Jeb Bush
Governor

Department of Environmental Protection

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

David B. Struhs
Secretary

July 11, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ricardo Lima, Vice President and General Manager
Okeelanta Power Limited Partnership
8001 U.S. Highway 27 South
South Bay, FL 33493

Re: Request for Additional Information No. 2
Project No. 0990332-014-AC (PSD-FL-196M)
Okeelanta Power L.P. Cogeneration Plant
Application to Modify CO and SO_2 Emissions Standards (and Additional Requests)

Dear Mr. Lima:

On June 12, 2001 the Department received a portion of the additional information requested regarding the application to revise the CO and SO_2 emissions standards for the biomass boilers at OkPLP's cogeneration plant. On June 21, 2001, the Department received additional changes to this information including revisions to the Department's application form. The application remains incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. CO, NOx, and SO_2 Data

   As originally requested, please provide a detailed description of the method used to calculate the heat input for use in the compliance averages. How is the volumetric flow rate determined? Does the volumetric flow rate include the contribution due to urea injection? What were the tested thermal efficiencies for each boiler?

2. Elevated CO Emissions

   How many excursions of the existing 30-day rolling average for CO emissions have occurred for each boiler? How many months have these boilers operated under the current standard?

   OkPLP has not provided any information that suggests "good operating practices" were being used during the high CO incidents. If bagasse fuel typically contains 50% moisture by weight and the boilers can operate in compliance with the CO standard, why wasn't more bagasse being fired to offset the "wet" wood materials? Please discuss the feasibility of providing a three-day storage area for "dry" biomass that could be commingled with "wet" biomass in order to comply with the current standards. This storage area would be protected from rain (or watering) and confined to prevent fugitive emissions.

   A recent permit revision approved the use of natural gas as a supplemental fuel. Please discuss the co-firing natural gas with a "wet" biomass fuel to increase combustion efficiency and reduce CO emissions.

   The response indicates that OkPLP has implemented an improved combustion control system using computer assisted air distribution modeling, which has lead more efficient tuning of air and fuel control instrumentation. These improvements have already resulted in lower CO emissions. The Department believes this is a more reasonable approach to correcting the elevated CO emissions as opposed to increasing the emissions standards.

   Also, OkPLP installed new rotary pocket style wood feeders in 1999/2000 to provide an effective thermal seal that minimizes tramp air into the boiler. Did the Department approve this change? Did the hourly fuel feed rate or maximum heat input rate increased as a result of this change?

3. Elevated SO2 Emissions

How many excursions of the existing 30-day rolling average for SO2 emissions have occurred for each boiler? How many months have these boilers operated under this standard? What measures did OkPLP take to prevent exceeding the SO2 standards? The response indicates that more frequent fuel sampling is now conducted. How is this information used to adjust operations in order to comply with the current standards?

Has OkPLP evaluated the option of using the *existing activated carbon injection system* to inject an activated carbon /lime product (or just lime) for additional SO2 control? Note that this control would only need to be used to ensure compliance with the current SO2 standard. Costs would be very different from the analysis presented in the initial application.

4. CO Modeling Analysis

Please explain why the point source inventory in the revised analysis did not include substantial CO emissions from Pratt and Whitney's new rocket testing facility or conduct a revised modeling analysis to include these additional emissions.

As originally requested, please provide the modeling files for our review.

5. SO2 Modeling Analysis

As stated in the application, the requested change in the SO2 emissions standard results in a net actual emissions increase of 1021 tons per year, which clearly exceeds the PSD significant emissions rate. The initial analysis is more than 8 years old and is based on a fuel that was never fired. Please provide the revised air quality modeling analysis for SO2 or revise your request. As mentioned in the Department's initial request, it is inappropriate to use the "potential emissions" for a fuel (coal) that is no longer authorized and has never been fired as emissions decreases to offset increases in actual emissions from the proposed project.

6. Coal Firing: The response indicates that OkPLP recognizes that coal is no longer an authorized fuel. No additional questions.

7. Other Requests: The Department requests information regarding OkPLP's additional requests.

   a. *Stack testing for CO, NOx, SO2, visible emissions, fluorides, beryllium, arsenic, chromium, and copper*:

      - The PSD permit will be revised make it clear that compliance with the CO, NOx, SO2, and opacity standards will be demonstrated based on the continuous monitor data. However, EPA Method 9 observations shall also remain a valid means of determining compliance with the opacity standard.
      - Please summarize the fluoride and beryllium emissions with and without coal firing. Please revise the PSD applicability analysis for these pollutants. The Department will consider the request to remove the testing requirements based on this information.
      - Please provide a summary identifying the emissions rates of arsenic, chromium, and copper for each boiler and for each test conducted. The Department will consider the request to remove periodic testing for these pollutants based on this information.

   b. *Emissions limits for lead, mercury, fluorides, and beryllium*:

      - The Department will consider the revised lead and mercury standards based on the revised PSD applicability analysis provided and the absence of coal firing.
      - As previously mentioned, please revise the PSD applicability analysis for these pollutants. The Department will consider the request to remove the testing requirements based on this information.

   c. *Eliminate the requirement for a carbon injection system*: Based on the absence of coal firing, the Department will consider removing the requirement to operate the activated carbon injection system when firing biomass, distillate oil, or natural gas and complying with the (possibly revised) lead and mercury emissions standards.

   d. *Bubbling of lead and mercury limits*: The Department does not believe the concept of "bubbling" the lead and mercury emissions standards is appropriate. This appears to be similar to a "plant-wide applicability limit", which has not yet been approved through the New Source Review reforms. Please comment.

Due to the extensive changes requested, please provide a new summary of the air quality analysis (Class I and Class II impacts) for this project. For each PSD pollutant, please include the modeled emissions rate (lb/hour), fuel used, exhaust temperature, predicted maximum ambient concentrations, and appropriate regulatory level for each averaging period.

Please include any revised impacts conducted since the original permit was issued. If no changes have been made since the original application for a given pollutant, data from the original analysis may be used.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Material changes to the application should also be accompanied by a new certification statement by the authorized representative or responsible official. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call me at 850/414-7268.

Sincerely,

Jeffery F. Koerner, P.E.
New Source Review Section

AAL/jfk

cc: Mr. Ricardo Lima, OkPLP
Mr. James Meriwether, OkPLP
Mr. David Buff, Golder Associates
Mr. Ron Blackburn, SD
Mr. Darrel Graziani, PBCHD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

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- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ricardo Lima
Vice President & Gen. Mgr.
Okeelanta Power Limited
Partnership
8001 U.S. Highway 27 South
South Bay, Fl 33493

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) AMANDA KINMAN
B. Date of Delivery 7/12/01

C. Signature
X [signature] ☐ Agent ☑ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

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SBAY. FL 33493-0008

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Recipient's Name (Please Print Clearly) (To be completed by mailer)
Mr. Ricardo Lima
Street, Apt. No.; or PO Box No.
8001 U.S. Highway 27 South
City, State, ZIP+4
South Bay, FL 33493

PS Form 3800, February 2000 See Reverse for Instructions

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

RECEIVED 0037584

JUN 21 2001

BUREAU OF AIR REGULATION

June 19, 2001

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Mr. Jeff Koerner, P.E.

RE: Okeelanta Power Cogeneration Facility
ARMS Facility ID No. 0990332
Project No. 0990332-014-AC/PSD-FL-196M
Application to Modify CO and SO_2 Emissions Standards

Dear Mr. Koerner:

In a letter dated June 8, 2001, Golder Associates Inc. submitted a response to the Department regarding Okeelanta Power's application to modify its CO and SO_2 emission standards. The application form and two of the tables submitted contained minor typographical errors. These errors affected the footnotes on the tables and the annual emissions for sulfuric acid mist contained in the tables and the application form.

Revised application form pages and tables from the application are attached. Please call if there are any questions.

Sincerely,
GOLDER ASSOCIATES INC.

David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #19011
SEAL

DB/fwh

cc: Gus Cepero
James Meriwether
David Dee
Bill Tarr
C. Holladay, SED
J. Goldman, SED
D. Gravois, PBCHD
EPA
NPS

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **13.2** lb/hour **19.10** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0184 lb/MMBtu** Reference: **AP-42**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **Emission factor based on AP-42 Section 1.3 for fuel oil firing, which shows approximately 5% of SO_2 emissions are emitted as SO_3. Then SO_3 is converted to H_2SO_4 by multiplying by 98/80.** **Emission factor for SO_2 emission is 0.3 lb/MMBtu (3-hr max).** **0.3 lb/MMBtu x 0.05 x 98/80 = 0.0184 lb/MMBtu** **0.0184 lb/MMBtu x 715 MMBtu/hr = 13.16 lb/hr** **Annual emission factor = 0.1 lb/MMBtu x 0.05 x 98/80 = 0.0061 lb/MMBtu** **0.0061 lb/MMBtu x 715 MMBtu/hr x 8760 hr/yr x 1 ton/2000 lb = 19.10 TPY**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Based on biomass firing, 35.08 TPY total for all boilers.**	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.0184 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.2** lb/hour **19.10** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on biomass firing.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **13.2** lb/hour **19.10** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0184 lb/MMBtu** Reference: **AP-42**	7. Emissions Method Code:

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

Emission factor based on AP-42 Section 1.3 for fuel oil firing, which shows approximately 5% of SO_2 emissions are emitted as SO_3. Then SO_3 is converted to H_2SO_4 by multiplying by 98/80.
Emission factor for SO_2 emission is 0.3 lb/MMBtu (3-hr max).
0.3 lb/MMBtu x 0.05 x 98/80 = 0.0184 lb/MMBtu
0.0184 lb/MMBtu x 715 MMBtu/hr = 13.16 lb/hr
Annual emission factor = 0.1 lb/MMBtu x 0.05 x 98/80 = 0.0061 lb/MMBtu
0.0061 lb/MMBtu x 715 MMBtu/hr x 8760 hr/yr x 1 ton/2000 lb = 19.10 TPY

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

Based on biomass firing, 35.08 TPY total for all boilers.

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.0184 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.2** lb/hour **19.10** tons/year

5. Method of Compliance (limit to 60 characters):

EPA Method 8 once every 5 years.

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Based on biomass firing.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **13.2** lb/hour **19.10** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0184 lb/MMBtu** Reference: **AP-42**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **Emission factor based on AP-42 Section 1.3 for fuel oil firing, which shows approximately 5% of SO_2 emissions are emitted as SO_3. Then SO_3 is converted to H_2SO_4 by multiplying by 98/80.** **Emission factor for SO_2 emission is 0.3 lb/MMBtu (3-hr max).** **0.3 lb/MMBtu x 0.05 x 98/80 = 0.0184 lb/MMBtu** **0.0184 lb/MMBtu x 715 MMBtu/hr = 13.16 lb/hr** **Annual emission factor = 0.1 lb/MMBtu x 0.05 x 98/80 = 0.0061 lb/MMBtu** **0.0061 lb/MMBtu x 715 MMBtu/hr x 8760 hr/yr x 1 ton/2000 lb = 19.10 TPY**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Based on biomass firing, 35.08 TPY total for all boilers.**	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.0184 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.2** lb/hour **19.10** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on biomass firing.**	

Table 2-4. Maximum Annual Emissions for Single Boiler at Okeelanta Power L.P. (Revised 6/19/01)

Regulated Pollutant	Biomass Emission Factor (lb/MMBtu)	Biomass Activity Factor (10^{12} Btu/yr)	Biomass Annual Emissions (TPY)	Alternate Fuel Emission Factor (lb/MMBtu)	Alternate Fuel Activity Factor (10^{12} 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 (PM_{10})	0.03	6.263	93.95	--	--	--	93.95	a
Sulfur dioxide	0.10	6.263	313.15	--	--	--	313.15	a
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	1.6E-04	6.263	0.501	--	--	--	0.501	a
Mercury	5.43E-06	6.263	0.0170	--	--	--	0.0170	a
Beryllium	--	--	--	--	--	--	--	
Fluorides	7.00E-04	6.263	2.19	--	--	--	2.19	a
Sulfuric acid mist	0.0061	6.263	19.10	--	--	--	19.10	a
			75.1% Biomass / 24.9% Fuel Oil					
Particulate (TSP)	0.03	4.428	66.42	0.03	1.468	22.02	88.44	
Particulate (PM_{10})	0.03	4.428	66.42	0.03	1.468	22.02	88.44	
Sulfur dioxide	0.10	4.428	221.40	0.05	1.468	36.70	258.10	
Nitrogen oxides	0.15	4.428	332.10	0.15	1.468	110.10	442.20	
Carbon monoxide	0.35	4.428	774.90	0.35	1.468	256.90	1,031.80	
VOC	0.06	4.428	132.84	0.03	1.468	22.02	154.86	
Lead	1.6E-04	4.428	0.354	8.9E-07	1.468	0.0007	0.355	
Mercury	5.43E-06	4.428	0.0120	2.4E-06	1.468	0.0018	0.0138	
Beryllium	--	--	--	3.5E-07	1.468	0.00026	0.00026	a
Fluorides	7.00E-04	4.428	1.55	6.27E-06	1.468	0.0046	1.5544	
Sulfuric acid mist	0.0061	4.428	13.51	0.0015	1.468	1.10	14.61	
			75.1% Biomass / 24.9% Natural Gas					
Particulate (TSP)	0.03	4.428	66.42	0.0073	1.468	5.36	71.78	
Particulate (PM_{10})	0.03	4.428	66.42	0.0073	1.468	5.36	71.78	
Sulfur dioxide	0.10	4.428	221.40	0.00058	1.468	0.43	221.83	
Nitrogen oxides	0.15	4.428	332.10	0.15	1.468	110.10	442.20	
Carbon monoxide	0.35	4.428	774.90	0.08	1.468	58.72	833.62	
VOC	0.06	4.428	132.84	0.0053	1.468	3.89	136.73	
Lead	1.6E-04	4.428	0.354	4.8E-07	1.468	0.0004	0.355	
Mercury	5.43E-06	4.428	0.0120	2.5E-07	1.468	0.0002	0.0122	
Beryllium	--	--	--	1.2E-08	1.468	0.00001	0.00001	
Fluorides	7.00E-04	4.428	1.55	--	--	--	1.5498	
Sulfuric acid mist	0.0061	4.428	13.51	3.55E-05	1.468	0.03	13.53	

[a] Denotes maximum annual emissions for any fuel scenario.

Note: No emissions of total reduced sulfur, asbestos, or vinyl chloride are expected.
Fuel type percentages are based on heat input.

Table 2-5. Maximum Annual Emissions for Okeelanta Power Cogeneration Facility (total all boilers, Revised 6/19/01))

Regulated Pollutant	Biomass Emission Factor (lb/MMBtu)	Biomass Activity Factor (10^{12} Btu/yr)	Biomass Annual Emissions (TPY)	Alternate Fuel Emission Factor (lb/MMBtu)	Alternate Fuel Activity Factor (10^{12} Btu/yr)	Alternate Fuel Annual Emissions (TPY)	Total Annual Emissions (TPY)	
			100% Biomass					
Particulate (TSP)	0.03	11.500	172.50	--	--	--	172.50	a
Particulate (PM_{10})	0.03	11.500	172.50	--	--	--	172.50	a
Sulfur dioxide	0.10	11.500	575.00	--	--	--	575.00	a
Nitrogen oxides	0.15	11.500	862.50	--	--	--	862.50	a
Carbon monoxide	0.35	11.500	2,012.50	--	--	--	2,012.50	a
VOC	0.06	11.500	345.00	--	--	--	345.00	a
Lead	1.6E-04	11.500	0.920	--	--	--	0.920	a
Mercury	5.43E-06	11.500	0.0312	--	--	--	0.031	a
Beryllium	--	--	--	--	--	--	--	
Fluorides	7.00E-04	11.500	4.03	--	--	--	4.03	a
Sulfuric acid mist	0.0061	11.500	35.08	--	--	--	35.08	a
			75.1% Biomass / 24.9% Fuel Oil					
Particulate (TSP)	0.03	8.130	121.95	0.03	2.696	40.44	162.39	
Particulate (PM_{10})	0.03	8.130	121.95	0.03	2.696	40.44	162.39	
Sulfur dioxide	0.10	8.130	406.50	0.05	2.696	67.40	473.90	
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	0.35	2.696	471.80	1,894.55	
VOC	0.06	8.130	243.90	0.03	2.696	40.44	284.34	
Lead	1.6E-04	8.130	0.650	8.9E-07	2.696	0.0012	0.652	
Mercury	5.43E-06	8.130	0.0221	2.4E-06	2.696	0.0032	0.025	
Beryllium	--	--	--	3.5E-07	2.696	0.00047	0.00047	a
Fluorides	7.00E-04	8.130	2.85	6.27E-06	2.696	0.0085	2.854	
Sulfuric acid mist	0.0061	8.130	24.80	0.0015	2.696	2.02	26.82	
			75.1% Biomass / 24.9% Natural Gas					
Particulate (TSP)	0.03	8.130	121.95	0.0073	2.696	9.84	131.79	
Particulate (PM_{10})	0.03	8.130	121.95	0.0073	2.696	9.84	131.79	
Sulfur dioxide	0.10	8.130	406.50	0.00058	2.696	0.78	407.28	
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	0.08	2.696	107.84	1,530.59	
VOC	0.06	8.130	243.90	0.0053	2.696	7.14	251.04	
Lead	1.6E-04	8.130	0.650	4.8E-07	2.696	0.0006	0.651	
Mercury	5.43E-06	8.130	0.0221	2.5E-07	2.696	0.0003	0.022	
Beryllium	--	--	--	1.2E-08	2.696	0.00002	0.00002	
Fluorides	7.00E-04	8.130	2.85	--	--	--	2.846	
Sulfuric acid mist	0.0061	8.130	24.80	3.55E-05	2.696	0.05	24.84	

[a] Denotes maximum annual emissions for any fuel scenario.

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

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

June 8, 2001

0037584

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Mr. Jeff Koerner, P.E.

RE: Okeelanta Power Cogeneration Facility
ARMS Facility ID No. 0990332
Project No. 0990332-014-AC/PSD-FL-196M
Application to Modify CO and SO_2 Emissions Standards

Dear Mr. Koerner:

Okeelanta Power Limited Partnership (OkPLP) has received the Department's letter dated January 25, 2001, requesting additional information in regards to modify the CO and SO_2 emissions standards for the three cogeneration boilers. Each of the Department's questions are responded to below, in the same order as they appear in the Department's letter.

1. **Comment: For each boiler during the period of 05/01/99 through 12/31/00, please provide the following information in a tabled format. Provide data for each day during a one-month period representative of operations before the violations, during the violations, and after the violations.**
   a. **24-hour averages for CO, NO_x, and SO_2 emissions. If possible, also provide line chart representing the 24-hour averages of each pollutant (on the same chart) over the entire period separately for each boiler.**
   b. **Daily average of tons of bagasse fired, tons of wood fired, gallons of oil fired, and the bagasse/wood firing ratio.**
   c. **The daily average steam production, power production, stack gas moisture, stack gas oxygen content; and the F-factor used.**

   In detail, please describe the method of calculating the heat input for use in the compliance averages. What is the thermal efficiency of each boiler? Has the thermal efficiency been tested for each boiler?

   Response: All data requested are provided in Appendix A. The information for Boiler A is provided in Table 1 (for the period of CO violations) and Table 3 (for SO_2 violations). Line charts of the data are provided in Figures 1 and 2. Boiler B data is provided in Table 4 and Figure 3 for the period of SO_2 violations (no CO violations occurred). The information for Boiler C is provided in Table 2 (for the period of CO violations) and Table 5 (for SO_2 violations), and in Figures 4 and 5.

   The heat input to the boilers are determined based a carbon based F-Factor of 1,850 scf/MMBtu.

The design thermal efficiency of the boilers is 68 percent when burning biomass. A thermal efficiency test was conducted on the boilers during acceptance testing.

2. **Comment: Okeelanta speculates that the increased CO emissions result from a high moisture content of the biomass fuel due to increased rainfall. The data presented does not appear to establish any conclusive correlation between rainfall and CO emissions. However, does Okeelanta maintain a dry source of biomass fuel or attempt to prevent some biomass from being rained upon? Has Okeelanta made any provisions to attempt drying the fuel before firing in the cogeneration boilers? Please provide a list of actions taken by Okeelanta to adjust operations in response to gradually increasing CO emissions. Has Okeelanta researched changes in equipment or processes that could be implemented to correct the elevated levels of CO emissions?**

Response: Operating experience has shown that periods of high rainfall are generally followed by periods of elevated CO emissions. For example, Hurricane Floyd affected the area on September 14 and 15, 1999. In October 1999, Boiler C exceeded the thirty-day rolling average for CO. In November 1999, Boiler A exceeded the thirty-day rolling average for CO. This is an indication that rainfall from the hurricane event affected CO emissions at the facility.

The OkPLP Cogeneration Facility has approximately 34 acres dedicated for fuel storage: 19 acres for wood fuel and 15 acres for bagasse fuel. In areas of this size it is not practical to store fuel under controlled conditions. The facility receives wood fuel from a number of vendors within a 100-mile radius of the facility. Bagasse fuel is received from the adjacent Okeelanta Sugar Mill. During the year 2000, wood fuel averaged approximately 34.51 percent moisture as received and bagasse approximately 52.18 percent moisture as received. Wood fuel can range from 20 percent to 48 percent moisture and bagasse from 52 percent to 55 percent moisture. Therefore, the fuel is inherently wet when received by the facility. The fuel storage areas are also wetted to control dusting during dry conditions. During normal operating conditions, approximately 6,500 lbs/hr of water contained in the aqueous urea solution is injected into each furnace for NO_x control, further adding to the total moisture entering the furnace.

No attempts have been made to dry the fuel prior to firing in the boilers. Although drying of wood fuel using a portion of the flue gases is feasible, this would require significant modifications at the facility and result in very high costs. Drying of bagasse fuel prior to firing has not been demonstrated, and has inherent problems including fire and explosion potential, handling and transport of dry bagasse, condensation and corrosion, etc. Therefore, this option is not considered technically or economically feasible.

Control of CO emissions is accomplished by combustion control. The facility has recently implemented an improved combustion control system, which also improves plant efficiency. Computer assisted air distribution modeling has been utilized at the facility to enhance combustion control. This modeling has led to more efficient tuning of air and fuel control instrumentation. Also, significant improvements in combustion control and reductions in CO have been realized by the installation of new rotary pocket style wood feeders in 1999-2000. This type fuel feeder provides an effective air seal to minimize tramp air into the boiler. In addition, a new type of water level control for the bottom ash system is currently being evaluated. A stable water level in the bottom ash system also prevents tramp air from entering the boilers.

Although these improvements have already resulted in lower CO emissions, it does not guarantee that the current CO emission limit based on a 30-day rolling average will be met at all times in the future, especially during high rainfall periods.

3. **Comment: From the information provided, the samples of bagasse appear to be within the range of sulfur contents stated in the initial application. Most samples of the wood materials show sulfur contents within the range stated in the initial application. However, several samples of the wood materials show sulfur contents as much as two to three times higher than expected. Please describe the plan for sampling the biomass fuels and analyzing for the sulfur content. When a sample indicates an unusually high sulfur content, what provisions does Okeelanta make to separate the shipment and proportionally blend with lower sulfur biomass to comply with the SO_2 standards? What other methods are used or could be used to adjust operations for biomass fuels detected to have high sulfur contents? Has Okeelanta evaluated the option of using a lime/activated carbon product for additional SO_2 control?**

   The data presented does not conclusively show that the addition of dust collectors resulted in higher SO_2 emissions due to less SO_2 adsorption. Please sample the bottom ash from a cogeneration boiler for both sulfur and unburned carbon. Compare the results with those from a cogeneration boiler prior to the dust collectors (or a sugar mill bagasse boiler).

