.0586 | 5/10/96 | 181.4 | 118.89 | 0.168 | 5/11/96 | 0.0215 | 1.29E-02 | 1.71E-05 |
| 3 | 5/12/96 | 34.1 | 49.89 | 0.0723 | 5/10/96 | 168.7 | 110.59 | 0.157 | 5/11/96 | 0.0264 | 1.46E-02 | 2.10E-05 |
| Average | | 28.6 | 41.87 | 0.0608 | | 206.2 | 131.95 | 0.191 | | 0.0305 | 1.74E-02 | 2.43E-05 |
| 4 | 5/29/96 | 29.2 | 44.97 | 0.0620 | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | 5/30/96 | 32.9 | 51.03 | 0.0700 | --- | --- | --- | --- | --- | --- | --- | --- |
| 6 | 5/30/96 | 30.9 | 50.60 | 0.0660 | --- | --- | --- | --- | --- | --- | --- | --- |
| Average | | 29.6 | 44.87 | 0.0630 | | --- | --- | --- | | --- | --- | --- |
| Okeelanta Unit B | | | | | | | | | | | | |
| 1 | 5/15/96 | 30.0 | 49.97 | 0.0691 | 5/14/96 | 198.5 | 138.33 | 0.183 | 5/15/96 | 0.0163 | 9.13E-03 | 1.30E-05 |
| 2 | 5/16/96 | 36.8 | 63.92 | 0.0862 | 5/14/96 | 218.9 | 152.84 | 0.203 | 5/15/96 | 0.2505 | 8.75E-03 | 1.29E-05 |
| 3 | 5/16/96 | 37.5 | 59.41 | 0.0856 | 5/14/96 | 168.2 | 116.11 | 0.156 | 5/15/96 | 0.2159 | 7.57E-03 | 1.11E-05 |
| Average | | 34.7 | 57.77 | 0.0803 | | 195.2 | 135.76 | 0.181 | | 0.1609 | 8.48E-03 | 1.23E-05 |
| Okeelanta Unit C | | | | | | | | | | | | |
| 1 | 6/3/96 | 19.7 | 31.13 | 0.0470 | 5/22/96 | 172.9 | 112.37 | 0.181 | 5/22/96 | 0.0274 | 1.63E-02 | 2.46E-05 |
| 2 | 6/3/96 | 9.7 | 15.78 | 0.0240 | 5/22/96 | 194.6 | 129.74 | 0.203 | 5/23/96 | 0.0283 | 1.59E-02 | 2.54E-05 |
| 3 | 6/3/96 | 18.7 | 28.81 | 0.0447 | 5/22/96 | 214.1 | 139.00 | 0.224 | 5/23/96 | 0.0368 | 2.05E-02 | 3.30E-05 |
| Average | | 16.1 | 25.24 | 0.039 | | 193.8 | 127.04 | 0.203 | | 0.0308 | 1.76E-02 | 2.77E-05 |
| Osceola Unit A | | | | | | | | | | | | |
| A -1 | 12/15/96 | 17.3 | 26.5 | 0.038 | 12/14/96 | 208.3 | 144.4 | 0.22 | 12/15/96 | 0.0780 | 4.77E-02 | 7.04E-05 |
| A -2 | 12/15/96 | 14.4 | 21.5 | 0.032 | 12/14/96 | 171.0 | 104.4 | 0.18 | 12/15/96 | 0.0644 | 3.69E-02 | 5.82E-05 |
| A -3 | 12/15/96 | 4.6 | 7.3 | 0.010 | 12/14/96 | 203.8 | 134.9 | 0.21 | 12/15/96 | 0.0635 | 3.60E-02 | 5.74E-05 |
| Average | | 12.1 | 18.4 | 0.027 | | 194.4 | 127.9 | 0.20 | | 0.0686 | 4.02E-02 | 6.20E-05 |
| Osceola Unit B | | | | | | | | | | | | |
| B -1 | 12/18/96 | 4.1 | 6.4 | 0.009 | 12/18/96 | 100.7 | 70.0 | 0.11 | 12/17/96 | 0.116 | 6.93E-02 | 1.05E-04 |
| B -2 | 12/18/96 | 23.1 | 36.9 | 0.056 | 12/18/96 | 152.4 | 103.3 | 0.16 | 12/18/96 | 0.132 | 7.72E-02 | 1.22E-04 |
| B -3 | 12/18/96 | 1.6 | 2.4 | 0.004 | 12/18/96 | 131.4 | 89.6 | 0.14 | 12/18/96 | 0.197 | 1.23E-01 | 1.81E-04 |
| Average | | 9.6 | 15.2 | 0.023 | | 128.1 | 87.6 | 0.14 | | 0.148 | 8.98E-02 | 1.36E-04 |
| Compliance Test Minimum | | 9.6 | 15.2 | 0.023 | | 128.1 | 87.6 | 0.14 | | 0.031 | 8.48E-03 | 1.23E-05 |
| Compliance Test Average | | 21.8 | 33.9 | 0.049 | | 183.5 | 122.1 | 0.18 | | 0.088 | 3.47E-02 | 5.25E-05 |
| Compliance Test Maximum | | 34.7 | 57.8 | 0.080 | | 206.2 | 135.8 | 0.20 | | 0.161 | 8.98E-02 | 1.36E-04 |
| Standard Deviation | | | | 0.023 | | | | 0.027 | | | | 5.02E-05 |
| t-statistic | | | | 2.105 | | | | 2.132 | | | | 2.132 |
| 95% Upper Confidence Limit | | | | 0.097 | | | | 0.242 | | | | 1.60E-04 |
| Permit Limit | | | | 0.100 | | | | 0.350 | | | | 2.5E-5 Okeelanta<br>2.7E-6 Osceola |

Table 2-7. Summary of CEMS Data for SO2, OkPLP, 1997

| Boiler | Month | No. of Hours | Daily Average SO2 Emissions (lb/MMBtu) | | |
|---|---|---|---|---|---|
| | | | Min. | Avg. | Max. |
| A | January | 408 | 0.0470 | 0.0494 | 0.0510 |
| | February | 320 | 0.0170 | 0.0347 | 0.0520 |
| | March (a) | 23 | 0.0350 | 0.0350 | 0.0350 |
| B | January | 523 | 0.0180 | 0.0497 | 0.0780 |
| | February | 522 | 0.0110 | 0.0308 | 0.0550 |
| | March | 322 | 0.0180 | 0.0412 | 0.0620 |
| C | January | 384 | 0.0590 | 0.0601 | 0.0620 |
| | February | 434 | 0.0150 | 0.0280 | 0.0500 |
| | March | 575 | 0.0220 | 0.0424 | 0.0740 |
| | Total hours = | 3,511 | | | |
| | Minimum = | | 0.0110 | | |
| | Average = | | | 0.0419 | |
| | Maximum = | | | | 0.0780 |

(a) Average consists of only one set of data.

Table 2-8. Mercury and Lead Content (mg/kg wet) of Wood Waste Recieved at OkPLP

| Test Date | Lead | Mercury | Test Date | Lead | Mercury |
|---|---|---|---|---|---|
| 07/15/96 | 4.2 | 0.065 (a) | 09/16/96 | 5.4 | 0.029 (a) |
| 07/16/96 | 4.1 | 0.060 (a) | 09/23/96 | 28.0 | 0.066 |
| 07/21/96 (b) | 6.9 | 0.062 (c) | 10/05/96 | 3.5 | 0.029 (a) |
| 07/25/96 | 11.0 | 0.260 | 11/25/96 | 3.9 | 0.025 (a) |
| 07/29/96 | 10.0 | 0.160 | 12/02/96 | 4.7 | 0.029 (a) |
| 07/29/96 | 6.3 | 0.025 (a) | 12/09/96 | 5.1 | 0.091 |
| 07/31/96 | 4.0 | 0.090 | 12/13/96 | 2.3 | 0.029 (a) |
| 08/5/96 | 2.0 | 0.025 (a) | 12/17/96 | 18.0 | 0.029 (a) |
| 08/7/96 | 0.5 (a) | 0.025 (a) | 12/18/96 | 22.0 | 0.087 |
| 08/9/96 | 4.7 | 0.025 (a) | 12/20/96 | 5.0 (a) | 0.025 (a) |
| 08/12/96 | 0.5 (a) | 0.200 | 01/14/97 | 3.2 | 0.025 (a) |
| 08/15/96 | 4.0 | 0.025 (a) | 01/20/97 | 5.4 | 1.000 |
| 08/16/96 (b) | | 0.530 | 01/22/97 | 16.0 | 0.025 (a) |
| 08/20/96 (b) | 7.7 | 0.041 (c) | 01/24/97 | 7.8 | 0.062 |
| 08/21/96 (b) | 37.8 | 0.078 (c) | 01/28/97 | 350.0 | 0.050 (a) |
| 08/23/96 | 16.0 | 0.029 (a) | 01/29/97 (b) | 3.1 | 0.038 |
| 08/27/96 | 2.8 | 0.029 (a) | 02/03/97 | 2.8 | 0.025 |
| 08/29/96 | 8.0 | 0.029 (a) | 02/05/97 | 0.5 (a) | 0.050 (a) |
| 09/04/96 (b) | 16.5 | 0.045 (c) | 02/07/97 | 1.4 | 0.050 (a) |
| 09/06/96 | 9.5 | 0.029 (a) | | | |
| 09/11/96 | 7.2 | 0.029 (a) | Minimum | 0.5 | 0.025 |
| 09/13/96 | 5.9 | 0.250 | Average | 7.9 | 0.095 |
| | | | Maximum | 37.8 | 1.000 |

Note:

(a) Value represents 50% of detection limit

(b) Value is an average of multiple analysis on the given day.

