404-562-9095

Department of Environmental Protection

Jeb Bush
Governor

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

David B. Struhs
Secretary

June 21, 2000

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

863-902-2223

Mr. Murray T. Brinson, Vice President
United States Sugar Corporation
111 Ponce DeLeon Avenue
Clewiston, FL 33440

Re: Additional Information Request No. 2
DEP File No. 0510003-010-AC (PSD-FL-272A)
Revised ISC Prime Modeling Scenario

Dear Mr. Brinson:

On May 23, 2000, the Department received additional information requested on February 4, 2000. The Department reviewed this information and has some additional questions regarding the revised modeling scenario. The application remains incomplete. In order to continue processing your application, the Department will need the additional information attached to this letter. 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. *Prior to revising the modeling analysis, the Department would like to meet with your consultant to establish acceptable scenarios to prevent further delays.*

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. A new certification statement by the authorized representative or responsible official must accompany any material changes to the application. Rule 62-4.055(1), F.A.C. now requires applicants to respond to requests for information within 90 days. If you have any questions, please call me at 850/414-7268. Matters regarding modeling issues should be directed to the project meteorologist, Cleve Holladay, at 850/921-8986.

Sincerely,

Jeffery F. Koerner

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

JFK/jfk

cc: Mr. David Buff, P.E., Golder Associates
Mr. David Knowles, SD
Mr. Gregg Worley, EPA
Mr. John Bunyak, NPS

Question 1 1 1 1 1 1

1. 1 1

1 1 1 1 1

Have to be conservative

7. B4 screen run
Dave explained

13. Flow rates could change

15. VS Sugar will look at this
B5+6 probably can't burn f.o.

16. Will think about 75%
c. would accept steam rates a /hr maximum
d.

1. Response to FDEP No. 1 and EPA No. 1: The response indicates that Boiler Nos. 1-3 are not currently restricted on annual operating hours or to only operating during the crop season. However, it is the recent startup of the refinery that would actually allow these units to operate during the traditional off-season. In addition, excess sugar cane and bagasse will be brought in from U.S. Sugar's Bryant mill. Please explain why operation of Boiler Nos. 1-3 during the off-season would not be considered a change in the method of operation and therefore a modification.

   Also, please define "crop season" dates for the PSD baseline cases as well as for the proposed project. There appear to be inconsistencies between the various modeling runs. For example, the off-season SO_2 PSD Class I increment screening runs have monthly activity factors of "1" for the period of May to October while the corresponding refined runs have monthly activity factors of "1" for the period of April to October. The analyses should be consistent. In addition, they should also be conservative. In evaluating the increment consumption of the proposed project, partial operation during a month should be input as full operation for that month. In the example above, the refined runs with monthly activities of "1" for the period of April to October would be correct if there is any proposed off-season operation for April.

2. Response to FDEP No. 2 and EPA No. 2: Comments for the Section 6.0 tables are provided below.

3. Response to FDEP No. 3 and EPA No. 4: No comment.

4. Response to FDEP No. 4 and EPA No. 5: Comments for the Section 6.0 tables are provided below.

5. Response to FDEP No. 5: No comment.

6. Response to EPA No. 3: Comments regarding CO emissions are provided below.

7. Crop Season Operational Restrictions: Please provide information that supports the "worst-case scenarios" presented for Boiler Nos. 1-4. The Department is not yet convinced because the restrictions on fuel oil involve four different boilers, different heat input rates, different fuel consumption rates for each boiler, and different fuel sulfur limits. Please provide the maximum 1-hour fuel consumption rate for each boiler based on design specifications. Additional comments are provided below.

8. Off-Season Operational Restrictions (1-hr, 3-hr, and 8-hr Operation): The Department is not convinced that the worst case scenario is presented for limiting total steam production from Boiler Nos. 1-4 and 7 to 1,062,800 lb/hr. These units have different stack heights, diameters, heat inputs, velocities, fuel oil consumption rates, and steam enthalpies. Please provide information that supports the "worst-case scenarios" presented or simplify the restrictions. The Department is not yet convinced because the restrictions on fuel oil involve four different boilers, different heat input rates, different fuel consumption rates for each boiler, and different fuel sulfur limits. Also, please revise the heat input from bagasse to reflect the remaining heat input after subtracting the heat input from oil firing. In other words, it is inappropriate to consider an 80% thermal efficiency from oil firing for these units. Historically, the Department has made concessions to limit and monitor the steam production as a surrogate for fuel consumption. Otherwise, the Department is considering a requirement to install weigh scales and limit bagasse consumption to provide reasonable assurance. Additional comments are provided below.

9. Off-Season Operational Restrictions (24-hr Operation): The Department offers the same comments as no. 8 above. It is inappropriate to limit fuel oil firing based on steam production. Again, the Department is not convinced that the worst case scenario is presented for limiting total steam production or fuel oil consumption for the various combinations presented. Please provide information that supports the "worst-case scenarios" presented or simplify the restrictions. What are the process steam needs during the off-season? What combinations of boilers could be used to meet these needs? If the steam needs can be met with only a few boilers, the Department believes the modeling can be greatly simplified. Additional comments are provided below.

10. Table 2-1. Short-Term Emissions for Boiler No. 4: Footnote (a) indicates 55% thermal efficiency for bagasse firing and 80% thermal efficiency for oil firing. The thermal efficiency for bagasse firing is fairly well established. The Department does not believe this assumption to be accurate for a boiler designed to fire primarily bagasse with supplemental oil firing. Please revise and base solely on the maximum oil-firing rate allowed by permit with the remaining heat input coming from bagasse.

11. Table 2-2. Future Maximum Annual Emissions for Boiler No. 4: Although the industry has performed some particulate tests to establish the fraction of PM_{10} emissions, no separate limits have been imposed for PM_{10}. In addition, the Department is not aware of any recent PM_{10} tests conducted for this industry. Please revise the modeling based on the assumption that all of the PM emissions are PM_{10}.

12. Table 2-4. Emissions from Granular Carbon Regenerative Furnace (GCRF): The SO_2 emission rate should be based on 0.05% not 0.03% sulfur by weight because the permit was revised. A review of the file indicates that an SO_2 limit and testing was required for the GCRF because the decolorization process may result in additional SO_2 emissions, which would be controlled by the wet scrubber. However, the current application suggests that the GCRF will only emit SO_2 as the result of fuel combustion. Please verify that the sugar refining process will not result in additional SO_2 emissions. If it does, please quantify. Also, please provide a summary of the SO_2 emissions from the GCRF for tests required in construction permit modification no. 0510003-004-AC. only SO_2 is from fuel oil

13. Table 2-7. Stack Parameters for Existing and Modified Boiler No. 4: This table clearly indicates that increased steam production for Boiler No. 4 will result in higher volumetric flow rates and exit velocities. Conversely, lower steam production rates will result in lower volumetric flow rates and exit velocities. Please revise the modeling analysis to account for the lower flow rates and velocities whenever a reduced steam production or heat input is requested (for example, a reduced heat input based on a 24-hour average).

14. Table 3-4. Net Emissions increase for Boiler No. 4: Please confirm that this table represents the last permitting action (PSD-FL-272) for Boiler No. 4 and not the current request. The current request should result in no increases in emissions from Boiler No. 4.

15. Table 6-2. Summary of Stack Parameters: This table omits Boiler Nos. 5 and 6 from any consideration in the modeling analysis. A review of the operational history indicates no use during the last crop season. In addition, the emissions reductions were used as net decreases to avoid a BACT determination for at least CO emissions for the PSD permit for Boiler No. 7. The Department will remove the authority to operate these units, even for standby purposes.

16. Table 6-3. SO_2 Emissions – Future Crop Season

    a. The SO_2 emission rate for firing bagasse in Boiler No. 4 should be based on the revised permit limit of 0.06 lb/mmBTU not 0.10 lb/mmBTU. This occurs in both the 3-hour and 24-hour cases. Please revise the SO_2 emission rate for Boiler No. 4 using an emissions rate of 0.06 lb SO_2/mmBTU as the "maximum" emissions.

    b. Note (b) indicates that 75% reduction was *assumed* for bagasse firing from Boiler Nos. 1-3. The modeling analysis indicates that SO_2 is very close to the acceptable PSD increments. Therefore, it is inappropriate to assume such a large reduction. Please revise the analysis to assume no reductions Otherwise, the Department will establish appropriate permit limits and stack testing to ensure that the reduced emission levels are routinely achieved.

    c. Note (c) indicates that the steam rates for Boiler Nos. 1-3 are based on the 24-hour average steam rates. What does U.S. Sugar believe the maximum 1-hour steam rates to be? See also the Department's Table A-1 and corresponding questions.

d. Both the 3-hour and 24-hour cases include the current permit restrictions for fuel oil firing. This is inappropriate because Boiler No. 4 now has a separate fuel tank and fires oil with a lower sulfur content. Because this project includes stack height increases and a unique air dispersion model to satisfy the air quality impacts for SO_2, it is important to ensure that a lower emission rate for a unit with a shorter stack and cooler exhaust temperature would not result in a higher ambient impact. Please revise the modeling analysis accordingly and provide supporting information to indicates how the "worst case" was determined. Otherwise, model each scenario offered for consideration.

17. Table 6-4a. PM_{10} and CO Emissions – Future Crop Season

a. For Boiler Nos. 1-4, please revise and base the maximum 24-hour case on PM_{10} equal to 100% of PM emissions.

b. The emission rates for Boiler Nos. 1-3 were based on actual test data. However, the table reflects two different emission rates for these boilers, apparently based on the averaging period. Please revise the data for the maximum 8-hour case to reflect the emission rates used for the maximum 1-hour case. This is similar to using the maximum permitted emission rates for Boiler Nos. 4 and 7. CO

18. Table 6-4b. Maximum SO2 Emissions – Future Off-Season Operation

a. Footnotes (a) and (b) indicate 55% thermal efficiency for bagasse firing and 80% thermal efficiency for oil firing. Although the thermal efficiency for bagasse firing is fairly well established, the Department does not believes the assumption for oil firing to be accurate nor verifiable for a boiler designed to fire primarily bagasse with supplemental oil firing. Please revise and base solely on the maximum oil-firing rate allowed by permit with the residual heat input made coming from bagasse. In other words, the heat input from oil firing plus the heat input from bagasse firing will add up to the maximum design heat input rate – not a lower heat input rate.

b. Note (b) indicates that 75% reduction was *assumed* for bagasse firing from Boiler Nos. 1-3. The modeling analysis indicates that SO_2 is very close to the acceptable PSD increments. Therefore, it is inappropriate to assume such a large reduction. Please revise the analysis to assume no reductions Otherwise, the Department will establish appropriate permit limits and stack testing to ensure that the reduced emission levels are routinely achieved.

c. Note (d) indicates that the steam rates for Boiler Nos. 1-3 are based on the 24-hour average steam rates. What does U.S. Sugar believe the maximum 1-hour steam rates to be? See also the Department's Table A-1 and corresponding questions.

d. Both the 3-hour and 24-hour cases include new permit restrictions for fuel oil firing and steam rates for Boiler Nos. 1-4 and 7. The requested limits may not be adequate to determine ensure maximum emissions. As shown in this table, there are three different steam enthalpies for the five boilers and as well as three different fuel sulfur contents. Because this project includes stack height increases and a unique air dispersion model to satisfy the air quality impacts for SO_2, it is important to ensure that a lower emission rate for a unit with a shorter stack and cooler exhaust temperature would not result in a higher ambient impact. Please simplify the restrictions on the boilers to a manageable scenario, revise the modeling analysis accordingly, and provide supporting information to indicate how the "worst case" was determined. Otherwise, model each alternate scenario offered for consideration.

19. Table 6-4c. Maximum PM_{10} Emissions – Off-Season Operation

a. See Department comment 9a above.

b. U.S. Sugar requests a maximum 24-hour steam rate of 744,000 lb/hour for Boiler Nos. 1-4 and 7. Please provide supporting information that indicates the scenario provided represents the worst case.

c. See Department comment 2 above.

20. Table 6-4d. Maximum CO Emissions – Off-Season Operation

a. See Department comment 9a above.

b. Note (c) indicates that the emission rates for Boiler Nos. 1-3 were based on actual test data. However, the table reflects two different emission rates for these boilers, apparently based on the averaging period. Please revise the data for the maximum 8-hour case to reflect the emission rates used for the maximum 1-hour case. This is similar to using the maximum permitted emission rates for Boiler Nos. 4 and 7.

c. Note (d) indicates that the steam rates for Boiler Nos. 1-3 are based on the 24-hour average steam rates. What does U.S. Sugar believe the maximum 1-hour steam rates to be? See also the Department's Table A-1 and corresponding questions.