   Response: The initial application states that the maximum sulfur content of bagasse (sulfur in wood waste is similar, reference AP-42) is 0.022 percent on a wet basis. This sulfur content was used to calculate the SO_2 maximum emission factor of 0.10 lbs/MMBtu (24-hour average). In the Golder Associates "Application to Modify CO/SO_2 Emission Limits" (December 2000) the Summary of Wood Fuel Analyses shows the average sulfur content for wood materials to be 0.07 percent (wet basis) and the Summary of Bagasse Fuel Analyses show the average sulfur content of bagasse materials to be 0.03 percent (wet basis). These are both higher than the sulfur content shown in the initial application (0.022 percent), which was used to calculate the maximum SO_2 emission factor.

   The OkPLP Cogeneration facility's permit limit for SO_2 is based on a thirty-day rolling average of 0.02 lbs/MMBtu for bagasse and 0.05 lbs/MMBtu for wood. Specific Condition 20 of the air permit states that SO_2 emission limits for wood and bagasse are subject to revision pursuant to facility stack testing.

   The OkPLP Cogeneration Facility burns an average of 70 tons/hour of biomass fuel per boiler. Two to four "boiler ready" wood fuel samples are collected each week and analyzed for sulfur content. This sampling schedule was implemented following the SO_2 excess emission events. These samples are collected from the wood material that has been blended and considered "boiler ready" fuel. Sampling each truckload of biomass or segregating deliveries is not practical due to the large number of truckloads of material received at the facility each week.

   OkPLP did investigate a dry lime injection system during the initial PSD permitting of the facility. This analysis showed that such a system would not be cost effective, based on total annual SO_2 emissions of 1,154 TPY. OkPLP is currently proposing to lower the allowable annual SO_2 emissions to 575 TPY by eliminating the ability to fire coal (based on 0.1 lb/MMBtu, 30-day rolling average and 11.5×10^{12} Btu/yr). This renders an add-on control system such as dry lime injection even more costly.

4. **Comment: The following table is presented to document the original CO standards, subsequent changes, and current request:**

Table 6. Summary of CO Standards

Year	Average	Biomass	Oil	Coal
1993	8-hour	0.35 lb/MMBtu	0.2 lb/MMBtu	0.2 lb/MMBtu
1997	24-hour	0.35 lb/MMBtu	0.35 lb/MMBtu	0.35 lb/MMBtu
1999	30-day	0.35 lb/MMBtu	0.35 lb/MMBtu	0.35 lb/MMBtu
Request	12-month	0.35 lb/MMBtu	0.35 lb/MMBtu	0.35 lb/MMBtu

a. **The Department notes that the Ambient Air Quality Standards (AAQS) are defined for CO in terms of 1-hour and 8-hour averages. The initial Ambient Air Quality Analysis was based on maximum emissions rates reflecting these averaging periods. Please review the available operating data and provide the expected maximum CO emission rates based on the 1-hour and 8-hour averages from the CO CEMS. Provide a summary of the CO data and describe the methods used to select the expected maximum CO emission rates.**

b. **Please provide a tabled comparison of the CO emission rates used in the initial Ambient Air Quality Analysis versus the expected maximum CO emission rates. If the expected maximum CO emission rates are higher, please revise the PSD significant impact analysis and the AAQS analysis accordingly. Please provide a report of the revised modeling effort as well as the modeling files for review.**

c. **If additional modeling is necessary and indicates a significant impact, the Department is considering new short-term CO limits. If revised modeling indicates an insignificant impact, the Department is considering providing the short-term CO emission rates in the revised permit for informational purposes.**

Response:

a. OkPLP has reviewed the historic CO data from the CEM, and have identified the periods of highest 1-hour and 8-hour averages. These are presented in Appendix B. The highest 8-hour average CO levels are 4.28, 2.69, 1.88, 1.03, 0.76 and 0.75 lb/MMBtu. The three highest levels occurred during cold startup of the boilers. OkPLP's permit provides for up to 4 hours or until the boiler reaches 150,000 lb/hr steam for excess emissions during a cold startup. CO emissions during the startup period are excluded from the 8-hour and 1-hour CEM averages for compliance purposes. Therefore, these excluded periods were not included in determining the highest CO levels, but were nonetheless related to boiler startup. The other three high CO averages appear to not be related to a cold startup. The highest 1-hour average CO levels also occurred during a cold startup period. The maximum 1-hour CO level was 6.5 lb/MMBtu.

   Based on a review of the data, the very highest CO emissions occur very infrequently, and during cold startup periods. Outside of cold startup conditions, the highest 8-hour CO level is only about 1.0 lb/MMBtu. Outside of cold startup, the highest 1-hour CO level is about 1.8 lb/MMBtu.

b. An ambient air quality modeling analysis for CO was not conducted for the facility in the past because PSD review was not triggered for CO. Therefore, a modeling analysis for CO has been conducted and is attached in Appendix C. The significant impact analysis was

conducted assuming current CO emission rates of 0.35 lb/MMBtu for both the 1-hour and 8-hour averaging times, since the original CO permit limit for OkPLP was 0.35 lb/MMBtu as an 8-hour average. Future maximum CO levels were assumed to be 6.5 lb/MMBtu for the 1-hour average, and 4.5 lb/MMBtu for the 8-hour average.

c. The CO modeling analysis resulted in a significant impact based on the emission rates described above, therefore a full CO modeling analysis was performed (see Appendix C). However, at the normal expected maximum CO emission rates (1.8 lb/MMBtu, 1-hour; 1.0 lb/MMBtu, 8-hour), the CO impacts are not significant. Since the highest CO emissions occur very infrequently, and the normal maximum CO levels cause an insignificant impact, short-term CO emission limits for the OkPLP boilers are considered unnecessary.

5. Comment: The following table is presented to document the original SO_2 standards, subsequent changes, and the current request:

Table 6. Summary of SO_2 Standards

Year	Average	Biomass	Oil	Coal
1993	3-hour	NA	NA	1.2 lb/MMBtu
	24-hour	0.10 lb/MMBtu	0.05 lb/MMBtu	1.2 lb/MMBtu
	30-day	0.02 lb/MMBtu	NA	1.2 lb/MMBtu
	Annual	0.02 lb/MMBtu	NA	1.2 lb/MMBtu
1997	3-hour	NA	NA	1.2 lb/MMBtu
	24-hour	0.10 lb/MMBtu	0.05 lb/MMBtu	1.2 lb/MMBtu
	30-day	0.02 lb/MMBtu (Bagasse) 0.05 lb/MMBtu (Wood)	NA	1.2 lb/MMBtu
	Annual	0.02 lb/MMBtu (Bagasse) 0.05 lb/MMBtu (Wood)	NA	1.2 lb/MMBtu
Request	3-hour	NA	NA	1.2 lb/MMBtu
	24-hour	0.20 lb/MMBtu	0.05 lb/MMBtu	1.2 lb/MMBtu
	30-day	0.10 lb/MMBtu	NA	1.2 lb/MMBtu
	Annual	0.10 lb/MMBtu	NA	1.2 lb/MMBtu

a. The Department notes that the Ambient Air Quality Standards (AAQS) are defined for SO_2 in terms of 3-hour, 24-hour, and annual averages. The initial Ambient Air Quality Analysis was based on maximum emissions rates reflecting these averaging periods. Please review the available operating data and provide the expected maximum SO_2 emission rates based on the 3-hour, 24-hour, and annual averages from the SO_2 CEMS. Provide a summary of the SO_2 data and describe the methods used to select the expected maximum SO_2 emission rates.

b. Please provide a tabled comparison of the modeled SO_2 emission rates used for the original PSD Air Quality Analysis versus the expected maximum (and requested) SO_2 emission rates. If the expected maximum (or requested) SO_2 emission rates are higher, please revise the PSD significant impact analysis, Class I and Class I increment consumption, and the AAQS analysis accordingly. Please provide a report of the revised modeling effort as well as the modeling files for review.

c. If additional modeling is necessary and indicates a significant impact, the Department is considering new short-term SO_2 limits. If revised modeling indicates an insignificant

impact, the Department is considering providing the short-term SO_2 emission rates in the revised permit for informational purposes.

Response:

a. OkPLP has reviewed the historic SO_2 data from the CEMS, and have identified the periods of highest 1-hour averages. These are presented in Appendix B. The highest 1-hour average SO_2 level is about 0.17 lb/MMBtu. Based on these data, it is expected that the maximum 3-hour SO_2 emissions in the future will not be greater than 0.3 lb/MMBtu. The proposed maximum 24-hour SO_2 limit is 0.20 lb/MMBtu.

   An ambient air quality modeling analysis for SO_2 was conducted for the facility in the past. Maximum SO_2 emissions were based on coal firing, and were 588 lb/hr per boiler (1.2 lb/MMBtu), and 1,154 TPY. This emission rate is much higher than the expected maximum 3-hour SO_2 emission rate of 214.5 lb/hr per boiler (0.3 lb/MMBtu) or the proposed maximum 24-hour emission rate of 143 lb/hr per boiler(0.2 lb/MMBtu). The proposed maximum annual SO_2 emission rate of 575 TPY is also much less than the previously modeled/permitted emissions of 1,154 TPY. Therefore, a revised modeling analysis for SO_2 was not conducted.

6. **Comment: As the Department has pointed out during previous permitting actions, the initial PSD air construction permit authorized the installation of coal handling facilities and the firing of low sulfur coal. However, the coal handling facilities were never constructed and coal has never been fired at this plant. Okeelanta Power L.P. must obtain new authorization from the Department (through a permit modification) to fire any coal in the future. At the very least, such a request shall evaluate current "Best Available Control Technologies" for each significant pollutant. Also, it is inappropriate to use the "potential emissions" for a fuel (coal) that is no longer authorized and has never been fired as emissions decreases to offset increases in actual emissions from the proposed project. Please revise the request accordingly.**

   Response: OkPLP is no longer requesting that coal be retained as an alternate fuel. Revised emission tables and permit application form pages are attached which reflect this change

7. **Comment: The Department intends to update the PSD permit to incorporate all of the previous revisions. Please include any other requests for amendments at this time.**

   Response: They are several additional issues OkPLP would like to address at this time, as requested by the Department. These are as follows:

   a. Stack testing for SO_2, CO, NO_x, visible emissions, fluorides, beryllium, arsenic, chromium and copper. The original construction permit and the current Title V permit (0990005-003-AV) for the facility requires that annual stack testing for PM/PM_{10}, SO_2, sulfuric acid mist, NO_x, CO, VOC, mercury, arsenic, chromium, copper and visible emissions (VE) be conducted annually. Also, testing for lead, fluorides and beryllium is required every five years at permit renewal. Each boiler at OkPLP has continuous emissions monitors (CEM) for SO_2, CO, NO_x, and opacity. An annual RATA and quarterly audits are performed on the units, according to 40 CFR 60, Appendix F. Also, compliance with the emissions limits are demonstrated through the CEM and not through the stack tests. Stack testing cannot demonstrate compliance with the emission limits due to the averaging times associated with the various limits. It is therefore requested that the requirement for annual testing for SO_2, CO, NO_x, and VE be eliminated from the permit.

In this application, OkPLP is not requesting the authorization to fire coal in the boilers. The emission limits in the permit and the stack testing requirements for fluorides and beryllium where only placed in the permit because of coal firing. Therefore it is requested that testing no longer be required for these pollutants.

It is also requested that stack testing for arsenic, chromium and copper be removed from the permit. The requirements to test these pollutants were established during the time when the Department had an air toxics policy, and were requiring the estimation of toxic air pollutants, which led to the testing requirements. The Department no longer regulates toxic air pollutants in this manner, deferring instead to EPA's MACT rules. The OkPLP permit contains other provisions related to the arsenic, chromium and copper content of the wood fuel, as well as a fuel management plan. These were placed in the permit to minimize the amount of treated wood being delivered to the facility and burned in the boilers. OkPLP is not requesting that these provisions related to the wood fuel be removed. However, OkPLP believes that the provisions in the permit related to the metals content of the fuel and the fuel inspection and testing plan adequately ensure that treated wood burned at the facility is minimized. There are no emission limits for these pollutants in the current permit. The stack sampling requirements therefore are not necessary, and provide very limited data (data only on the day of the stack test), are burdensome, and do not relate to any established emission limits or ambient standards.

b. Emission limits for lead, mercury, fluorides and beryllium. Currently, the OkPLP facility has emission limits for lead and mercury for both bagasse and wood fuel. OkPLP would like to consolidate these dual limits into a single limit for both fuels. The single limit would be the higher of the two existing limits for each pollutant (i.e., 1.6E-04 lb/MMBtu for lead, and 5.43E-06 for mercury). OkPLP's current and expected future operation is to burn both wood and bagasse simultaneously. The dual limits complicate facility compliance testing, as well as requiring testing on each fuel individually.

   Since these changes will result in a change to the PSD permit, they have been included in a revised PSD applicability analysis, attached.

   In the case of fluorides and beryllium, the emission limits in the permit were placed there solely due to coal burning. Limits were established for No. 2 fuel oil and coal, but over 99 percent of the emissions were due to coal firing. Since coal will no longer be burned at the facility, it is requested that the fluoride and beryllium limits for both oil and coal be removed from the permit. There is no basis to regulate these emissions from the facility.

c. Eliminate the requirement for a carbon injection system. The OkPLP permit requires that a carbon injection system be installed for mercury control. This requirement was due to concerns over mercury emissions in the early 90's. Mercury stack testing has demonstrated that the mercury emissions limits for wood and bagasse can be met without any carbon injection (see attached test data from 1999 contained in Appendix D). Further, mercury testing conducted in 1996 at various carbon injection rates showed no correlation with mercury removal efficiency or emission rate (see attached test data from 1996 in Appendix D). This is believed to be due to the very low mercury levels in the wood and bagasse fuel, as well as the presence of unburned carbon in the fly ash, which absorbs mercury from the flue gas. Based on these data, and the fact that coal will no longer be burned at the facility, it is requested that the requirement to operate a carbon injection system

be removed from the permit. OkPLP would be willing to keep the existing carbon injection system in place in case the current situation changes that warrants reactivation of the system.

d. Bubbling of lead and mercury limits. Due to the very low magnitude of the emissions limits for lead and mercury, and limitations in the test methods, actual emissions of these pollutants from the stack testing can vary substantially. For instance, recent compliance testing for lead when burning bagasse revealed two boilers out of the three boilers exceeding the emission limit for lead. The other boiler exhibited emissions well below the standard. Retesting of the two boilers resulted in one boiler being in compliance and the second boiler being over the limit. The cause of these "spikes" is not known, especially since they occurred when burning bagasse, and there is no known source of lead in the fuel stream. Sample contamination is possible. A bubble limit, wherein the average of the three boilers would be compared to the applicable limit, would provide some relief from these anomalies. It is therefore requested that the lead and mercury limits be set as the average over the three boilers, as opposed to an individual limit for each boiler.

Updated application form pages, tables from the application, and supportive information are attached. Thank you for your consideration of this information and requests. Please call if there are any questions.

Sincerely,
GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #19011
SEAL

DB/arz

cc: Gus Cepero
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D. Goldman, SED
D. Guajardo, BBCHD
EPA
NPS

REVISIONS
TO
APPLICATION FORM

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Cogen Boiler A fired by Biomass/No. 2 oil/natural gas

4. Emissions Unit Identification Number:
ID: [030] No ID

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

74.9 MW gross generating capacity for entire facility.

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

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**715** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr
3. Maximum Process or Throughput Rate:	tons/day
4. Maximum Production Rate:	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
Maximum heat input rates: Biomass - 715 MMBtu/hr; No. 2 Fuel Oil - 490 MMBtu/hr; Natural Gas – 605 MMBtu/hr	

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

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Electric Utility Boiler - Distillate Oil - Grades 1 and 2 Oil**		
2. Source Classification Code (SCC): **10100501**	3. SCC Units: **Thousand Gallons Burned (all liquid fuels)**	
4. Maximum Hourly Rate: **3.551**	5. Maximum Annual Rate: **10,639**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138**
10. Segment Comment (limit to 200 characters): **Maximum annual rate represents 24.9% oil firing on a heat input basis. Total No. 2 fuel all three boilers = 19,533,086 gal/yr.**		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Electric Utility Boiler – Natural Gas**		
2. Source Classification Code (SCC): **10100601**	3. SCC Units: **MMscf Burned**	
4. Maximum Hourly Rate: **0.605**	5. Maximum Annual Rate: **1,468**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment (limit to 200 characters): **Maximum annual rate represents 24.9% gas firing on a heat input basis. Total natural gas all three boilers = 2,696 MMscf/yr.**		

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:

3. Potential Emissions: **214.5** lb/hour **313.2** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.30 lb/MMBtu** Reference: **CEM Data**	7. Emissions Method Code: **0**

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

0.30 lb/MMBtu x 715 MMBtu/hr = 214.5 lb/hr

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

575 TPY total for all three boilers. Based on biomass firing.

Allowable Emissions Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.20 lb/MMBtu**	4. Equivalent Allowable Emissions: **143.0** lb/hour **313.2** tons/year

5. Method of Compliance (limit to 60 characters):

Continuous SO_2 monitor

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

Requested Allowable Emissions: 0.2 lb/MMBtu 24-hr avg; Annual-0.10 lb/MMBtu. Based on biomass firing.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** 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. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on No. 2 fuel oil firing and BACT.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4,648** lb/hour **1,096.3** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **6.5 lb/MMBtu** Reference: **Boiler design**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **6.5 lb/MMBtu x 715 MMBtu/hr = 4,647.5 lb/hr** **0.35 lb/MMBtu x 715 MMBtu/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 1,096.3 TPY**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **6.5 lb/MMBtu as a 1-hr average; 0.35 lb/MMBtu as an annual average. Total for all three boilers = 2,012.5 TPY.**	

Allowable Emissions Allowable Emissions 1 of 1

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: lb/hour **1,096.3** tons/year
5. Method of Compliance (limit to 60 characters): **Continuous CO monitor.**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **lb/MMBtu limit based on 12-month rolling average. All three boilers limited to 2,012.5 TPY.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **13.2** lb/hour **57.62** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0184 lb/MMBtu** Reference: **Permit**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **0.0184 lb/MMBtu x 715 MMBtu/hr = 13.16 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Based on biomass firing, 105.8 TPY total for all boilers.**	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.0184 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.2** lb/hour **57.62** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on biomass firing.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **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. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on No. 2 fuel oil firing.**	

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Cogen Boiler B fired by Biomass/No. 2 oil/natural gas

4. Emissions Unit Identification Number:
[ ] No ID
ID: ~~031~~ [ ] ID

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

74.9 MW gross generating capacity for entire facility.

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

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**715** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr
3. Maximum Process or Throughput Rate:	tons/day
4. Maximum Production Rate:	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
Maximum heat input rates: Biomass - 715 MMBtu/hr; No. 2 Fuel Oil - 490 MMBtu/hr; Natural Gas – 605 MMBtu/hr	

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

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Electric Utility Boiler - Distillate Oil - Grades 1 and 2 Oil**		
2. Source Classification Code (SCC): **10100501**	3. SCC Units: **Thousand Gallons Burned (all liquid fuels)**	
4. Maximum Hourly Rate: **3.551**	5. Maximum Annual Rate: **10,639**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138**
10. Segment Comment (limit to 200 characters): **Maximum annual rate represents 24.9% oil firing on a heat input basis. Total No. 2 fuel all three boilers = 19,533,086 gal/yr.**		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Electric Utility Boiler – Natural Gas**		
2. Source Classification Code (SCC): **10100601**	3. SCC Units: **MMscf Burned**	
4. Maximum Hourly Rate: **0.605**	5. Maximum Annual Rate: **1,468**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment (limit to 200 characters): **Maximum annual rate represents 24.9% gas firing on a heat input basis. Total natural gas all three boilers = 2,696 MMscf/yr.**		

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **214.5** lb/hour **313.2** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.30 lb/MMBtu** Reference: **CEM Data**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.30 lb/MMBtu x 715 MMBtu/hr = 214.5 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **575 TPY total for all three boilers. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.20 lb/MMBtu**	4. Equivalent Allowable Emissions: **143.0** lb/hour **313.2** tons/year
5. Method of Compliance (limit to 60 characters): **Continuous SO_2 monitor**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested Allowable Emissions: 0.2 lb/MMBtu 24-hr avg; Annual-0.10 lb/MMBtu. Based on biomass firing.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** 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. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on No. 2 fuel oil firing and BACT.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4,648** lb/hour **1,096.3** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **6.5 lb/MMBtu** Reference: **Boiler design**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **6.5 lb/MMBtu x 715 MMBtu/hr = 4,647.5 lb/hr** **0.35 lb/MMBtu x 715 MMBtu/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 1,096.3 TPY**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **6.5 lb/MMBtu as a 1-hr average; 0.35 lb/MMBtu as an annual average. Based on biomass firing. Total for all three boilers = 2,012.5 TPY.**	

Allowable Emissions Allowable Emissions 1 of 1

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: lb/hour **1,096.3** tons/year
5. Method of Compliance (limit to 60 characters): **Continuous CO monitor.**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **lb/MMBtu limit based on 12-month rolling average. All three boilers limited to 2,012.5 TPY.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **13.2** lb/hour **57.62** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0184 lb/MMBtu** Reference: **Permit**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **0.0184 lb/MMBtu x 715 MMBtu/hr = 13.16 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Based on biomass firing, 105.8 TPY total for all boilers.**	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.0184 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.2** lb/hour **57.62** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years.**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on biomass firing.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **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. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on No. 2 fuel oil firing.**	

III. EMISSIONS UNIT INFORMATION

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

A. GENERAL EMISSIONS UNIT INFORMATION
(All Emissions Units)

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[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.

2. 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.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Cogen Boiler C fired by Biomass/No. 2 oil/natural gas

4. Emissions Unit Identification Number:
[ ] No ID
ID: **033** [ ] ID

5. Emissions Unit Status Code:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code:	8. Acid Rain Unit?
A		**49**	[ ]

9. Emissions Unit Comment: (Limit to 500 Characters)

74.9 MW gross generating capacity for entire facility.

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

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	**715** mmBtu/hr
2. Maximum Incineration Rate:	lb/hr
3. Maximum Process or Throughput Rate:	tons/day
4. Maximum Production Rate:	
5. Requested Maximum Operating Schedule:	
24 hours/day	**7** days/week
52 weeks/year	**8,760** hours/year
6. Operating Capacity/Schedule Comment (limit to 200 characters):	
Maximum heat input rates: Biomass - 715 MMBtu/hr; No. 2 Fuel Oil - 490 MMBtu/hr; Natural Gas – 605 MMBtu/hr	

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

Segment Description and Rate: Segment 3 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Electric Utility Boiler - Distillate Oil - Grades 1 and 2 Oil**		
2. Source Classification Code (SCC): **10100501**	3. SCC Units: **Thousand Gallons Burned (all liquid fuels)**	
4. Maximum Hourly Rate: **3.551**	5. Maximum Annual Rate: **10,639**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur: **0.05**	8. Maximum % Ash:	9. Million Btu per SCC Unit: **138**
10. Segment Comment (limit to 200 characters): **Maximum annual rate represents 24.9% oil firing on a heat input basis. Total No. 2 fuel all three boilers = 19,533,086 gal/yr.**		

Segment Description and Rate: Segment 4 of 4

1. Segment Description (Process/Fuel Type) (limit to 500 characters): **Electric Utility Boiler – Natural Gas**		
2. Source Classification Code (SCC): **10100601**	3. SCC Units: **MMscf Burned**	
4. Maximum Hourly Rate: **0.605**	5. Maximum Annual Rate: **1,468**	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit: **1,000**
10. Segment Comment (limit to 200 characters): **Maximum annual rate represents 24.9% gas firing on a heat input basis. Total natural gas all three boilers = 2,696 MMscf/yr.**		

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **214.5** lb/hour **313.2** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.30 lb/MMBtu** Reference: **CEM Data**	7. Emissions Method Code: **0**
8. Calculation of Emissions (limit to 600 characters): **0.30 lb/MMBtu x 715 MMBtu/hr = 214.5 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **575 TPY total for all three boilers. Based on biomass firing.**	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.20 lb/MMBtu**	4. Equivalent Allowable Emissions: **143.0** lb/hour **313.2** tons/year
5. Method of Compliance (limit to 60 characters): **Continuous SO_2 monitor**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Requested Allowable Emissions: 0.2 lb/MMBtu 24-hr avg; Annual-0.10 lb/MMBtu. Based on biomass firing.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SO_2**	2. Total Percent Efficiency of Control:
3. Potential Emissions: lb/hour tons/year	4. Synthetically Limited? [ ]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: Reference:	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters):	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters):	

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **RULE**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.05 lb/MMBtu**	4. Equivalent Allowable Emissions: **24.5** 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. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on No. 2 fuel oil firing and BACT.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **CO**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **4,648** lb/hour **1096.3** tons/year	4. Synthetically Limited? [**X**]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **6.5 lb/MMBtu** Reference: **Boiler design**	7. Emissions Method Code:

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

6.5 lb/MMBtu x 715 MMBtu/hr = 4,647.5 lb/hr
0.35 lb/MMBtu x 715 MMBtu/hr x 8,760 hr/yr ÷ 2,000 lb/ton = 1,096.3 TPY

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

6.5 lb/MMBtu as a 1-hr average; 0.35 lb/MMBtu as an annual average. Based on biomass firing. Total for all three boilers = 2,012.5 TPY.