(c) Value includes one analysis that represents 50% of detection limit.

Table 2-9. Mercury Stack Test Data for OkPLP and OsPLP Burning Wood Waste

| Boiler/Run | Test Date | Mercury (Hg) (mg/dscm @ 7 % O2) | Mercury (Hg) (lb/hr) | Mercury (Hg) (lb/MMBtu) |
|---|---|---|---|---|
| Okeelanta Unit A | | | | |
| 1 | 5/11/96 | 1.86E-03 | 1.04E-03 | 1.48E-06 |
| 2 | 5/11/96 | 9.55E-04 | 5.13E-04 | 7.62E-07 |
| 3 | 5/11/96 | 8.59E-04 | 4.69E-04 | 6.84E-07 |
| Average | | 1.22E-03 | 6.74E-04 | 9.75E-07 |
| Okeelanta Unit B | | | | |
| 1 | 5/14/96 | 1.26E-03 | 6.95E-04 | 1.00E-06 |
| 2 | 5/14/96 | 1.21E-03 | 6.75E-04 | 9.65E-07 |
| 3 | 5/14/96 | 1.13E-03 | 6.39E-04 | 8.97E-07 |
| Average | | 1.20E-03 | 6.70E-04 | 9.54E-07 |
| 1 | 12/09/96 | 2.63E-03 | 1.38E-03 | 2.09E-06 |
| 2 | 12/09/96 | 2.52E-03 | 1.34E-03 | 2.00E-06 |
| 3 | 12/10/96 | 2.98E-03 | 1.54E-03 | 2.38E-06 |
| Average | | 2.71E-03 | 1.42E-03 | 2.16E-06 |
| 4 | 12/10/96 | 1.84E-03 | 1.08E-03 | 1.46E-06 |
| 5 | 12/10/96 | 1.84E-03 | 1.04E-03 | 1.46E-06 |
| 6 | 12/10/96 | 1.66E-03 | 9.90E-04 | 1.32E-06 |
| Average | | 1.78E-03 | 1.04E-03 | 1.41E-06 |
| 7 | 12/11/96 | 1.94E-03 | 1.03E-03 | 1.54E-06 |
| 8 | 12/12/96 | 2.46E-03 | 1.35E-03 | 1.95E-06 |
| 9 | 12/12/96 | 2.51E-03 | 1.24E-03 | 1.99E-06 |
| Average | | 2.30E-03 | 1.21E-03 | 1.83E-06 |
| Okeelanta Unit C | | | | |
| 1 | 5/23/96 | 2.21E-03 | 1.30E-03 | 1.98E-06 |
| 2 | 5/23/96 | 2.23E-03 | 1.24E-03 | 1.90E-06 |
| 3 | 5/23/96 | 1.25E-03 | 7.13E-04 | 1.12E-06 |
| Average | | 1.89E-03 | 1.09E-03 | 1.66E-06 |
| 2 | 12/13/96 | 3.43E-03 | 1.95E-03 | 2.72E-06 |
| 3 | 12/13/96 | 2.85E-03 | 1.63E-03 | 2.26E-06 |
| 4 | 12/13/96 | 3.31E-03 | 1.84E-03 | 2.63E-06 |
| Average | | 3.20E-03 | 1.81E-03 | 2.54E-06 |
| 5 | 12/14/96 | 2.46E-03 | 1.37E-03 | 1.96E-06 |
| 6 | 12/14/96 | 2.29E-03 | 1.25E-03 | 1.82E-06 |
| 7 | 12/14/96 | 2.32E-03 | 1.28E-03 | 1.85E-06 |
| Average | | 2.36E-03 | 1.30E-03 | 1.88E-06 |
| 8 | 12/15/96 | 2.18E-03 | 1.24E-03 | 1.74E-06 |
| 9 | 12/15/96 | 2.37E-03 | 1.25E-03 | 1.88E-06 |
| 10 | 12/15/96 | 1.85E-03 | 1.01E-03 | 1.48E-06 |
| Average | | 2.14E-03 | 1.17E-03 | 1.70E-06 |
| Osceola Unit A | | | | |
| A -1 | 12/15/96 | 3.12E-03 | 1.91E-03 | 2.82E-06 |
| A -2 | 12/15/96 | 3.22E-03 | 1.84E-03 | 2.91E-06 |
| A -3 | 12/15/96 | 2.00E-03 | 1.13E-03 | 1.81E-06 |
| Average | | 2.78E-03 | 1.63E-03 | 2.51E-06 |
| Osceola Unit B | | | | |
| B -1 | 12/17/96 | 3.33E-03 | 1.20E-03 | 3.02E-06 |
| B -2 | 12/18/96 | 3.69E-03 | 2.15E-03 | 3.39E-06 |
| B -3 | 12/18/96 | 3.59E-03 | 2.24E-03 | 3.29E-06 |
| Average | | 3.54E-03 | 1.86E-03 | 3.23E-06 |
| Compliance Test Minimum | | 1.20E-03 | 6.70E-04 | 9.54E-07 |
| Compliance Test Average | | 2.28E-03 | 1.26E-03 | 1.90E-06 |
| Compliance Test Maximum | | 3.54E-03 | 1.86E-03 | 3.23E-06 |
| Standard Deviation | | | | 6.87E-07 |
| t-statistic | | | | 1.812 |
| 95% Upper Confidence Limit | | | | 3.14E-06 |
| Permit Limit | | | | 2.9E-7 |

Table 2-10. Calculated Mercury Removal Efficiency at OkPLP

| Test Date | Carbon Injection Setting(a) (Hertz) | Run | Run Time (hrs) | Fuel Usage (tons - wet) | Fuel Analysis Hg Conc. (mg/kg,dry) | Fuel Analysis Moisture Content (%) | Fuel Analysis Hg Conc. (mg/kg,wet) | Hg Content (lbs) | Hg Stack Emissions (lbs/hr) | Hg Stack Emissions (lbs) | Calculated Hg Removal Efficiency |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Boiler B** | | | | | | | | | | | |
| 12/09/96 | 15 | 1 | 2.10 | 124.36 | 0.230 | 26 | 0.170 | 0.0423 | 1.38E-03 | 2.90E-03 | 93.15% |
| 12/09/96 | 15 | 2 | 2.05 | 100.71 | 0.064 | 36 | 0.041 | 0.0083 | 1.34E-03 | 2.75E-03 | 66.70% |
| 12/10/96 | 15 | 3 | 2.07 | 115.37 | 0.080 | 29 | 0.057 | 0.0131 | 1.54E-03 | 3.18E-03 | 75.72% |
| 12/10/96 | 30 | 4 | 2.07 | 128.05 | 0.075 | 34 | 0.050 | 0.0127 | 1.08E-03 | 2.23E-03 | 82.39% |
| 12/10/96 | 30 | 5 | 2.22 | 123.50 | 0.015 (b) | 25 | 0.011 | 0.0028 | 1.04E-03 | 2.31E-03 | 17.04% |
| 12/10/96 | 30 | 6 | 2.05 | 121.76 | 0.049 | 30 | 0.034 | 0.0084 | 9.90E-04 | 2.03E-03 | 75.70% |
| 12/11/96 | 45 | 7 | 2.03 | 104.48 | 0.043 | 28 | 0.031 | 0.0065 | 1.03E-03 | 2.09E-03 | 67.63% |
| 12/12/96 | 45 | 8 | 2.03 | 100.24 | 0.055 | 26 | 0.041 | 0.0082 | 1.35E-03 | 2.75E-03 | 66.36% |
| 12/12/96 | 45 | 9 | 2.03 | 99.54 | 0.066 | 28 | 0.048 | 0.0095 | 1.24E-03 | 2.52E-03 | 73.35% |
| | | | | | | | | | | Average = | 68.67% |

(a) Hertz settings represent approximately the following:
15 Hertz - 25% of max. injection rate or 7 lb/hr
30 Hertz - 50% of max. injection rate or 16 lb/hr
45 Hertz - 75% of max. injection rate or 23 lb/hr

(b) Below detectable level. Value represents one-half the detectable level.

Table 2-11. Maximum Short-Term Emissions for OkPLP Cogeneration Facility (per boiler)