21. Tables 6-6 through 6-12. Summary of SO_2 Facilities

a. A new power plant, Lake Worth Generating, has been permitted adjacent to Lake Worth Utilities. The FPL Martin Plant has published notice on a Draft Permit for two new combustion turbines. Shouldn't the potential emissions from these two new facilities be included in the inventory?

b. Are the east and west pellet plants listed in Table 6-8 still in existence at the U.S. Sugar Clewiston facility?

22. Table 6-13. A Summary of the Building Structures: As noted in this table, several large building structures are located in the refinery and are included in the modeling analysis. The structures had not been included in any previous PSD modeling at this facility. A review of the permitting files indicates that the Bureau of Air Regulation issued a PSD permit for Boiler No. 7 in 1995. According to Golder Associates (letter dated January 16, 1997), this boiler was "designed and built with the intention of operating 8760 hours per year" to "provide steam to the new mill expansion (sugar processing system)" during the crop season as well as during the off season. The Department's South District Office issued a *minor source* permit for the refinery operations in 1996, conditioned to avoid PSD applicability. This permit was later revised to further restrict operations in an effort to maintain permitted emission levels below the Significant Emissions Rates and continue to avoid PSD applicability. As a result of these separate applications, no BACT determinations were made for the refinery units and no modeling analysis was performed that included the refinery structures. Please describe why these separate requests should not be considered "project splitting".

23. Department's Table A-1. Capacity History for Boiler Nos. 1-3 (attached): A review of the permit files indicated much lower maximum steam rates and heat input levels for Boiler Nos. 1-3, as provided by U.S. Sugar. Please see the attached summary Table A-1. For each boiler this table lists the following items:

- The maximum design steam rate (lb/hr);
- The maximum design heat input (mmBTU/hr);
- The heat input (mmBTU/hr) and firing rate (TPH) for firing only bagasse; and
- The heat inputs (mmBTU/hr) and firing rates (TPH and GPH) for firing the maximum amount of fuel oil with the remaining heat input from bagasse.

The information for "1973/1974" column is based on data provided by U.S. Sugar in previous air construction permit applications. The information for "ARMS DB" column is based on the current data available in the state's Air Resources Management Database. The information for the "proposed" column is based on data in the current proposed project. As shown, it appears that both the steam rates and heat inputs have escalated over the last 25 years. Please identify each modification made to these boilers that allowed substantial increases in the steam production rates or heat inputs including the dates, physical

changes, approvals, permit modifications, and emissions rates. Please identify what U.S. Sugar now considers to be the "maximum 1-hour" steam rates, heat inputs, and oil firing rates for each unit. Please explain why each change did not trigger a PSD modification or an NSPS modification.

24. Other Modeling Questions:

- Please include Boiler Nos. 1-3 in the off-season significant impact analysis for both the PSD Class I and Class II areas.
- Please explain the method for determining an accurate annual concentration with different emission rates for each operating season (crop season and off-season).
- Please list the radii of significant impact for all Class II significant impact analyses (both crop season and off-season) in the appropriate table.

Due to the assumptions made, the changes requested, and modeled impacts approaching the PSD increments, the Department does not yet believe the Air Quality Analysis demonstrates compliance with the Ambient Air Quality Standards or PSD increments.

Golder Associates Inc.

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Golder Associates

September 8, 2000

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RECEIVED

SEP 11 2000

BUREAU OF AIR REGULATION

Florida Department of Environmental Protection
New Source Review Section
2600 Blair Stone Road
Tallahassee, FL

Attention : Jeffery Koerner, P.E.

RE: United States Sugar Corporation
PSD Permit Application for Boiler No. 4 and
the Sugar Refinery at the Clewiston Mill
Revised ISC-PRIME Modeling Scenario
Request for Additional Information No. 2

Dear Mr. Koerner:

United States Sugar Corporation (U.S. Sugar) has received the Florida Department of Environmental Protection's (FDEP) letter dated June 21, 2000, requesting additional information in regards to the revised ISC-PRIME modeling scenario for the Clewiston Mill. Revised modeling scenario results were submitted to the FDEP in a letter from Golder Associates Inc. dated May 3, 2000. The purpose of this letter is to address the questions in the FDEP's letter in order to address all outstanding issues. The comments are addressed below, in the same order as they appear in the comment letter. Note that U.S. Sugar has performed revised dispersion modeling for all pollutants for both the "crop season" and "off-season" operating scenarios, as described below. Note that a complete set of Section 6.0 tables (from the PSD report) are attached, revised to be consistent with the current modeling.

1. Operation of Boiler Nos. 1-3 during the off-season would not be considered a change in the method of operation under FDEP's rules, and therefore would not constitute a modification. The state's definition of modification at Rule 62-210.200(188)2. reads as follows:

   "For any pollutant that is specifically regulated by EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975."

   Boiler Nos. 1-3 currently do not have any federally enforceable restriction on operating hours. These three boilers have never had a federally enforceable restriction on operating hours. As a result, by FDEP rules, Boiler Nos. 1-3 operating in the off-season

would not constitute a change in the method of operation, and would therefore not be a "modification".

U.S. Sugar has provided information concerning start and end dates of historic crop seasons. From the startup of the Clewiston mill in 1929 through 1961, crop seasons routinely spanned 7 months and from time to time spanned 8 months. The U.S. Sugar Bryant mill began operating in 1962, and therefore U.S. Sugar's total sugar cane supply was shared between the two mills, and crop seasons generally spanned 6 to 7 months thereafter. The 1972-1973 crop season spanned 7 months, from October through April. Based on this historical information, the baseline months for PSD increment consumption for the Clewiston mill will span 7 months, from October through April.

The future crop season for Clewiston will also be modeled as 7 months, from October through April. This is the anticipated future maximum crop season length. U.S. Sugar does not agree with placing a limit in the permit on the crop season length. The FDEP requires "reasonable assurance" that ambient standards or PSD increments will not be violated. The dispersion modeling is already very conservative, and provides the FDEP with that reasonable assurance.

The approach recommended by FDEP will be utilized in the modeling, i.e., the future scenario will be modeled as two facilities in a single model run – a "crop season" facility and an "off-season" facility. The crop season facility will be modeled for 7 months, October through April, and the off-season facility will be modeled as the remaining 5 months. An annual average will then be obtained for all months. The PSD baseline sources for the Clewiston mill will be modeled for 7 months, from October through April.

2. No discussion required.
3. No discussion required.
4. No discussion required.
5. No discussion required.
6. No discussion required.
7. Refer to Comment 16 for a discussion of worst case operating scenarios for various pollutants for the crop season operation
8. Refer to Comments 18-20.
9. Refer to Comments 18-20.
10. Although we do not agree with the FDEP on this issue, for purposes of expediting this application, the emission tables have been revised to reflect 55% thermal efficiency for both bagasse and fuel oil burning.
11. Many previous permit applications and modeling analysis for Florida bagasse boilers have used the presumption of 93% of PM emissions is equal to PM_{10} emissions. The

basis of this presumption is a stack test performed on a bagasse boiler at Bryant by EPA (copy of test results attached). Two tests using an Andersen impactor were performed. The first test showed 91.5% of total PM was 10.5 microns or less, while the second test showed 87.1% of total PM as less than 10.5 microns in size. The average of the two runs was 89%. Thus, the 93% factor used in developing the PM_{10} emissions for Clewiston overestimates actual PM_{10} emissions, based on this testing.

12. The SO_2 emissions shown in the initial construction permit for the GCRF were based on a similar industry. Subsequently, tests were conducted on the sugar decolorization process that indicated minimal sulfur concentrations in the feed material, and that this sulfur was not removed by the GCRF. Therefore, no SO_2 emissions are expected from the GCRF except for that due to fuel sulfur. No SO_2 compliance tests have been conducted on the GCRF because Permit No. 0510003-009-AC was issued on Nov. 11, 1999, prior to any initial compliance testing, and this revised permit did not require any SO_2 tests. Since all SO_2 is due to fuel oil burning, there is no need to test for SO_2 emissions.

13. The modeling has been revised to reflect appropriate volumetric flow rates and velocities whenever a reduced steam production is indicated for the scenario.

14. Permit No. 051-0003-009-AC, issued Nov. 11, 1999, required that an application be submitted for modification that included, among other information, the latest emission information. Since certain emission limits for Boiler No. 4 were established in this permit that were lower than those in the initial application, the purpose of providing Table 3-4 was to bring the project increases up to date. The current request, as the FDEP points out, is only to revise the modeling analysis.

15. U.S. Sugar will agree that these boilers will not be operated in the future.

16. a. The current permit limit of 0.06 lb SO_2/MMBtu for Boiler No. 4 has been used throughout the revised emission calculations and modeling analysis.

    b. An SO_2 emission rate of 0.06 lb/MMBtu for bagasse burning on all boilers has been used in the revised analysis (except for Boiler No. 7), in order to add consistency to the analysis. Boiler Nos. 1, 2 and 3 have the same type wet scrubbing system and burn the same bagasse fuel as Boiler No. 4, so SO_2 emissions should be similar. As presented previously to the FDEP, a total of 16 test runs on Boiler No. 4 resulted in an average SO_2 emission rate from bagasse of 0.007 lb/MMBtu and a maximum of 0.014 lb/MMBtu. Therefore, the 0.06 lb/MMBtu emission factor for Boiler Nos. 1, 2 and 3 is conservatively high.

    c. The maximum 1-hr steam production rates and heat input rates for Boiler Nos. 1-3 are shown in the attached tables, and are as follows:

        Boiler No. 1: 255,000 lb/hr steam; 495.6 MMBtu/hr

        Boiler No. 2: 230,000 lb/hr steam; 447.0 MMBtu/hr

        Boiler No. 3: 130,000 lb/hr steam; 265.3 MMBtu/hr

    These maximum rates are based on recent compliance test rates, with an adequate margin of safety.

d. Various operating scenarios have been developed to appropriately determine a reasonable "worst case" operating scenario. Both crop season and off-season operations were assessed. The operating scenarios were developed based on steam production requirements, practical operating rates for the boilers (i.e., several boilers would not be operated at less than 50% load when fewer boilers at higher capacity could provide the same steam requirements), fuel burning capabilities of the boilers, etc. The oil firing rates for Boiler Nos. 1 – 4 were based on the maximum physical capabilities of these boilers (1500, 1500, 900, and 1500 gallons per hour, respectively), except that certain total fuel oil burning limitations for Boiler Nos. 1-4 were taken where as necessary to maintain acceptable impacts.

The scenarios were pollutant and averaging time specific. Screening runs were performed for the various scenarios to identify the overall worst-case. The Clewiston facility only was modeled (crop season facility and off-season facility) to determine the scenario resulting in worst-case impacts. This scenario was then used for the final refined modeling analysis to assess compliance with AAQS and PSD increments with all sources.

Note that as a result of the revised analysis, U.S. Sugar will raise the stacks on Boiler Nos. 1-3 to a minimum height of 213 feet.

The following forms the basis of the modeling analysis for the crop season operation.

Crop season operation

- All boilers (Nos. 1, 2, 3, 4, and 7) operating at maximum capacity (based on permit limitations, Boiler Nos. 4 and 7 operate at slightly reduced rates for the 24-hour averaging time).
- Boiler Nos. 1, 2 and 3 are restricted to burning fuel oil with no greater than 2.5% sulfur.
- Boiler No. 4 is restricted to burning fuel oil with no greater than 0.7% sulfur (with a separate fuel oil tank).
- Boiler No. 7 is restricted to burning fuel oil with no greater than 0.05% sulfur (with a separate fuel oil tank).
- The worst case for SO_2 emissions occur with Boiler Nos. 1, 2, 3 and 4 burning the maximum amount of fuel oil, with the remainder of heat input due to bagasse burning. The worst case SO_2 emissions for Boiler No. 7 are when burning 100 percent bagasse.
- SO_2 3-hour averaging time: No. 6 fuel oil consumption (total of Boiler Nos. 1, 2, 3 and 4) is limited to 16,200 gallons per 3-hour period. Two scenarios were evaluated: A) all boilers operating at maximum heat input, and B) all boilers operating at 80% load.
- SO_2 24-hour averaging time: No. 6 fuel oil consumption is limited to 88,800 gallons per 24-hour period. Four scenarios were evaluated: A&B) all boilers operating at maximum heat input, with the total fuel oil burning distributed differently, and C&D) all boilers operating at 80 percent load, with the total fuel oil burning distributed differently.