Allowable Emissions Allowable Emissions 1 of 1

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: lb/hour **1,096.3** tons/year

5. Method of Compliance (limit to 60 characters):

Continuous CO monitor.

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

lb/MMBtu limit based on 12-month rolling average. All three boilers limited to 2,012.5 TPY.

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units - Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

1. Pollutant Emitted: **SAM**	2. Total Percent Efficiency of Control:
3. Potential Emissions: **13.2** lb/hour **57.62** tons/year	4. Synthetically Limited? [X]
5. Range of Estimated Fugitive Emissions: [ ] 1 [ ] 2 [ ] 3 _____ to _____ tons/year	
6. Emission Factor: **0.0184 lb/MMBtu** Reference: **Permit**	7. Emissions Method Code:
8. Calculation of Emissions (limit to 600 characters): **0.0184 lb/MMBtu x 715 MMBtu/hr = 13.16 lb/hr**	
9. Pollutant Potential/Fugitive Emissions Comment (limit to 200 characters): **Based on biomass firing, 105.8 TPY total for all boilers.**	

Allowable Emissions Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: **OTHER**	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: **0.0184 lb/MMBtu**	4. Equivalent Allowable Emissions: **13.2** lb/hour **57.62** tons/year
5. Method of Compliance (limit to 60 characters): **EPA Method 8 once every 5 years**	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on biomass firing.**	

G. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

(Regulated Emissions Units -
Emissions-Limited and Preconstruction Review Pollutants Only)

Potential/Fugitive Emissions

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

Allowable Emissions Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: **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. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): **Based on No. 2 fuel oil firing.**	

APPENDIX A

DAILY AVERAGE CO, NO_x, AND SO_2 CEM DATA

Okeelanta Cogeneration Facility - Boiler A — **Table 1 - Page 1 of 3**

Carbon Monoxide (CO) excess emissions 11/10/99 to 11/30/99

Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod	MW Prod.	O2	F-factor
9/8/1999	0.621	0.155	0.030	1096	573	0	66/34	7830	1430	7.8	1850
9/9/1999	0.324	0.147	0.026	1156	259	0	82/18	7730	1323	7.3	1850
9/10/1999	0.248	0.142	0.019	1168	296	0	80/20	8633	1482	6.5	1850
9/11/1999	0.413	0.156	0.021	1178	102	0	92/8	6807	1150	8.7	1850
9/12/1999	0.188	0.142	0.019	1373	0	0	100/0	6865	1204	8.1	1850
9/13/1999	0.577	0.167	0.024	1075	0	0	100/0	5121	284	9.7	1850
9/16/1999	0.269	0.148	0.035	1017	157	4183	87/13	6801	1414	9.3	1850
9/17/1999	0.215	0.136	0.043	1018	65	0	94/6	6806	1459	7.3	1850
9/18/1999	0.243	0.151	0.027	937	73	2139	93/7	4472	1191	9.6	1850
9/19/1999	0.344	0.155	0.025	1138	0	1185	100/0	5362	1167	9.2	1850
9/20/1999	0.319	0.150	0.027	875	0	2628	100/0	5621	1316	8.8	1850
9/22/1999	0.282	0.147	0.021	966	155	0	86/14	5749	1279	7.5	1850
10/8/1999	0.303	0.141	0.030	1117	619	0	64/36	8013	1462	8	1850
10/9/1999	0.326	0.143	0.032	1221	613	0	66/34	8325	1516	6.7	1850
10/10/1999	0.433	0.151	0.034	785	812	0	49/51	7063	1207	7.7	1850
10/11/1999	0.286	0.145	0.025	831	816	0	50/50	7397	1329	7.4	1850
10/12/1999	0.224	0.145	0.017	780	605	0	56/44	7396	1644	7	1850
10/13/1999	0.216	0.145	0.019	715	1011	0	41/59	8912	1627	5.9	1850
10/14/1999	0.230	0.143	0.015	571	1188	0	32/68	9107	1618	5.6	1850
10/15/1999	0.381	0.151	0.022	769	899	6943	46/54	7690	1216	8.4	1850
10/16/1999	0.733	0.170	0.022	1248	155	6591	89/11	5064	1147	10.7	1850
10/23/1999	0.286	0.142	0.024	1225	0	0	100/0	5839	770	8.9	1850
10/24/2000	0.261	0.142	0.015	1253	0	0	100/0	5900	805	9.4	1850
10/25/1999	0.311	0.145	0.027	1236	348	0	78/22	7317	1147	7.9	1850
10/26/1999	0.266	0.140	0.034	1053	331	736	76/24	6358	1197	8.3	1850
10/27/1999	0.473	0.143	0.032	873	743	0	54/46	7929	1425	6.9	1850
10/28/1999	0.552	0.142	0.020	670	1281	0	34/66	9537	1454	5.6	1850
10/29/1999	0.535	0.141	0.023	544	1464	0	27/73	9378	1473	5.5	1850
10/30/1999	0.399	0.141	0.012	519	1439	0	26/74	9315	1443	6	1850
10/31/1999	0.336	0.142	0.011	503	1406	0	26/74	9613	1389	3.9	1850
11/1/1999	0.316	0.142	0.018	618	1246	1351	33/67	9401	1475	5.4	1850
11/2/1999	0.256	0.144	0.025	768	1075	322	42/58	9086	1576	6	1850
11/3/1999	0.324	0.143	0.014	624	1334	272	32/68	9479	1529	5.6	1850
11/4/1999	0.347	0.143	0.011	428	1550	1358	22/78	na	na	5.5	1850

Okeelanta Cogeneration Facility - Boiler A											Table 1 - Page 2 of 3	
Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor	
11/5/1999	0.261	0.146	0.016	538	1365	0	28/72	na	na	4.9	1850	
11/6/1999	0.238	0.142	0.019	647	1180	119	35/65	na	na	5.1	1850	
11/7/1999	0.638	0.142	0.027	1083	1032	0	51/49	10505	578	3.9	1850	
11/8/1999	0.422	0.145	0.009	419	1551	0	21/79	9282	1470	5.4	1850	
11/9/1999	0.386	0.142	0.011	284	1702	1282	14/86	9220	1414	5.2	1850	
11/10/1999	0.559	0.140	0.017	240	1596	1416	13/87	8650	1419	5.3	1850	
11/11/1999	0.564	0.131	0.018	241	1701	535	12/88	9067	1416	4.6	1850	
11/12/1999	0.402	0.142	0.011	204	1695	577	11/89	8499	1395	5.3	1850	
11/14/1999	0.544	0.142	0.020	284	1442	2069	16/84	8324	1342	6.7	1850	
11/15/1999	0.275	0.142	0.014	184	1787	424	9/91	9591	1437	5.3	1850	
11/16/1999	0.223	0.151	0.018	352	1546	0	18/82	9637	1470	5.5	1850	
11/17/1999	0.387	0.141	0.011	285	1676	0	14/86	9706	1589	4.6	1850	
11/18/1999	0.273	0.143	0.013	274	1621	0	14/86	9724	1505	5.2	1850	
11/19/1999	0.464	0.141	0.008	0	1889	978	0/100	9733	1502	4.9	1850	
11/20/1999	0.362	0.141	0.009	165	1812	0	8/92	9734	1444	4.9	1850	
11/21/1999	0.406	0.146	0.012	312	1659	0	16/84	9870	1549	4.8	1850	
11/22/1999	0.337	0.141	0.012	342	1628	0	17/83	9808	1610	4.8	1850	
11/23/1999	0.332	0.142	0.015	418	1533	0	21/79	9949	1574	4.7	1850	
11/24/1999	0.421	0.143	0.015	262	1545	0	14/86	8611	1469	6	1850	
11/25/1999	0.281	0.143	0.018	181	1807	0	9/91	9309	1353	5.5	1850	
11/26/1999	0.382	0.148	0.026	300	1455	4001	17/83	8595	1126	6.4	1850	
11/27/1999	0.393	0.140	0.023	230	1830	525	11/89	9096	1307	5.3	1850	
11/29/1999	0.145	0.145	0.018	356	1418	0	20/80	9588	1403	5.8	1850	
11/30/1999	0.205	0.142	0.020	315	1606	0	16/84	9739	846	5	1850	
12/1/1999	0.190	0.142	0.019	274	1795	436	13/87	9673	1449	5.5	1850	
12/2/1999	0.262	0.141	0.020	309	1755	0	15/85	9503	1542	5 5	1850	
12/3/1999	0.215	0.141	0.021	326	1748	0	16/84	9490	1648	5.6	1850	
12/4/1999	0.172	0.142	0.019	164	1856	0	8/92	9443	1552	5.6	1850	
12/6/1999	0.276	0.142	0.018	270	1741	348	13/87	9239	1592	6	1850	
12/7/1999	0.191	0.141	0.021	252	1825	0	12/88	9448	1525	5.5	1850	
12/8/1999	0.191	0.141	0.019	103	1954	0	5/95	9388	1543	5.6	1850	
12/9/1999	0.195	0.141	0.025	0	2030	0	0/100	9434	1571	5.5	1850	
12/10/1999	0.341	0.156	0.030	213	1641	211	11/89	8436	1342	7	1850	
12/14/1999	0.352	0.156	0.016	73	2016	0	3/97	9409	1500	5.4	1850	
12/15/1999	0.302	0.135	0.017	320	1793	0	15/85	9369	1521	5.6	1850	

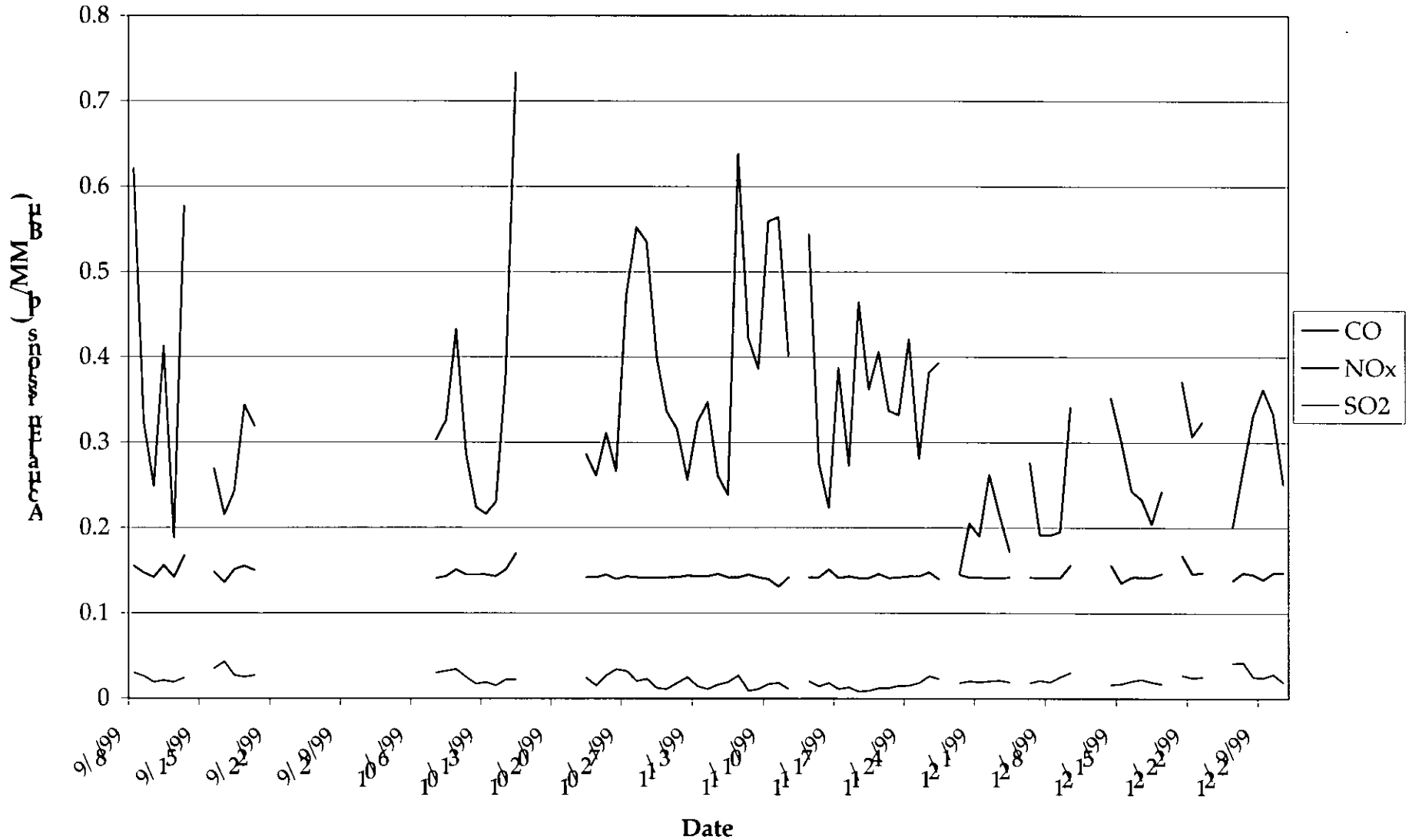
Okeelanta Cogeneration Facility - Boiler A Table 1 - Page 3 of 3

Date:	CO-24 hr.	NOx-24Hr	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor
12/16/1999	0.243	0.142	0.020	0	2072	0	0/100	9387	1540	5.8	1850
12/17/1999	0.233	0.142	0.022	0	2093	0	0/100	9481	1528	5.7	1850
12/18/1999	0.204	0.142	0.019	0	2038	0	0/100	9345	1558	5.9	1850
12/19/1999	0.242	0.146	0.017	0	2095	0	0/100	9493	1519	5.8	1850
12/21/1999	0.371	0.167	0.027	480	1114	3443	30/70	7837	504	7.7	1850
12/22/1999	0.307	0.146	0.024	0	2040	0	0/100	9368	1401	5.5	1850
12/23/1999	0.324	0.147	0.025	0	2053	0	0/100	9426	1303	5.5	1850
12/26/1999	0.200	0.138	0.041	354	1654	0	18/82	8299	789	7.2	1850
12/27/1999	0.267	0.147	0.042	513	1315	1040	28/72	8879	867	7.2	1850
12/28/1999	0.331	0.145	0.025	0	2022	0	0/100	9287	1422	5.9	1850
12/29/1999	0.362	0.139	0.024	0	2106	383	0/100	9167	1460	6.3	1850
12/30/1999	0.334	0.147	0.028	0	1991	2476	0/100	9569	1168	5.9	1850
12/31/1999	0.251	0.147	0.019	75	1943	0	4/96	9277	1582	6.2	1850

Note:

1. CO, NOx and SO2 are expressed in lbs/MMBtu
2. Wood/tons = Total tons of wood fuel fired in 24-hour period
3. Bag/tons = Total tons of bagasse fuel fired in 24-hour period
4. Fuel Oil/gal = Total gallons of fuel oil fired in 24-hour period
5. Wood/Bag% = Percentage of wood versus bagasse fired in 24-hour period
6. Steam Prod = total steam production expressed in k/lbs in 24-hour period
7. MW Prod = total gross megawatts generated in 24-hour period (includes all three boilers)
8. O2 = average percent oxygen for 24-hour period
9. F-factor = scf/MMBtu for biomass fuel programmed into CEMS

Figure 1. Boiler A: Actual Daily CO, NO_x, and SO_2 Emissions
September 8, 1999 - December 31, 1999



Okeelanta Cogeneration Facility - Boiler A

Sulfur Dioxide (SO2) excess emissions 9/11/00, 10/3/00 and 10/4/00

Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod	MW Prod.	O2	F-factor
8/4/2000	0.183	0.147	0.062	1106	591	288	65/35	9334	1668	5.6	1850
8/5/2000	0.115	0.146	0.053	1133	559	1623	67/33	9188	1683	5.5	1850
8/6/2000	0.185	0.148	0.061	884	540	485	62/38	7266	1736	5.1	1850
8/8/2000	0.126	0.146	0.045	1012	569	48	64/36	7855	1685	6.7	1850
8/11/2000	0.139	0.147	0.058	1142	718	175	61/39	9281	1704	5.6	1850
8/12/2000	0.122	0.147	0.039	1091	784	0	58/42	9213	1713	5.4	1850
8/13/2000	0.188	0.147	0.055	1142	712	0	62/38	9371	1740	5.4	1850
8/14/2000	0.185	0.147	0.059	1109	699	0	61/39	9406	1740	5.7	1850
8/15/2000	0.187	0.147	0.065	1101	766	0	59/41	9456	1764	6	1850
8/16/2000	0.145	0.147	0.066	1095	806	0	58/42	9536	1762	5.8	1850
8/17/2000	0.225	0.147	0.092	1137	704	430	62/38	9509	1701	6.2	1850
8/18/2000	0.159	0.148	0.038	769	588	548	57/43	6961	1401	7	1850
8/21/2000	0.146	na	0.077	1036	708	4032	59/41	9165	1694	5.5	1850
8/22/2000	0.159	0.147	0.059	1137	681	0	63/37	9430	1745	5.6	1850
8/23/2000	0.152	0.147	0.063	1137	704	0	62/38	9424	1773	5.3	1850
8/24/2000	0.136	0.147	0.061	1192	744	0	62/38	9580	1786	5.7	1850
8/25/2000	0.140	0.147	0.064	1125	823	0	58/42	9601	1793	5.4	1850
8/26/2000	0.152	0.146	0.054	1123	751	0	60/40	9532	1778	5.7	1850
8/27/2000	0.149	0.147	0.044	1089	738	286	60/40	9294	1748	5.7	1850
8/28/2000	0.203	0.147	0.064	907	610	613	60/40	7111	1481	6.4	1850
8/29/2000	0.164	0.147	0.066	1117	746	0	60/40	9445	1758	5.5	1850
8/30/2000	0.215	0.147	0.052	1022	855	167	54/46	9598	1784	5.5	1850
8/31/2000	0.160	0.146	0.060	1158	647	1151	64/36	9476	1769	6	1850
9/1/2000	0.195	0.146	0.070	1069	812	0	57/43	9397	1794	5.4	1850
9/2/2000	0.154	0.147	0.047	944	919	363	51/49	8657	1780	6.1	1850
9/3/2000	0.129	0.147	0.050	957	861	0	53/47	8671	1765	6.3	1850
9/4/2000	0.158	0.147	0.058	948	897	343	51/49	8629	1759	5.5	1850
9/5/2000	0.096	0.147	0.076	1004	368	2548	73/27	7510	1554	7.5	1850
9/6/2000	0.186	0.148	0.072	1151	527	1500	69/31	8144	1669	6.7	1850
9/7/2000	0.148	0.146	0.065	1274	313	0	80/20	8183	1687	6.2	1850
9/8/2000	0.186	0.147	0.056	1087	742	0	59/41	8647	1788	5.3	1850
9/9/2000	0.257	0.149	0.060	1205	585	959	67/33	8277	1739	5.8	1850
9/10/2000	0.197	0.148	0.067	1258	605	84	68/32	8467	1751	5.8	1850
9/11/2000	0.169	0.147	0.057	1122	653	0	63/37	8640	1790	5.6	1850

Okeelanta Cogeneration Facility - Boiler A											Table 3 - Page 2 of 3	
Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor	
9/12/2000	0.123	0.147	0.041	1129	569	0	66/34	8689	1790	6.3	1850	
9/13/2000	0.087	0.147	0.041	1045	707	0	60/40	8497	1782	6.2	1850	
9/14/2000	0.103	0.147	0.032	964	784	0	55/45	8691	1791	6.1	1850	
10/1/2000	0.094	0.148	0.064	1278	0	0	100/0	5678	564	7.8	1850	
10/3/2000	0.193	0.147	0.090	1519	0	0	100/0	9176	1783	5.1	1850	
10/4/2000	0.277	0.148	0.070	1549	405	0	79/21	7943	1732	5.1	1850	
10/5/2000	0.261	0.148	0.042	1369	359	1071	79/21	7524	1573	5.1	1850	
10/6/2000	0.194	0.147	0.029	1403	462	0	75/25	7513	1771	5.9	1850	
10/7/2000	0.215	0.146	0.026	1309	237	0	85/15	6804	1620	6.3	1850	
10/8/2000	0.138	0.146	0.020	1132	523	840	68/32	6828	1651	6.7	1850	
10/9/2000	0.140	0.147	0.025	1191	410	0	74/26	7178	1781	6.3	1850	
10/10/2000	0.137	0.147	0.030	1259	483	0	72/28	7286	1721	6	1850	
10/11/2000	0.157	0.148	0.039	1288	604	0	68/32	7460	1749	5.6	1850	
10/12/2000	0.100	0.147	0.036	1208	627	765	66/34	7256	1703	5.8	1850	
10/13/2000	0.061	0.128	0.028	1277	79	175	94/6	5325	1626	6.5	1850	
10/17/2000	0.151	0.146	0.026	916	680	2687	57/43	6880	1753	6	1850	
10/18/2000	0.064	0.151	0.011	814	690	804	54/46	6392	1754	6.4	1850	
10/19/2000	0.156	0.148	0.022	874	917	3435	49/51	7731	1607	5.5	1850	
10/20/2000	0.178	0.147	0.010	562	1289	0	30/70	7778	1591	5.5	1850	
10/21/2000	0.193	0.147	0.021	575	1308	0	31/69	7688	1591	5.5	1850	
10/22/2000	0.108	0.147	0.032	629	1286	0	33/67	7986	1604	4.8	1850	
10/23/2000	0.138	0.147	0.031	593	1352	76	30/70	9274	1567	4.9	1850	
10/24/2000	0.134	0.147	0.023	861	789	11080	52/48	9218	1584	6.1	1850	
10/25/2000	0.255	0.146	0.024	591	1452	304	29/71	9435	1618	5	1850	
10/26/2000	0.191	0.147	0.026	584	1412	0	29/71	9325	1616	4.8	1850	
10/27/2000	0.156	0.150	0.030	668	1352	53	33/67	9470	1596	4.9	1850	
10/28/2000	0.150	0.147	0.036	630	1335	384	32/68	9343	1584	5.3	1850	
10/29/2000	0.169	0.147	0.041	642	1150	2767	36/64	9270	1547	5.3	1850	
10/30/2000	0.145	0.148	0.031	560	1392	0	29/71	9324	1671	4.9	1850	
10/31/2000	0.119	0.147	0.028	559	1383	0	29/71	9378	1756	4.9	1850	
11/1/2000	0.106	0.149	0.023	541	1433	0	27/73	9372	1761	4.8	1850	
11/2/2000	0.132	0.148	0.021	530	1435	0	27/73	9509	1762	4.4	1850	
11/3/2000	0.188	0.147	0.020	526	1390	320	27/73	9521	1743	4	1850	
11/4/2000	0.148	0.147	0.024	492	1505	0	25/75	9602	1768	4	1850	
11/5/2000	0.154	0.147	0.035	565	1416	0	29/71	9542	1757	4.2	1850	