| Regulated Pollutant | Biomass | | | No. 2 Fuel Oil | | | Coal | | | Tire-Derived Fuel | | | 25%TDF/ 75% Biomass (d) | Maximum Emissions for any fuel |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Emission Factor (lb/MMBtu) | Activity Factor (MMBtu/hr) | Maximum Emissions (lb/hr) | Emission Factor (lb/MMBtu) | Activity Factor (MMBtu/hr) | Maximum Emissions (lb/hr) | Emission Factor (lb/MMBtu) | Activity Factor (MMBtu/hr) | Maximum Emissions (lb/hr) | Emission Factor (lb/MMBtu) | Activity Factor (MMBtu/hr) | Maximum Emissions (lb/hr) | (lb/hr) | (lb/hr) |
| Particulate (TSP) | 0.03 | 715 | 21.5 | 0.03 | 490 | 14.7 | 0.03 | 490 | 14.7 | 0.03 | 340 | 10.2 | 21.5 | 21.5 |
| Particulate (PM10) | 0.03 | 715 | 21.5 | 0.03 | 490 | 14.7 | 0.03 | 490 | 14.7 | 0.03 | 340 | 10.2 | 21.5 | 21.5 |
| Sulfur dioxide (c) | 0.10 | 715 | 71.5 | 0.05 | 490 | 24.5 | 1.2 | 490 | 588.0 | 1.2 | 340 | 408.0 | 445.5 | 588.0 |
| Nitrogen oxides (a) | 0.15 | 715 | 107.3 | 0.15 | 490 | 73.5 | 0.17 | 490 | 83.3 | 0.15 | 340 | 51.0 | 107.3 | 107.3 |
| Carbon monoxide (b) | 0.35 | 715 | 250.3 | 0.2 | 490 | 98.0 | 0.2 | 490 | 98.0 | 0.35 | 340 | 119.0 | 250.3 | 250.3 |
| Volatile organic compds. | 0.06 | 715 | 42.9 | 0.03 | 490 | 14.7 | 0.03 | 490 | 14.7 | 0.06 | 340 | 20.4 | 42.9 | 42.9 |
| Lead - Bagasse | 2.5E-05 | 715 | 0.0179 | 8.9E-07 | 490 | 0.00044 | 6.4E-05 | 490 | 0.031 | 4.2E-05 | 340 | 0.0143 | 0.0743 | 0.1144 |
| - Wood Waste | 1.6E-04 | 715 | 0.1144 | | | | | | | | | | | |
| Mercury - Bagasse | 5.43E-06 | 715 | 0.0039 | 2.4E-06 | 490 | 0.00118 | 8.4E-06 | 490 | 0.0041 | 6.5E-06 | 340 | 0.0022 | 0.0042 | 0.0042 |
| - Wood Waste | 4.0E-06 | 715 | 0.0029 | | | | | | | | | | | |
| Beryllium | -- | 715 | -- | 3.5E-07 | 490 | 0.00017 | 5.9E-06 | 490 | 0.0029 | 4.5E-07 | 340 | 1.5E-04 | 0.00015 | 0.0029 |
| Fluorides | -- | 715 | -- | 6.3E-06 | 490 | 0.0031 | 0.024 | 490 | 11.8 | 6.5E-04 | 340 | 0.22 | 0.22 | 11.8 |
| Sulfuric acid mist (c) | 0.003 | 715 | 2.15 | 0.0015 | 490 | 0.74 | 0.036 | 490 | 17.64 | 0.010 | 340 | 3.40 | 4.53 | 17.64 |

(a) 30-day rolling average.
(b) 24-hour average.
(c) 24-hour average.
(d) Weight basis: 340 MMBtu/hr TDF and 375 MMBtu/hr biomass.

Table 2-12. Maximum Annual Emissions for Okeelanta Power Cogeneration Facility (total all boilers)

| Regulated Pollutant | Biomass Emission Factor (lb/MMBtu) | Biomass Activity Factor (E12 Btu/yr) | Biomass Annual Emissions (TPY) | Alternate Fuel Emission Factor (lb/MMBtu) | Alternate Fuel Activity Factor (E12 Btu/yr) | Alternate Fuel Annual Emissions (TPY) | Total Annual Emissions (TPY) |
|---|---|---|---|---|---|---|---|
| | | | 100% Biomass | | | | |
| Particulate (TSP) | 0.03 | 11.500 | 172.50 | -- | -- | -- | 172.50 |
| Particulate (PM10) | 0.03 | 11.500 | 172.50 | -- | -- | -- | 172.50 |
| Sulfur dioxide - Bagasse | 0.02 | 6.900 b | 69.00 | -- | -- | -- | 184.00 |
| - Wood Waste | 0.05 | 4.600 c | 115.00 | | | | |
| Nitrogen oxides | 0.15 | 11.500 | 862.50 | -- | -- | -- | 862.50 |
| Carbon monoxide | 0.35 | 11.500 | 2,012.50 | -- | -- | -- | 2,012.50 |
| VOC | 0.06 | 11.500 | 345.00 | -- | -- | -- | 345.00 |
| Lead - Bagasse | 2.5E-05 | 6.900 b | 0.086 | -- | -- | -- | 0.454 a |
| - Wood Waste | 1.6E-04 | 4.600 c | 0.368 | | | | |
| Mercury - Bagasse | 5.43E-06 | 6.900 b | 0.0187 | -- | -- | -- | 0.0279 |
| - Wood Waste | 4.00E-06 | 4.600 c | 0.00920 | | | | |
| Beryllium | -- | -- | -- | -- | -- | -- | -- |
| Fluorides | -- | -- | -- | -- | -- | -- | -- |
| Sulfuric acid mist | 0.0006 | 11.500 | 3.45 | -- | -- | -- | 3.45 |
| | | | 75.1% Biomass / 24.9% Fuel Oil | | | | |
| Particulate (TSP) | 0.03 | 8.130 | 121.95 | 0.03 | 2.696 | 40.44 | 162.39 |
| Particulate (PM10) | 0.03 | 8.130 | 121.95 | 0.03 | 2.696 | 40.44 | 162.39 |
| Sulfur dioxide - Bagasse | 0.02 | 4.878 b | 48.78 | 0.05 | 2.696 | 67.40 | 197.48 |
| - Wood Waste | 0.05 | 3.252 c | 81.30 | | | | |
| Nitrogen oxides | 0.15 | 8.130 | 609.75 | 0.15 | 2.696 | 202.20 | 811.95 |
| Carbon monoxide | 0.35 | 8.130 | 1,422.75 | 0.2 | 2.696 | 269.60 | 1,692.35 |
| VOC | 0.06 | 8.130 | 243.90 | 0.03 | 2.696 | 40.44 | 284.34 |
| Lead - Bagasse | 2.5E-05 | 4.878 b | 0.061 | 8.9E-07 | 2.696 | 0.0012 | 0.322 |
| - Wood Waste | 1.6E-04 | 3.252 c | 0.260 | | | | |
| Mercury - Bagasse | 5.43E-06 | 4.878 b | 0.0132 | 2.4E-06 | 2.696 | 0.0032 | 0.0230 |
| - Wood Waste | 4.00E-06 | 3.252 c | 0.00650 | | | | |
| Beryllium | -- | -- | -- | 3.5E-07 | 2.696 | 0.00047 | 0.00047 |
| Fluorides | -- | -- | -- | 6.27E-06 | 2.696 | 0.0085 | 0.0085 |
| Sulfuric acid mist | 0.0006 | 8.130 | 2.44 | 0.0015 | 2.696 | 2.02 | 4.46 |
| | | | 84.9% Biomass / 15.1% Coal | | | | |
| Particulate (TSP) | 0.03 | 9.408 | 141.12 | 0.03 | 1.673 | 25.10 | 166.22 |
| Particulate (PM10) | 0.03 | 9.408 | 141.12 | 0.03 | 1.673 | 25.10 | 166.22 |
| Sulfur dioxide - Bagasse | 0.02 | 5.645 b | 56.45 | 1.2 | 1.673 | 1,003.80 | 1,154.33 a |
| - Wood Waste | 0.05 | 3.763 c | 94.08 | | | | |
| Nitrogen oxides | 0.15 | 9.408 | 705.60 | 0.17 | 1.673 | 142.21 | 847.81 |
| Carbon monoxide | 0.35 | 9.408 | 1,646.40 | 0.2 | 1.673 | 167.30 | 1,813.70 |
| VOC | 0.06 | 9.408 | 282.24 | 0.03 | 1.673 | 25.10 | 307.34 |
| Lead - Bagasse | 2.5E-05 | 5.645 b | 0.071 | 6.4E-05 | 1.673 | 0.0535 | 0.425 |
| - Wood Waste | 1.6E-04 | 3.763 c | 0.301 | | | | |
| Mercury - Bagasse | 5.43E-06 | 5.645 b | 0.0153 | 8.4E-06 | 1.673 | 0.0070 | 0.0299 |
| - Wood Waste | 4.00E-06 | 3.763 c | 0.00753 | | | | |
| Beryllium | -- | -- | -- | 5.9E-06 | 1.673 | 0.0049 | 0.0049 a |
| Fluorides | -- | -- | -- | 0.024 | 1.673 | 20.08 | 20.08 a |
| Sulfuric acid mist | 0.0006 | 9.408 | 2.82 | 0.036 | 1.673 | 30.11 | 32.94 a |
| | | | 78.1% Biomass / 21.9% Tire-Derived Fuel (9.0% TDF, weight basis) | | | | |
| Particulate (TSP) | 0.03 | 8.982 | 134.73 | 0.03 | 2.519 | 37.79 | 172.52 a |
| Particulate (PM10) | 0.03 | 8.982 | 134.73 | 0.03 | 2.519 | 37.79 | 172.52 a |
| Sulfur dioxide - Bagasse | 0.02 | 5.389 b | 53.89 | 0.8 | 2.519 | 1,007.60 | 1,151.31 |
| - Wood Waste | 0.05 | 3.593 c | 89.82 | | | | |
| Nitrogen oxides | 0.15 | 8.982 | 673.65 | 0.15 | 2.519 | 188.93 | 862.58 a |
| Carbon monoxide | 0.35 | 8.982 | 1,571.85 | 0.35 | 2.519 | 440.83 | 2,012.68 a |
| VOC | 0.06 | 8.982 | 269.46 | 0.06 | 2.519 | 75.57 | 345.03 a |
| Lead - Bagasse | 2.5E-05 | 5.389 b | 0.067 | 4.2E-05 | 2.519 | 0.0529 | 0.408 |
| - Wood Waste | 1.6E-04 | 3.593 c | 0.287 | | | | |
| Mercury - Bagasse | 5.43E-06 | 5.389 b | 0.0146 | 6.5E-06 | 2.519 | 0.0082 | 0.0300 a |
| - Wood Waste | 4.00E-06 | 3.593 c | 0.00719 | | | | |
| Beryllium | -- | -- | -- | 4.5E-07 | 2.519 | 0.00057 | 0.00057 |
| Fluorides | -- | -- | -- | 6.5E-04 | 2.519 | 0.82 | 0.8187 |
| Sulfuric acid mist | 0.0006 | 8.982 | 2.69 | 0.0069 | 2.519 | 8.69 | 11.39 |

a Denotes maximum annual emissions for any fuel scenario.
b Represents 60% of total heat input.
c Represents 40% of total heat input.