- Maximum PM and CO emissions occur under 100 percent bagasse firing and maximum steam rate for all boilers.

The following forms the basis of the modeling analysis for the off-season operation.

Off-season operation

1-, 3- and 8-Hour Operation:

- Total steam production from all boilers (Nos. 1, 2, 3, 4, and 7) is limited to 1,000,000 lb/hr steam.
- Total steam production from Boiler Nos. 1-4 will not exceed 615,000 lb/hr.
- For Boiler Nos. 1-4, only three of these boilers will operate at any one time.
- Boiler Nos. 1, 2 and 3 are restricted to burning fuel oil with no greater than 1.6% sulfur during the off-season. U.S. Sugar will comply with this requirement by minimizing the amount of No. 6 fuel oil contained in the fuel oil tank for Boiler Nos. 1, 2 and 3 at the end of each crop season, and purchasing only No. 6 oil with a maximum sulfur content of 1.6% during the off-season. (Note: a separate tank provides these boilers with fuel oil)
- Boiler No. 4 is restricted to burning fuel oil with no greater than 0.7% sulfur (with a separate fuel oil tank).
- Boiler No. 7 is restricted to burning fuel oil with no greater than 0.05% sulfur (with a separate fuel oil tank).
- Total No. 6 fuel oil consumption (total of Boiler Nos. 1, 2, 3 and 4) is limited to 11,700 gallons per 3-hour period.
- For SO_2, two scenarios were evaluated: A) Boiler Nos. 1-3 and 7 operating at maximum steam rate, max fuel oil burning in Boiler Nos. 1-3; B) Boiler Nos. 2, 3 and 4 operating at reduced load, max oil firing in Boiler Nos. 2, 3 and 4.

24-Hour Operation:

- Total steam production from all boilers (Nos. 1, 2, 3, 4, and 7) is limited to 800,000 lb/hr steam (24-hr average).
- Total steam production from Boiler Nos. 1-4 is limited to 450,000 lb/hr steam (24-hr average).
- For Boiler Nos. 1-4, only three of these boilers will operate at any one time.
- Boiler Nos. 1, 2 and 3 are restricted to burning fuel oil with no greater than 1.6% sulfur during the off-season.
- Boiler No. 4 continues to be restricted to burning fuel oil with no greater than 0.7% sulfur (with a separate fuel oil tank).
- Boiler No. 7 continues to be restricted to burning fuel oil with no greater than 0.05% sulfur (with a separate fuel oil tank).
- Total No. 6 fuel oil consumption (total of Boiler Nos. 1, 2, 3 and 4) is limited to 54,000 gallons per 24 period.

- For SO_2, Five scenarios were evaluated, representing various boiler loads and fuel oil burning rates, with total steam production and oil burning for Boiler Nos. 1-4 limited as described above.
- Maximum PM and CO emissions occur under 100 percent bagasse firing in all boilers. Scenarios A-D analyzed for SO_2 emissions were also evaluated for PM_{10} emissions. To simplify the analysis, the crop season CO emissions were modeled for both the crop season and the off-season scenarios.

17. – 20. Refer to Comments 11 and 16 above.

21. Lake Worth Generating and the FPL Martin new combustion turbines will be incorporated into the evaluation.

22. FDEP investigated the potential applicability of PSD prior to issuing the 1996 and 1997 permits for the sugar refinery. The 1997 permit includes an express determination by FDEP that PSD did not apply. In addition, the recent permit (No. 051-0003-009-AC/PSD-FL-272) imposed BACT upon all of the refinery units, and the current modeling analysis incorporates the refinery sources as well as the new refinery structures, which should satisfy any FDEP concerns.

23. There have been no modifications to these boilers that have affected maximum steam production or heat input rates. Past compliance test data indicate that, during the period 1976 to 1982, Boiler No. 1 achieved a maximum steam rate during compliance testing of 236,250 lb/hr and a maximum heat input rate of 462.3 MMBtu/hr (see attached tables taken from the Clewiston Boiler No. 4 application dated 1984). Similarly, during the period 1975 to 1982, Boiler No. 2 achieved a maximum steam rate during compliance testing of 215,100 lb/hr and a maximum heat input rate of 410.4 MMBtu/hr. During the period 1975 to 1982, Boiler No. 3 achieved a maximum steam rate during compliance testing of 128,483 lb/hr and a maximum heat input rate of 275.0 MMBtu/hr. The steam production rates and heat input rates measured during recent compliance testing of Boilers 1, 2, and 3 are comparable to these historical values. Our answer to Question 16.c presents the maximum production rates and heat input values used in the current modeling effort. Current and historical steam production rates and heat inputs are within 90% of the modeled maximums.

24. Boiler Nos. 1 – 3 will be included in the off season significant impact analysis for both the PSD Class I and Class II areas. The annual concentration will be determined by modeling the crop season and off-season scenarios in the same model run. The radii of significant impact for all Class II significant impact analyses (both crop season and off-season) is provided in the appropriate table.

Revised Air Quality Impact Assessment

Based upon the above model related comments, Golder Associates has performed additional modeling analysis in order to bring the project impacts up to date. All model runs have been re-executed using the ISC-PRIME model. All modeling was performed with the final selected control option of raising the existing stacks on Boiler Nos. 1, 2 and 3 from the current 165 feet to a height of 213 feet. Note that a complete set of tables from

Section 6.0 are being provided, including additional tables reflecting crop-season emissions and impacts.

A shown in the attached Section 6.0 tables, compliance with all standards and increments is predicted with the ISC-PRIME model. All model input and output files will be placed at ftp.golder.com/gville/srm/cleve/USSCLEW – Golder's FTP site for access by FDEP and EPA.

Thank you for consideration of this information. Please call or e-mail me if you have any additional questions.

Sincerely,

Golder Associates Inc.

David A. Buff

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

DB/arz

Attachments

cc: Don Griffin
Bill Wehrum
Lisa Gefen
Stan Krivo, EPA Region IV
National Park Service

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U.S. SUGAR CLEWISTON

LOAD ANALYSIS EMISSION TABLES

Table 3 HR CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Crop Season Operation - 3-hr Averaging Time (7/18/00)

Boilers 1-3 @ 2.5% sulfur fuel oil; 213 ft stack height

Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr [a]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled SO_2 Emissions: Fuel Oil [b] (lb/hr)	Bagasse [c] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
CASE A: MAXIMUM HEAT INPUT												
1	495.6 [c]	225.1	1,500	225.0	270.6	615.0	16.2	631.2	79.54	190,000	63.0	19.20
2	447.0 [c]	225.1	1,500	225.0	222.0	615.0	13.3	628.3	79.17	171,400	56.8	17.32
3	265.3 [c]	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8	8.47
4	633.0	225.1	1,500	213.0	420.0	153.3	25.2	178.5	22.49	266,800	83.2	25.35
7	812.0	249.0	0	0.0	812.0	0.0	138.0	138.0	17.39	290,000	85.2	25.96
Totals	2,652.9		5,400 (16,200 gallons per 3-hour period)	798.0	1,854.9	1,752.3	200.6	1,952.9	246.1			
CASE B: 80% OF MAXIMUM HEAT INPUT												
1	396.5 [c]	225.1	1,500	225.0	171.5	615.0	10.3	625.3	78.79	152,000	50.4	15.36
2	357.6 [c]	225.1	1,500	225.0	132.6	615.0	8.0	623.0	78.49	137,120	45.5	13.86
3	212.2 [c]	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2	6.78
4	506.4	225.1	1,500	213.0	293.4	153.3	17.6	170.9	21.53	213,440	66.5	20.28
7	649.6	249.0	0	0.0	649.6	0.0	110.4	110.4	13.91	232,000	68.1	20.77
Totals	2,122.3		5,400 (16,200 gallons per 3-hour period)	798.0	1,324.3	1,752.3	150.9	1,903.2	239.8			

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 0.06 lb/MMBtu SO_2 due to bagasse firing, based on industry test data, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 24 HR CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Crop Season Operation - 24-hr Averaging Time (7/18/00)
Boilers 1-3 @ 2.5% sulfur fuel oil; 213 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil[a] (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr[a]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled SO_2 Emissions: Fuel Oil[b] (lb/hr)	Bagasse[c] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
				CASE A: MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL								
1	495.6	225.1	1,400	210.0	285.6	574.0	17.1	591.1	74.48	190,000	63.0	19.20
2	447.0	225.1	1,400	210.0	237.0	574.0	14.2	588.2	74.12	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8	8.47
4	600.0	225.1	0	0.0	600.0	0.0	36.0	36.0	4.54	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	125.5	125.5	15.81	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	555.0	1,990.9	1,517.0	200.6	1,717.6	216.4			
				CASE B: MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL								
1	495.6	225.1	900	135.0	360.6	369.0	21.6	390.6	49.22	190,000	63.0	19.20
2	447.0	225.1	900	135.0	312.0	369.0	18.7	387.7	48.85	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8	8.47
4	600.0	225.1	1,000	142.0	458.0	102.2	27.5	129.7	16.34	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	125.5	125.5	15.81	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	547.0	1,998.9	1,209.2	201.1	1,410.3	177.7			
				CASE C: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL								
1	396.48	225.1	1,400	210.0	186.5	574.0	11.2	585.2	73.73	152,000	50.4	15.36
2	357.6	225.1	1,400	210.0	147.6	574.0	8.9	582.9	73.44	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2	6.78
4	480.0	225.1	0	0.0	480.0	0.0	28.8	28.8	3.63	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	100.4	100.4	12.65	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	555.0	1,481.7	1,517.0	153.8	1,670.8	210.5			
				CASE D: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL								
1	396.48	225.1	900	135.0	261.5	369.0	15.7	384.7	48.47	152,000	50.4	15.36
2	357.6	225.1	900	135.0	222.6	369.0	13.4	382.4	48.18	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2	6.78
4	480.0	225.1	1,000	142.0	338.0	102.2	20.3	122.5	15.43	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	100.4	100.4	12.65	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	547.0	1,489.7	1,209.2	154.3	1,363.5	171.8			

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 0.06 lb/MMBtu SO_2 due to bagasse firing, based on industry test data, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 24 HR NOx CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And NO_x Emissions - Future Crop Season Operation - 24-hr Averaging Time (8/22/00)
Boilers 1-3 @ 2.5% sulfur fuel oil; 213 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil[a] (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr[b]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled NO_x Emissions: Fuel Oil[c] (lb/hr)	Bagasse[d] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
					CASE A: MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	495.6	225.1	1,400	210.0	285.6	77.0	57.1	134.1	16.90	190,000	63.0	19.20
2	447.0	225.1	1,400	210.0	237.0	77.0	47.4	124.4	15.67	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	49.5	26.1	75.6	9.52	83,800	27.8	8.47
4	600.0	225.1	0	0.0	600.0	0.0	120.0	120.0	15.12	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	184.5	184.5	23.25	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	555.0	1,990.9	203.5	435.1	638.6	80.5			
					CASE B: MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	495.6	225.1	900	135.0	360.6	49.5	72.1	121.6	15.32	190,000	63.0	19.20
2	447.0	225.1	900	135.0	312.0	49.5	62.4	111.9	14.10	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	49.5	26.1	75.6	9.52	83,800	27.8	8.47
4	600.0	225.1	1,000	142.0	458.0	55.0	91.6	146.6	18.47	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	184.5	184.5	23.25	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	547.0	1,998.9	203.5	436.7	640.2	80.7			
					CASE C: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	396.48	225.1	1,400	210.0	186.5	77.0	37.3	114.3	14.40	152,000	50.4	15.36
2	357.6	225.1	1,400	210.0	147.6	77.0	29.5	106.5	13.42	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	49.5	15.4	64.9	8.18	67,040	22.2	6.78
4	480.0	225.1	0	0.0	480.0	0.0	96.0	96.0	12.10	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	147.6	147.6	18.60	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	555.0	1,481.7	203.5	325.9	529.4	66.7			
					CASE D: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	396.48	225.1	900	135.0	261.5	49.5	52.3	101.8	12.83	152,000	50.4	15.36
2	357.6	225.1	900	135.0	222.6	49.5	44.5	94.0	11.85	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	49.5	15.4	64.9	8.18	67,040	22.2	6.78
4	480.0	225.1	1,000	142.0	338.0	55.0	67.6	122.6	15.45	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	147.6	147.6	18.60	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	547.0	1,489.7	203.5	327.5	531.0	66.9			

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 55 lb/1000 gal for No. 6 fuel oil; permit limit for Boiler No. 7 of 0.2 lb/MMBtu.