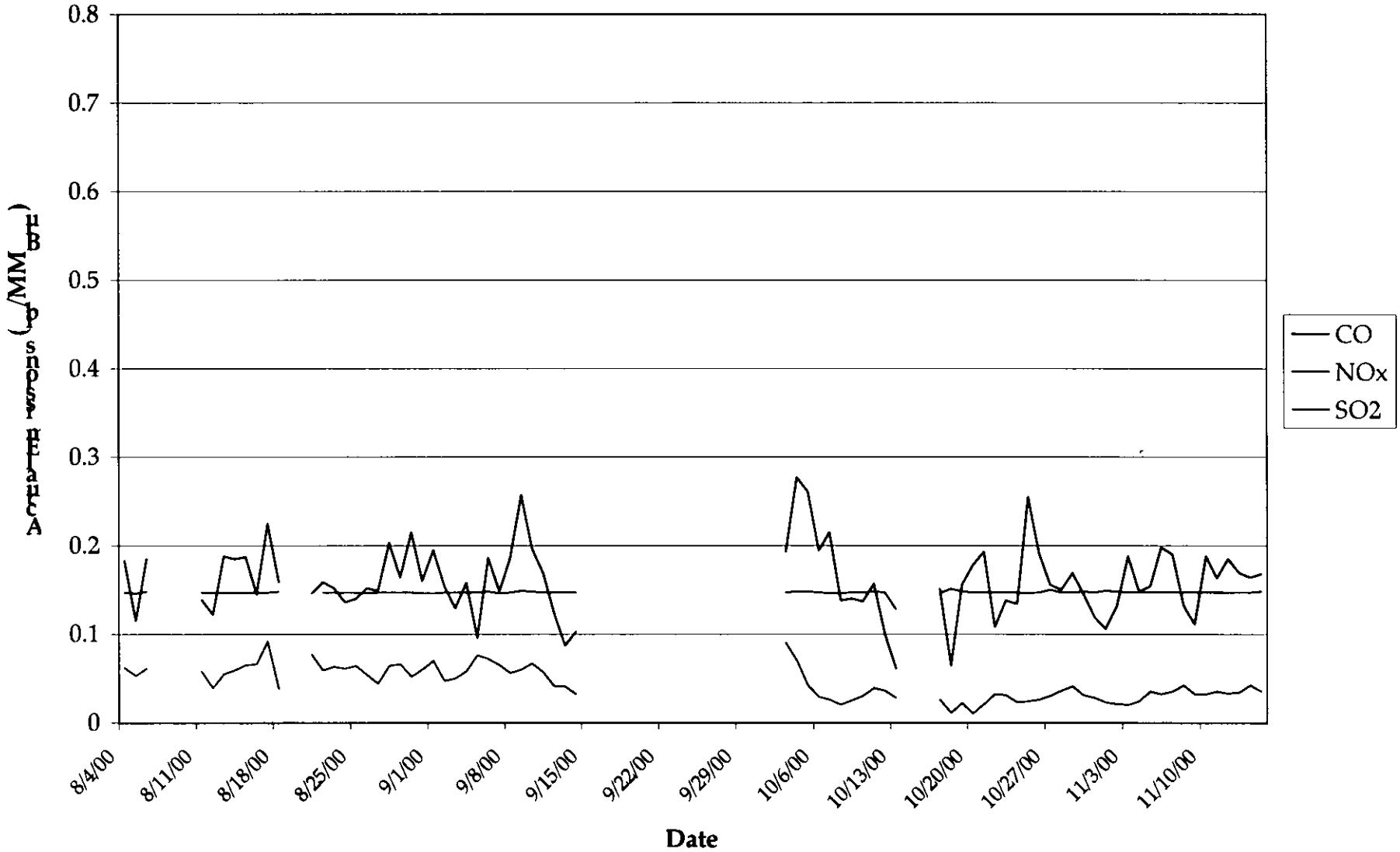
Okeelanta Cogeneration Facility - Boiler A

Date:	CO-24 hr.	NOx-24Hr	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor
11/6/2000	0.198	0.147	0.032	524	1493	178	26/74	9461	1764	4	1850
11/7/2000	0.190	0.147	0.035	545	1508	28	27/73	9500	1768	4	1850
11/8/2000	0.132	0.147	0.042	589	1452	0	29/71	9540	1761	4.3	1850
11/9/2000	0.111	0.147	0.032	521	1501	0	26/74	9570	1773	3.9	1850
11/10/2000	0.188	0.147	0.032	508	1495	0	25/75	9386	1780	4.5	1850
11/11/2000	0.163	0.147	0.035	558	1483	0	27/73	9383	1786	5.1	1850
11/12/2000	0.185	0.147	0.033	539	1549	0	26/74	9440	1782	5.1	1850
11/13/2000	0.169	0.147	0.034	505	1587	0	24/76	9357	1777	5.1	1850
11/14/2000	0.164	0.147	0.042	607	1464	0	29/71	9360	1777	5.2	1850
11/15/2000	0.168	0.148	0.035	642	1368	0	32/68	9232	1771	4.6	1850

Note:

1. CO, NOx and SO2 are expressed in lbs/MMBtu
2. Wood/tons = Total tons of wood fuel fired in 24-hour period
3. Bag/tons = Total tons of bagasse fuel fired in 24-hour period
4. Fuel Oil/gal = Total gallons of fuel oil fired in 24-hour period
5. Wood/Bag% = Percentage of wood versus bagasse fired in 24-hour period
6. Steam Prod = total steam production expressed in k/lbs in 24-hour period
7. MW Prod = total gross megawatts generated in 24-hour period (includes all three boilers)
8. O2 = average percent oxygen for 24-hour period
9. F-factor = scf/MMBtu for biomass fuel programmed into CEMS

Figure 2. Boiler A: Actual Daily CO, NO_x, and SO_2 Emissions
August 4, 2000 - November 15, 2000



Okeelanta Cogeneration Facility - Boiler B — Table 4 - Page 1 of 3

Sulfur Dioxide (SO2) excess emissions 6/23/00 through 7/17/00

Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod	MW Prod.	O2	F-factor	
5/27/2000	0.261	0.145	0.032	585	922	0	39/61	7419	1730	9.5	1850	
5/28/2000	0.212	0.147	0.050	787	697	0	53/47	8290	1743	8.8	1850	
5/29/2000	0.195	0.147	0.064	926	538	0	63/37	8470	1767	8.5	1850	
5/30/2000	0.207	0.147	0.042	1002	512	0	66/34	7668	1754	8.6	1850	
5/31/2000	0.179	0.146	0.025	874	615	0	59/41	7129	1733	9.1	1850	
6/1/2000	0.203	0.147	0.020	961	340	472	74/26	6926	1707	9.3	1850	
6/2/2000	0.262	0.146	0.032	1030	236	206	81/19	7792	1707	8.6	1850	
6/3/2000	0.209	0.147	0.055	982	426	0	70/30	8774	1717	8.5	1850	
6/4/2000	0.258	0.147	0.067	1026	334	0	75/25	8845	1730	8.5	1850	
6/5/2000	0.264	0.147	0.062	1027	434	0	70/30	8831	1718	8.5	1850	
6/6/2000	0.218	0.147	0.046	1130	192	0	85/15	9055	1693	8.2	1850	
6/7/2000	0.128	0.146	0.054	1185	36	0	97/3	8897	1752	8.2	1850	
6/8/2000	0.103	0.147	0.045	1102	281	175	80/20	8930	1724	8	1850	
6/9/2000	0.136	0.147	0.053	1411	0	65	100/0	9069	1741	8	1850	
6/10/2000	0.178	0.146	0.063	1440	0	0	100/0	8947	1722	7.9	1850	
6/11/2000	0.184	0.146	0.063	1444	0	0	100/0	8959	1687	7.6	1850	
6/12/2000	0.295	0.147	0.091	1316	0	375	100/0	9114	772	7.1	1850	
6/13/2000	0.294	0.147	0.097	1388	0	724	100/0	9011	1691	7.9	1850	
6/14/2000	0.226	0.146	0.077	1245	0	912	100/0	8091	1470	8.6	1850	
6/15/2000	0.218	0.147	0.102	1416	0	55	100/0	8916	1622	7.6	1850	
6/16/2000	0.357	0.146	0.118	1596	0	69	100/0	9725	752	6.8	1850	
6/17/2000	0.238	0.149	0.073	1249	0	84	100/0	9003	1210	8	1850	
6/18/2000	0.151	0.146	0.089	1068	0	138	100/0	8849	1631	7.9	1850	
6/19/2000	0.258	0.146	0.080	913	371	0	71/29	8596	1638	8.1	1850	
6/20/2000	0.232	0.147	0.058	1186	293	0	80/20	8499	1654	8	1850	
6/21/2000	0.272	0.154	0.063	985	809	1163	56/44	7954	1519	8.5	1850	
6/22/2000	0.201	0.146	0.067	966	603	0	62/38	8759	1701	8.1	1850	
6/23/2000	0.247	0.148	0.060	767	432	428	64/36	8757	1678	8.3	1850	
6/24/2000	0.152	0.146	0.070	1000	493	0	67/33	9204	1716	7.9	1850	
6/25/2000	0.202	0.146	0.050	1112	432	124	72/28	9023	1686	7.7	1850	
6/26/2000	0.316	0.146	0.023	968	405	538	71/29	8837	1699	8.1	1850	
6/27/2000	0.263	0.147	0.045	1042	477	0	69/31	9108	1710	7.6	1850	
6/28/2000	0.220	0.147	0.062	975	508	2449	66/34	8723	1666	8.4	1850	
6/29/2000	0.241	0.148	0.072	1109	552	913	67/33	9145	1723	8.1	1850	

Okeelanta Cogeneration Facility - Boiler B											Table 4 - Page 2 of 3	
Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor	
6/30/2000	0.190	0.147	0.057	1177	491	0	71/29	9453	1750	7.8	1850	
7/1/2000	0.344	0.146	0.058	1132	540	146	68/32	9282	1726	7.8	1850	
7/2/2000	0.237	0.147	0.048	1126	517	540	69/31	9262	1711	7.7	1850	
7/3/2000	0.303	0.146	0.045	1107	571	441	66/34	9289	1712	7.6	1850	
7/4/2000	0.261	0.147	0.032	847	823	741	51/49	9205	1721	7	1850	
7/5/2000	0.282	0.146	0.036	841	809	0	51/49	9432	1752	6.8	1850	
7/6/2000	0.216	0.146	0.036	765	889	0	46/54	9442	1772	6.8	1850	
7/7/2000	0.296	0.146	0.045	604	916	0	40/60	8058	1593	7	1850	
7/10/2000	0.247	0.147	0.060	1134	414	1061	73/27	8696	1652	8	1850	
7/11/2000	0.273	0.147	0.046	836	787	1432	52/48	8658	1571	8.1	1850	
7/12/2000	0.232	0.147	0.063	926	768	1028	55/45	8778	1621	7.9	1850	
7/13/2000	0.308	0.146	0.073	1084	783	611	58/42	9333	901	7.4	1850	
7/14/2000	0.299	0.147	0.100	1228	476	0	72/28	9409	1751	7.3	1850	
7/15/2000	0.281	0.147	0.058	942	853	0	52/48	9315	1744	7.6	1850	
7/16/2000	0.222	0.147	0.085	1065	648	0	62/38	9316	1733	8.4	1850	
7/17/2000	0.366	0.147	0.088	1103	587	0	65/35	8961	1711	8.6	1850	
7/19/2000	0.432	0.145	0.035	1369	311	1584	81/19	8978	1258	7.8	1850	
7/20/2000	0.273	0.147	0.044	1362	291	553	82/18	9128	1689	8.1	1850	
7/21/2000	0.282	0.147	0.064	1298	512	147	72/28	9124	1688	8.3	1850	
7/22/2000	0.225	0.146	0.062	1174	651	304	64/36	9416	1741	8	1850	
7/23/2000	0.323	0.146	0.081	999	981	270	50/50	9295	1720	7.1	1850	
7/24/2000	0.358	0.148	0.057	1070	824	619	56/44	9150	1702	7.4	1850	
7/25/2000	0.322	0.147	0.043	1286	639	674	67/33	9073	1709	7.4	1850	
7/26/2000	0.312	0.147	0.031	1152	719	847	62/38	9104	1710	7.6	1850	
7/27/2000	0.397	0.147	0.033	1226	703	545	64/36	9046	1682	7.3	1850	
7/28/2000	0.298	0.147	0.029	1144	698	1262	62/38	8878	1638	7.5	1850	
7/29/2000	0.318	0.147	0.038	1202	638	300	65/35	9502	1738	7.2	1850	
7/30/2000	0.325	0.146	0.035	1181	787	846	60/40	9214	1725	7.1	1850	
7/31/2000	0.305	0.147	0.037	1248	707	577	64/36	9384	1747	7.2	1850	
8/1/2000	0.296	0.146	0.032	1212	731	0	62/38	9409	1769	7.5	1850	
8/2/2000	0.302	0.147	0.035	1182	667	0	64/36	9442	1739	7.6	1850	
8/3/2000	0.299	0.147	0.025	814	481	0	63/37	6497	1652	na	1850	
8/5/2000	0.295	0.147	0.032	1133	559	0	67/33	9158	1683	na	1850	
8/6/2000	0.255	0.147	0.042	1061	648	0	62/38	9142	1736	na	1850	
8/7/2000	0.376	0.146	0.028	761	507	2545	60/40	6526	1326	na	1850	

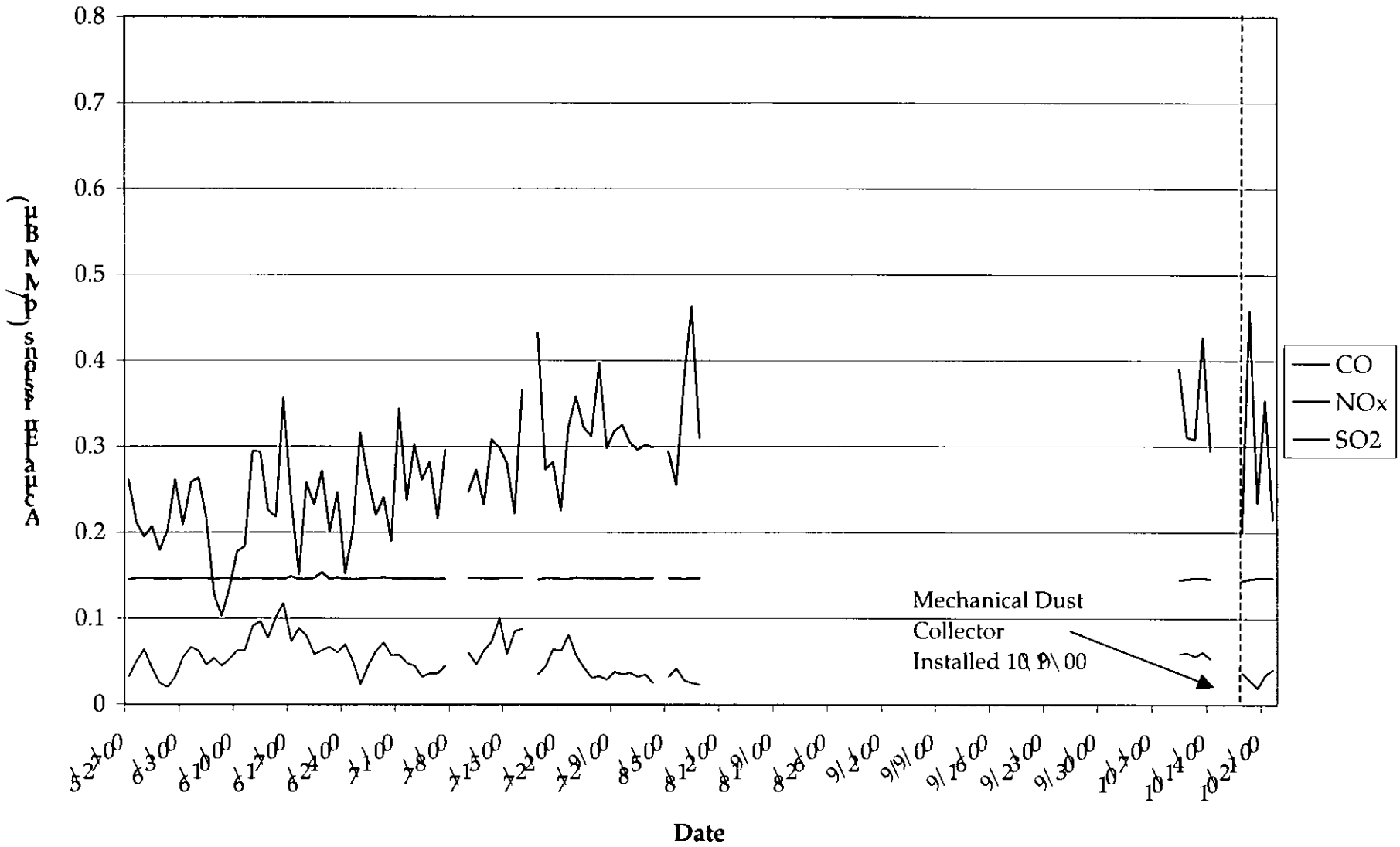
Okeelanta Cogeneration Facility - Boiler B — Table 4 - Page 3 of 3

Date:	CO-24 hr.	NOx-24Hr	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor
8/8/2000	0.463	0.147	0.025	1012	569	802	64/36	8274	1685	na	1850
8/9/2000	0.310	0.147	0.023	931	654	0	59/41	7854	1686	na	1850
10/10/2000	0.390	0.145	0.059	1259	483	1393	72/28	7316	1721	5.2	1850
10/11/2000	0.311	0.146	0.060	1288	604	192	68/32	7379	1749	5.5	1850
10/12/2000	0.308	0.147	0.056	1208	627	1608	66/34	7251	1703	5.9	1850
10/13/2000	0.427	0.147	0.061	1459	90	0	94/6	8608	1626	5	1850
10/14/2000	0.295	0.146	0.053	1720	0	0	100/0	8297	982	5.5	1850
10/18/2000	0.201	0.144	0.037	814	690	891	54/46	6220	1754	6.2	1850
10/19/2000	0.458	0.146	0.028	874	917	0	49/51	7315	1607	5.6	1850
10/20/2000	0.234	0.147	0.019	562	1289	45	30/70	7709	1591	5.2	1850
10/21/2000	0.354	0.147	0.034	575	1308	0	31/69	7803	1591	4.6	1850
10/22/2000	0.215	0.147	0.041	629	1286	0	33/67	7970	1604	5	1850

Note:

1. CO, NOx and SO2 are expressed in lbs/MMBtu
2. Wood/tons = Total tons of wood fuel fired in 24-hour period
3. Bag/tons = Total tons of bagasse fuel fired in 24-hour period
4. Fuel Oil/gal = Total gallons of fuel oil fired in 24-hour period
5. Wood/Bag% = Percentage of wood versus bagasse fired in 24-hour period
6. Steam Prod = total steam production expressed in k/lbs in 24-hour period
7. MW Prod = total gross megawatts generated in 24-hour period (includes all three boilers)
8. O2 = average percent oxygen for 24-hour period
9. F-factor = scf/MMBtu for biomass fuel programmed into CEMS

Figure 3. Boiler B: Actual Daily CO, NO_x, and SO_2 Emissions
May 27, 2000 - October 22, 2000



Okeelanta Cogeneration Facility - Boiler C — Table 2 - Page 1 of 3

Carbon Monoxide (CO) excess emissions 10/30/99 to 11/26/99

Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod	MW Prod.	O2	F-factor
10/1/1999	0.323	0.141	0.032	1315	237	0	85/15	9352	1685	6.1	1850
10/2/1999	0.300	0.141	0.020	1254	183	3105	87/13	9059	1616	6.9	1850
10/3/1999	0.373	0.141	na	1145	345	0	77/23	8995	1609	6.3	1850
10/4/1999	0.318	0.143	0.018	1196	251	0	83/17	7791	1223	7.4	1850
10/5/1999	0.264	0.141	0.037	1428	0	0	100/0	8189	1430	7.2	1850
10/6/1999	0.295	0.143	0.029	1507	77	0	95/5	7698	1351	7.6	1850
10/7/1999	0.391	0.150	0.032	1328	496	583	73/27	7059	1349	8.2	1850
10/9/1999	0.334	0.141	0.019	1221	613	0	66/34	8538	1516	7.2	1850
10/10/1999	0.379	0.144	0.016	785	812	1557	49/51	7230	1207	8.2	1850
10/11/1999	0.315	0.141	0.017	831	816	544	50/50	7821	1329	7.6	1850
10/12/1999	0.344	0.141	0.011	780	605	0	56/44	7109	1644	7.8	1850
10/13/1999	0.426	0.140	0.010	715	1011	0	41/59	8933	1627	6.1	1850
10/14/1999	0.313	0.140	0.007	571	1188	0	32/68	8705	1618	6.6	1850
10/19/1999	0.393	0.142	0.015	1068	882	0	55/45	8017	1116	7.3	1850
10/20/1999	0.402	0.141	0.014	976	1072	0	48/52	8509	1506	6.8	1850
10/21/1999	0.450	0.141	0.011	1098	810	1231	57/43	7451	1402	7.9	1850
10/22/1999	0.308	0.142	0.006	962	840	1264	53/47	6510	1284	7.9	1850
10/29/1999	0.666	0.140	0.013	544	1464	273	27/73	9468	1473	5.7	1850
10/30/1999	0.425	0.140	0.011	519	1439	700	26/74	9486	1443	5.7	1850
10/31/1999	0.262	0.140	0.010	503	1406	0	26/74	9492	1389	6.2	1850
11/1/1999	0.370	0.141	0.012	618	1246	1654	33/67	9269	1475	6.2	1850
11/2/1999	0.274	0.150	0.023	768	1075	0	42/58	9133	1576	6.2	1850
11/3/1999	0.297	0.148	0.013	624	1334	236	32/68	9543	1529	6.1	1850
11/4/1999	0.292	0.143	0.005	428	1550	928	22/78	na	na	5.8	1850
11/5/1999	0.353	0.144	0.009	538	1365	0	29/71	na	na	5.6	1850
11/6/1999	0.303	0.141	0.013	647	1180	0	35/65	na	na	5.7	1850
11/7/1999	0.594	0.156	0.033	1083	1032	0	51/49	na	na	4.5	1850
11/8/1999	0.471	0.141	0.007	419	1551	915	21/79	9138	1470	5.8	1850
11/9/1999	0.534	0.143	0.009	284	1702	3050	14/86	9150	1414	5.6	1850
11/10/1999	0.645	0.140	0.015	274	1824	1080	13/87	9670	1419	5	1850
11/11/1999	0.386	0.141	0.013	241	1701	0	12/88	9553	1416	5.7	1850
11/12/1999	0.294	0.141	0.013	213	1769	0	11/89	9587	1395	5.8	1850