Note: No emissions of total reduced sulfur, asbestos, or vinyl chloride are expected.

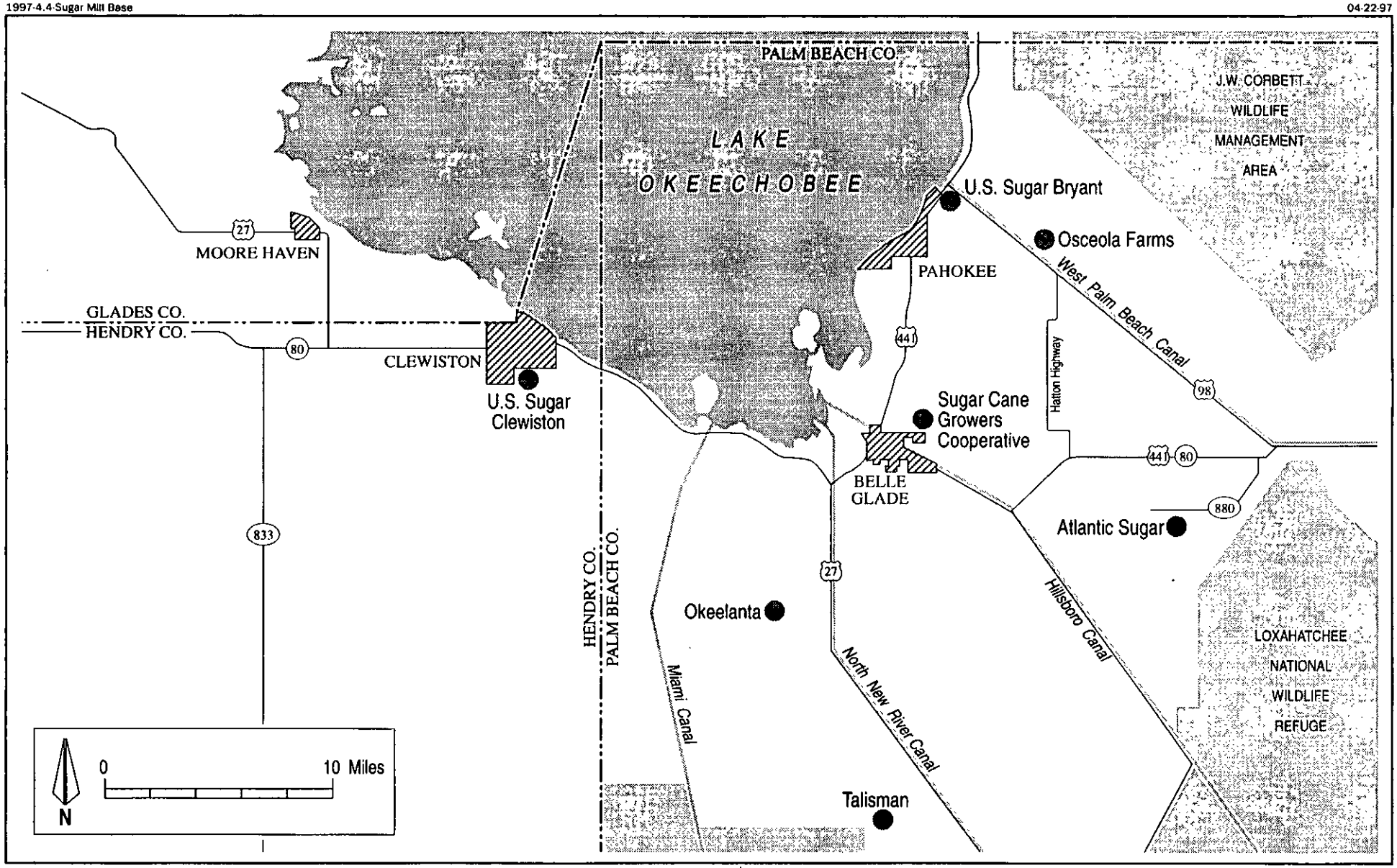


Figure 2-1
Regional Site Map

Golder Associates

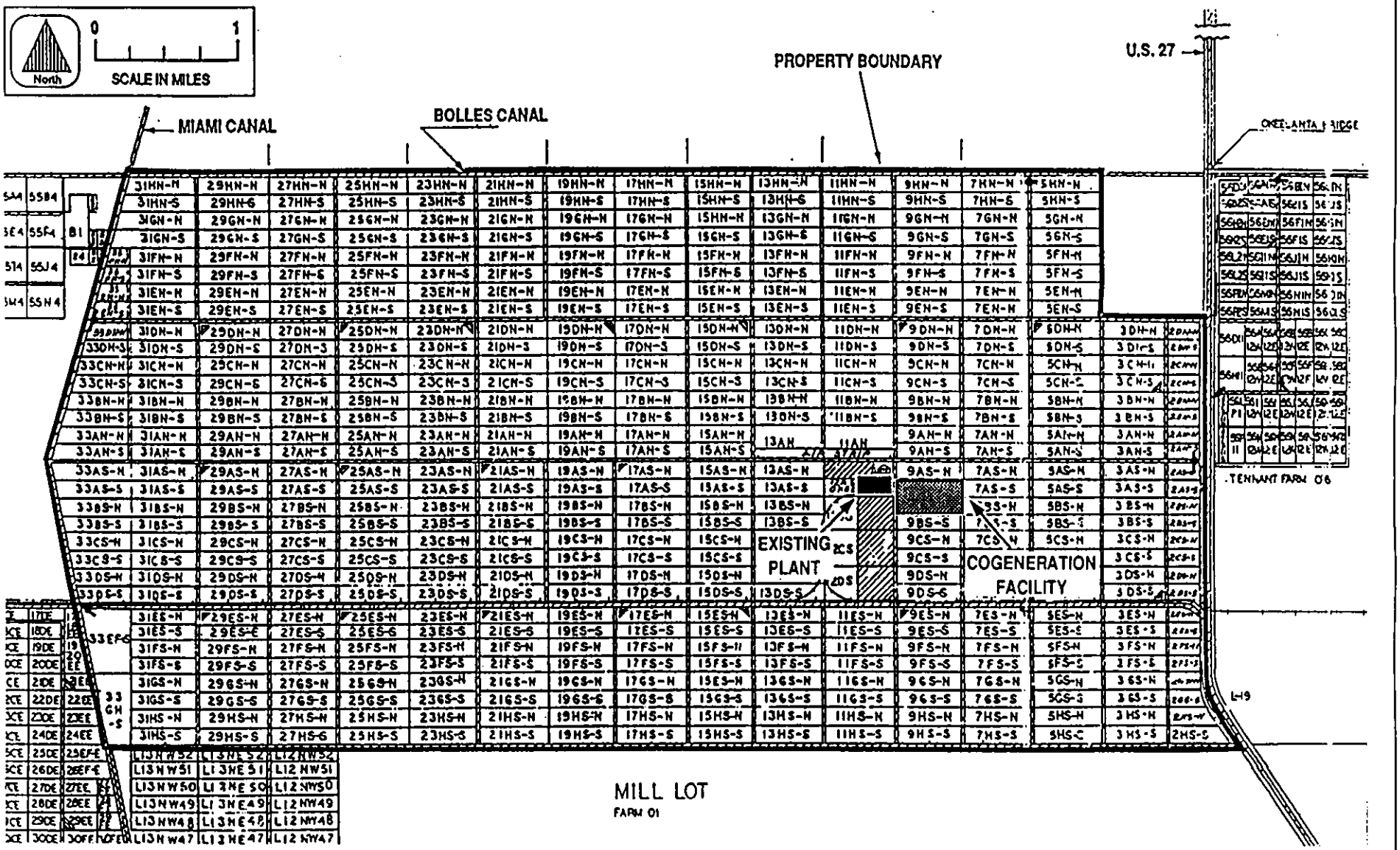


Figure 2-2
Location of Existing Sugar Mill and Cogeneration Facility

Golder Associates

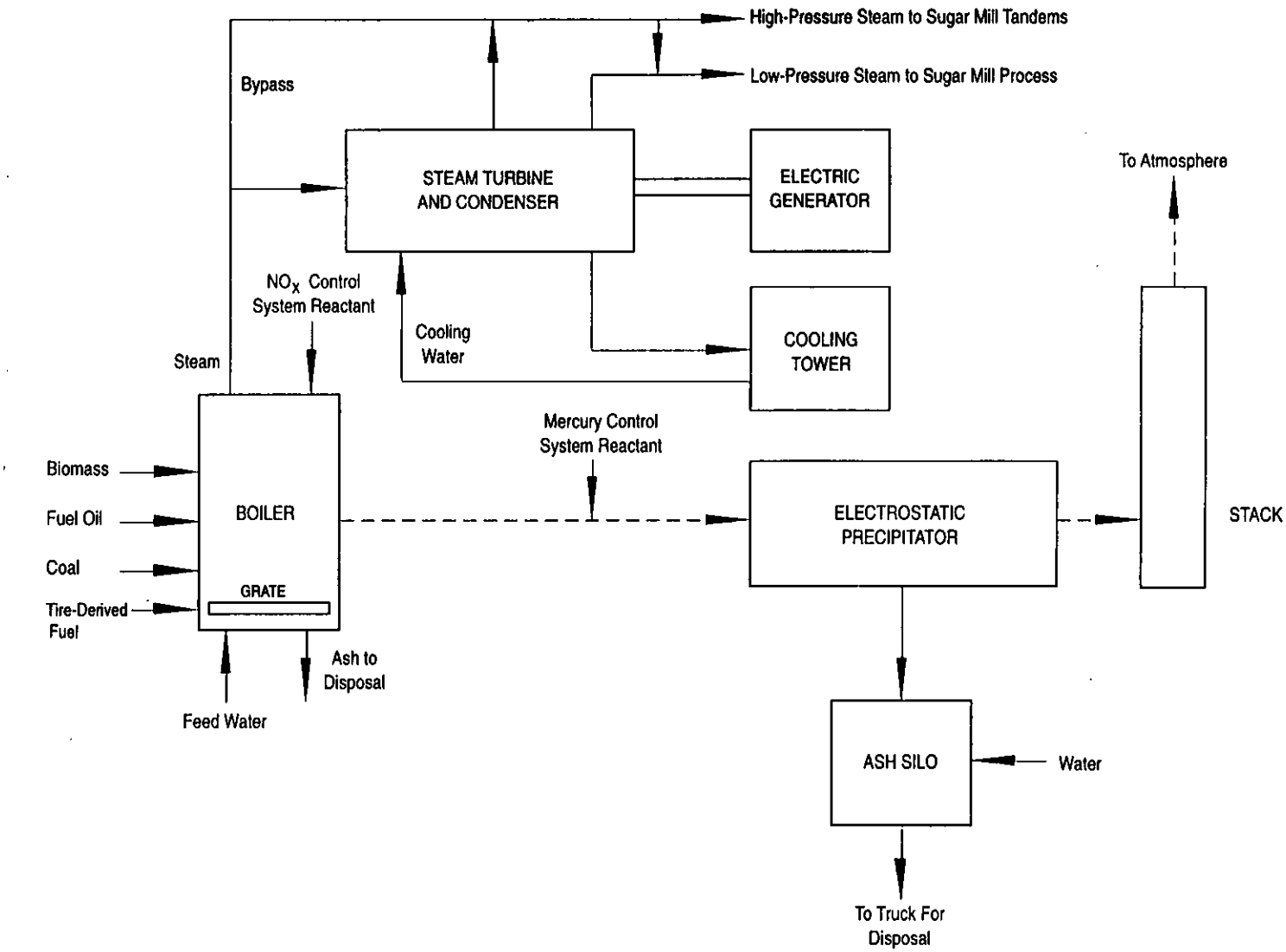


Figure 2-3
Simplified Flow Diagram for Okeelanta Power Cogeneration Facility

Golder Associates

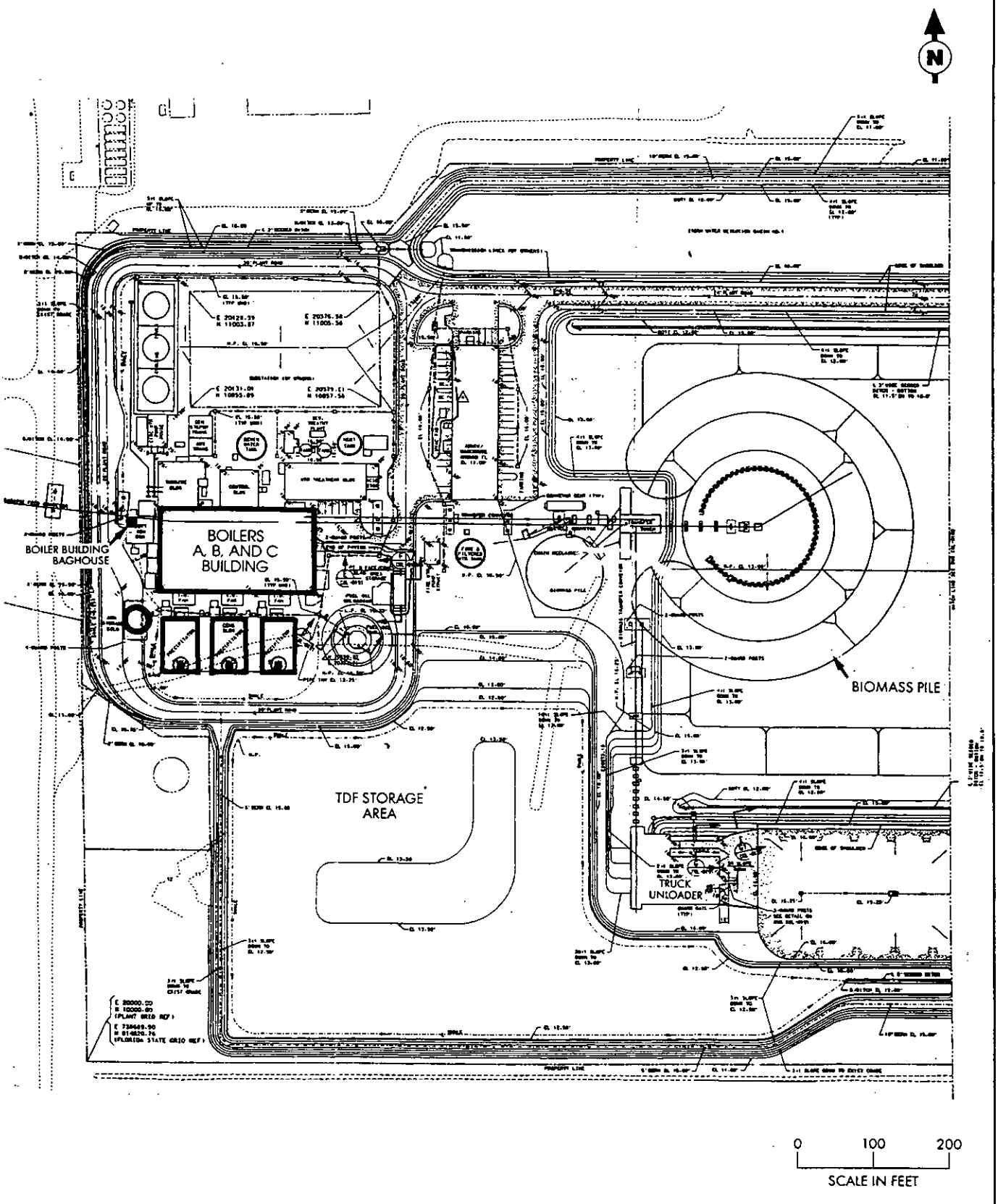


Figure 2-4
Plot Plan of Okeelanta Power

Source: Bechtel, 1995.

Golder Associates

## 3.0 AIR QUALITY REVIEW REQUIREMENTS AND SOURCE APPLICABILITY

OkPLP received a state and federal PSD construction permit in 1993. PSD review was triggered for $SO_2$, beryllium, and fluorides. The facility is now operating and has conducted initial compliance testing on wood waste. Compliance testing on bagasse has not yet been conducted. OkPLP is now proposing changes to the emission limits of three pollutants for wood waste firing and desires to amend the PSD construction permit. The averaging time specified for the CO emissions limit for all fuels is also being revised. The requested emissions from the boilers are not greater than the currently permitted emissions, except in regards to annual emissions of Pb.

A revised PSD source applicability analysis for OkPLP, incorporating these changes, is provided in Table 3-1. The emissions also reflect to request to burn TDF. Although the emissions for all PSD pollutants are shown in Table 3-1, only the annual Pb emissions are being revised at this time. Since the facility does not yet have a two-year operational history, the original baseline emission rates presented in the PSD application in 1993 were used. As shown, based on the permit limits and the OkPLP maximum annual emissions, PSD review will not be triggered by this request.