[d] Based on 0.20 lb/MMBtu due to bagasse firing; based on permit limit of 0.25 lb/MMBtu for Boiler No. 7.

Table 3 HR OFFCROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Off-Season Operation - 3-hr Averaging Time (7/20/00)

Boilers 1-3 @ 1.6% sulfur fuel oil; 213 ft stack height

Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

	Boiler Design Rates			Operating Rate					Modeled SO_2 Emissions				Stack Flow		
	Steam	Heat	Heat Input	Steam	Heat Input	Heat Input from		Fuel Oil							
Boiler	Rate[a] (lb/hr)	Input (MMBtu/hr)	From Oil (MMBtu/hr)	Rate (lb/hr)	Rate (MMBtu/hr)	Bagasse (MMBtu/hr)	Oil (MMBtu/hr)	Usage[b] (gal/hr)	Fuel Oil[b] (lb/hr)	Bagasse[c] (lb/hr)	Total (lb/hr)	Total (g/s)	Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
						CASE A (3-hr)									
1	255,000	495.6	225.1	255,000	495.6	270.6	225.0	1,500	393.6	16.2	409.8	51.64	190,000	63.0	19.20
2	230,000	447.0	225.1	230,000	447.0	222.0	225.0	1,500	393.6	13.3	406.9	51.27	171,400	56.8	17.32
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	236.2	7.8	244.0	30.74	83,800	27.8	8.47
4	300,000	633.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	385,000	812.0	249.0	385,000	812.0	812.0	0.0	0	0.0	138.0	138.0	17.39	290,000	85.2	25.96
Totals	1,300,000	2,652.9	1,059.3	1,000,000	2,019.9	1,434.9	585.0	3,900 (11,700 gal/3-hr period)	1,023.4	175.4	1,198.8	151.0			
						CASE B (3-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	214,000	415.9	190.9	225.0	1,500	393.6	11.5	405.1	51.04	159,477	52.9	16.12
3	130,000	265.3	135.0	121,000	246.9	111.9	135.0	900	236.2	6.7	242.9	30.60	77,998	25.9	7.88
4	300,000	633.0	225.1	280,000	590.8	365.8	225.0	1,500	172.2	21.9	194.1	24.46	249,013	77.6	23.66
7	385,000	812.0	249.0	385,000	812.0	812.0	0.0	0	0.0	138.0	138.0	17.39	290,000	85.2	25.96
Totals	1,300,000	2,652.9	1,059.1	1,000,000	2,065.6	1,480.6	585.0	3,900 (11,700 gal/3-hr period)	802.0	178.2	980.1	123.5			

[a] Maximum 3-hour average steam rate.

b No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 0.06 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 24 HR OFFCROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Off-Season Operation - 24-hr Averaging Time (7/26/00)
Boilers 1-3 @ 1.6% sulfur fuel oil; 213 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

	Boiler Design Rates			Operating Rate					Modeled SO_2 Emissions				Stack Flow		
	Steam	Heat	Heat Input	Steam	Heat Input	Heat Input from		Fuel Oil							
Boiler	Rate[a] (lb/hr)	Input (MMBtu/hr)	From Oil (MMBtu/hr)	Rate (lb/hr)	Rate (MMBtu/hr)	Bagasse (MMBtu/hr)	Oil (MMBtu/hr)	Usage[b] (gal/hr)	Fuel Oil[b] (lb/hr)	Bagasse[c] (lb/hr)	Total (lb/hr)	Total (g/s)	Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
						CASE A (24-hr)									
1	255,000	495.6	225.1	235,000	456.7	279.2	177.5	1,183	310.5	16.8	327.3	41.23	175,098	58.1	17.70
2	230,000	447.0	225.1	215,000	417.9	257.9	160.0	1,067	279.9	15.5	295.4	37.22	160,222	53.1	16.19
3	130,000	265.3	135.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.3	800,000	1,612.6	1,275.1	337.5	2,250 (54,000 gal/day)	590.4	157.7	748.1	94.3			
						CASE B (24-hr)									
1	255,000	495.6	225.0	160,000	311.0	209.7	101.3	675	177.1	12.6	189.7	23.90	119,216	39.5	12.05
2	230,000	447.0	225.0	160,000	311.0	209.7	101.3	675	177.1	12.6	189.7	23.90	119,235	39.5	12.05
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	236.2	7.8	244.0	30.74	83,800	27.8	8.47
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,625.2	1,287.7	337.5	2,250 (54,000 gal/day)	590.4	158.4	748.8	94.4			
						CASE C (24-hr)									
1	255,000	495.6	225.0	186,600	362.7	261.4	101.3	675	177.1	15.7	192.8	24.29	139,035	46.1	14.05
2	230,000	447.0	225.0	168,300	327.1	225.8	101.3	675	177.1	13.6	190.7	24.02	125,420	41.6	12.68
3	130,000	265.3	135.0	95,100	194.1	59.1	135.0	900	236.2	3.5	239.7	30.20	61,303	20.3	6.20
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,621.8	1,284.3	337.5	2,250 (54,000 gal/day)	590.4	158.2	748.6	94.3			
						CASE D (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	18.7	18.7	2.35	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	71.3	112.4	749	196.6	4.3	200.9	25.31	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	196.0	225.1	1,501	172.3	11.8	184.0	23.19	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	368.9	160.2	529.1	66.7			
						CASE E (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	18.7	18.7	2.35	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	48.7	135.0	900	236.2	2.9	239.1	30.12	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	218.6	202.5	1,350	155.0	13.1	168.1	21.18	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	391.1	160.2	551.3	69.5			

[a] Maximum 24-hour average steam rate.

b No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 0.06 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 24 HR OFFCROP NOx. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And NOx Emissions - Future Off-Season Operation - 24-hr Averaging Time (8/22/00)
Boilers 1-3 @ 1.6% sulfur fuel oil; 213 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

	Boiler Design Rates			Operating Rate					Modeled NO_x Emissions				Stack Flow		
	Steam	Heat	Heat Input	Steam	Heat Input	Heat Input from		Fuel Oil							
Boiler	Rate[a] (lb/hr)	Input (MMBtu/hr)	From Oil (MMBtu/hr)	Rate (lb/hr)	Rate (MMBtu/hr)	Bagasse (MMBtu/hr)	Oil (MMBtu/hr)	Usage[b] (gal/hr)	Fuel Oil[c] (lb/hr)	Bagasse[d] (lb/hr)	Total (lb/hr)	Total (g/s)	Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
						CASE A (24-hr)									
1	255,000	495.6	225.1	235,000	456.7	279.2	177.5	1,183	65.1	55.8	120.9	15.24	175,098	58.1	17.70
2	230,000	447.0	225.1	215,000	417.9	257.9	160.0	1,067	58.7	51.6	110.2	13.89	160,222	53.1	16.19
3	130,000	265.3	135.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.3	800,000	1,612.6	1,275.1	337.5	2,250 (54,000 gal/day)	123.8	291.9	415.7	52.4			
						CASE B (24-hr)									
1	255,000	495.6	225.0	160,000	311.0	209.7	101.3	675	37.1	41.9	79.1	9.96	119,216	39.5	12.05
2	230,000	447.0	225.0	160,000	311.0	209.7	101.3	675	37.1	41.9	79.1	9.96	119,235	39.5	12.05
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	49.5	26.1	75.6	9.52	83,800	27.8	8.47
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,625.2	1,287.7	337.5	2,250 (54,000 gal/day)	123.8	294.4	418.2	52.7			
						CASE C (24-hr)									
1	255,000	495.6	225.0	186,600	362.7	261.4	101.3	675	37.1	52.3	89.4	11.27	139,035	46.1	14.05
2	230,000	447.0	225.0	168,300	327.1	225.8	101.3	675	37.1	45.2	82.3	10.37	125,420	41.6	12.68
3	130,000	265.3	135.0	95,100	194.1	59.1	135.0	900	49.5	11.8	61.3	7.73	61,303	20.3	6.20
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,621.8	1,284.3	337.5	2,250 (54,000 gal/day)	123.8	293.8	417.5	52.6			
						CASE D (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	62.2	62.2	7.84	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	71.3	112.4	749	41.2	14.3	55.5	6.99	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	196.0	225.1	1,501	82.5	39.2	121.7	15.34	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	123.8	300.1	423.9	53.4			
						CASE E (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	62.2	62.2	7.84	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	48.7	135.0	900	49.5	9.7	59.2	7.46	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	218.6	202.5	1,350	74.3	43.7	118.0	14.86	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	123.8	300.1	423.9	53.4			

[a] Maximum 24-hour average steam rate.

[b] No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 55 lb/1000 gal for No. 6 fuel oil; permit limit of 0.20 lb/MMBtu for Boiler No. 7.

[d] Based on 0.20 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.25 lb/MMBtu.

Table 24 HR OFFCROP PM10
U.S. Sugar Clewiston Mill Maximum PM10 Emissions - Future Off-Season Operation (07/26/00)
Boiler Nos. 1-3 @ 213 feet

Boiler	Boiler Design Rates		Operating Rate		Modeled PM10 Emissions				Stack Flow		
	Steam Rate[a] (lb/hr)	Heat Input (MMBtu/hr)	Steam from Bagasse (lb/hr)	Heat Input From Bagasse (MMBtu/hr)	PM (lb/MMBtu)	PM10 Factor	PM10 (lb/hr)	PM10 (g/s)	Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
				CASE A (24-hr)							
1	255,000	495.6	235,000	456.7	0.25	93%	106.2	13.38	175,098	58.1	17.70
2	230,000	447.0	215,000	417.9	0.25	93%	97.2	12.24	160,222	53.1	16.19
3	130,000	265.3	0	0.0	0.25	93%	0.0	0.00	0	0.0	0.00
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0	0.00
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,612.6			225.5	28.4			
				CASE B (24-hr)							
1	255,000	495.6	160,000	311.0	0.25	93%	72.3	9.11	119,216	39.5	12.05
2	230,000	447.0	160,000	311.0	0.25	93%	72.3	9.11	119,235	39.5	12.05
3	130,000	265.3	130,000	265.3	0.30	93%	74.0	9.33	83,800	27.8	8.47
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0	0.00
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,625.2			240.8	30.3			
				CASE C (24-hr)							
1	255,000	495.6	186,600	362.7	0.25	93%	84.3	10.62	139,035	46.1	14.05
2	230,000	447.0	168,300	327.1	0.25	93%	76.0	9.58	125,420	41.6	12.68
3	130,000	265.3	95,100	194.1	0.30	93%	54.1	6.82	61,303	20.3	6.20
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0	0.00
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,621.8			236.7	29.8			
				CASE D (24-hr)							
1	255,000	495.6	0	0.0	0.25	93%	0.0	0.00	0	0.0	0.00
2	230,000	447.0	160,000	311.0	0.25	93%	72.3	9.11	119,235	39.5	12.05
3	130,000	265.3	90,000	183.7	0.30	93%	51.2	6.46	58,015	19.2	5.86
4	285,000	600.0	200,000	421.1	0.15	93%	58.7	7.40	177,867	55.5	16.90
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,653.7			204.4	25.8			

[a] Maximum 24-hour average steam rate.