Okeelanta Cogeneration Facility - Boiler C — Table 2 - Page 2 of 3

Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor	
11/13/1999	0.555	0.149	0.045	1106	997	0	53/47	10473	597	4.5	1850	
11/14/1999	0.235	0.144	0.011	324	1648	0	16/84	9623	1342	5.5	1850	
11/15/1999	0.245	0.142	0.008	184	1787	0	9/91	9648	1437	5.5	1850	
11/16/1999	0.260	0.144	0.012	352	1546	645	18/82	9516	1470	5.9	1850	
11/17/1999	0.329	0.140	0.010	285	1676	117	14/86	9795	1589	5.6	1850	
11/18/1999	0.308	0.141	0.010	274	1621	0	14/86	9580	1505	5.6	1850	
11/19/1999	0.409	0.139	0.008	0	1889	278	0/100	9865	1502	5.5	1850	
11/20/1999	0.269	0.141	0.009	165	1812	0	8/92	9722	1444	5.7	1850	
11/21/1999	0.376	0.141	0.011	312	1659	0	16/84	9850	1549	5.6	1850	
11/22/1999	0.330	0.141	0.011	342	1628	0	17/83	9794	1610	5.6	1850	
11/23/1999	0.214	0.146	0.016	418	1533	0	21/79	9835	1574	6	1850	
11/24/1999	na	na	na	286	1686	427	14/86	9430	1469	5.8	1850	
11/25/1999	0.275	0.141	0.010	181	1807	0	9/91	9323	1353	5.9	1850	
11/26/1999	0.248	0.141	0.012	274	1328	1999	17/83	7462	1126	7.2	1850	
11/27/1999	0.242	0.134	0.012	230	1830	0	11/89	9245	1307	5.9	1850	
11/28/1999	0.311	0.149	0.017	889	1075	0	45/55	9638	655	5.7	1850	
11/29/1999	0.201	0.141	0.016	356	1418	1466	20/80	9344	1403	6.3	1850	
11/30/1999	0.301	0.143	0.022	315	1606	0	16/84	9824	846	5.7	1850	
12/1/1999	0.165	0.141	0.018	274	1795	0	13/87	9703	1449	6	1850	
12/2/1999	0.240	0.141	0.020	309	1755	0	15/85	9798	1542	5.9	1850	
12/3/1999	0.218	0.140	0.019	326	1748	0	16/84	9515	1648	6	1850	
12/4/1999	0.186	0.141	0.019	164	1856	0	8/92	9380	1552	5.8	1850	
12/5/1999	0.191	0.150	0.020	190	1784	2233	10/90	9399	1256	6.2	1850	
12/6/1999	0.224	0.141	0.020	270	1741	336	13/87	9479	1592	5.6	1850	
12/7/1999	0.274	0.140	0.022	252	1825	0	12/88	9439	1525	5.6	1850	
12/8/1999	0.221	0.141	0.019	103	1954	0	5/95	9412	1543	5.8	1850	
12/9/1999	0.252	0.141	0.024	0	2030	0	0/100	9420	1571	5.9	1850	
12/10/1999	0.495	0.141	0.023	222	1712	959	11/89	8972	1342	6.2	1850	
12/11/1999	0.559	0.140	0.028	477	1456	1440	25/75	8578	605	6.3	1850	
12/12/1999	0.522	0.143	0.031	981	1088	1911	47/53	9633	341	5.5	1850	
12/13/1999	0.455	0.141	0.022	450	1542	706	23/77	9304	868	5.9	1850	
12/14/1999	0.592	0.143	0.014	73	2016	226	3/97	9217	1500	5.7	1850	
12/15/1999	0.241	0.146	0.021	320	1793	0	15/85	9405	1521	6	1850	
12/16/1999	0.257	0.146	0.018	0	2072	313	0/100	9367	1540	6	1850	
12/17/1999	0.324	0.146	0.020	0	2093	338	0/100	9457	1528	5.9	1850	

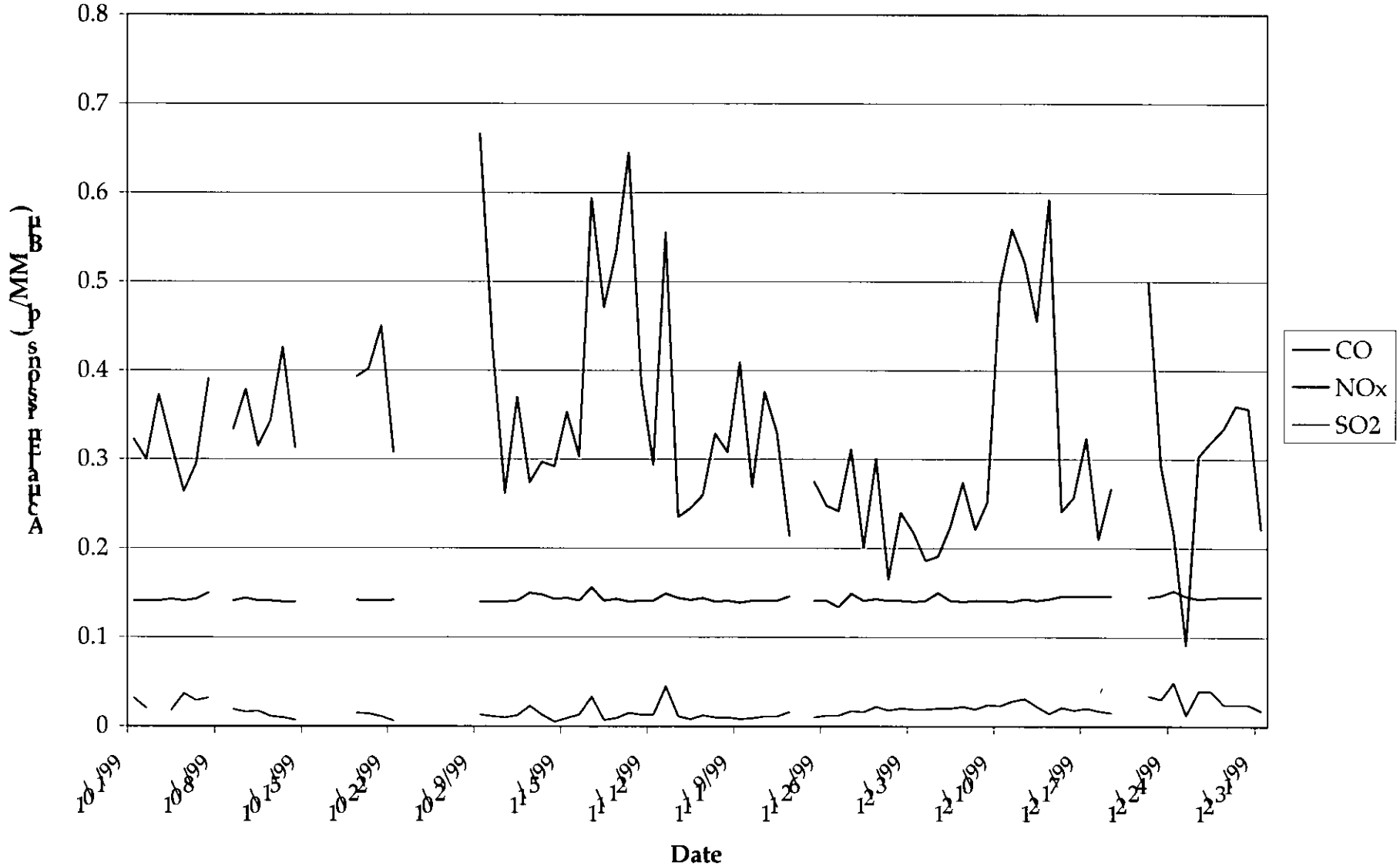
Okeelanta Cogeneration Facility - Boiler C Table 2 - Page 3 of 3

Date:	CO-24 hr.	NOx-24Hr	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor
12/18/1999	0.210	0.146	0.017	0	2038	0	0/100	9341	1558	6.2	1850
12/19/1999	0.267	0.146	0.015	0	2095	0	0/100	9470	1519	6.1	1850
12/22/1999	0.499	0.145	0.034	0	2040	249	0/100	9337	1401	6	1850
12/23/1999	0.293	0.147	0.030	0	2053	0	0/100	9053	1303	7.5	1850
12/24/1999	0.217	0.152	0.049	957	1046	200	48/52	8814	1123	9.3	1850
12/25/1999	0.091	0.146	0.012	0	1919	0	0/100	7581	1539	9.9	1850
12/26/1999	0.303	0.143	0.039	369	1726	0	18/82	7769	789	6.6	1850
12/27/1999	0.319	0.144	0.039	513	1315	0	28/72	8774	867	6.6	1850
12/28/1999	0.334	0.145	0.024	95	2022	0	4/96	9174	1422	6.2	1850
12/29/1999	0.360	0.145	0.024	596	1229	589	50/50	9102	1460	6.8	1850
12/30/1999	0.357	0.145	0.024	951	1161	582	62/38	9220	1168	6.6	1850
12/31/1999	0.221	0.145	0.017	75	1943	0	4/96	9305	1582	6.3	1850

Note:

1. CO, NOx and SO2 are expressed in lbs/MMBtu
2. Wood/tons = Total tons of wood fuel fired in 24-hour period
3. Bag/tons = Total tons of bagasse fuel fired in 24-hour period
4. Fuel Oil/gal = Total gallons of fuel oil fired in 24-hour period
5. Wood/Bag% = Percentage of wood versus bagasse fired in 24-hour period
6. Steam Prod = total steam production expressed in k/lbs in 24-hour period
7. MW Prod = total gross megawatts generated in 24-hour period (includes all three boilers)
8. O2 = average percent oxygen for 24-hour period
9. F-factor = scf/MMBtu for biomass fuel programmed into CEMS

Figure 4. Boiler C: Actual Daily CO, NO_x, and SO_2 Emissions
October 1, 1999 - December 31, 1999



Okeelanta Cogeneration Facility - Boiler C — Table 5 - Page 1 of 3

Sulfur Dioxide (SO2) excess emissions 6/14/00 through 7/12/00

Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod	MW Prod.	O2	F-factor
3/22/2000	0.232	0.146	0.015	97	1175	122	8/92	8128	1499	8.4	1850
3/23/2000	0.171	0.146	0.019	0	1329	0	0/100	8370	1536	7.8	1850
3/24/2000	0.252	0.146	0.018	0	1337	0	0/100	8655	1570	7.9	1850
3/25/2000	0.265	0.146	0.024	0	1413	402	0/100	8629	1565	7.9	1850
3/26/2000	0.238	0.146	0.047	603	700	48	46/54	8813	1593	8.3	1850
3/27/2000	0.222	0.147	0.059	876	231	219	79/21	8803	1603	8.8	1850
3/28/2000	0.182	0.145	0.047	613	630	212	49/51	8646	1596	8.6	1850
3/29/2000	0.197	0.146	0.044	728	504	170	59/41	8577	1579	8.8	1850
3/30/2000	0.236	0.146	0.049	747	431	0	63/37	8661	1603	8.7	1850
3/31/2000	0.194	0.146	0.043	665	531	0	56/44	9023	1691	8.6	1850
4/1/2000	0.159	0.146	0.048	809	316	0	72/28	9151	1707	8.8	1850
4/2/2000	0.209	0.146	0.053	866	334	0	72/28	9033	1702	8.8	1850
4/3/2000	0.322	0.148	0.056	722	436	0	62/38	9067	1710	8.5	1850
5/27/2000	0.140	0.145	0.052	585	922	0	39/61	7510	1730	6.7	1850
5/28/2000	0.110	0.144	0.076	787	697	0	53/47	8247	1743	6.7	1850
5/29/2000	0.127	0.144	0.087	926	538	0	63/37	8277	1767	6.8	1850
5/30/2000	0.145	0.145	0.057	1002	512	0	66/34	8848	1754	6.5	1850
5/31/2000	0.200	0.146	0.048	874	615	0	59/41	9228	1733	6	1850
6/1/2000	0.165	0.146	0.051	961	340	371	74/26	9286	1707	6.1	1850
6/2/2000	0.143	0.156	0.046	1030	236	0	81/19	9731	1707	5.9	1850
6/3/2000	0.150	0.146	0.060	982	426	0	70/30	9942	1717	5.5	1850
6/4/2000	0.139	0.146	0.067	1026	334	0	75/25	10172	1730	5.3	1850
6/5/2000	0.185	0.147	0.067	1027	434	0	70/30	10017	1718	5.2	1850
6/6/2000	0.150	0.146	0.061	1130	192	464	85/15	9586	1693	5.2	1850
6/7/2000	0.143	0.146	0.066	1185	36	0	97/3	10195	1752	5.8	1850
6/8/2000	0.167	0.146	0.064	1102	281	0	80/20	9877	1724	5.4	1850
6/9/2000	0.151	0.146	0.082	1411	0	0	100/0	9917	1741	5.1	1850
6/10/2000	0.209	0.146	0.106	1440	0	0	100/0	9767	1722	5.4	1850
6/11/2000	0.165	0.146	0.098	1444	0	1110	100/0	9390	1687	5.3	1850
6/13/2000	0.341	0.148	0.111	1388	0	290	100/0	9466	1691	6.1	1850
6/14/2000	0.124	0.146	0.093	1302	0	1753	100/0	8336	1470	6.1	1850
6/15/2000	0.101	0.146	0.123	1416	0	59	100/0	8877	1622	6.8	1850
6/18/2000	0.080	0.147	0.074	1068	0	0	100/0	8850	1631	6.2	1850

Okeelanta Cogeneration Facility - Boiler C											Table 5 - Page 2 of 3
Date:	CO-24 hr.	NOx-24 hr.	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor
6/19/2000	0.121	0.146	0.048	913	371	0	71/29	9271	1638	6.2	1850
6/20/2000	0.130	0.144	0.061	1186	293	0	80/20	9346	1654	5.7	1850
6/21/2000	0.205	0.152	0.048	985	809	1641	55/45	8967	1519	6	1850
6/22/2000	0.144	0.146	0.059	966	603	0	62/38	9467	1701	5.8	1850
6/23/2000	0.088	0.146	0.059	767	432	0	64/36	9276	1678	5	1850
6/24/2000	0.069	0.147	0.060	1000	493	0	67/33	9198	1716	5.1	1850
6/25/2000	0.083	0.146	0.042	1112	432	0	72/28	9092	1686	5.1	1850
6/26/2000	0.090	0.146	0.032	968	405	36	71/29	8810	1699	5.2	1850
6/27/2000	0.097	0.146	0.049	1042	477	0	69/31	9170	1710	6	1850
6/28/2000	0.124	0.146	0.052	1064	554	357	66/34	9464	1666	5.8	1850
6/29/2000	0.132	0.146	0.055	1109	552	0	67/33	9340	1723	5.7	1850
6/30/2000	0.164	0.146	0.056	1177	491	0	71/29	9448	1750	5.8	1850
7/1/2000	0.194	0.146	0.057	1132	540	0	68/32	9469	1726	4.6	1850
7/2/2000	0.167	0.146	0.045	1126	517	0	69/31	9331	1711	4.7	1850
7/3/2000	0.144	0.146	0.045	1107	571	0	66/34	9332	1712	4.8	1850
7/4/2000	0.120	0.147	0.038	847	823	0	51/49	9373	1721	5.2	1850
7/5/2000	0.113	0.146	0.036	841	809	0	51/49	9445	1752	5.1	1850
7/6/2000	0.111	0.146	0.044	765	889	0	46/54	9449	1772	4.9	1850
7/7/2000	0.157	0.146	0.057	659	999	0	40/60	9508	1593	4.5	1850
7/8/2000	0.199	0.146	0.073	840	869	579	49/51	9074	1385	4.7	1850
7/9/2000	0.307	0.146	0.050	1294	816	0	61/39	9587	683	4.6	1850
7/10/2000	0.145	0.146	0.035	1183	432	0	73/27	9327	1652	5.2	1850
7/11/2000	0.124	0.146	0.036	836	787	0	52/48	8642	1571	6	1850
7/12/2000	0.156	0.147	0.045	926	768	243	55/45	9009	1621	6.2	1850
7/14/2000	0.195	0.146	0.099	1228	476	0	72/28	9473	1751	4.8	1850
7/15/2000	0.234	0.146	0.075	942	853	0	52/48	9380	1744	4.3	1850
7/16/2000	0.247	0.146	0.069	1065	648	0	62/38	9468	1733	4.3	1850
7/17/2000	0.170	0.147	0.082	1103	587	0	65/35	9659	1711	4.5	1850
7/18/2000	0.230	0.146	0.056	993	615	4973	62/38	8149	1114	6	1850
7/20/2000	0.135	0.146	0.037	1362	291	0	82/18	9305	1689	4.8	1850
7/21/2000	0.176	0.146	0.040	1298	512	0	72/28	9410	1688	4.7	1850
7/22/2000	0.133	0.146	0.053	1174	651	0	64/36	9507	1741	4.4	1850
7/23/2000	0.195	0.146	0.070	999	981	0	50/50	9383	1720	4.3	1850
7/24/2000	0.155	0.146	0.060	1070	824	0	56/44	9215	1702	4.9	1850
7/25/2000	0.154	0.146	0.054	1286	639	0	67/33	9391	1709	4.6	1850

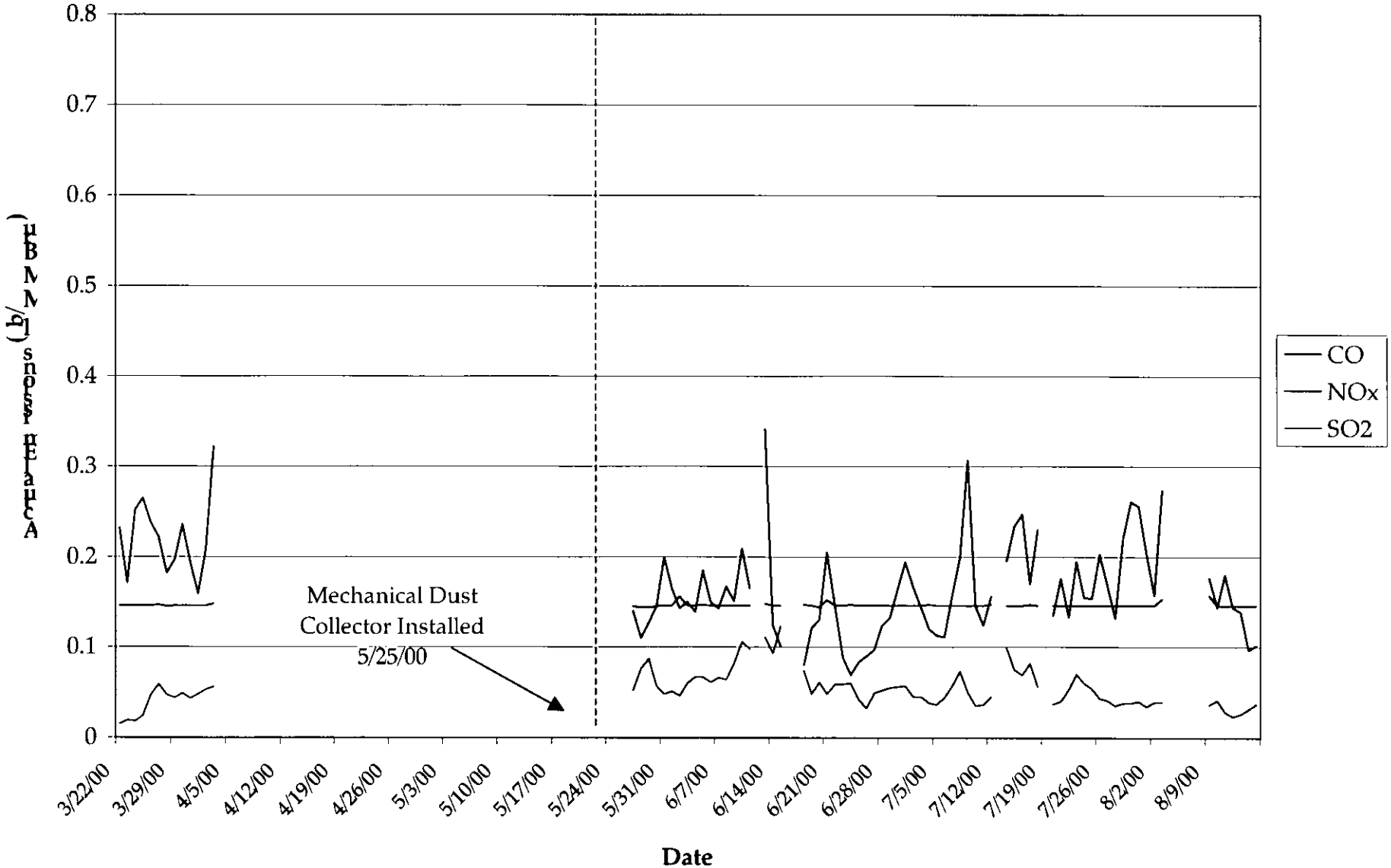
Okeelanta Cogeneration Facility - Boiler C — Table 5 - Page 3 of 3

Date:	CO-24 hr.	NOx-24Hr	SO2-24 hr.	Wood/tons	Bag/tons	Fuel Oil/gal	Wood/Bag%	Steam Prod.	MW Prod.	O2	F-factor
7/26/2000	0.203	0.146	0.043	1152	719	0	62/38	9539	1710	4.5	1850
7/27/2000	0.168	0.146	0.041	1226	703	0	64/36	9164	1682	4.6	1850
7/28/2000	0.132	0.146	0.035	1144	698	0	62/38	9072	1638	4.7	1850
7/29/2000	0.221	0.146	0.038	1202	638	0	65/35	9518	1738	4.8	1850
7/30/2000	0.261	0.146	0.038	1181	787	948	60/40	9313	1725	4.9	1850
7/31/2000	0.256	0.146	0.040	1248	707	0	64/36	9493	1747	4.7	1850
8/1/2000	0.204	0.146	0.034	1212	731	0	62/38	9453	1769	5	1850
8/2/2000	0.157	0.146	0.039	1182	667	0	64/36	9466	1739	5.2	1850
8/3/2000	0.274	0.153	0.039	1028	607	0	63/37	8373	1652	5.8	1850
8/9/2000	0.177	0.157	0.036	737	518	3533	59/41	6761	1686	7.9	1850
8/10/2000	0.144	0.146	0.041	953	763	0	56/44	8927	1756	5.6	1850
8/11/2000	0.180	0.146	0.028	1142	718	0	61/39	9187	1704	5.8	1850
8/12/2000	0.144	0.146	0.023	1091	784	0	58/42	9189	1713	5.4	1850
8/13/2000	0.139	0.146	0.026	1142	712	0	62/38	9365	1740	5.5	1850
8/14/2000	0.097	0.146	0.031	1109	699	0	61/39	9276	1740	5.5	1850
8/15/2000	0.102	0.146	0.037	1101	766	0	59/41	9210	1764	5.5	1850

Note:

1. CO, NOx and SO2 are expressed in lbs/MMBtu
2. Wood/tons = Total tons of wood fuel fired in 24-hour period
3. Bag/tons = Total tons of bagasse fuel fired in 24-hour period
4. Fuel Oil/gal = Total gallons of fuel oil fired in 24-hour period
5. Wood/Bag% = Percentage of wood versus bagasse fired in 24-hour period
6. Steam Prod = total steam production expressed in k/lbs in 24-hour period
7. MW Prod = total gross megawatts generated in 24-hour period (includes all three boilers)
8. O2 = average percent oxygen for 24-hour period
9. F-factor = scf/MMBtu for biomass fuel programmed into CEMS