Although PSD review is not being triggered by the proposed modification, changes are occurring in some air emission rates for Pb. As a result, the previous air toxics modeling analysis has been updated. This analysis is presented in Section 4.0.

Table 3-1. PSD Source Applicability Analysis for the OKPLP Facility

| Regulated Pollutant | Cogeneration Facility Emissions (TPY) | | | Significant Emission Rate (TPY) | Current Permit Limit (TPY) | PSD Applies ? | Permit Amendment Required ? |
|---|---|---|---|---|---|---|---|
| | Baseline[a] | Requested Limits | Net Change | | | | |
| Particulate (TSP) | 473.7 | 200.0[b] | -273.7 | 25 | 172.5[d] | No | No |
| Particulate (PM10) | 426.3 | 190.8[c] | -235.5 | 15 | 172.5[d] | No | No |
| Sulfur Dioxide | 748.3 | 1,154.3 | 406.0 | 40 | 1,154.3 | No | No |
| Nitrogen Oxides | 888.7 | 862.5 | -26.2 | 40 | 862.5 | No | No |
| Carbon Monoxide | 10,388.0 | 2,012.5 | -8,375.5 | 100 | 2,012.5 | No | No |
| VOC | 401.9 | 345.0 | -56.9 | 40 | 345.0 | No | No |
| Lead | 0.28 | 0.454 | 0.174 | 0.6 | 0.17 | No | **Yes** |
| Mercury | 0.0292 | 0.0300 | 0.0008 | 0.1 | 0.0300 | No | No |
| Beryllium | 0.0004 | 0.0049 | 0.0045 | 0.0004 | 0.0052 | No | No |
| Fluorides | 0.04 | 20.1 | 20.1 | 3 | 21.2 | No | No |
| Sulfuric Acid Mist | 22.4 | 32.9 | 10.5 | 7 | 34.6 | No | No |
| Total Reduced Sulfur | -- | -- | 0 | 10 | -- | No | No |
| Asbestos | -- | -- | 0 | 0.007 | -- | No | No |
| Vinyl Chloride | -- | -- | 0 | 0 | -- | No | No |

[a] Emission offsets to be achieved by shutdown of existing Okeelanta Sugar Mill boilers.

[b] Includes 172.5 TPY from boilers and 27.5 TPY from fugitive dust sources.

[c] Includes 172.5 TPY from boilers and 18.3 TPY from fugitive dust sources.

[d] PM/PM10 emissions from boilers only; does not included fugitive dust sources.