REVISIONS TO CHAPTER 6.0 TABLES

Table 6-2. Summary of Stack Parameters for Future Sources Used in Modeling of U.S. Sugar Clewiston Mill

Emission Unit	Modeling ID	Stack Height		Stack Diameter		Temperature		Flow Rate		Velocity [a]		Relative Location [b]			
												X		Y	
		(ft)	(m)	(ft)	(m)	(F)	(K)	(dscfm)	(acfm)	(ft/s)	(m/s)	(ft)	(m)	(ft)	(m)
BOILERS															
Crop [c]															
Boiler 1	USSBLR1	213	64.9	8.00	2.44	165	347.0	--	152,000	50.4	15.36	185	56.39	-5	-1.52
Boiler 2	USSBLR2	213	64.9	8.00	2.44	150	338.7	--	137,120	45.5	13.86	143	43.59	-5	-1.52
Boiler 3	USSBLR3	213	64.9	8.00	2.44	140	333.2	--	67,040	22.2	6.78	95	28.96	18	5.49
Boiler 4	USSBLR4	150	45.7	8.25	2.51	160	344.3	--	213,440	66.5	20.28	0	0.00	0	0.00
Boiler 7	USSBLR7	225	68.6	8.50	2.59	270	405.4	--	232,000	68.1	20.77	-58	-17.68	65	19.81
Off-Crop [d]															
Boiler 1	USSBLR1	213	64.9	8.00	2.44	165	347.0	--	139,035	46.1	14.05	185	56.39	-5	-1.52
Boiler 2	USSBLR2	213	64.9	8.00	2.44	150	338.7	--	125,420	41.6	12.68	143	43.59	-5	-1.52
Boiler 3	USSBLR3	213	64.9	8.00	2.44	140	333.2	--	61,303	20.3	6.20	95	28.96	18	5.49
Boiler 4	USSBLR4	150	45.7	8.25	2.51	160	344.3	--	0	0.0	0.00	0	0.00	0	0.00
Boiler 7	USSBLR7	225	68.6	8.50	2.59	270	405.4	--	263,636	77.4	23.60	-58	-17.68	65	19.81
REFINERY SOURCES															
Screening & Distribution Vacuum	S1	65	19.8	0.50	0.15	68	293.2	990	1,705	0.29	0.01	664.79	202.63	-155.17	-47.30
100 lb Bagging Vacuum System	S2	65	19.8	0.50	0.15	90	305.4	872	1,564	0.29	0.01	700.98	213.66	-147.48	-44.95
5 lb Bagging Vacuum System	S3	65	19.8	0.50	0.15	90	305.4	984	1,585	0.29	0.01	700.98	213.66	-147.48	-44.95
Packaging Dust Collector	S4	60	18.3	1.94	0.59	125	324.8	9,589	11,500	0.29	0.01	774.34	236.02	-131.89	-40.20
Screening and Distribution #1	S5	72	21.9	0.95	0.29	125	324.8	2,668	3,200	0.29	0.01	700.98	213.66	-147.48	-44.95
Screening and Distribution #2	S6	72	21.9	1.94	0.59	125	324.8	8,755	10,500	0.29	0.01	700.98	213.66	-147.48	-44.95
Conditioning Silo No. 2	S7	130	39.6	1.37	0.42	110	316.5	2,641	3,000	0.29	0.01	637.28	194.24	-150.8	-45.96
Conditioning Silo No. 4	S8	130	39.6	1.37	0.42	110	316.5	2,641	3,000	0.29	0.01	602.07	183.51	-158.28	-48.24
Conditioning Silo No. 6	S9	130	39.6	1.37	0.42	110	316.5	2,641	3,000	0.29	0.01	566.85	172.78	-165.77	-50.53
White Sugar Dryer Baghouse	S10	75	22.9	7.31	2.23	115	319.3	94,488	113,000	0.29	0.01	695.66	212.04	-194.62	-59.32
V. H. P. Sugar Dryer Baghouse	S11	10	3.0	4.79	1.46	115	319.3	110,042	127,000	0.29	0.01	2045.01	623.32	214.88	65.50
Granular Carbon Furnace	S12	30	9.1	2.00	0.61	160	344.3	--	4,300	22.8	6.9	603.97	184.09	-398.13	-121.35
Conditioning Silo No. 1	S13	130	39.6	1.37	0.42	110	316.5	2,641	4,300	0.29	0.09	622.85	189.84	-92.52	-28.20
Conditioning Silo No. 2	S14	130	39.6	1.37	0.42	110	316.5	2,641	4,300	0.29	0.09	588.61	179.41	-99.8	-30.42
Conditioning Silo No. 3	S15	130	39.6	1.37	0.42	110	316.5	2,641	4,300	0.29	0.09	549.49	167.48	-108.12	-32.95
Powdered Sugar Starch Bins	S16	55	16.8	2.00	0.61	100	310.9	6,128	--	34.5	10.5	767.14	233.82	-266.32	-81.17

[a] All refinery sources except granular carbon furnace have horizontal discharge: velocity set at 0.01 m/s for modeling purposes.

[b] Relative to Boiler No. 4 stack location.

[c] Crop season stack data October - April, velocity data for SO_2, 24-hour Case C.

[d] Off-crop season stack data May - September, velocity data for SO_2, 24-hour Case C.

TABLE 6-3

REFER TO LOAD ANALYSIS EMISSION TABLES

Table 6-4a. U.S. Sugar Clewiston Boiler Maximum PM_{10} and CO Emissions (7/20/00)
Future Crop Season Operation

Source	Maximum Heat Input (MMBtu/hr)	Emission Factor		Emissions (lb/hr)	Emissions (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
MAXIMUM 24-HOUR CASE - PM10 EMISSIONS								
Boilers		PM Emission Factor	PM_{10} Emission Factor					
Boiler 1	495.6	0.25 lb/MMBtu	93% of PM	115.2	14.52	190,000	63.0	19.20
Boiler 2	447.0	0.25 lb/MMBtu	93% of PM	103.9	13.09	171,400	56.8	17.32
Boiler 3	265.3	0.30 lb/MMBtu	93% of PM	74.0	9.33	83,800	27.8	8.47
Boiler 4	600.0	0.15 lb/MMBtu	93% of PM	83.7	10.55	252,891	78.8	24.03
Boiler 7	738.0	0.03 lb/MMBtu	100% of PM	22.1	2.79	263,571	77.4	23.60
MAXIMUM 1-HR AND 8-HR CO EMISSIONS								
Boilers								
Boiler 1	495.6	13.0 lb/MMBtu		6,442.80	811.79	190,000	63.0	19.20
Boiler 2	447.0	13.0 lb/MMBtu		5,811.00	732.19	171,400	56.8	17.32
Boiler 3	265.3	10.0 lb/MMBtu		2,653.00	334.28	83,800	27.8	8.47
Boiler 4	633.0	6.5 lb/MMBtu		4,114.50	518.43	266,800	83.2	25.35
Boiler 7	812.0	0.7 lb/MMBtu		568.40	71.62	290,000	85.2	25.96

Note: PM emissions are based on allowable or maximum emission rates for bagasse firing.
CO emissions for Boiler Nos. 1, 2, and 3 are based on actual test data.
CO emissions for Boiler Nos. 4 and 7 are based on allowable emissions for bagasse firing.

Table 6-5. Summary of PM/PM_{10} Emissions from the Baghouses Associated With the Sugar Refinery, U.S. Sugar Corporation

Source / Vent Name	New Stack Number	Design Capacity	Operating Hours	PM/PM10 Emissions (gr/dscf)	(lb/hr)	(g/s)	(TPY)
Existing Sources							
Screening & Distribution Vacuum	S-1	990 dscfm	8,760	0.00754 [a]	0.064 [b]	0.00806	0.280
100 lb Bagging Vacuum System	S-2	872 dscfm	8,760	0.00856 [a]	0.064 [b]	0.00806	0.280
5 lb Bagging Vacuum System	S-3	984 dscfm	8,760	0.00759 [a]	0.064 [b]	0.00806	0.280
Packaging Dust Collector	S-4	9,589 dscfm	8,760	0.0025	0.205	0.0259	0.900
Screening and Distribution #1	S-5	2,668 dscfm	8,760	0.0025	0.057	0.00720	0.250
Screening and Distribution #2	S-6	8,755 dscfm	8,760	0.0025	0.188	0.0236	0.822
Conditioning Silo No. 2	S-7	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 4	S-8	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 6	S-9	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
White Sugar Dryer	S-10	94,488 dscfm	8,760	0.00177 [a]	1.436 [b]	0.181	6.29
V.H.P. Sugar Dryer	S-11	110,042 dscfm	8,760	0.00172 [a]	1.625 [b]	0.205	7.12
Granular Carbon Furnace	S-12	--	8,760	--	0.650	0.0819	2.85
Proposed Sources							
Conditioning Silo No. 1	S-13	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 3	S-14	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 5	S-15	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Powdered Sugar Bins	S-16	6,128 dscfm	8,760	0.0025	0.131	0.01655	0.575
				Total =	4.82	0.61	21.13

Footnotes:

[a] Back calculated from guaranteed emission rate and design flow rate.

[b] Manufacturer's guaranteed emission rate.

Note: dscfm = dry standard cubic foot per minute.
gr/dscf = grains per dry standard cubic foot
lb/hr = pounds per hour
TPY = tons per year

Table 6-6. Summary of SO_2 Facilities Considered for Inclusion in the Annual and 24-Hour AAQS and PSD Class II Air Modeling Analyses (revised 8/15/2000)

APIS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to U.S. Sugar [a] X (km)	Relative to U.S. Sugar [a] Y (km)	Relative to U.S. Sugar [a] Distance (km)	Relative to U.S. Sugar [a] Direction [a] (deg)	Maximum SO_2 Emissions (TPY)	Q, Emission Threshold [b] (Dist -35) x 20	Include in Modeling Analysis ?
52FTM260001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	1,216	SIA	YES
50PMB500086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	98	SIA	YES
52FTM260015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	409	SIA	YES
50PMB500332	Okeelanta	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	939	SIA	YES
52FTM500026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	2,555	SIA	YES
52FTM500061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	2,698	SIA	YES
52FTM500016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	2,023	93.7	YES
52FTM500016	Atlantic Sugar	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	954	264.8	YES
50WPB430001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	78,522	332.5	YES
50WPB430102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	2,629	350.2	YES
50PMB500021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	504	445.0	YES
50WPB500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	1,533	895.4	YES
52FTM360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	490	956.4	NO
52FTM36	FPL - Fort Myers	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	22,702	981.9	YES
50WPB430021	Stuart Contracting	Martin	575.2	3006.8	69.1	49.9	85.2	54	100	1004.7	NO
50PMB500045	Lake Worth Utilities [c]	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	8,996	1054.0	YES
50PMB500042	FPL -Riviera Beach [c]	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	73,475	1063.6	YES
50WPB062120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	896	1137.0	NO
50WPB560003	Fort Pierce Utilities [c]	St. Lucie	566.8	3036.3	60.7	79.4	99.9	37	2,708	1298.9	YES
50WPB062119	South Broward Resource Recovery	Broward	579.6	2883.3	73.5	-73.6	104.0	135	1,318	1380.3	NO
50BRO060037	FPL -Lauderdale [c]	Broward	580.1	2883.3	74.0	-73.6	104.4	135	47,858	1387.4	YES
50BRO060036	FPL -Port Everglades [c]	Broward	587.4	2885.3	81.3	-71.6	108.3	131	170,215	1466.7	YES
50DAD130020	Tarmac	Dade	562.9	2861.7	56.8	-95.2	110.9	149	2,792	1517.1	NO
50DAD130348	Dade Co. Resource Recovery	Dade	564.3	2857.4	58.2	-99.5	115.3	150	857	1605.4	NO
30ORL310029	Vero Beach Power	St. Lucie	567.1	3056.5	61.0	99.6	116.8	31	11,832	1635.9	NO
[a] U.S. Sugar Clewiston Mill Coordinates:			506.1	2956.9							

[b] Proposed project's 24-hour emissions are significant to 35 km.
Emission inventory is limited to facilities within 85 km but includes major power plants outside the proposed project's significant impact distance.

[c] Large emission sources outside the modeled area which are included in the analysis.

Table 6-7. Summary of SO_2 Facilities Considered for Inclusion in the 3 Hour AAQS and PSD Class II Air Modeling Analyses (revised 8/14/2000)

APIS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	X (km)	Y (km)	Distance (km)	Direction (deg)	Maximum SO_2 Emissions (TPY)	Q, Emission Threshold [b] (Dist -75) x 20	Include in Modeling Analysis ?
52FTM260001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	1,216	SIA	YES
50PMB500086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	98	SIA	YES
52FTM260015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	409	SIA	YES
50PMB500332	Okeelanta	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	939	SIA	YES
52FTM500026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	2,555	SIA	YES
52FTM500061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	2,698	SIA	YES
52FTM500016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	2,023	SIA	YES
52FTM500016	Atlantic Sugar	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	954	SIA	YES
50WPB430001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	78,522	SIA	YES
50WPB430102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	2,629	SIA	YES
50PMB500021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	504	SIA	YES
50WPB500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	1,533	95.4	YES
52FTM360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	490	156.4	YES
52FTM36	FPL - Fort Myers	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	22,702	181.9	YES
50WPB430021	Stuart Contracting	Martin	575.2	3006.8	69.1	49.9	85.2	54	100	204.7	NO
50PMB500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	8,996	254.0	YES
50PMB500042	FPL -Riviera Beach	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	73,475	263.6	YES
50WPB062120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	896	337.0	YES
50WPB560003	Fort Pierce Utilities	St. Lucie	566.8	3036.3	60.7	79.4	99.9	37	2,708	498.9	YES
50WPB062119	South Broward Resource Recovery	Broward	579.6	2883.3	73.5	-73.6	104.0	135	1,318	580.3	YES
50BRO060037	FPL -Lauderdale	Broward	580.1	2883.3	74.0	-73.6	104.4	135	47,858	587.4	YES
50BRO060036	FPL -Port Everglades	Broward	587.4	2885.3	81.3	-71.6	108.3	131	170,215	666.7	YES
50DAD130020	Tarmac	Dade	562.9	2861.7	56.8	-95.2	110.9	149	2,792	717.1	YES
50DAD130348	Dade Co. Resource Recovery	Dade	564.3	2857.4	58.2	-99.5	115.3	150	857	805.4	YES
30ORL310029	Vero Beach Power	St. Lucie	567.1	3056.5	61.0	99.6	116.8	31	11,832	835.9	YES
[a] US Sugar Clewiston Mill Coordinates:			506.1	2956.9							

[b] Proposed project's 3-hour emissions are significant to 75 km.