Figure 5. Boiler C: Actual Daily CO, NO_x, and SO_2 Emissions
March 22, 2000 - August 15, 2000



APPENDIX B

HIGHEST CO AND SO_2 EMISSIONS FROM CEM DATA

Okeelanta Cogeneration Facility

Summary of CO Emissions - Maximum 8-hour Average (lbs/MMBtu)

Boiler B			**Boiler A**		
Date:	Time:	CO	Date:	Time:	CO
12/27/1999	04:00	4.880	10/16/1999	04:00	1.027
12/27/1999	05:00	5.800	10/16/1999	05:00	1.388
12/27/1999	06:00	5.886	10/16/1999	06:00	1.835
12/27/1999	07:00	5.934	10/16/1999	07:00	1.294
12/27/1999	08:00	6.012	10/16/1999	08:00	0.520
12/27/1999	09:00	4.090	10/16/1999	09:00	0.259
12/27/1999	10:00	1.104	10/16/1999	10:00	1.120
12/27/1999	11:00	0.538	10/16/1999	11:00	0.791
Average		4.280	Average		1.029

Boiler A			**Boiler C**		
Date:	Time:	CO	Date:	Time:	CO
8/25/1999	09:00	3.265	11/10/1999	08:00	0.734
8/25/1999	10:00	3.064	11/10/1999	09:00	0.817
8/25/1999	11:00	2.938	11/10/1999	10:00	0.698
8/25/1999	12:00	2.618	11/10/1999	11:00	0.596
8/25/1999	13:00	2.758	11/10/1999	12:00	0.814
8/25/1999	14:00	2.749	11/10/1999	13:00	0.781
8/25/1999	15:00	2.480	11/10/1999	14:00	0.798
8/25/1999	16:00	1.657	11/10/1999	15:00	0.837
Average		2.691	Average		0.759

Boiler C			**Boiler C**		
Date:	Time:	CO	Date:	Time:	CO
9/20/1999	05:00	6.497	10/29/1999	12:00	0.859
9/20/1999	06:00	6.327	10/29/1999	13:00	0.888
9/20/1999	07:00	0.865	10/29/1999	14:00	0.884
9/20/1999	08:00	0.207	10/29/1999	15:00	0.554
9/20/1999	09:00	0.154	10/29/1999	16:00	0.494
9/20/1999	10:00	0.329	10/29/1999	17:00	0.689
9/20/1999	11:00	0.385	10/29/1999	18:00	0.822
9/20/1999	12:00	0.307	10/29/1999	19:00	0.849
Average		1.883	Average		0.754

Okeelanta Cogeneration Facility

Summary of SO2 Emissions - Maximum Hourly Average (lbs/MMBtu)

Boiler B

Date:	Time:	SO2
6/13/2000	16:00	0.152
6/13/2000	17:00	0.138
6/13/2000	18:00	0.142
6/15/2000	14:00	0.135
6/15/2000	15:00	0.121
6/15/2000	16:00	0.120
6/16/2000	00:00	0.144
6/16/2000	01:00	0.141
6/16/2000	02:00	0.166
6/16/2000	14:00	0.133
6/16/2000	15:00	0.131
6/16/2000	16:00	0.129
7/14/2000	10:00	0.136
7/14/2000	11:00	0.132
7/14/2000	12:00	0.128
7/14/2000	13:00	0.129

Boiler C

Date:	Time:	SO2
6/9/2000	18:00	0.138
6/9/2000	19:00	0.122
6/9/2000	20:00	0.150
6/9/2000	21:00	0.135
6/10/2000	10:00	0.131
6/10/2000	11:00	0.129
6/10/2000	12:00	0.126
6/13/2000	13:00	0.139
6/13/2000	14:00	0.151
6/13/2000	15:00	0.143
6/13/2000	16:00	0.146
6/15/2000	13:00	0.125
6/15/2000	14:00	0.146
6/15/2000	15:00	0.128
6/15/2000	18:00	0.137
6/15/2000	19:00	0.140
6/15/2000	20:00	0.133

APPENDIX C

AIR QUALITY IMPACT ANALYSIS FOR CARBON MONOXIDE

1.0 AIR QUALITY IMPACT ANALYSIS FOR CARBON MONOXIDE

Golder Associates Inc. (Golder), on behalf of Okeelanta Power L.P. (OkPLP), has performed additional air quality impact analyses for carbon monoxide (CO) emissions to further address Comment No. 4 made in the Department of Environmental Protection's (DEP) letter dated January 25, 2001. These analyses were based on modeling OkPLP's future maximum CO emissions together with CO emissions of other sources within the modeling and screening areas. The modeling area extended out to 6 km, at which distance the increase in CO impacts are predicted to be below the 1-hour and 8-hour significant impact levels of 2,000 and 500 $\mu g/m^3$, respectively. The screening area extended out to 56 km, i.e. 50 km beyond the modeling area. As shown in these analyses, the OkPLP's CO impacts, together with those from background CO emission sources, are predicted to be well below the national and state ambient air quality standards (AAQS). The following summary provides descriptions of the methods and assumptions used to estimate total air quality CO concentrations for OkPLP and other sources.

1.1 AIR MODELING METHODS AND APPROACH

The CO concentrations were predicted with the Industrial Source Complex Short-term (ISCST3, Version 00101) dispersion model (EPA, 2001) and five years of meteorological data from the National Weather Service (NWS) office at Palm Beach International Airport. The 5-year period of meteorological data was from 1987 through 1991. Generally, when using 5-years of meteorological data for the analysis, the highest annual and highest, second-highest (HSH) short-term concentrations are to be compared to the applicable AAQS and allowable PSD increments. The HSH is calculated for a receptor field by:

1. Eliminating the highest concentration predicted at each receptor,
2. Identifying the second-highest concentration at each receptor, and
3. Selecting the highest concentration among these second-highest concentrations.

This approach is consistent with most air quality standards and all allowable PSD increments, which permit a short-term average concentration to be exceeded once per year at each receptor.

For the AAQS analysis, the future emissions of the plant site are modeled with background emission facilities. A non-modeled background concentration is added to the maximum predicted air quality to determine a total air quality concentration. The maximum annual and HSH short-term total concentrations are compared to the AAQS.

1.2 EMISSION INVENTORY

The future maximum CO emissions and operating data for OkPLP are presented in revised Tables 2-1 through 2-5. For the significant impact analysis, the CO emissions and stack parameters for the OkPLP boilers were developed and are presented in Tables C-1 and C-2. The CO emission data were based on current permit limits and Continuous Emissions Monitoring System (CEMS) data. Stack and operating data were obtained from the Title V permit application (1999).

The emission inventories for background facilities were developed from databases obtained from the DEP, previous air modeling studies performed by Golder Associates, and air permit data. All background sources that were in these inventories were located outside the modeling area (defined as the significant impact area).

For sources located in the screening area (defined as 50 km beyond the modeling area), a technique was used for eliminating sources in the modeling analyses if the source's emissions do not meet an emission criterion. This technique, which is approved for use by the DEP and the USEPA, is the *Screening Threshold* method, developed by the North Carolina Department of Natural Resources and Community Development. The method is designed to objectively eliminate from the emission inventory those sources that are unlikely to have a significant interaction with the source undergoing evaluation. In general, sources that should be considered in the modeling analyses are those with emissions greater than a screening threshold value (in TPY) that is calculated by the following criteria:

$$Q = 20 \times D$$

where Q = the screening threshold value (TPY), and

D = The distance (km) from the proposed facility to the source undergoing evaluation for short-term analysis, or

The distance (km) from the edge of the proposed facility's significant impact area to the source undergoing evaluation for long-term (annual) analysis.

For this analysis, the long-term criterion was used since fewer facilities would be eliminated than with the short-term criterion. Also, the total emissions from a facility were used rather than emissions from individual sources for comparison to the screening threshold value. These methods result in a more conservative approach to produce higher-than-expected concentrations. Those facilities with

maximum allowable emissions that are below the calculated *screening threshold* were eliminated from further consideration in the AAQS modeling analyses. Additional large sources beyond the screening area were also included in the modeling.

A summary of the facilities considered for inclusion in the modeling analyses is presented in Table C-3. This summary identifies those facilities located within the modeling area and screening area. The facilities that were not included in the modeling analyses because their CO emissions were less than the *screening threshold* criteria are also identified. A summary of the stack, operating, and emission data for sources used in the modeling analyses is presented in Table C-4.

1.3 RECEPTOR LOCATIONS

The maximum concentrations in the vicinity of OkPLP and the distance of the significant impacts were predicted in a receptor grid that contained 472 discrete receptors. The discrete receptors included 393 receptors, separated by 100-meter spacing, located along OkPLP's property line and 79 additional offsite receptors in a radial at 10-degree intervals at distances of 4.0, 5.0, and 6.0 km from the cogeneration boiler B's stack. A summary of the property boundary receptors is presented in Table C-5. A plot of the property boundary, receptors and building locations is presented in Figure C-1.

1.4 BUILDING DOWNWASH EFFECTS FOR OKPLP

All significant building structures within OkPLP's property boundary were determined by a site plot plan. The plot plan was presented in the original application (attachment OC-FI-C2). A total of 4 building structures were evaluated. All building structures were processed in the EPA Building Input Profile (BPIP, Version 95086) program to determine direction-specific building heights and projected widths for each 10-degree azimuth direction for each source that was included in the modeling analysis. A listing of dimensions for each structure is presented in Table C-6. A plot of the building dimensions and the cogeneration boiler B stack location (the modeling origin) is presented in Figure C-2.

1.5 BACKGROUND CONCENTRATIONS

To estimate the total CO air quality concentrations, 1-hour and 8-hour background concentrations were added to the modeling results. The background concentration is considered to be the air quality concentration contributed by sources not included in the modeling evaluation. Because other background sources were modeled, a background value was used that was considered to be realistic

but still conservative. The monitors in West Palm Beach are considered to provide a very conservative estimate of background CO concentrations for OkPLP, due to the significant mobile traffic impacting the West Palm Beach monitors. In this analysis, background concentrations were assumed to be represented by the lowest of the second highest concentrations measured from the nearest monitors since OkPLP is located in a more rural area of Palm Beach county.

A summary of the CO ambient monitoring data in the vicinity of OkPLP for 1999 and 2000 is presented in Table C-7. The CO monitors nearest to the site are the DEP monitor, number 12-057-1006, located at 50 South Military Trail in West Palm Beach, and monitor number 12-057-1004, 3730 Belvedere Road in Palm Beach. For 1999 and 2000, the lowest of the second highest of the 1-hour and 8-hour measured concentrations at these monitors were 3.8 parts per million (ppm) (4,370 microgram per cubic meter ($\mu g/m^3$)) and 2.6 ppm (approximately 2,990 $\mu g/m^3$), respectively. These background levels were added to the refined model-predicted concentrations to estimate total CO air quality levels for comparison to the AAQS.

1.6 SUMMARY OF RESULTS

The maximum CO impacts due to the increase in emissions compared to the significant impact levels in Table C-8. A summary of the maximum 1-hour and 8-hour average CO concentrations predicted in the screening analysis is presented in Table C-9. Based on the screening results, modeling refinements were performed for both the 1-hour and 8-hour averaging times. The results of the refined modeling analyses from this analysis are summarized in Table C-10. For this analysis, the maximum 1-hour and 8-hour average CO concentrations due to all sources, including background concentrations, are 7,436 and 3,746 $\mu g/m^3$, respectively. These concentrations are 19 and 37 percent of the AAQS of 40,000 and 10,000 $\mu g/m^3$, respectively.

Based on these air modeling results, the maximum CO concentrations from OkPLP and other CO emission sources will comply with the AAQS.

The air modeling output files which contain the results of the CO concentrations predicted for the Okeelanta Power, L.P. facility and background sources have been forwarded to the DEP using Golder's ftp site (ftp://external.golder.com/OkPLP/Modeling).

Table 2-1. Revised Maximum Short-Term Emissions for OkPLP Cogeneration Facility (per boiler) (Revised 5/25/01)

Regulated Pollutant	Biomass			No. 2 Fuel Oil			Natural Gas			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)	(lb/hr)
Sulfur dioxide--3-hr Average	0.30	715	214.5	--	--	--	--	--	--	214.5
--24-hr Average	0.20	715	143.0	0.05	490	24.5	0.00058	605	0.4	143.0
Carbon monoxide--1-hr Average[a]	6.5	715	4647.5	1.0	490	490.0	0.08	605	48.4	4,647.5
--8-hr Average[a]	4.5	715	3217.5	--	--	--	--	--	--	3,217.5
Sulfuric acid mist	0.0184	715	13.16	0.0015	490	0.74	3.55E-05	605	0.02	13.16

[a] Maximum emissions occur during cold start-up conditions. Normal maximum emissions are 1.0 MMBtu/hr for both the 1-hr and 8-hr averaging times.

Table 2-2. Maximum Fuel Usage and Heat Input Rates per Boiler, Okeelanta Power L.P. (Revised 5/25/01)

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	195,730	lb/hr [a]
- Wood	715	68	486	158,748	lb/hr [b]
No. 2 Fuel Oil	490	85	417	3,551	gal/hr
Natural Gas	605	85	514	605,000	scf/hr
	Annual Average (per boiler)				
	(Btu/yr)		(Btu/yr)		
NORMAL OPERATIONS (100% BIOMASS)					
Biomass	6.263E+12	68	4.259E+12	857,295	TPY [a]
No. 2 Fuel Oil	0	85	0	0	gal/yr
Natural Gas	0	85	0	0	MMscf/yr
TOTAL	6.263E+12		4.259E+12		
24.9% OIL FIRING					
Biomass	4.428E+12	68	3.011E+12	606,077	TPY [a]
No. 2 Fuel Oil	1.468E+12	85	1.248E+12	10,638,685	gal/yr
Natural Gas	0	85	0	0	MMscf/yr
TOTAL	5.896E+12		4.259E+12		
24.9% NATURAL GAS FIRING					
Biomass	4.428E+12	68	3.011E+12	606,077	TPY [a]
No. 2 Fuel Oil	0	85	0	0	gal/yr
Natural Gas	1.468E+12	85	1.248E+12	1,468	MMscf/yr
TOTAL	5.896E+12		4.259E+12		

[a] Based on bagasse firing.

[b] Based on wood firing.

Notes:

40 CFR 60, Subpart Da, limits fossil-fuel firing to less than 25% for each boiler (heat input 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 - 3,653 Btu/lb

Wood - 4,504 Btu/lb

No. 2 Fuel Oil - 138,000 Btu/gal

Natural gas - 1,000 Btu/scf

Table 2-3. Maximum Fuel Usage and Heat Input Rates, Total All Three Boilers, Okeelanta Power, L.P. (Revised 5/25/01)

Fuel	Heat Input		Heat Transfer Efficiency (%)	Heat Output		Fuel Firing Rate	
			Maximum Annual Average (total all three boilers)				
NORMAL OPERATIONS							
Biomass	1.150E+13	Btu/yr	68	7.820E+12	Btu/yr	1,436,945	TPY [a]
No. 2 Oil	0	Btu/yr	85	0	Btu/yr	0	gal/yr
Natural Gas	0	Btu/yr	85	0	Btu/yr	0	MMscf/yr
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	1,015,857	TPY [a]
No. 2 Oil	2.696E+12	Btu/yr	85	2.291E+12	Btu/yr	19,533,086	gal/yr
Natural Gas	0	Btu/yr	85	0	Btu/yr	0	MMscf/yr
TOTAL	1.083E+13	Btu/yr		7.820E+12	Btu/yr		
24.9% NATURAL GAS FIRING							
Biomass	8.130E+12	Btu/yr	68	5.528E+12	Btu/yr	1,015,857	TPY [a]
No. 2 Oil	0	Btu/yr	85	0	Btu/yr	0	gal/yr
Natural Gas	2.696E+12	Btu/yr	85	2.291E+12	Btu/yr	2,696	MMscf/yr
TOTAL	1.083E+13	Btu/yr		7.820E+12	Btu/yr		

[a] Assumes 53.9% of annual heat input from bagasse, and 46.1% from wood.

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.

Table 2-4. Maximum Annual Emissions for Single Boiler at Okeelanta Power L.P. (Revised 6/4/01)

Regulated Pollutant	Biomass Emission Factor (lb/MMBtu)	Biomass Activity Factor (10^{12} Btu/yr)	Biomass Annual Emissions (TPY)	Alternate Fuel Emission Factor (lb/MMBtu)	Alternate Fuel Activity Factor (10^{12} 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 (PM_{10})	0.03	6.263	93.95	--	--	--	93.95	a
Sulfur dioxide	0.10	6.263	313.15	--	--	--	313.15	a
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	1.6E-04	6.263	0.501	--	--	--	0.501	a
Mercury	5.43E-06	6.263	0.0170	--	--	--	0.0170	a
Beryllium	--	--	--	--	--	--	--	
Fluorides	7.00E-04	6.263	2.19	--	--	--	2.19	a
Sulfuric acid mist	0.0184	6.263	57.62	--	--	--	57.62	a
			75.1% Biomass / 24.9% Fuel Oil					
Particulate (TSP)	0.03	4.428	66.42	0.03	1.468	22.02	88.44	
Particulate (PM_{10})	0.03	4.428	66.42	0.03	1.468	22.02	88.44	
Sulfur dioxide	0.10	4.428	221.40	0.05	1.468	36.70	258.10	
Nitrogen oxides	0.15	4.428	332.10	0.15	1.468	110.10	442.20	
Carbon monoxide	0.35	4.428	774.90	0.35	1.468	256.90	1,031.80	
VOC	0.06	4.428	132.84	0.03	1.468	22.02	154.86	
Lead	1.6E-04	4.428	0.354	8.9E-07	1.468	0.0007	0.355	
Mercury	5.43E-06	4.428	0.0120	2.4E-06	1.468	0.0018	0.0138	
Beryllium	--	--	--	3.5E-07	1.468	0.00026	0.00026	a
Fluorides	7.00E-04	4.428	1.55	6.27E-06	1.468	0.0046	1.5544	
Sulfuric acid mist	0.0184	4.428	40.74	0.0015	1.468	1.10	41.84	
			75.1% Biomass / 24.9% Natural Gas					
Particulate (TSP)	0.03	4.428	66.42	0.0073	1.468	5.36	71.78	
Particulate (PM_{10})	0.03	4.428	66.42	0.0073	1.468	5.36	71.78	
Sulfur dioxide	0.10	4.428	221.40	0.00058	1.468	0.43	221.83	
Nitrogen oxides	0.15	4.428	332.10	0.15	1.468	110.10	442.20	
Carbon monoxide	0.35	4.428	774.90	0.08	1.468	58.72	833.62	
VOC	0.06	4.428	132.84	0.0053	1.468	3.89	136.73	
Lead	1.6E-04	4.428	0.354	4.8E-07	1.468	0.0004	0.355	
Mercury	5.43E-06	4.428	0.0120	2.5E-07	1.468	0.0002	0.0122	
Beryllium	--	--	--	1.2E-08	1.468	0.00001	0.00001	
Fluorides	7.00E-04	4.428	1.55	--	--	--	1.5498	
Sulfuric acid mist	0.0184	4.428	40.74	3.55E-05	1.468	0.03	40.76	

[a] Denotes maximum annual emissions for any fuel scenario.

[b] Represents 50% of total heat input due to bagasse.

[c] Represents 50% of total heat input due to wood.

Note: No emissions of total reduced sulfur, asbestos, or vinyl chloride are expected.
Fuel type percentages are based on heat input.

Table 2-5. Maximum Annual Emissions for Okeelanta Power Cogeneration Facility (total all boilers, Revised 6/4/01))

Regulated Pollutant	Biomass Emission Factor (lb/MMBtu)	Biomass Activity Factor (10^{12} Btu/yr)	Biomass Annual Emissions (TPY)	Alternate Fuel Emission Factor (lb/MMBtu)	Alternate Fuel Activity Factor (10^{12} Btu/yr)	Alternate Fuel Annual Emissions (TPY)	Total Annual Emissions (TPY)	
			100% Biomass					
Particulate (TSP)	0.03	11.500	172.50	--	--	--	172.50	a
Particulate (PM_{10})	0.03	11.500	172.50	--	--	--	172.50	a
Sulfur dioxide	0.10	11.500	575.00	--	--	--	575.00	a
Nitrogen oxides	0.15	11.500	862.50	--	--	--	862.50	a
Carbon monoxide	0.35	11.500	2,012.50	--	--	--	2,012.50	a
VOC	0.06	11.500	345.00	--	--	--	345.00	a
Lead	1.6E-04	11.500	0.920	--	--	--	0.920	a
Mercury	5.43E-06	11.500	0.0312	--	--	--	0.031	a
Beryllium	--	--	--	--	--	--	--	
Fluorides	7.00E-04	11.500	4.03	--	--	--	4.03	a
Sulfuric acid mist	0.0184	11.500	105.80	--	--	--	105.80	a
			75.1% Biomass / 24.9% Fuel Oil					
Particulate (TSP)	0.03	8.130	121.95	0.03	2.696	40.44	162.39	
Particulate (PM_{10})	0.03	8.130	121.95	0.03	2.696	40.44	162.39	
Sulfur dioxide	0.10	8.130	406.50	0.05	2.696	67.40	473.90	
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	0.35	2.696	471.80	1,894.55	
VOC	0.06	8.130	243.90	0.03	2.696	40.44	284.34	
Lead	1.6E-04	8.130	0.650	8.9E-07	2.696	0.0012	0.652	
Mercury	5.43E-06	8.130	0.0221	2.4E-06	2.696	0.0032	0.025	
Beryllium	--	--	--	3.5E-07	2.696	0.00047	0.00047	a
Fluorides	7.00E-04	8.130	2.85	6.27E-06	2.696	0.0085	2.854	
Sulfuric acid mist	0.0184	8.130	74.80	0.0015	2.696	2.02	76.82	
			75.1% Biomass / 24.9% Natural Gas					
Particulate (TSP)	0.03	8.130	121.95	0.0073	2.696	9.84	131.79	
Particulate (PM_{10})	0.03	8.130	121.95	0.0073	2.696	9.84	131.79	
Sulfur dioxide	0.10	8.130	406.50	0.00058	2.696	0.78	407.28	
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	0.08	2.696	107.84	1,530.59	
VOC	0.06	8.130	243.90	0.0053	2.696	7.14	251.04	
Lead	1.6E-04	8.130	0.650	4.8E-07	2.696	0.0006	0.651	
Mercury	5.43E-06	8.130	0.0221	2.5E-07	2.696	0.0003	0.022	
Beryllium	--	--	--	1.2E-08	2.696	0.00002	0.00002	
Fluorides	7.00E-04	8.130	2.85	--	--	--	2.846	
Sulfuric acid mist	0.0184	8.130	74.80	3.55E-05	2.696	0.05	74.84	

[a] Denotes maximum annual emissions for any fuel scenario.

[b] Represents 50% of total heat input due to bagasse.

[c] Represents 50% of total heat input due to wood.

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

Table 3-1. Current Actual and Future Potential CO and SO_2 Emissions, Okeelanta Power L.P. (Revised 6/4/01)

Boiler	Operating Hours[a]	Heat Input[a] (MMBtu/yr)	Annual Emissions (TPY)			
			CO	SO_2	Lead	Mercury
Boiler A	7,265	3,824,398	478.34	47.11	0.047	0.0015
Boiler B	5,927	3,206,304	485.29	38.32	0.076	0.0016
Boiler C	6,978	3,694,714	562.44	47.80	0.334	0.0036
Total	20,170	10,725,416	1,526.07	133.23	0.456	0.0066
Requested Permit Limit		11,500,000	2,012.5	575.0	0.920	0.031
Net Increase			486.4	441.8	0.464	0.0246
PSD Significant Emission Rate			100	40	0.6	0.1

[a] Based on the period April 1999 through March 2000.