# 4.0 AIR TOXICS MODELING ANALYSIS

## 4.1 INTRODUCTION

In support of the request to burn TDF as a supplemental fuel, OkPLP submitted a revised air modeling analysis for HAPs/toxics to the FDEP in May 1996. Based on the current request to increase emissions limits for Pb and Hg, an updated air modeling analysis is presented for all pollutants. This analysis incorporates revised stack parameters, as shown in Table 2-3.

## 4.2 METHODOLOGY

The procedure used in the analysis followed the recommendations in the U.S. Environmental Protection Agency's (EPA's) modeling guidelines, which are approved by FDEP for general use. The recommendations are related to specific models and options that are preferred for use in particular situations. The guidelines provide recommendations for predicting impacts in both flat or gently rolling terrain by the use of simple terrain models (i.e., terrain less than stack height). These models are applicable to the OkPLP facility.

The Industrial Source Complex Short-Term (ISCST) dispersion model, Version 95250 (ISCST3; EPA, 1995) is preferred because EPA and FDEP have specifically recommended this model to provide refined air quality impacts in simple terrain. The ISCST3 model is a Gaussian plume model that can be used to assess the air quality impact of emissions from a wide variety of sources associated with an industrial facility.

The ISCST3 model is designed to calculate hour-by-hour concentrations or deposition values and provide averages for time periods of 2-, 3-, 4-, 6-, 8-, 12-, and 24-hours and 1 year. The ISCST3 model has rural and urban options that affect the wind speed profile exponent law, dispersion rates, and mixing-height formulations used in calculating ground-level concentrations. Concentrations are readily obtainable from the model output for comparison to the Florida ambient reference concentrations (FARCs) developed by FDEP. A list of ISCST3 model features is presented in Table 4-1.

For the application of the ISCST3 model, the general modeling approach followed EPA and FDEP modeling guidelines for determining compliance with regulatory standards, such as FARCs.

One source, representing the Okeelanta cogeneration facility's three boilers, was modeled in the ISCST3 model with a generic emission rate of 10.0 grams per second (g/sec) (i.e., 79.365 lb/hr). The selected averaging times were for 8-hours, 24-hours, and annual average. The highest predicted 8-hour, 24-hour, and annual concentrations in 5 years were selected for comparison to the FARCs.

Short-term (i.e., maximum pound per hour) and annual averaged (i.e., tons per year) emission rates were determined for the OkPLP facility for each HAP and air toxic pollutant emitted. The emission rates for these compounds are provided in Section 2.0. The short-term emission rates for each pollutant were used for determining compliance with the 8-hour and 24-hour FARCs, while the annual averaged emissions were used for determining compliance with the annual FARC. The maximum pollutant-specific impact for each averaging time was determined by multiplying the maximum predicted generic concentration by the pollutant-specific emission rate and dividing the product by the generic emission rate.

Meteorological data used in the ISCST3 model to determine air quality impacts consisted of 5 years of coincident hourly surface weather observations and twice-daily upper-air soundings from the National Weather Service (NWS) station at the West Palm Beach International Airport. The 5-year period of meteorological data was from 1982 through 1986. These data have been recommended by FDEP for projects in the sugar mill area.

For the screening analysis, 36 receptors were located at 10-degree increments along the plant property boundary. A listing of these receptors is presented in Table 4-2. Modeling refinements were performed by using a 2-degree angular spacing along the plant property boundary. The refined receptor grid was centered on the screening analysis receptor that produced the highest impact and extended to and included the adjacent screening grid receptors.

Direction-specific building heights and widths that were used for these sources in the original modeling analysis for the cogeneration facility were also used in the toxic model analysis. The only significant structure near the cogeneration facility stacks is the cogeneration facility boiler structure (see Figure 2-5). The dimensions of this structure are 120 ft high, 180 ft long, and 75 ft wide.

Stack parameters used in the modeling analysis are shown in Table 2-3. To be conservative, the lowest stack gas flow rate, velocity, and temperature shown for biomass were used to result in the highest predicted impacts.

## 4.3 MODELING RESULTS

The maximum predicted concentrations for the 8-hour, 24-hour, and annual averaging periods for each HAP and air toxic pollutant are presented in Table 4-3. Table 4-3 indicates the maximum short-term and annual emission rates and the maximum impacts for each compound emitted. As shown, all compounds have maximum impacts that are below the FARC for the 8-hour, 24-hour, and annual averaging times, respectively.

Table 4-1. Major Features of the ISCST3 Model

| ISCST3 Model Features |
|---|
| • Polar or Cartesian coordinate systems for receptor locations |
| • Rural or one of three urban options which affect wind speed profile exponent, dispersion rates, and mixing height calculations |
| • Plume rise due to momentum and buoyancy as a function of downwind distance for stack emissions (Briggs, 1969, 1971, 1972, and 1975; Bowers, et al., 1979). |
| • Procedures suggested by Huber and Snyder (1976); Huber (1977); and Schulman and Scire (1980) for evaluating building wake effects |
| • Procedures suggested by Briggs (1974) for evaluating stack-tip downwash |
| • Separation of multiple emission sources |
| • Consideration of the effects of gravitational settling and dry deposition on ambient particulate concentrations |
| • Capability of simulating point, line, volume, area, and open pit sources |
| • Capability to calculate dry and wet deposition, including both gaseous and particulate precipitation scavenging for wet deposition |
| • Variation of wind speed with height (wind speed-profile exponent law) |
| • Concentration estimates for 1-hour to annual average times |
| • Terrain-adjustment procedures for elevated terrain including a terrain truncation algorithm for ISCST3; a built-in algorithm for predicting concentrations in complex terrain |
| • Consideration of time-dependent exponential decay of pollutants |
| • The method of Pasquill (1976) to account for buoyancy-induced dispersion |
| • A regulatory default option to set various model options and parameters to EPA recommended values (see text for regulatory options used) |
| • Procedure for calm-wind processing including setting wind speeds less than 1 m/s to 1 m/s. |

Note: ISCST3 = Industrial Source Complex Short-Term.

Source: EPA, 1995.

Table 4-2. Property Boundary Receptors Used in the Modeling Analysis

| Direction (deg) | Distance (m) | Direction (deg) | Distance (m) |
|---|---|---|---|
| 10 | 3674. | 190 | 2764. |
| 20 | 3850. | 200 | 2897. |
| 30 | 4178. | 210 | 3143. |
| 40 | 3642. | 220 | 3553. |
| 50 | 3163. | 230 | 4234. |
| 60 | 4066. | 240 | 5444. |
| 70 | 3849. | 250 | 7958. |
| 80 | 3669. | 260 | 9485. |
| 90 | 3609. | 270 | 9675. |
| 100 | 3661. | 280 | 9585. |
| 110 | 3832. | 290 | 9602. |
| 120 | 4153. | 300 | 7236. |
| 130 | 4234. | 310 | 5629. |
| 140 | 3553. | 320 | 4723. |
| 150 | 3143. | 330 | 4178. |
| 160 | 2897. | 340 | 3850. |
| 170 | 2764. | 350 | 3674. |
| 180 | 2722. | 360 | 3618. |

Note: Distances are relative to centroid of cogeneration facility stacks locations.

Table 4-3. Maximum Impacts of HAPs and Air Toxic Pollutants for Okeelanta Power Cogeneration Facility (total 3 boilers)