Table 6-8. Summary of SO_2 Sources Included in the Air Modeling Analysis (revised 8/14/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
	US Sugar[a] - Clewiston - PSD Baseline												
		Unit 1 PSD Baseline	BLR1B	23.1	1.86	344.0	30.20	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	BLR2B	23.1	1.86	343.0	35.70	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	BLR3B	27.4	2.29	342.0	14.70	-48.30	-33.20	EXP	No	Yes	Yes
		East Pellet Plant PSD Baseline	EPELLET	12.2	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		West Pellet Plant PSD Baseline	WPELLET	15.7	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
52FTM260001	Everglades Sugar[b] Main Boiler		EVERGLAD	21.9	1.10	477.0	10.10	34.90	34.90	NO	Yes	No	No
50PMB500086	Glades Corr Institute		GLADCORR	9.8	0.40	389.0	11.28	2.82	2.82	NO	Yes	No	No
50FTM260015	Southern Gardens Citrus - PSD												
		Peel Dryer	SGARDDRY	38.1	1.73	316.0	7.45	5.29	5.29	CON	Yes	Yes	Yes
		Boilers 1-3	SGARDBLR	16.8	1.22	478.0	14.22	6.88	6.88	CON	Yes	Yes	Yes
50PMB500332	Okeelanta[a]												
		Boiler 4 PSD Baseline	OKBLR4B	22.9	2.29	333.0	7.36	-10.95	-10.95	EXP	No	Yes	Yes
		Boiler 5 PSD Baseline	OKBLR5B	22.9	2.29	333.0	12.07	-15.64	-15.64	EXP	No	Yes	Yes
		Boiler 6 PSD Baseline	OKBLR6B	22.9	2.29	334.0	8.74	-15.64	-15.64	EXP	No	Yes	Yes
		Boiler 10 PSD Baseline	OKBLR10B	22.9	2.29	334.0	10.35	-17.15	-17.15	EXP	No	Yes	Yes
		Boiler 11 PSD Baseline	OKBLR11B	22.9	2.29	342.0	9.89	-16.79	-16.79	EXP	No	Yes	Yes
		Okeelanta Power Blrs 1,2,3[b]	OKCOGEN	68.6	3.05	438.7	17.46	27.0	27.0	CON	Yes	Yes	Yes
52FTM500026	Sugar Cane Growers[a]												
		Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	41.20	41.20	CON	Yes	Yes	Yes
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	16.20	16.20	CON	Yes	Yes	Yes
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	38.20	38.20	CON	Yes	Yes	Yes
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	27.90	27.90	CON	Yes	Yes	Yes
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	23.50	23.50	CON	Yes	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	24.4	1.40	344.0	11.40	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	SUGCN3B	24.4	1.60	344.0	15.60	-4.40	-4.40	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	SUGCN4B	25.9	1.63	344.0	11.20	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 5 PSD Baseline	SUGCN5B	24.4	1.40	344.0	15.20	-16.20	-16.20	EXP	No	Yes	Yes
		Unit 6&7 PSD Baseline	SUGCN67B	12.2	1.52	606.0	11.20	-51.00	-51.00	EXP	No	Yes	Yes
52FTM500061	US Sugar-Bryant[a]												
		Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	45.70	45.70	CON	Yes	Yes	Yes
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	109.50	109.50	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	USSBRY1B	19.8	1.68	494.0	44.30	-36.50	-36.50	EXP	No	Yes	Yes
		Unit 2&3 PSD Baseline	USBRY23B	19.8	1.68	344.0	37.90	-73.00	-73.00	EXP	No	Yes	Yes
52FTM500019	Osceola Farms[a]												
		Unit 2	OSBLR2	27.4	1.52	339.0	18.63	17.12	17.12	CON	Yes	Yes	Yes
		Unit 3	OSBLR3	27.4	1.92	344.0	14.34	30.74	30.74	CON	Yes	Yes	Yes
		Unit 4	OSBLR4	27.4	1.83	344.0	16.53	17.12	17.12	CON	Yes	Yes	Yes
		Unit 5	OSBLR5	27.4	1.52	344.0	17.85	18.00	18.00	CON	Yes	Yes	Yes
		Unit 6	OSBLR6	27.4	1.92	339.0	18.25	33.39	33.39	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	OSBLR1B	22.0	1.52	342.0	8.18	-5.07	-5.07	EXP	No	Yes	Yes

Table 6-8. Summary of SO_2 Sources Included in the Air Modeling Analysis (revised 8/14/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
		Unit 2 PSD Baseline	OSBLR2B	22.0	1.52	341.0	18.10	-16.32	-16.32	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	OSBLR3B	22.0	1.93	341.0	14.50	-7.26	-7.26	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	OSBLR4B	22.0	1.83	341.0	18.80	-13.61	-13.61	EXP	No	Yes	Yes
52FTM500016	Atlantic Sugar [a]												
		Unit 1	ATLSUG1	27.4	1.83	346.0	17.97	16.28	16.28	CON	Yes	Yes	Yes
		Unit 2	ATLSUG2	27.4	1.83	350.0	23.36	16.28	16.28	CON	Yes	Yes	Yes
		Unit 3	ATLSUG3	27.4	1.83	350.0	21.56	16.02	16.02	CON	Yes	Yes	Yes
		Unit 4	ATLSUG4	27.4	1.83	344.0	25.16	16.21	16.21	CON	Yes	Yes	Yes
		Unit 5 PSD [b]	ATLSUG5	27.4	1.68	339.0	19.24	8.41	8.04	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	ATLSUG1B	18.9	1.92	506.0	12.70	-17.24	-17.24	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	ATLSUG2B	18.9	1.92	511.0	10.90	-22.50	-22.50	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	ATLSUG3B	21.9	1.83	522.0	17.50	-16.88	-16.88	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	ATLSUG4B	18.3	1.83	344.0	15.00	-10.76	-10.76	EXP	No	Yes	Yes
50WPB430001	FPL Martin												
		Units 1&2	MART12	152.1	7.99	420.9	21.03	1743.79	1743.79	NO	Yes	No	No
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	12.90	12.90	CON	Yes	Yes	Yes
		Diesel Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	0.51	0.51	CON	Yes	Yes	Yes
		Units 3&4 PSD	MART34	64.9	6.10	410.9	18.90	470.40	470.40	CON	Yes	Yes	Yes
		2 Simple Cycle CT	MARTCTs	18.3	6.17	853.2	37.63	25.98	25.98	CON	Yes	Yes	Yes
50WPB430102	Bechtel Indiantown PSD		BECHTIND	150.9	4.88	333.2	30.50	75.64	75.64	CON	Yes	Yes	Yes
50WPB500234	Pratt & Whitney												
		Heater	PRATARCH	15.2	0.91	810.9	143.73	13.99	13.99	CON	Yes	Yes	Yes
		Boiler BO-12	PRATBO12	4.6	0.76	533.2	6.92	0.51	0.51	CON	Yes	Yes	Yes
50WPB500234	Palm Beach Co. Resource Recovery												
		1&2 PSD	PBCRRF	76.2	2.04	505.2	24.90	85.05	85.05	CON	Yes	Yes	Yes
52FTM360119	Lee County RRF PSD		LEECORRF	83.8	1.88	388.5	19.81	14.00	14.00	CON	Yes	Yes	Yes
52FTM360002	FPL Fort Myers												
		Unit 1 PSD	FMU1	91.8	2.90	422.0	29.90	-585.50	-585.50	EXP	No	Yes	Yes
		Unit 2 PSD	FMU2	121.2	5.52	408.0	19.20	-1334	-1334.0	EXP	No	Yes	Yes
		HRSGs 1 - 6	FMYHR1_6	38.1	5.79	377.6	14.2	3.86	3.9	CON	Yes	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	9.75	4.42	797.0	35.7	649.2	649.2	NO	Yes	No	No
50PMB500045	Lake Worth Utilities												
		Unit 3	LAKWTHU3	38.1	2.13	408.2	7.71	103.95	103.95	NO	Yes	No	No
		Unit 4	LAKWTHU4	35.1	2.29	418.2	17.00	129.85	129.85	NO	Yes	No	No
		Unit 5	LAKWTHU5	22.9	0.94	450.4	18.29	11.59	11.59	NO	Yes	No	No
		HRSG	LAKWTHHR	45.7	5.49	377.6	13.74	12.79	12.79	CON	Yes	Yes	Yes
50PMB500042	FPL Riviera												
		Units 3&4 at 2.5%s fuel oil	RIVU34	90.8	4.88	401.5	18.90	2113.65	2113.65	NO	Yes	No	No

Table 6-8. Summary of SO_2 Sources Included in the Air Modeling Analysis (revised 8/14/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
50WPB062120	North Broward RRF PSD		NBCRRF	58.5	3.96	381.0	18.01	35.40	35.40	CON	Yes	Yes	Yes
50WPB560003	Fort Pierce Utilities												
		Units 6&7	FTPIER67	45.7	2.19	408.2	12.50	77.87	77.87	NO	Yes	No	No
50WPB062116	South Broward RRF PSD		SBCRRF	59.4	3.96	381.0	18.01	37.91	37.91	CON	Yes	Yes	Yes
50BR0060037	FPL - Lauderdale												
		CTs 1-4 PSD	LAUDU45	45.7	5.49	438.7	14.60	271.15	271.15	CON	Yes	Yes	Yes
		GT 1-12 (0.5% fuel oil)	LDGT1_12	13.7	2.37	733.2	114.31	552.80	552.80	NO	Yes	No	No
		GT 13-24 (0.5% fuel oil)	LDGT1324	13.4	4.75	733.2	28.43	552.80	552.80	NO	Yes	No	No
		4&5 PSD Baseline	FTLAU45B	46.0	4.27	422.0	14.63	-457.00	-457.00	EXP	No	Yes	Yes
50BR0060036	FPL Port Everglades												
		Units 1&2 at 2.5%s fuel oil	PTEVU12	104.5	4.27	415.9	26.72	1593.90	1593.90	NO	Yes	No	No
		Units 3&4 at 2.5%s fuel oil	PTEVU34	104.5	5.52	414.8	23.88	2772.00	2772.00	NO	Yes	No	No
		GT 1-12 (0.5% fuel oil)	PTEVGTS	13.4	4.75	733.2	28.43	530.70	530.70	NO	Yes	No	No
50DAD130348	Dade County RRF PSD												
		Units 1&2	DCRRF12	76.2	3.66	405.4	15.86	26.41	12.32	CON	Yes	Yes	Yes
		Units 3&4	DCRRF34	76.2	3.66	405.4	15.86	26.41	12.32	CON	Yes	Yes	Yes
50DAD130020	Tarmac												
		Kiln 1	TARMC1	61.0	2.44	465.0	12.80	5.67	5.67	NO	Yes	No	No
		Kiln 2 PSD Baseline	TARMC2B	61.0	2.44	465.0	12.84	-5.71	-5.71	EXP	No	Yes	Yes
		Kiln 3 PSD Baseline	TARMC3B	61.0	4.57	472.0	10.78	-2.76	-2.76	EXP	No	Yes	Yes
		Kiln 2 PSD	TABMC2P	61.0	2.44	422.0	9.10	24.57	24.57	CON	Yes	Yes	Yes
		Kiln 3 PSD	TARMC3P	61.0	4.57	450.0	11.04	51.43	51.43	CON	Yes	Yes	Yes
30ORL310029	Vero Beach Power												
		Unit 1	VERBU1	60.96	1.07	437.0	32.42	28.77	28.77	NO	Yes	No	No
		Unit 2	VERBU2	60.96	1.07	434.3	37.57	84.21	84.21	NO	Yes	No	No
		Unit 3	VERBU3	60.96	1.83	440.4	19.93	142.07	142.07	NO	Yes	No	No
		Unit 4	VERBU4	60.96	2.13	425.4	24.36	69.05	69.05	NO	Yes	No	No
		Unit 5 Simple Cycle CT	VERBU5	38.10	3.35	416.5	19.56	15.50	15.50	CON	Yes	Yes	Yes

[a] Facilities or sources within facilities that operate only during the October 1 through April 31 crop season

[b] Sugar mill sources that operate all year

Note: EXP = PSD expanding source.
CON = PSD consuming source.
NO = Source does not affect PSD increment.