Table 3-2. Current Actual Lead and Mercury Emissions for Okeelanta Power L.P. Boilers (Revised 6/4/01)

Parameter		Lead	Mercury		Lead	Mercury		Lead	Mercury
		Boiler A			Boiler B			Boiler C	
Emission Factor (lb/MMBtu)									
Wood waste [a]		2.96E-05	1.20E-06		8.39E-05	1.50E-06		3.97E-04	3.60E-06
Bagasse [a]		2.03E-05	4.41E-07		7.30E-06	3.83E-07		6.29E-06	5.41E-07
No. 2 Fuel [b]		8.90E-07	2.40E-06		8.90E-07	2.40E-06		8.90E-07	2.40E-06
Heat Input (MMBtu/yr) [c]									
Wood	45.68%	1,746,985	1,746,985	52.05%	1,668,881	1,668,881	44.68%	1,650,798	1,650,798
Bagasse	53.69%	2,053,319	2,053,319	47.34%	1,517,864	1,517,864	54.48%	2,012,880	2,012,880
No. 2	0.63%	24,094	24,094	0.61%	19,558	19,558	0.84%	31,036	31,036
Total		3,824,398	3,824,398		3,206,304	3,206,304		3,694,714	3,694,714
Emissions (TPY)									
April 1999 - March 2000 Emissions		0.047	0.0015		0.076	0.0016		0.33	0.0036

[a] Based on actual stack test data for the fuel type.

[b] Based upon permit limit.

[c] Based upon actual boiler heat input for period April 1999 - March 2000.

Table C-1. Cogeneration Boiler Emission Rates for Okeelanta Power, L.P.--Total all Three Boilers

Pollutant	Total Heat Input Rate[a] (MMBtu/hr)	CURRENT ACTUAL EMISSIONS				FUTURE POTENTIAL EMISSIONS			
		Short-Term Emissions		Annual Average Emissions		Short-Term Emissions[b]		Annual Average Emissions[c]	
		lb/hr	g/sec	TPY	g/sec	lb/hr	g/sec	TPY	g/sec
Carbon Monoxide--1-Hour	2,145	750.75 [d]	94.6	--	--	13,942.5	1,756.73	--	--
--8-Hour	2,145	750.75 [d]	94.6	--	--	9,652.5	1,216.20	--	--

[a] Three boilers at 715 MMBtu/hr each.
[b] Future potential emissions from Table 2-1 of permit application.
[c] Future potential emissions from Table 2-5 of permit application.
[d] Based on original 8-hr CO limit of 0.35 lb/MMBtu.

Table C-2. Stack Parameters[a] for Okeelanta Power, L.P. Boilers

ISCST ID	Heat Input Rate (MMBtu/hr)	Stack/Vent Release Height		Stack/Vent Diameter		Gas Flow Rate (acfm)	Gas Exit Temperature		Velocity	
		ft	m	ft	m		°F	K	ft/sec	m/sec
COGENC/COGENF	715	199	60.66	10	3.05	300,000	373	463	64	19.4

[a] Representative of all 3 boiler stacks.

Table C- 3. Summary of CO Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to Okeelanta Power [a] X (km)	Y (km)	Distance (km)	Direction (deg)	Maximum CO Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist - 6) x 20	Include in Modeling Analysis ?
0990086	Glades Correctional Institute	Palm Beach	523.4	2955.2	-1.5	15.1	15.2	354	10	183.5	NO
0990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	10.0	13.2	16.6	37	33,771	211.2	YES
0510001	Everglades Sugar	Hendry	509.6	2954.2	-15.3	14.1	20.8	313	15	296.1	NO
0510003	U.S. Sugar Clewiston	Hendry	506.1	2956.9	-18.8	16.8	25.2	312	64,644	384.3	YES
0990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	28.0	5.1	28.5	80	25,065	449.2	YES
0990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	13.9	28.0	31.3	26	19,958	505.2	YES
0990019	Osceola Farms	Palm Beach	544.2	2968.0	19.3	27.9	33.9	35	25,175	558.5	YES
0510015	Southern Gardens Citrus	Hendry	487.6	2957.6	-37.3	17.5	41.2	295	1,888	704.0	YES
0990021	Pratt & Whitney	Palm Beach	559.2	2978.3	34.3	38.2	51.3	42	30	906.8	NO
0850102	Bechtel Indiantown	Martin	545.6	2991.5	20.7	51.4	55.4	22	1,651	988.2	YES
0850001	FPL -Martin	Martin	543.1	2992.9	18.2	52.8	55.8	19	2,285	997.0	YES
0500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	67.9	3.6	68.0	87	204	1239.9	NO
0360119	Lee County Resource Recovery	Lee	424.0	2946.0	-100.9	5.9	101.1	273	238	1901.4	YES
0710002	FPL - Fort Myers [c]	Lee	422.1	2952.9	-102.8	12.8	103.6	277	4,478	1951.9	YES
[a] Okeelanta Power Coordinates:			524.9	2940.1							

[b] Proposed project's emissions are significant to 6 kilometers.
Emission inventory is limited to facilities within 56 km of Okeelanta facility but includes major plants outside the proposed project's significant impact distance.

[c] Large source beyond screening area included in modeling analysis.

Table C-4. Summary of CO Sources Included in the Air Modeling Analysis

AIRS Number	Facility	Units	ISCST3 ID Name	Stack and Operating Parameters				Emission Rate (g/s)
				Height (m)	Diameter (m)	Temperature (K)	Velocity (m/s)	
0990026	Sugar Cane Growers[a]	Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	547.09
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	187.61
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	467.71
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	359.60
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	381.02
0510003	U.S. Sugar Clewiston							
		Unit 1	BRL1	65.0	2.44	347.0	19.20	811.79
		Unit 2	BLR2	65.0	2.44	338.0	17.32	732.19
		Unit 3	BLR3	65.0	2.44	333.2	8.47	334.28
		Unit 4	BLR4	45.7	2.51	344.3	25.35	518.43
		Unit 7	BLR7	68.6	2.59	405.4	25.96	71.62
0990016	Atlantic Sugar Association[a]	Unit 1	ATLSUG1	27.4	1.83	346.0	17.97	299.90
		Unit 2	ATLSUG2	27.4	1.83	350.0	23.36	585.60
		Unit 3	ATLSUG3	27.4	1.83	350.0	21.56	180.20
		Unit 4	ATLSUG4	27.4	1.83	344.0	25.16	180.20
		Unit 5[b]	ATLSUG5	27.4	1.68	339.0	19.24	209.10
0990061	U.S. Sugar -Bryant[a]	Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	760.91
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	1309.77
0990019	Osceola Farms[a]	Unit 2	OSBLR2	27.4	1.52	339.0	18.63	317.52
		Unit 3	OSBLR3	27.4	1.92	344.0	14.34	128.77
		Unit 4	OSBLR4	27.4	1.83	344.0	16.53	317.52
		Unit 5	OSBLR5	27.4	1.52	344.0	17.85	374.22
		Unit 6	OSBLR6	27.4	1.92	339.0	18.25	310.40
0510015	Southern Gardens Citrus - PSD	Peel Dryer	SGARDDRY	38.1	1.16	353.0	7.45	116.68
		Boilers 1-3	SGARDBLR	16.8	1.22	478.0	14.23	0.50
0850102	Bechtel Indiantown		BECHTIND	150.9	4.88	333.2	30.50	47.38
0850001	FPL -Martin	Units 1&2	MART12	152.1	7.99	420.9	21.03	38.92
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	-
		Diesel Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	-
		Units 3&4 PSD	MART34	64.9	6.10	410.9	18.90	26.66
0710119	Lee County Energy Recovery Facility	Units 1 & 2	LEECORRF	84.1	1.98	416.5	22.86	6.85
0710002	FPL Fort Myers	Gas Turbines 1 - 12	FMGT112	9.8	3.47	797.0	57.73	61.69
		HRSGs 1-6	FMCT1_6	38.1	5.79	377.6	21.43	32.51
		CT 1 - 2	FMCT1_2	24.4	6.25	852.00	39.1	34.32

[a] Facilities or sources with facilities that operate only during the October 1 through April 30 crop season.

[b] Sugar mill sources that operate all year.

Table C-5. Okeelanta Power, L.P. Property Boundary Receptors[a] Used In the Modeling Analysis

Coordinates[b]		Coordinates[b]		Coordinates[b]		Coordinates[b]		Coordinates[b]	
X (m)	Y (m)	X (m)	Y (m)	X (m)	Y (m)	X (m)	Y (m)	X (m)	Y (m)
-9699.6	444.2	-9509.5	3738.7	-6259.5	3791.6	-2959.5	3791.6	340.5	3791.6
-9693.9	544.0	-9459.5	3791.6	-6159.5	3791.6	-2859.5	3791.6	440.5	3791.6
-9688.1	643.9	-9359.5	3791.6	-6059.5	3791.6	-2759.5	3791.6	540.5	3791.6
-9682.3	743.7	-9259.5	3791.6	-5959.5	3791.6	-2659.5	3791.6	640.5	3791.6
-9676.6	843.5	-9159.5	3791.6	-5859.5	3791.6	-2559.5	3791.6	740.5	3791.6
-9670.8	943.4	-9059.5	3791.6	-5759.5	3791.6	-2459.5	3791.6	840.5	3791.6
-9665.1	1043.2	-8959.5	3791.6	-5659.5	3791.6	-2359.5	3791.6	940.5	3791.6
-9659.3	1143.0	-8859.5	3791.6	-5559.5	3791.6	-2259.5	3791.6	1040.5	3791.6
-9653.5	1242.9	-8759.5	3791.6	-5459.5	3791.6	-2159.5	3791.6	1140.5	3791.6
-9647.8	1342.7	-8659.5	3791.6	-5359.5	3791.6	-2059.5	3791.6	1240.5	3791.6
-9642.0	1442.5	-8559.5	3791.6	-5259.5	3791.6	-1959.5	3791.6	1340.5	3791.6
-9636.3	1542.4	-8459.5	3791.6	-5159.5	3791.6	-1859.5	3791.6	1440.5	3791.6
-9630.5	1642.2	-8359.5	3791.6	-5059.5	3791.6	-1759.5	3791.6	1540.5	3791.6
-9624.7	1742.0	-8259.5	3791.6	-4959.5	3791.6	-1659.5	3791.6	1640.5	3791.6
-9619.0	1841.9	-8159.5	3791.6	-4859.5	3791.6	-1559.5	3791.6	1740.5	3791.6
-9613.2	1941.7	-8059.5	3791.6	-4759.5	3791.6	-1459.5	3791.6	1840.5	3791.6
-9607.5	2041.5	-7959.5	3791.6	-4659.5	3791.6	-1359.5	3791.6	1940.5	3791.6
-9601.7	2141.4	-7859.5	3791.6	-4559.5	3791.6	-1259.5	3791.6	2040.5	3791.6
-9595.9	2241.2	-7759.5	3791.6	-4459.5	3791.6	-1159.5	3791.6	2140.5	3791.6
-9590.2	2341.0	-7659.5	3791.6	-4359.5	3791.6	-1059.5	3791.6	2240.5	3791.6
-9584.4	2440.9	-7559.5	3791.6	-4259.5	3791.6	-959.5	3791.6	2306.1	3757.2
-9578.7	2540.7	-7459.5	3791.6	-4159.5	3791.6	-859.5	3791.6	2306.1	3657.2
-9572.9	2640.5	-7359.5	3791.6	-4059.5	3791.6	-759.5	3791.6	2306.1	3557.2
-9567.1	2740.4	-7259.5	3791.6	-3959.5	3791.6	-659.5	3791.6	2306.1	3457.2
-9561.4	2840.2	-7159.5	3791.6	-3859.5	3791.6	-559.5	3791.6	2306.1	3357.2
-9555.6	2940.0	-7059.5	3791.6	-3759.5	3791.6	-459.5	3791.6	2306.1	3257.2
-9549.9	3039.9	-6959.5	3791.6	-3659.5	3791.6	-359.5	3791.6	2306.1	3157.2
-9544.1	3139.7	-6859.5	3791.6	-3559.5	3791.6	-259.5	3791.6	2306.1	3057.2
-9538.3	3239.5	-6759.5	3791.6	-3459.5	3791.6	-159.5	3791.6	2306.1	2957.2
-9532.6	3339.4	-6659.5	3791.6	-3359.5	3791.6	-59.5	3791.6	2306.1	2857.2
-9526.8	3439.2	-6559.5	3791.6	-3259.5	3791.6	40.5	3791.6	2306.1	2757.2
-9521.1	3539.0	-6459.5	3791.6	-3159.5	3791.6	140.5	3791.6	2306.1	2657.2
-9515.3	3638.9	-6359.5	3791.6	-3059.5	3791.6	240.5	3791.6	2306.1	2557.2

[a] Receptors were selected at 100-meter spacing along property boundary.

[b] Distances are relative to the Cogeneration Boiler B stack.

Note: m = meter

Table C-5. Okeelanta Power, L.P. Property Boundary Receptors[a] Used In the Modeling Analysis (continued)

Coordinates[b]		Coordinates[b]		Coordinates[b]		Coordinates[b]		Coordinates[b]	
X (m)	Y (m)	X (m)	Y (m)	X (m)	Y (m)	X (m)	Y (m)	X (m)	Y (m)
2306.1	2457.2	3448.7	299.8	3696.1	-2838.9	396.1	-2838.9	-2903.9	-2838.9
2306.1	2357.2	3448.7	199.8	3596.1	-2838.9	296.1	-2838.9	-3003.9	-2838.9
2306.1	2257.2	3448.7	99.8	3496.1	-2838.9	196.1	-2838.9	-3103.9	-2838.9
2306.1	2157.2	3448.7	-0.2	3396.1	-2838.9	96.1	-2838.9	-3203.9	-2838.9
2366.8	2117.9	3448.7	-100.2	3296.1	-2838.9	-3.9	-2838.9	-3303.9	-2838.9
2466.8	2117.9	3448.7	-200.2	3196.1	-2838.9	-103.9	-2838.9	-3403.9	-2838.9
2566.8	2117.9	3448.7	-300.2	3096.1	-2838.9	-203.9	-2838.9	-3503.9	-2838.9
2666.8	2117.9	3448.7	-400.2	2996.1	-2838.9	-303.9	-2838.9	-3603.9	-2838.9
2766.8	2117.9	3448.7	-500.2	2896.1	-2838.9	-403.9	-2838.9	-3703.9	-2838.9
2866.8	2117.9	3448.7	-600.2	2796.1	-2838.9	-503.9	-2838.9	-3803.9	-2838.9
2966.8	2117.9	3448.7	-700.2	2696.1	-2838.9	-603.9	-2838.9	-3903.9	-2838.9
3066.8	2117.9	3448.7	-800.2	2596.1	-2838.9	-703.9	-2838.9	-4003.9	-2838.9
3166.8	2117.9	3448.7	-900.2	2496.1	-2838.9	-803.9	-2838.9	-4103.9	-2838.9
3266.8	2117.9	3448.7	-1000.2	2396.1	-2838.9	-903.9	-2838.9	-4203.9	-2838.9
3366.8	2117.9	3448.7	-1100.2	2296.1	-2838.9	-1003.9	-2838.9	-4303.9	-2838.9
3448.7	2099.8	3448.7	-1200.2	2196.1	-2838.9	-1103.9	-2838.9	-4403.9	-2838.9
3448.7	1999.8	3448.7	-1300.2	2096.1	-2838.9	-1203.9	-2838.9	-4503.9	-2838.9
3448.7	1899.8	3448.7	-1400.2	1996.1	-2838.9	-1303.9	-2838.9	-4603.9	-2838.9
3448.7	1799.8	3448.7	-1500.2	1896.1	-2838.9	-1403.9	-2838.9	-4703.9	-2838.9
3448.7	1699.8	3448.7	-1600.2	1796.1	-2838.9	-1503.9	-2838.9	-4803.9	-2838.9
3448.7	1599.8	3448.7	-1700.2	1696.1	-2838.9	-1603.9	-2838.9	-4903.9	-2838.9
3448.7	1499.8	3448.7	-1800.2	1596.1	-2838.9	-1703.9	-2838.9	-5003.9	-2838.9
3448.7	1399.8	3448.7	-1900.2	1496.1	-2838.9	-1803.9	-2838.9	-5103.9	-2838.9
3448.7	1299.8	3448.7	-2000.2	1396.1	-2838.9	-1903.9	-2838.9	-5203.9	-2838.9
3448.7	1199.8	3448.7	-2100.2	1296.1	-2838.9	-2003.9	-2838.9	-5303.9	-2838.9
3448.7	1099.8	3483.0	-2191.1	1196.1	-2838.9	-2103.9	-2838.9	-5403.9	-2838.9
3448.7	999.8	3532.4	-2278.0	1096.1	-2838.9	-2203.9	-2838.9	-5503.9	-2838.9
3448.7	899.8	3581.8	-2365.0	996.1	-2838.9	-2303.9	-2838.9	-5603.9	-2838.9
3448.7	799.8	3631.2	-2451.9	896.1	-2838.9	-2403.9	-2838.9	-5703.9	-2838.9
3448.7	699.8	3680.6	-2538.9	796.1	-2838.9	-2503.9	-2838.9	-5803.9	-2838.9
3448.7	599.8	3730.0	-2625.8	696.1	-2838.9	-2603.9	-2838.9	-5903.9	-2838.9
3448.7	499.8	3779.4	-2712.8	596.1	-2838.9	-2703.9	-2838.9	-6003.9	-2838.9
3448.7	399.8	3828.8	-2799.7	496.1	-2838.9	-2803.9	-2838.9	-6103.9	-2838.9

[a] Receptors were selected at 100-meter spacing along property boundary.

[b] Distances are relative to the Cogeneration Boiler B stack.

Note: m = meter

Table C-5. Okeelanta Power, L.P. Property Boundary Receptors[a] Used In the Modeling Analysis (continued)

Coordinates[b]		Coordinates[b]	
X (m)	Y (m)	X (m)	Y (m)
-6203.9	-2838.9	-9120.5	-2368.5
-6303.9	-2838.9	-9140.7	-2270.6
-6403.9	-2838.9	-9160.9	-2172.6
-6503.9	-2838.9	-9181.0	-2074.7
-6603.9	-2838.9	-9201.2	-1976.7
-6703.9	-2838.9	-9221.4	-1878.8
-6803.9	-2838.9	-9241.5	-1780.9
-6903.9	-2838.9	-9261.7	-1682.9
-7003.9	-2838.9	-9281.9	-1585.0
-7103.9	-2838.9	-9302.0	-1487.0
-7203.9	-2838.9	-9322.2	-1389.1
-7303.9	-2838.9	-9342.3	-1291.1
-7403.9	-2838.9	-9362.5	-1193.2
-7503.9	-2838.9	-9382.7	-1095.2
-7603.9	-2838.9	-9402.8	-997.3
-7703.9	-2838.9	-9423.0	-899.3
-7803.9	-2838.9	-9443.2	-801.4
-7903.9	-2838.9	-9463.3	-703.5
-8003.9	-2838.9	-9483.5	-605.5
-8103.9	-2838.9	-9503.7	-507.6
-8203.9	-2838.9	-9523.8	-409.6
-8303.9	-2838.9	-9544.0	-311.7
-8403.9	-2838.9	-9564.2	-213.7
-8503.9	-2838.9	-9584.3	-115.8
-8603.9	-2838.9	-9604.5	-17.8
-8703.9	-2838.9	-9624.7	80.1
-8803.9	-2838.9	-9644.8	178.1
-8903.9	-2838.9	-9665.0	276.0
-9003.9	-2838.9	-9685.2	373.9
-9039.9	-2760.3		
-9060.0	-2662.4		
-9080.2	-2564.4		
-9100.4	-2466.5		

[a] Receptors were selected at 100-meter spacing along property boundary.

[b] Distances are relative to the Cogeneration Boiler B stack.

Note: m = meter

Table C-6. OkPLP Building Dimensions Used in the Modeling Analysis

Structure	Height		Length		Width	
	ft	m	ft	m	ft	m
Boiler Building	139	42.44	207	63.12	114	34.84
Electrostatic Precipitator Building No. 1	107	32.54	50	15.24	71	21.76
Electrostatic Precipitator Building No. 2	107	32.54	50	15.24	71	21.76
Electrostatic Precipitator Building No. 3	107	32.54	50	15.24	71	21.76

Table C-7. Summary of Ambient Carbon Monoxide Data for Sites Near Okeelanta Power, L.P.

City	Site ID No.	Monitoring Method	Year	Number of Observations	Percent of Data Recovery	Concentration (ug/m3)			
						Max 1-hour	2nd High 1-hour	Max 8-hour	2nd High 8-hour
Palm Beach	12-099-1004	Continuous	1999	8,355	95	4,830	4,600	3,795	3,220
			2000	8,631	99	4,370	4,370	3,105	2,990
West Palm Beach	12-099-1006	Continuous	1999	8,523	97	6,325	5,980	4,485	3,565
			2000	7,110	81	7,590	5,635	3,335	3,105

Note: ug/m3 = micrograms per cubic meter
Source FDEP: Allsum Report; 1999, 2000.

Table C-8. Maximum Impacts Due to Proposed Project and Significant Impact Levels, Okeelanta Power L.P.

Pollutant	Averaging Period	Increases in Emissions Due to Project (g/sec)	Predicted Maximum Impact[a] (ug/m^3) 1-hour	Predicted Maximum Impact[a] (ug/m^3) 8-hour	Significant Impact Levels (ug/m3) 1-hour	Significant Impact Levels (ug/m3) 8-hour	Above Significant Impact Levels?
Carbon Monoxide	1-hour	1,662.1	2,580	--	2,000	--	Yes
	8-hour	1,121.6	--	610	--	500	Yes

[a] Based on the following generic maximum impacts (ug/m^3) predicted with an emission rate of 10 g/sec:

1-hour: 15.52
8-hour: 5.44

Table C-9. Maximum Predicted CO Impacts for the Proposed Project
AAQS Screening Analysis, Okeelanta Power, L.P.

Pollutant/ Averaging Time	Concentration (ug/m^3)[a]	Receptor Location[b] Direction (degree)	Receptor Location[b] Distance (m)	Time Period (YYMMDDHH)
HSH 8-Hour	756	217	3,534	87103024
	575	50	5,000	88010608
	563	149	3,307	89100324
	580	220	4,000	90030524
	632	10	5,000	91110524
HSH 1-Hour	2,318	20	6,000	87121019
	2,526	90	6,000	88103021
	3,016	69	3,686	89123008
	2,726	166	2,923	90012612
	2,798	100	6,000	91022822

[a] Based on 5-year meteorological record, West Palm Beach, 1987 to 1991.

[b] Relative to the Cogeneration Boiler B stack.

Note: YYMMDDHH = Year, Month, Day, Hour Ending
HSH = Highest, Second-Highest

Table C-10. Maximum Predicted CO Concentrations for All Sources Compared to AAQS, Refined Analysis, Okeelanta Power, L.P.

Pollutant/ Averaging Time	Concentration (ug/m^3) Total	Modeled Sources	Background	Receptor Location[a] Direction (degree)	Distance (m)	Time Period (YYMMDDHH)	Florida AAQS (ug/m^3)
HSH 8-hour	3,746	756	2,990	217	3,534	87103024	10,000
HSH 1-hour	7,436	3,066	4,370	66	4,000	89123008	
	7,096	2,726	4,370	166	2,923	90012612	40,000
	7,169	2,799	4,370	101	6,000	91022822	

[a] Relative to the Cogeneration Boiler B stack.