| | Emission Rates | | Concentrations (µg/m³) | | | | | | Compound |
|---|---|---|---|---|---|---|---|---|---|
| | Maximum | Annual | 8-Hour | | 24-Hour | | Annual | | Complies With |
| Pollutant | (lb/hr) | (TPY) | Impact | FARC | Impact | FARC | Impact | FARC | FARCs? |
| acetaldehyde | 1.67 | 4.49 | 0.0923 | 450 | 0.0709 | 107 | 0.0030 | 0.5 | YES |
| acetone | 0.82 | 2.19 | 0.0450 | 17800 | 0.0345 | 4238 | 1.5E-03 | NA | YES |
| acetophenone | 0.0079 | 0.021 | 0.0004 | 490 | 0.0003 | 117 | 1.4E-05 | 100 | YES |
| acrolein | 0.139 | 0.37 | 0.0077 | 2.3 | 0.0059 | 0.5 | 2.5E-04 | 0.02 | YES |
| ammonia | 70.6 | 123.3 | 3.8932 | 170 | 2.9908 | 41 | 0.082 | 100 | YES |
| antimony | 0.051 | 0.031 | 0.0028 | 5 | 0.0022 | 1.2 | 2.1E-05 | 0.3 | YES |
| arsenic | 0.36 | 0.32 | 0.0196 | 0.1 | 0.0151 | 0.02 | 0.00021 | 0.00023 | YES |
| barium | 0.11 | 0.09 | 0.0060 | 5 | 0.0046 | 1.2 | 6.0E-05 | 50 | YES |
| benzene | 2.79 | 7.48 | 0.1539 | 30 | 0.1182 | 7 | 0.0050 | 0.12 | YES |
| benzo (a) anthracene (POM) | 0.0016 | 0.0043 | 8.8E-05 | NA | 6.8E-05 | NA | 2.9E-06 | 0.0011 | YES |
| benzo (a) pyrene | 7.6E-05 | 2.0E-04 | 4.2E-06 | NA | 3.2E-06 | NA | 1.3E-07 | 0.0003 | YES |
| beryllium | 0.0087 | 5.2E-03 | 4.8E-04 | 0.02 | 3.7E-04 | 0.005 | 3.5E-06 | 0.00042 | YES |
| bromine | 1.16 | 0.91 | 0.0641 | 6.6 | 0.0492 | 1.6 | 6.0E-04 | NA | YES |
| cadmium | 0.0049 | 0.0083 | 2.7E-04 | 0.02 | 2.1E-04 | 0.005 | 5.5E-06 | 0.00056 | YES |
| carbon disulfide | 0.28 | 0.75 | 0.0154 | 310 | 0.0118 | 74 | 5.0E-04 | 200 | YES |
| carbon tetrachloride | 0.013 | 0.035 | 0.0007 | 310 | 0.0005 | 74 | 2.3E-05 | 0.067 | YES |
| chlorine | 1.97 | 5.29 | 0.1089 | 15 | 0.0836 | 3.6 | 0.0035 | 0.4 | YES |
| chloroform | 0.10 | 0.27 | 0.0056 | 490 | 0.0043 | 117 | 1.8E-04 | 0.043 | YES |
| chromium | 0.34 | 0.32 | 0.0186 | 5 | 0.0143 | 1.2 | 2.1E-04 | 1000 | YES |
| chromium +6 | 0.067 | 0.064 | 0.0037 | 0.5 | 0.0029 | 0.1 | 4.3E-05 | 0.000083 | YES |
| chrysene | 0.076 | 0.20 | 0.0042 | 2 | 0.0032 | 0.5 | 1.3E-04 | NA | YES |
| cobalt | 0.330 | 0.37 | 0.0182 | 0.5 | 0.0140 | 0.1 | 2.5E-04 | NA | YES |
| copper | 0.79 | 1.04 | 0.0437 | 10 | 0.0336 | 2.4 | 6.9E-04 | NA | YES |
| cumene | 0.039 | 0.10 | 0.0021 | 2460 | 0.0016 | 586 | 6.9E-05 | 1 | YES |
| dibutyl phthalate | 0.124 | 0.33 | 0.0069 | 50 | 0.0053 | 12 | 2.2E-04 | 100 | YES |
| ethylbenzene | 0.008 | 0.022 | 0.0005 | 4340 | 0.0004 | 1033 | 1.5E-05 | 1000 | YES |
| fluorine (as fluorides) | 35.28 | 21.23 | 1.9466 | 25 | 1.4954 | 6 | 0.014 | NA | YES |
| formaldehyde | 2.79 | 7.48 | 0.1539 | 3.7 | 0.1182 | 0.9 | 0.0050 | 0.077 | YES |
| hexane | 1.18 | 3.16 | 0.0651 | 1760 | 0.0500 | 419 | 0.0021 | 200 | YES |
| hydrogen chloride | 116.1 | 113.1 | 6.4075 | 70 | 4.9223 | 17 | 0.0752 | 7 | YES |
| indium | 0.27 | 0.73 | 0.0150 | 1 | 0.0115 | 0.2 | 4.9E-04 | NA | YES |
| iodine | 0.0050 | 0.012 | 0.0003 | 10 | 0.0002 | 2.4 | 8.0E-06 | NA | YES |
| isopropanol | 19.73 | 52.90 | 1.0886 | 9800 | 0.8363 | 2333 | 3.5E-02 | NA | YES |
| lead | 0.343 | 0.454 | 0.0189 | 0.5 | 0.0145 | 0.1 | 3.0E-04 | 0.09 | YES |
| manganese | 0.77 | 1.18 | 0.0422 | 50 | 0.0324 | 12 | 7.8E-04 | 0.05 | YES |
| mercury | 0.014 | 0.030 | 0.0008 | 0.5 | 0.0006 | 0.1 | 2.0E-05 | 0.3 | YES |
| methanol | 3.22 | 8.63 | 0.1775 | 2600 | 0.1364 | 619 | 5.7E-03 | NA | YES |
| methyl ethyl ketone | 0.026 | 0.069 | 0.0014 | 5900 | 0.0011 | 1405 | 4.6E-05 | 1000 | YES |
| methyl isobutyl ketone | 1.84 | 4.95 | 0.1018 | 2050 | 0.0782 | 488 | 3.3E-03 | NA | YES |
| methylene chloride | 3.22 | 8.63 | 0.1775 | 1740 | 0.1364 | 414 | 5.7E-03 | 2 | YES |
| molybdenum | 0.05 | 0.053 | 0.0025 | 50 | 0.0019 | 12 | 3.5E-05 | NA | YES |
| m&p xylene | 0.017 | 0.045 | 0.0009 | 4340 | 0.0007 | 1033 | 3.0E-05 | 80 | YES |
| napthalene | 1.27 | 3.39 | 0.0698 | 500 | 0.0536 | 119 | 2.3E-03 | NA | YES |
| nickel | 0.047 | 0.073 | 0.0026 | 10 | 0.0020 | 2.4 | 4.9E-05 | 0.0042 | YES |
| o xylene | 0.006 | 0.015 | 0.0003 | 4340 | 0.0002 | 1033 | 9.9E-06 | 80 | YES |
| PAH | 1.3E-06 | 3.4E-06 | 7.0E-08 | 2 | 5.4E-08 | 0.5 | 2.3E-09 | NA | YES |
| phenols | 0.088 | 0.24 | 0.0049 | 190 | 0.0037 | 45 | 1.6E-04 | 30 | YES |
| phosphorus | 1.26 | 0.77 | 0.0698 | 1 | 0.0536 | 0.2 | 5.1E-04 | NA | YES |
| pom (polycyclic organic matter) | 0.012 | 0.013 | 0.0007 | NA | 0.0005 | NA | 8.6E-06 | NA | YES |
| selenium | 0.079 | 0.10 | 0.0043 | 2 | 0.0033 | 0.5 | 6.6E-05 | NA | YES |
| silver | 0.0030 | 0.0081 | 1.7E-04 | 0.1 | 1.3E-04 | 0.02 | 5.4E-06 | NA | YES |
| styrene | 0.032 | 0.086 | 0.0018 | 2130 | 0.0014 | 507 | 5.7E-05 | 1000 | YES |
| sulfuric acid mist | 52.9 | 34.6 | 2.92 | 10 | 2.24 | 2.4 | 2.3E-02 | NA | YES |
| tin | 0.013 | 0.0080 | 7.2E-04 | 1 | 5.5E-04 | 0.2 | 5.3E-06 | NA | YES |
| 2,3,7,8 -TCDD (dioxin) | 1.3E-08 | 3.5E-08 | 7.1E-10 | NA | 5.5E-10 | NA | 2.3E-11 | 2.2E-08 | YES |
| toluene | 0.19 | 0.52 | 0.0107 | 1880 | 0.0082 | 448 | 3.4E-04 | 400 | YES |
| 1, 1, 1 trichloroethane | 0.36 | 0.98 | 0.0201 | 19000 | 0.015 | 4524 | 6.5E-04 | NA | YES |
| trichloroethylene | 0.016 | 0.044 | 0.0009 | 2690 | 6.9E-04 | 640 | 2.9E-05 | 0.77 | YES |
| tungsten | 2.8E-05 | 7.4E-05 | 1.53E-06 | 50 | 1.2E-06 | 12 | 4.9E-08 | NA | YES |
| uranium | 2.6E-05 | 3.0E-05 | 1.5E-06 | 0.5 | 1.1E-06 | 0.1 | 2.0E-08 | NA | YES |
| vanadium | 8.2E-04 | 0.0014 | 4.5E-05 | 0.5 | 3.5E-05 | 0.1 | 9.3E-07 | 20 | YES |
| yttrium | 1.4E-04 | 3.8E-04 | 7.8E-06 | 10 | 6.0E-06 | 2.4 | 2.5E-07 | NA | YES |
| zinc | 10.48 | 13.23 | 0.58 | 10 | 0.44 | 2.4 | 8.8E-03 | NA | YES |
| zirconium | 8.8E-04 | 0.0024 | 4.9E-05 | 50 | 3.7E-05 | 12 | 1.6E-06 | NA | YES |

Notes: F'ARC= Florida Ambient Reference Concentrations
Maximum concentrations determined with ISCST3 model and West Palm Beach meteorological data for 1982 to 1986.
Highest predicted concentrations (µg/m³) for a generic emission rate of 10 g/s (79.365 lb/hr) are :

| | |
|---|---|
| 8-hour= | 4.379 |
| 24-hour= | 3.364 |
| Annual= | 0.2311 |

**ATTACHMENT A**

Table A-1. Maximum Fuel Usage and Heat Input Rates per Boiler, Okeelanta Power Limited Partnership

| Fuel | Heat Input | Heat Transfer Efficiency (%) | Heat Output | Fuel Firing Rate | |
|---|---|---|---|---|---|
| | Maximum Short-Term (per boiler) | | | | |
| | (MMBtu/hr) | | (MMBtu/hr) | | |
| Biomass - Bagasse | 715 | 68 | 486 | 168,235 | lb/hr^a |
| - Wood Waste | 715 | 68 | 486 | 130,000 | lb/hr^b |
| No. 2 Fuel Oil | 490 | 85 | 417 | 3,551 | gal/hr |
| Coal | 490 | 85 | 417 | 40,833 | lb/hr |
| Tire-Derived Fuel | 340 | 68 | 231 | 21,935 | lb/hr |
| | Annual Average (per boiler) | | | | |
| | (Btu/yr) | | (Btu/yr) | | |
| NORMAL OPERATIONS (100% BIOMASS) | | | | | |
| Biomass | 6.263E+12 | 68 | 4.259E+12 | 736,871 | TPY^a |
| No. 2 Fuel Oil | 0 | 85 | 0 | 0 | gal/yr |
| Coal | 0 | 85 | 0 | 0 | TPY |
| Tire-Derived Fuel | 0 | 68 | 0 | 0 | TPY |
| TOTAL | 6.263E+12 | | 4.259E+12 | | |
| 24.9% OIL FIRING | | | | | |
| Biomass | 4.428E+12 | 68 | 3.011E+12 | 520,941 | TPY |
| No. 2 Fuel Oil | 1.468E+12 | 85 | 1.248E+12 | 10,638,685 | gal/yr |
| Coal | 0 | 85 | 0 | 0 | TPY |
| Tire-Derived Fuel | 0 | 68 | 0 | 0 | TPY |
| TOTAL | 5.896E+12 | | 4.259E+12 | | |
| 24.9% COAL FIRING | | | | | |
| Biomass | 4.428E+12 | 68 | 3.011E+12 | 520,941 | TPY |
| No. 2 Fuel Oil | 0 | 85 | 0 | 0 | gal/yr |
| Coal | 1.468E+12 | 85 | 1.248E+12 | 61,172 | TPY |
| Tire-Derived Fuel | 0 | 68 | 0 | 0 | TPY |
| TOTAL | 5.896E+12 | | 4.259E+12 | | |
| 40.2% TIRE-DERIVED FUEL | | | | | |
| Biomass | 3.744E+12 | 68 | 2.546E+12 | 340,364 | TPY^b |
| No. 2 Fuel Oil | 0 | 85 | 0 | 0 | gal/yr |
| Coal | 0 | 85 | 0 | 0 | TPY |
| Tire-Derived Fuel | 2.519E+12 | 68 | 1.713E+12 | 81,246 | TPY |
| TOTAL | 6.263E+12 | | 4.259E+12 | | |