Table 6-9. Summary of PM Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses (8/21/00)

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to U.S. Sugar [a] X (km)	Relative to U.S. Sugar [a] Y (km)	Relative to U.S. Sugar [a] Distance (km)	Relative to U.S. Sugar [a] Direction (deg)	Maximum PM Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -12) x 20	Include in Modeling Analysis ?
510001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	41	SIA	YES
990086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	30	107.7	NO
510015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	54	130.3	NO
990332	Okeelanta Power	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	283	303.1	NO
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	1,032	340.5	YES
990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	979	451.3	YES
990016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	700	553.7	YES
990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	684	724.8	NO
850102	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	9,103	792.5	YES
510006	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	270	810.2	NO
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	30	905.0	NO
850007	Dickerson	Martin	569.5	2995.9	63.4	39.0	74.4	58	47	1248.7	NO
500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	26	1355.4	NO
710002	FPL - Fort Myers [c]	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	1,685	1441.9	YES
500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	468	1514.0	NO
500042	FPL -Riviera Beach [c]	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	3,340	1523.6	YES
112120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	103	1597.0	NO
110037	FPL -Lauderdale [c]	Broward	580.1	2883.3	74.0	-73.6	104.4	135	852	1847.4	YES
110036	FPL -Port Everglades [c]	Broward	587.4	2885.3	81.3	-71.6	108.3	131	3,247	1926.7	YES
[a] U.S. Sugar Clewiston Mill Coordinates:			506.1	2956.9							

[b] Proposed project's emissions are significant to 12 km.
Emission inventory is limited to facilities within 62 km but includes major power plants outside the proposed project's significant impact distance.

[c] Large emissions sources outside the significant impact area that were included in the analysis.

Table 6-10. Summary of PM Sources Included in the Air Modeling Analysis

AIRS Number	Facility	Units	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temp. (K)	Velocity (m/s)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II
510003	US Sugar - Clewiston [a]										
		PSD Baseline (On-crop season only)									
		Unit 1 PSD Baseline	BRL1B	23.1	1.86	344.0	30.20	-7.48	EXP	No	Yes
		Unit 2 PSD Baseline	BLR2B	23.1	1.86	343.0	35.70	-7.04	EXP	No	Yes
		Unit 3 PSD Baseline	BLR3B	27.4	2.29	342.0	14.70	-4.57	EXP	No	Yes
		East Pellet Plant PSD Baseline	EPELLET	12.2	1.52	347.0	8.54	-1.69	EXP	No	Yes
		West Pellet Plant PSD Baseline	WPELLET	15.7	1.52	347.0	8.54	-0.82	EXP	No	Yes
		Units 5 PSD Baseline	BLR5B	23.1	1.86	494.0	44.30	-26.46	EXP	No	Yes
		Units 6 PSD Baseline	BLR6B	23.1	1.86	494.0	44.30	-26.46	EXP	No	Yes
510001	Everglades Sugar [b] Main Boiler		EVERGLAD	21.9	1.10	477.0	10.10	2.37	NO	Yes	No
990026	Sugar Cane Growers [a]										
		Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	6.49	CON	Yes	Yes
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	12.95	CON	Yes	Yes
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	12.45	CON	Yes	Yes
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	12.45	CON	Yes	Yes
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	8.57	CON	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	24.4	1.40	344.0	11.40	-18.94	EXP	No	Yes
		Unit 3 PSD Baseline	SUGCN3B	24.4	1.60	344.0	15.60	-5.70	EXP	No	Yes
		Unit 4 PSD Baseline	SUGCN4B	25.9	1.63	344.0	11.20	-10.90	EXP	No	Yes
		Unit 5 PSD Baseline	SUGCN5B	24.4	1.40	344.0	15.20	-9.10	EXP	No	Yes
		Unit 6&7 PSD Baseline	SUGCN67B	12.2	1.52	606.0	11.20	-2.50	EXP	No	Yes
990061	US Sugar-Bryant [a]										
		Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	12.59	CON	Yes	Yes
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	43.66	CON	Yes	Yes
		Unit 1 PSD Baseline	USSBRY1B	19.8	1.68	494.0	44.30	-82.40	EXP	No	Yes
		Unit 2&3 PSD Baseline	USBRY23B	19.8	1.68	344.0	37.90	-12.04	EXP	No	Yes
990019	Osceola Farms [a]										
		Unit 2	OSBLR2	27.4	1.52	339.0	18.63	7.06	CON	Yes	Yes
		Unit 3	OSBLR3	27.4	1.92	344.0	14.34	7.36	CON	Yes	Yes
		Unit 4	OSBLR4	27.4	1.83	344.0	16.53	10.58	CON	Yes	Yes
		Unit 5	OSBLR5	27.4	1.52	344.0	17.85	8.09	CON	Yes	Yes
		Unit 6	OSBLR6	27.4	1.92	339.0	18.25	7.17	CON	Yes	Yes
		Unit 1 PSD Baseline	OSBLR1B	22.0	1.52	342.0	8.18	-3.38	EXP	No	Yes
		Unit 2 PSD Baseline	OSBLR2B	22.0	1.52	341.0	18.10	-7.52	EXP	No	Yes
		Unit 3 PSD Baseline	OSBLR3B	22.0	1.93	341.0	14.50	-4.03	EXP	No	Yes
		Unit 4 PSD Baseline	OSBLR4B	22.0	1.83	341.0	18.80	-6.01	EXP	No	Yes

Table 6-10. Summary of PM Sources Included in the Air Modeling Analysis

AIRS Number	Facility	Units	ISCST3 ID Name	Stack Parameters Height (m)	Diameter (m)	Temp. (K)	Velocity (m/s)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled in AAQS	Modeled in Class II
850001	FPL -Martin										
		Units 1&2	MART12	152.1	7.99	420.9	21.03	218.00	CON	Yes	Yes
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	0.01	CON	Yes	Yes
		Diesel Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	0.22	CON	Yes	Yes
		Units 3&4 PSD	MART34	64.9	6.10	410.9	18.90	30.54	CON	Yes	Yes
		2 Simple Cycle CT	MARTCTs	18.3	6.17	853.2	37.63	4.28	CON	Yes	Yes
710002	FPL - Fort Myers										
		Unit 1 PSD	FMU1	91.8	2.90	422.0	29.90	-21.30	EXP	No	Yes
		Unit 2 PSD	FMU2	121.2	5.52	408.0	19.20	-48.50	EXP	No	Yes
		HRSGs 1 - 6	FMYHR1_6	228.6	5.79	377.6	14.2	7.56	CON	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	117.00	4.42	797.0	35.7	37.68	NO	Yes	No
		Cooling Towers 1 - 12	FMYCT112	164.64	9.75	304.3	7.59	1.61	CON	Yes	Yes
500042	FPL - Riviera Beach										
		Units 3 and 4 at 2.5% S fuel oil	RIVU34	90.8	4.88	401.5	18.90	96.08	NO	Yes	No
060037	FPL-Lauderdale										
		CTs 1-4 PSD	LAUD45	45.72	5.49	438.7	48.37	7.31	CON	Yes	Yes
		GT 1-12 (0.5% fuel oil)	LDGT1_13	13.72	2.37	733.2	114.31	8.19	NO	Yes	No
		GT 13-24 (0.5% fuel oil)	LDGT1324	13.41	4.75	733.2	28.43	8.19	NO	Yes	No
060036	FPL-Port Everglades										
		232 MW FFSG UNIT #1	PTEVU1	104.85	4.27	408.2	18.51	14.34	NO	Yes	No
		232 MW FFSG UNIT #2	PTEVU2	104.85	4.27	416.5	5.15	13.23	NO	Yes	No
		401 MW FFSG UNIT #3	PTEVU3	104.55	5.52	408.2	19.25	27.76	NO	Yes	No
		401 MW FFSG UNIT #4	PTEVU4	104.55	5.52	408.2	19.25	26.31	NO	Yes	No
		GT 1-12 (0.5% fuel oil)	PTEVGTS	104.85	4.75	683.2	10.78	8.62	NO	Yes	No

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

[b] Sugar mill sources that operate all year.

Table 6-11. Summary of CO Facilities Considered for Inclusion in the AAQS Air Modeling Analyses (revised 8/21/2000)

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	X (km)	Y (km)	Distance (km)	Direction (deg)	Maximum CO Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -20) x 20	Include in Modeling Analysis ?
510001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	15	SIA	YES
510015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	1,888	SIA	YES
990332	Okeelanta Power	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	3,297	SIA	YES
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	33,771	SIA	YES
990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	19,958	SIA	YES
990016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	25,175	93.7	YES
990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	25,065	264.8	YES
850001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	2,285	332.5	YES
850102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	1,651	350.2	YES
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	30	445.0	NO
360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	238	956.4	NO
710002	FPL - Fort Myers [c]	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	4,478	981.9	YES
500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	204	1054.0	NO
[a] U.S. Sugar Clewiston Mill Coordinates:				506.1	2956.9						

[b] Proposed project's emissions are significant to 20 kilometers.
Emission inventory is limited to facilities within 70 km of U. S. Sugar facility but includes major power plants outside the proposed project's significant impact distance.

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

Table 6-12. Summary of CO Sources Included in the Air Modeling Analysis (revised 8/18/2000)

APIS Number	Facility	Units	ISCST3 ID Name	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s)
0510001	Everglades Sugar [b]	Main Boiler	EVERGLAD	21.9	1.07	477.6	10.06	0.44
510015	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
990332	Okeelanta	Cogen Blrs 1,2,& 3	OKCOGEN	68.6	3.05	438.7	17.46	94.61
990026	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
990061	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
990016	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
990016	Atlantic Sugar [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
0710119	Lee County Energy Recovery Facility	Units 1 & 2	LEECORRF	84.1	1.98	416.5	22.86	6.85
850001	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
850102	Bechtel Indiantown		BECHTIND	150.9	4.88	333.2	30.50	47.38
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 6-13. Summary of NO_2 Facilities Considered for Inclusion in the Annual AAQS and PSD Class II Air Modeling Analyses (revised 8/19/2000)

APIS Number	Facility	East (km)	North (km)	X (km)	Y (km)	Distance (km)	Direction[a] (deg)	Maximum NOx Emissions (TPY)	Q, Emission Threshold (Dist -4) x 20	Include in Modeling Analysis ?
0510001	EVERGLADES SUGAR	509.6	2954.2	3.5	-2.7	4.4	128	1,410	SIA	YES
0510015	SOUTHERN GARDENS CITRUS PROCESSING CORP.	487.6	2957.6	-18.5	0.7	18.5	272	167	SIA	YES
0430008	ATLAS-TRANSOIL INC	489.2	2966.6	-16.9	9.7	19.5	300	35	SIA	YES
0990005	OKEELANTA CORP	525.0	2937.4	18.9	-19.5	27.2	136	3,432	SIA	YES
0990026	SUGAR CANE GROWERS CO-OP	534.9	2953.3	28.8	-3.6	29.0	97	3,243	SIA	YES
0990061	U.S.SUGAR CORP. BRYANT MILL	538.8	2969.1	32.7	12.2	34.9	70	1,984	SIA	YES
0990019	OSCEOLA FARMS	544.2	2968.0	38.1	11.1	39.7	74	1,044	93.7	YES
0110351	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	522.3	2912.2	16.2	-44.7	47.5	160	737	250.2	YES
0990016	ATLANTIC SUGAR ASSOCIATION	552.9	2945.2	46.8	-11.7	48.2	104	2,266	264.8	YES
0990549	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	554.2	2940.5	48.1	-16.5	50.8	109	199	316.7	NO
0850001	FP&L MARTIN	543.1	2992.9	37.0	36.0	51.6	46	35,489	332.5	YES
0850102	INDIANTOWN COGENERATION, L.P.	545.6	2991.5	39.5	34.6	52.5	49	2,583	350.2	YES
0850129	AMERICAN POWER TECH, INC	549.1	2990.8	43.0	33.9	54.7	52	10	394.6	NO
0510011	HENDRY CORRECTIONAL INSTITUTION	476.1	2909.9	-30.0	-47.0	55.7	213	2	415.0	NO
0710002	FP&L FORT MYERS [a]	422.1	2952.9	-84.0	-4.0	84.1	267	33,272	981.9	YES
0990045	LAKE WORTH UTILITIES [a]	592.8	2943.7	86.7	-13.2	87.7	99	8,615	1054.0	YES
0990042	FP&L RIVIERA [a]	594.2	2960.6	88.1	3.7	88.2	88	16,565	1063.6	YES
US Sugar Clewiston Mill Coordinates:			506.1	2956.9						

Proposed project's annual emissions are significant to 4km.