Note: YYMMDDHH = Year, Month, Day, Hour Ending
HSH = Highest, Second-Highest

Figure C-1. Okeelanta Power, L.P.
Building, Property Boundary, and Receptor Locations

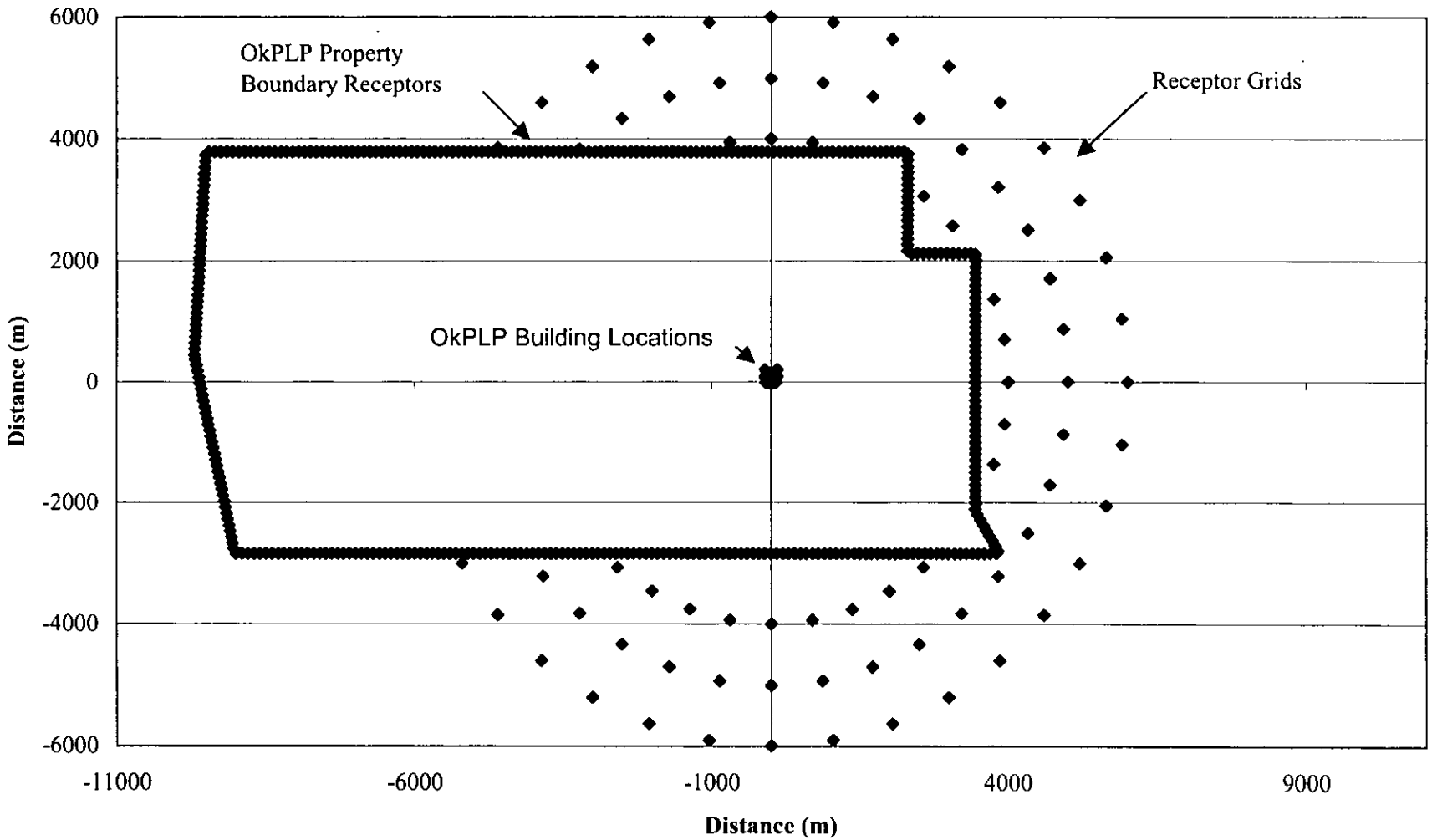
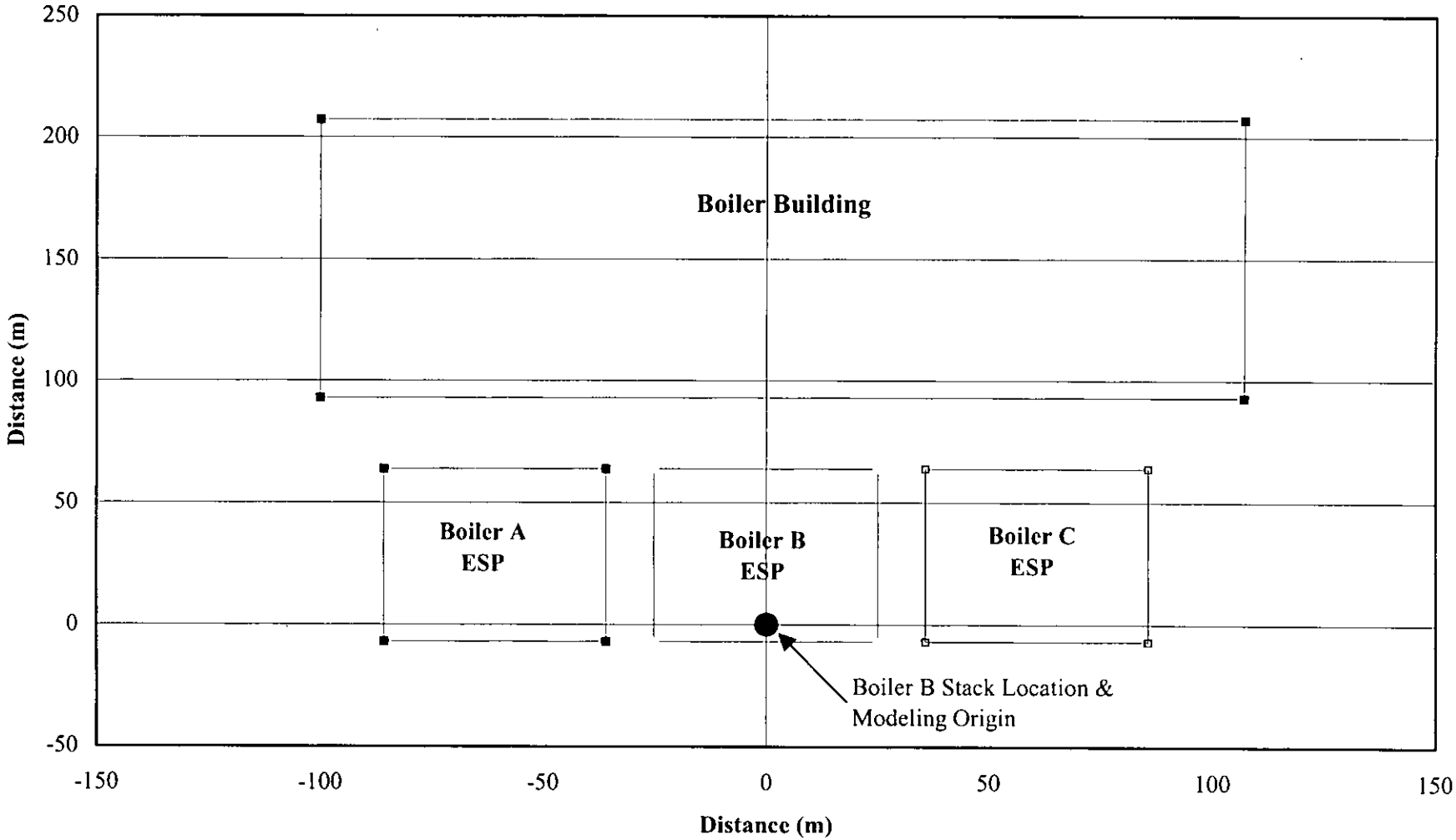


Figure C-2. Okeelanta Power L.P.
Building Profile and Boiler B Stack Location



APPENDIX D

MERCURY EMISSION TEST DATA

Table D-1. Emission Compliance Tests for Mercury Conducted Without Carbon Injection

Boiler	Fuel	Testing Date	Run No.	Measured Mercury Emissions		Allowable Mercury Emissions	
				lb/hr	lb/MMBtu	lb/hr	lb/MMBtu
A	Bagasse	1/26/99-1/27/99	4	3.75E-04	4.94E-07	--	--
A	Bagasse	1/26/99-1/27/99	5	2.99E-04	3.71E-07	--	--
A	Bagasse	1/26/99-1/27/99	6	4.11E-04	5.52E-07	--	--
			Average =	*3.62E-04*	*4.72E-07*	3.90E-03	5.43E-06
B	Bagasse	1/19/99-1/20/99	4	3.20E-04	3.98E-07	--	--
B	Bagasse	1/19/99-1/20/99	5	2.87E-04	3.48E-07	--	--
B	Bagasse	1/19/99-1/20/99	6	4.22E-04	4.99E-07	--	--
			Average =	*3.43E-04*	*4.15E-07*	0.0039	5.43E-06
C	Bagasse	12/30/98-1/15/99	7	5.21E-04	6.16E-07	--	--
C	Bagasse	12/30/98-1/15/99	8	4.42E-04	5.23E-07	--	--
C	Bagasse	12/30/98-1/15/99	9	3.53E-04	4.18E-07	--	--
			Average =	*4.39E-04*	*5.19E-07*	0.0039	5.43E-06
A	Wood	1/27/99-1/28/99	7	7.69E-04	1.12E-06	--	--
A	Wood	1/27/99-1/28/99	8	1.51E-03	2.30E-06	--	--
A	Wood	1/27/99-1/28/99	9	7.25E-04	1.02E-06	--	--
			Average =	*1.00E-03*	*1.48E-06*	0.0029	4.00E-06
B	Wood	1/20/99-1/21/99	7	7.16E-04	1.17E-06	--	--
B	Wood	1/20/99-1/21/99	8	1.47E-03	1.99E-06	--	--
B	Wood	1/20/99-1/21/99	9	7.24E-04	1.07E-06	--	--
			Average =	*9.70E-04*	*1.41E-06*	0.0029	4.00E-06
C	Wood	1/14/99	4	2.20E-03	2.99E-06	--	--
C	Wood	1/14/99	5	2.42E-03	3.28E-06	--	--
C	Wood	1/14/99	6	1.47E-03	1.99E-06	--	--
			Average =	*2.03E-03*	*2.75E-06*	0.0029	4.00E-06

Note: lb/hr = pounds per hour
lb/MMBtu= pounds per million British thermal units

Table D-2. Calculated Mercury Removal Efficiency for Boiler B at Okeelanta Power Facility

Test Date	Carbon Injection Setting (Hertz)[a]	Fuel Usage (tons - wet)	Fuel Analysis			Hg Content (lbs)	Hg Stack Emissions		Calculated Hg Removal Efficiency (%)
			Hg Conc. (mg/kg,dry)	Moisture Content (%)	Hg Conc. (mg/kg,wet)		(lbs/hr)	(lbs)	
12/09/96	15	124.36	0.230	26	0.170	0.0423	1.38E-03	2.90E-03	93.15
12/09/96	15	100.71	0.064	36	0.041	0.0083	1.34E-03	2.75E-03	66.70
12/10/96	15	115.37	0.080	29	0.057	0.0131	1.54E-03	3.18E-03	75.72
12/10/96	30	128.05	0.075	34	0.050	0.0127	1.08E-03	2.23E-03	82.39
12/10/96	30	123.50	0.015 [b]	25	0.011	0.0028	1.04E-03	2.31E-03	17.04
12/10/96	30	121.76	0.049	30	0.034	0.0084	9.90E-04	2.03E-03	75.70
12/11/96	45	104.48	0.043	28	0.031	0.0065	1.03E-03	2.09E-03	67.63
12/12/96	45	100.24	0.055	26	0.041	0.0082	1.35E-03	2.75E-03	66.36
12/12/96	45	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.

Note: Conc. = concentration.
mg/kg = milligrams per kilogram.

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

May 24, 2001

0037584

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Mr. Jeff Koerner, P.E.

RE: OKEELANTA POWER COGENERATION FACILITY
ARMS FACILITY ID NO. 0990332
PROJECT NO. 0990332-014-AC/PSD-FL-196M
APPLICATION TO MODIFY CO AND SO_2 EMISSIONS STANDARDS

Dear Mr. Koerner:

The purpose of this letter is to request an additional 15-day extension to the time in which to respond to the Department's letter dated January 25, 2001, on the above referenced project. Okeelanta Power Limited Partnership (OkPLP) and its consultant, Golder Associates Inc., is in the process of completing required dispersion modeling analysis and cannot complete such analysis prior to the May 25, 2001, deadline. Additional time is needed to complete the dispersion modeling. Therefore, OkPLP and Golder request until June 8, 2001, in which to submit responses to the Department's January 25 letter.

Thank you for your consideration of this request. Please call if there are any questions.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #19011

DAB/jkw

cc: Gus Cepero
James Meriwether
David Dee
Bill Tarr

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Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

April 27, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ricardo Lima, Vice President and General Manager
Okeelanta Power Limited Partnership
8001 U.S. Highway 27 South
South Bay, FL 33493

Re: Request for Extension of Time to Submit Additional Information
Project No. 0990332-014-AC (PSD-FL-196M)
Okeelanta Power L.P. Cogeneration Plant
Request to Modify CO and SO_2 Emissions Standards

Dear Mr. Lima:

On April 23, 2001, we received a letter from Golder Associates requesting a 30-day extension to provide the additional information requested by the Department in a letter dated January 25, 2001. The Department approves this request and the new deadline for submittal of this information is May 26, 2001. The letter also stated that the extension of time was needed because the Department had recently identified *additional* questions regarding short term CO and SO_2 emissions. This was not the case. The Department simply confirmed the original questions and comments made in the January 25th request for additional information. If you have any comments regarding this matter, please contact me at 850/921-9536.

Sincerely,

Jeffery F. Koerner, P.E.
New Source Review Section

AAL/jfk

cc: Mr. Ricardo Lima, Okeelanta Power
Mr. James Meriwether, Okeelanta Power
Mr. David Buff, Golder Associates
Mr. David Knowles, SD
Mr. Jin Stormer, PBCHD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Ricardo Lima
Vice President & Gen. Mgr.
Okeelanta Power Limited Partnership
8001 U.S. Highway 27 South
South Bay, FL 33493

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) B. Date of Delivery
B. McPhee 4/30/04

C. Signature
x B. McPhee ☐ Agent ☐ Addressee

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If YES, enter delivery address below: ☐ No
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S. Bay 7133493

3. Service Type
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☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label)
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7099 3400 0000 1450 2613

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Ricardo Lima

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Okeelanta Power LP
Postmark Here

Name (Please Print Clearly) (to be completed by mailer)
Ricardo Lima
Street, Apt. No.; or PO Box No.
8001 US Highway 27 South
City, State, ZIP+4
South Bay, FL 33493

PS Form 3800, July 1999 See Reverse for Instructions

Golder Associates Inc.

6241 NW 23rd Street, Suite 500
Gainesville, FL 32653-1500
Telephone (352) 336-5600
Fax (352) 336-6603

Golder Associates

April 23, 2001

0037584

Florida Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, FL 32399-2400

Attention: Mr. Jeff Koerner, P.E.

RE: Okeelanta Power Cogeneration Facility
ARMS Facility ID No. 0990332
Project No. 0990332-014-AC/PSD-FL-196M
Application to Modify CO and SO_2 Emissions Standards

Dear Mr. Koerner:

The purpose of this letter is to request a 30-day extension to the time in which to respond to the Department's letter dated January 25, 2001, on the above referenced project. Okeelanta Power Limited Partnership (OkPLP) had anticipated responding to the Department's letter by April 25, 2001, but recently additional questions have been identified by the Department regarding short term CO and SO_2 emissions. Additional time is needed to resolve these questions, including performing additional dispersion modeling. We therefore request until May 25, 2001, in which to submit responses to the Department's January 25 letter.

Thank you for your consideration of this request. Please call if there are any questions.

Sincerely,
GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P.E., Q.E.P.
Principal Engineer
Florida P.E. #19011
SEAL

DB/arz

cc: Gus Cepero
James Meriwether
David Dee
Bill Tarr

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Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

April 3, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ricardo Lima, Vice President and General Manager
Okeelanta Power Limited Partnership
8001 U.S. Highway 27 South
South Bay, FL 33493

Re: **Reminder of Request for Additional Information**
Project No. 0990332-014-AC (PSD-FL-196M)
Okeelanta Power L.P. Cogeneration Plant
Application to Modify CO and SO_2 Emissions Standards

Dear Mr. Lima:

On January 2, 2001, the Department received your application requesting changes to the CO and SO_2 emissions standards for the biomass boilers at Okeelanta's cogeneration plant located 6 miles south of South Bay on U.S. Highway 27. The application was incomplete. In a letter dated January 25, 2001, the Department requested you to submit additional information that would allow continued processing of your application. To date, we have not received the requested additional information. Rule 62-4.055(1) of the Florida Administrative Code requires the following:

"The applicant shall have ninety days after the Department mails a timely request for additional information to submit that information to the Department. If an applicant requires more than ninety days in which to respond to a request for additional information, the applicant may notify the Department in writing of the circumstances, at which time the application shall be held in active status for one additional period of up to ninety days. Additional extensions shall be granted for good cause shown by the applicant. A showing that the applicant is making a diligent effort to obtain the requested additional information shall constitute good cause. Failure of an applicant to provide the timely requested information by the applicable deadline shall result in denial of the application."

It has been more than **60** days since our last request for additional information (copy attached). You are reminded that the permit processing time clock has stopped for this project and that we will not continue our review until we receive the additional information. If you require a period of time in addition to the 90 days allowed by rule, please submit a written request indicating the amount of time necessary. If you fail to provide the additional information or request additional time to submit the additional information, the Department will deny your application.

If you have any questions regarding this matter, please call me at 850/921-9536.

Sincerely,

Jeffery F. Koerner, P.E.
New Source Review Section

AAL/jfk

cc: Mr. Ricardo Lima, Okeelanta Power
Mr. James Meriwether, Okeelanta Power
Mr. David Buff, Golder Associates
Mr. Ron Blackburn, SD
Mr. Darrel Graziani, PBCHD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

FLORIDA

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

January 25, 2001

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ricardo Lima, Vice President and General Manager
Okeelanta Power Limited Partnership
8001 U.S. Highway 27 South
South Bay, FL 33493

Re: Request for Additional Information
Project No. 0990332-014-AC (PSD-FL-196M)
Okeelanta Power L.P. Cogeneration Plant
Application to Modify CO and SO_2 Emissions Standards

Dear Mr. Lima:

On January 2, 2001 the Department received an application requesting changes to the CO and SO_2 emissions standards for the biomass boilers at Okeelanta's cogeneration plant located 6 miles south of South Bay on U.S. Highway 27. The application is incomplete. In order to continue processing your application, the Department will need the additional information requested below. Should your response to any of the below items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. For each boiler during the period of 05/01/99 through 12/31/00, please provide the following information in a tabled format. Provide data for each day during a one-month period representative of operations before the violations, during the violations, and after the violations.

   a. 24-hour averages for CO, NOx, and SO_2 emissions. If possible, also provide line chart representing the 24-hour averages of each pollutant (on the same chart) over the entire period separately for each boiler.

   b. Daily average of tons of bagasse fired, tons of wood fired, gallons of oil fired, and the bagasse/wood firing ratio.

   c. The daily average steam production, power production, stack gas moisture, stack gas oxygen content; and the F-factor used.

   In detail, please describe the method of calculating the heat input for use in the compliance averages. What is the thermal efficiency of each boiler? Has the thermal efficiency been tested for each boiler?

2. Okeelanta speculates that the increased CO emissions result from a high moisture content of the biomass fuel due to increased rainfall. The data presented does not appear to establish any conclusive correlation between rainfall and CO emissions. However, does Okeelanta maintain a dry source of biomass fuel or attempt to prevent some biomass from being rained upon? Has Okeelanta made any provisions to attempt drying the fuel before firing in the cogeneration boilers? Please provide a list of actions taken by Okeelanta to adjust operations in response to gradually increasing CO emissions. Has Okeelanta researched changes in equipment or processes that could be implemented to correct the elevated levels of CO emissions?

3. From the information provided, the samples of bagasse appear to be within the range of sulfur contents stated in the initial application. Most samples of the wood materials show sulfur contents within the range stated in the initial application. However, several samples of the wood materials show sulfur contents as much as two to three times higher than expected. Please describe the plan for sampling the biomass fuels and analyzing for the sulfur content. When a sample indicates an unusually high sulfur content, what provisions does Okeelanta make to separate the shipment and proportionally blend with lower sulfur biomass to comply with the SO_2 standards? What other methods are used or could be used to adjust operations for biomass fuels detected to have high sulfur contents? Has Okeelanta evaluated the option of using a lime/activated carbon product for additional SO_2 control?

requested) SO_2 emission rates are higher, please revise the PSD significant impact analysis, Class I and Class I increment consumption, and the AAQS analysis accordingly. Please provide a report of the revised modeling effort as well as the modeling files for review.

c. If additional modeling is necessary and indicates a significant impact, the Department is considering new short-term SO_2 limits. If revised modeling indicates an insignificant impact, the Department is considering providing the short-term SO_2 emission rates in the revised permit for informational purposes.

6. As the Department has pointed out during previous permitting actions, the initial PSD air construction permit authorized the installation of coal handling facilities and the firing of low sulfur coal. However, the coal handling facilities were never constructed and coal has never been fired at this plant. Okeelanta Power L.P. must obtain new authorization from the Department (through a permit modification) to fire any coal in the future. At the very least, such a request shall evaluate current "Best Available Control Technologies" for each significant pollutant. Also, it is inappropriate to use the "potential emissions" for a fuel (coal) that is no longer authorized and has never been fired as emissions decreases to offset increases in actual emissions from the proposed project. Please revise the request accordingly.

7. The Department intends to update the PSD permit to incorporate all of the previous revisions. Please include any other requests for amendments at this time.

The Department will resume processing your application after receipt of the requested information. Rule 62-4.050(3), F.A.C. requires that all applications for a Department permit must be certified by a professional engineer registered in the State of Florida. This requirement also applies to responses to Department requests for additional information of an engineering nature. Material changes to the application should also be accompanied by a new certification statement by the authorized representative or responsible official. Permit applicants are advised that Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If there are any questions, please call me at 850/414-7268.

Sincerely,

Jeffery F. Koerner, P.E.
New Source Review Section

AAL/jfk

cc: Mr. Ricardo Lima, Okeelanta Power
Mr. James Meriwether, Okeelanta Power
Mr. David Buff, Golder Associates
Mr. David Knowles, SD
Mr. Darrel Graziani, PBCHD
Mr. Gregg Worley, EPA Region 4
Mr. John Bunyak, NPS

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Ricardo Lima
Vice President & Gen. Mgr.
Okeelanta Power Limited Partnership
8001 US Highway 27 South
South Bay, FL 33493

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) RACHAEL MARTINEZ — B. Date of Delivery 4/6/04

C. Signature — X — ☐ Agent ☐ Addressee

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If YES, enter delivery address below: ☐ No

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☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

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PS Form 3811, July 1999 Domestic Return Receipt 102595-00-M-0952

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Okeelanta Power

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Name (Please Print Clearly) (to be completed by mailer)
Mr. Ricardo Lima
Street, Apt. No., or PO Box No.
8001 US Highway 27 S.
City, State, ZIP+4
South Bay, FL 33493

PS Form 3800, July 1999 See Reverse for Instructions