a Based on bagasse firing.
b Based on wood waste firing.
Notes:
40 CFR 60, Subpart Da, limits fossil-fuel firing to less than 25% for each boiler (heat input basis).
40 CFR 60, Subpart Ea, limits municipal solid waste firing to 30% or less for each boiler (weight basis).

Total heat output required = 4.259E+12 Btu/yr per boiler.
Fuels may be burned in combination, not to exceed total heat outputs.
Based on fuel heating values as follows:
Bagasse - 4,250 Btu/lb
Wood Waste - 5,500 Btu/lb
No. 2 Fuel Oil - 138,000 Btu/gal
Coal - 12,000 Btu/lb
Tire-derived fuel - 15,500 Btu/lb

Table A-2. Maximum Annual Emissions for Single Boiler at Okeelanta Power Cogeneration Facility

| Regulated Pollutant | Biomass Emission Factor (lb/MMBtu) | Biomass Activity Factor (E12 Btu/yr) | Biomass Annual Emissions (TPY) | Alternate Fuel Emission Factor (lb/MMBtu) | Alternate Fuel Activity Factor (E12 Btu/yr) | Alternate Fuel Annual Emissions (TPY) | Total Annual Emissions (TPY) |
|---|---|---|---|---|---|---|---|
| | | | 100% Biomass | | | | |
| Particulate (TSP) | 0.03 | 6.263 | 93.95 | -- | -- | -- | 93.95 a |
| Particulate (PM10) | 0.03 | 6.263 | 93.95 | -- | -- | -- | 93.95 a |
| Sulfur dioxide - Bagasse | 0.02 | 3.758 b | 37.58 | -- | -- | -- | 100.21 |
| - Wood waste | 0.05 | 2.505 c | 62.63 | | | | |
| Nitrogen oxides | 0.15 | 6.263 | 469.73 | -- | -- | -- | 469.73 a |
| Carbon monoxide | 0.35 | 6.263 | 1,096.03 | -- | -- | -- | 1,096.03 a |
| VOC | 0.06 | 6.263 | 187.89 | -- | -- | -- | 187.89 a |
| Lead - Bagasse | 2.5E-05 | 3.758 b | 0.047 | -- | -- | -- | 0.067 |
| - Wood Waste | 1.6E-05 | 2.505 c | 0.020 | | | | |
| Mercury - Bagasse | 5.43E-06 | 3.758 b | 0.0102 | -- | -- | -- | 0.0152 |
| - Wood Waste | 4.00E-06 | 2.505 c | 0.00501 | | | | |
| Beryllium | -- | -- | -- | -- | -- | -- | -- |
| Fluorides | -- | -- | -- | -- | -- | -- | -- |
| Sulfuric acid mist | 0.0006 | 6.263 | 1.88 | -- | -- | -- | 1.88 |
| | | | 75.1% Biomass / 24.9% Fuel Oil | | | | |
| Particulate (TSP) | 0.03 | 4.428 | 66.42 | 0.03 | 1.468 | 22.02 | 88.44 |
| Particulate (PM10) | 0.03 | 4.428 | 66.42 | 0.03 | 1.468 | 22.02 | 88.44 |
| Sulfur dioxide - Bagasse | 0.02 | 2.657 b | 26.57 | 0.05 | 1.468 | 36.70 | 107.55 |
| - Wood waste | 0.05 | 1.771 c | 44.28 | | | | |
| Nitrogen oxides | 0.15 | 4.428 | 332.10 | 0.15 | 1.468 | 110.10 | 442.20 |
| Carbon monoxide | 0.35 | 4.428 | 774.90 | 0.2 | 1.468 | 146.80 | 921.70 |
| VOC | 0.06 | 4.428 | 132.84 | 0.03 | 1.468 | 22.02 | 154.86 |
| Lead - Bagasse | 2.5E-05 | 2.657 b | 0.033 | 8.9E-07 | 1.468 | 0.0007 | 0.048 |
| - Wood Waste | 1.6E-05 | 1.771 c | 0.014 | | | | |
| Mercury - Bagasse | 5.43E-06 | 2.657 b | 0.0072 | 2.4E-06 | 1.468 | 0.0018 | 0.0125 |
| - Wood Waste | 4.00E-06 | 1.771 c | 0.00354 | | | | |
| Beryllium | -- | -- | -- | 3.5E-07 | 1.468 | 0.00026 | 0.00026 |
| Fluorides | -- | -- | -- | 6.27E-06 | 1.468 | 0.0046 | 0.0046 |
| Sulfuric acid mist | 0.0006 | 4.428 | 1.33 | 0.0015 | 1.468 | 1.10 | 2.43 |
| | | | 75.1% Biomass / 24.9% Coal | | | | |
| Particulate (TSP) | 0.03 | 4.428 | 66.42 | 0.03 | 1.468 | 22.02 | 88.44 |
| Particulate (PM10) | 0.03 | 4.428 | 66.42 | 0.03 | 1.468 | 22.02 | 88.44 |
| Sulfur dioxide - Bagasse | 0.02 | 2.967 b | 29.67 | 1.2 | 1.468 | 880.80 | 947.00 |
| - Wood waste | 0.05 | 1.461 c | 36.53 | | | | |
| Nitrogen oxides | 0.15 | 4.428 | 332.10 | 0.17 | 1.468 | 124.78 | 456.88 |
| Carbon monoxide | 0.35 | 4.428 | 774.90 | 0.2 | 1.468 | 146.80 | 921.70 |
| VOC | 0.06 | 4.428 | 132.84 | 0.03 | 1.468 | 22.02 | 154.86 |
| Lead - Bagasse | 2.5E-05 | 2.657 b | 0.033 | 6.4E-05 | 1.468 | 0.0470 | 0.0944 a |
| - Wood Waste | 1.6E-05 | 1.771 c | 0.014 | | | | |
| Mercury - Bagasse | 5.43E-06 | 2.657 b | 0.0072 | 8.4E-06 | 1.468 | 0.0062 | 0.0169 |
| - Wood Waste | 4.00E-06 | 1.771 c | 0.00354 | | | | |
| Beryllium | -- | -- | -- | 5.9E-06 | 1.468 | 0.0043 | 0.0043 a |
| Fluorides | -- | -- | -- | 0.024 | 1.468 | 17.62 | 17.62 a |
| Sulfuric acid mist | 0.0006 | 4.428 | 1.33 | 0.036 | 1.468 | 26.42 | 27.75 a |
| | | | 59.8% Biomass / 40.2% Tire-Derived Fuel | | | | |
| Particulate (TSP) | 0.03 | 3.744 | 56.16 | 0.03 | 2.519 | 37.79 | 93.95 a |
| Particulate (PM10) | 0.03 | 3.744 | 56.16 | 0.03 | 2.519 | 37.79 | 93.95 a |
| Sulfur dioxide - Bagasse | 0.02 | 2.246 b | 22.46 | 0.8 | 2.519 | 1,007.60 | 1067.50 a |
| - Wood waste | 0.05 | 1.498 c | 37.44 | | | | |
| Nitrogen oxides | 0.15 | 3.744 | 280.80 | 0.15 | 2.519 | 188.93 | 469.73 |
| Carbon monoxide | 0.35 | 3.744 | 655.20 | 0.35 | 2.519 | 440.83 | 1096.03 a |
| VOC | 0.06 | 3.744 | 112.32 | 0.06 | 2.519 | 75.57 | 187.89 a |
| Lead - Bagasse | 2.5E-05 | 2.246 b | 0.028 | 4.2E-05 | 2.519 | 0.0529 | 0.0930 |
| - Wood Waste | 1.6E-05 | 1.498 c | 0.012 | | | | |
| Mercury - Bagasse | 5.43E-06 | 2.246 b | 0.0061 | 6.5E-06 | 2.519 | 0.0082 | 0.0173 a |
| - Wood Waste | 4.00E-06 | 1.498 c | 0.00300 | | | | |
| Beryllium | -- | -- | -- | 4.5E-07 | 2.519 | 0.00057 | 0.00057 |
| Fluorides | -- | -- | -- | 6.5E-04 | 2.519 | 0.82 | 0.8187 |
| Sulfuric acid mist | 0.0006 | 3.744 | 1.12 | 0.0069 | 2.519 | 8.69 | 9.81 |

a Denotes maximum annual emissions for any fuel scenario.
b Represents 60% of total heat input.
c Represents 40% of total heat input.
Note: No emissions of total reduced sulfur, asbestos, or vinyl chloride are expected.
Fuel type percentages are based on heat input.