Emission inventory is limited to facilities within 54 km but includes major power plants at outside the proposed project's significant impact distance.

[a] Large emission source outside the modeled area which are include in the model

Table 6-14. Summary of NO_2 Sources Included in the Air Modeling Analysis (8/23/00)

AIRS Number	Facility	Units	EU #	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate: (TPY)	(g/s)	PSD Source? (EXP/CON)	Modeled In: AAQS	Class II
510003	US Sugar - Clewiston [a]												
		PSD Baseline (Crop season only)											
		Unit 1 PSD Baseline		BRL1B	23.1	1.86	344.0	30.20	-93.7	-6.27	EXP	No	Yes
		Unit 2 PSD Baseline		BLR2B	23.1	1.86	343.0	35.70	-94.0	-6.29	EXP	No	Yes
		Unit 3 PSD Baseline		BLR3B	27.4	2.29	342.0	14.70	-45.1	-3.03	EXP	No	Yes
		Units 4 PSD Baseline		BLR4B	45.7	2.51	344.3	25.40	-127.9	-8.76	EXP	No	Yes
		Units 5 PSD Baseline		BLR5B	23.1	1.86	494.0	44.30	-20.9	-1.54	EXP	No	Yes
		Units 6 PSD Baseline		BLR6B	23.1	1.86	494.0	44.30	-18.0	-1.34	EXP	No	Yes
0510001	EVERGLADES SUGAR	MAIN BOILER [b]	2	EVERGLAD	21.95	1.07	477.6	10.06	168.0	4.82	NO	Yes	No
0990005	OKEELANTA [a]	BOILER #4 PSD Baseline	3	OKBLR4B	22.90	2.29	333.0	7.36	-27.3	-1.36	EXP	No	Yes
		BOILER #5 PSD Baseline	4	OKBLR5B	22.90	2.29	333.0	12.07	-37.8	-1.89	EXP	No	Yes
		BOILER #6 PSD Baseline	5	OKBLR6B	22.90	2.29	334.0	8.74	-31.9	-1.59	EXP	No	Yes
		BOILER # 10 PSD Baseline	9	OKBLR10B	22.90	2.29	334.0	10.35	-36.0	-1.80	EXP	No	Yes
		BOILER # 11 PSD Baseline	10	OKBLR11B	22.90	2.29	342.0	9.89	-46.0	-2.30	EXP	No	Yes
		BOILER # 12 PSD Baseline	12	OKBLR12B	22.90	2.29	330.0	8.20	-57.7	-2.88	EXP	No	Yes
		BOILER # 14 PSD Baseline	14	OKBLR14B	22.90	2.29	333.0	8.30	-63.6	-3.18	EXP	No	Yes
		BOILER # 15 PSD Baseline	15	OKBLR15B	22.90	2.29	332.0	10.20	-50.5	-2.52	EXP	No	Yes
		COGEN Units 1, 2, & 3 [b]		OKCOGEN	60.66	3.05	438.70	17.5	1,410	40.5	CON	Yes	Yes
0990026	SUGAR CANE	BOILER #1 & #2		SUGCN12	45.72	1.87	339.00	21.75	1,097	37.88	CON	Yes	Yes
	GROWERS [a]	BOILER #3	3	SUGCN3	27.43	1.52	339.00	22.25	227	12.96	CON	Yes	Yes
		BOILER #4	4	SUGCN4	54.90	2.44	339.00	21.73	939	32.41	CON	Yes	Yes
		BOILER #5	5	SUGCN5	45.72	2.30	339.00	15.94	721	24.90	CON	Yes	Yes
		BOILER # 8	8	SUGCN8	47.24	2.90	339.00	13.62	449	15.50	CON	Yes	No
		BOILER #1 & #2 PSD Baseline		SUGCN12B	24.40	1.32	344.00	16.90	-68.01	-3.40	EXP	No	Yes
		BOILER #3 PSD Baseline	3	SUGCN3B	24.40	1.60	344.00	15.60	-41.64	-2.08	EXP	No	Yes
		BOILER #4 PSD Baseline	4	SUGCN4B	25.90	2.82	344.00	10.60	-77.67	-3.88	EXP	No	Yes
		BOILER #5 PSD Baseline	5	SUGCN5B	24.40	1.40	344.00	15.20	-51.82	-2.59	EXP	No	Yes
0990061	U.S. SUGAR, BRYANT [a]	BOILERS #s 1, 2, & 3		USBRY123	19.81	1.65	344.26	26.52	1,060	65.49	NO	Yes	No
		BOILER #5	5	USBRY5	42.67	2.90	345.37	17.07	384.2	20.37	NO	Yes	No
		DIESEL ELECTRIC GENERATOR #1	7	USBRY7	8.53	0.37	519.26	12.19	262.0	7.54	NO	Yes	No
		DIESEL ELECTRIC GENERATOR #2	8	USBRY8	8.53	0.37	519.26	12.80	278.0	7.99	NO	Yes	No
0990019	OSCEOLA FARMS [a]	BOILER #2	2	OSBLR2	27.43	1.52	342.04	31.39	241.9	15.88	CON	Yes	Yes
		BOILER #3	3	OSBLR3	27.43	1.92	341.48	23.77	124.0	8.14	CON	Yes	Yes
		BOILER #4	4	OSBLR4	25.60	1.83	340.93	12.50	241.9	15.88	CON	Yes	Yes
		BOILER # 5	5	OSBLR5	27.43	1.52	340.93	31.39	285.1	18.71	NO	Yes	No
		BOILER #6	6	OSBLR6	27.43	1.92	341.48	17.07	150.9	9.90	CON	Yes	Yes
		BOILER #1 PSD Baseline	1	OSBLR1B	22.00	1.52	342.00	8.18	-101.6	-5.08	EXP	No	Yes
		BOILER #2 PSD Baseline	2	OSBLR2B	22.00	1.52	342.00	18.10	-37.64	-1.88	EXP	No	Yes
		BOILER #3 PSD Baseline	3	OSBLR3B	22.00	1.93	341.00	14.50	-16.89	-0.84	EXP	No	Yes
		BOILER #4 PSD Baseline	4	OSBLR4B	22.00	1.83	341.00	18.80	-30.37	-1.52	EXP	No	Yes
		BOILER #6 PSD Baseline	6	OSBLR6B	27.43	1.93	341.48	17.07	-39.93	-2.00	EXP	No	Yes

Table 6-14. Summary of NO_2 Sources Included in the Air Modeling Analysis (8/23/00)

AIRS Number	Facility	Units	EU #	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate: (TPY)	(g/s)	PSD Source? (EXP/CON)	Modeled In: AAQS	Class II
0990016	ATLANTIC SUGAR ASSOCIATION [a]	BOILER #1	1	ATLSUG1	27.43	1.89	344.26	16.82	550.4	31.75	No	Yes	No
		BOILER #2	2	ATLSUG2	27.43	1.89	344.26	12.50	550.4	31.75	No	Yes	No
		BOILER #3	3	ATLSUG3	18.29	1.83	338.71	16.15	512.5	14.74	No	Yes	No
		BOILER # 4	4	ATLSUG4	27.43	1.83	338.71	16.15	542.0	15.59	No	Yes	No
		BOILER # 5[b]	5	ATLSUG5	27.43	1.68	338.71	19.20	110.7	8.00	CON	Yes	Yes
		BOILER # 5[b] PSD Baseline	5	ATLSUG5B	27.40	1.68	339.00	15.70	-14.78	-0.74	EXP	No	Yes
0850001	FP&L Martin	Units 1 & 2		MART12	152.10	7.99	420.93	21.03	22,732	653.94	NO	Yes	No
		Units 3 & 4		MART34	64.92	6.10	410.93	18.59	12,432	89.21	CON	Yes	Yes
		2 Simple Cycle CTs		MARTCTs	18.30	6.71	853.20	37.63	325	93.39	CON	Yes	Yes
		Unit 1 & 2 PSD Baseline		MART12B	152.10	9.14	472.00	17.77	-3,652	-104.8	EXP	No	Yes
0850102	Becktel Indiantown	Pulverized Coal Main Boiler	1	INDTWN1	150.88	4.88	333.15	28.41	2,549	73.33	CON	Yes	Yes
		(2) Auxiliary Boilers	3	INDTWN3	64.01	1.52	449.82	26.70	34	9.02	CON	Yes	Yes
0710002	FP&L Fort Myers[c]	Gas Turbines 1 - 12		FMYGT112	9.75	4.42	797.04	57.73	31,272	900.00	NO	Yes	No
		HRSGs 1 - 6		FMYHR16	38.10	5.79	377.59	21.43	1,708	49.14	CON	Yes	Yes
		CT1 - 2		FMCT1_2	24.40	6.25	852.00	39.08	293	84.12	CON	Yes	Yes
		Unit No. 1 PSD Baseline		FMU1B	91.74	2.90	435.90	28.04	-488.0	-14.01	EXP	No	Yes
		Unit No. 2 PSD Baseline		FMU2B	121.31	5.52	414.30	21.03	-3,890	-111.64	EXP	No	Yes
0990045	Lake Worth Utilities [c]	Diesel Peking Units # 1-5		LAKWTH15	5.18	0.56	625.93	37.09	2,185	62.87	NO	Yes	No
		GAS TURBINE # 1	6	LAKWTH6	14.02	4.88	720.37	24.84	1,715	49.39	NO	Yes	No
		STEAM GENERATING #1	7	LAKWTH7	18.29	1.52	422.04	10.52	243	7.06	NO	Yes	No
		STEAM GENERATOR #3	9	LAKWTH8	34.44	2.13	418.15	15.67	712	20.54	NO	Yes	No
		STEAM GENERATOR #4	10	LAKWTH9	35.05	2.29	418.15	17.01	918	26.46	NO	Yes	No
		COMBINED CYCLE UNIT (GT-2/S-5)	11	LAKWTH10	22.86	3.05	479.82	26.67	1,252	36.04	CON	Yes	Yes
		HRSG		LADWTHHR	45.70	5.49	377.60	24.29	1,591	45.66	CON	Yes	Yes
0990042	FP&L Riviera[c]	Units 3 & 4		RIVU34	90.83	4.88	401.48	26.88	16,565	476.53	NO	Yes	No

[a] Facilities or sources within facilities that operate only during the October 1 through April 31 crop season

[b] Sugar mill sources that operate all year

[c] Large source outside the 24-hour significant impact distance, but included in analysis

Note: EXP = PSD expanding source.
CON = PSD consuming source.
NO = Source does not affect PSD increment.

Table 6-15. A Summary of Building Structures Considered in the Air Modeling Analysis

Structure	Height		Length		Width	
	ft	m	ft	m	ft	m
Mill Expansion Buildings						
Electrical Equipment	100.0	30.5	95.6	29.1	27.6	8.4
Support Structure	133.0	40.5	95.6	29.1	76.2	23.2
Dryer Area	100.0	30.5	95.6	29.1	41.8	12.7
Screening & Distribution Towers	150.0	45.7	132.2	40.3	68.7	20.9
Specialty Packaging Facility	40.0	12.2	82.1	25.0	201.6	61.4
Packaging Facility	60.0	18.3	65.0	19.8	280.0	85.3
Warehouse	28.0	8.5	339.7	103.5	289.7	88.3
Electrical & Conditioning Equipment	24.0	7.3	59.7	18.2	52.3	15.9
Bulk Loading	40.0	12.2	84.4	25.7	53.8	16.4
Sugar Silos	136.0	41.5	111.6	34.0	68.1	20.8
Other Mill Buildings						
Pellet Warehouse	46.0	14.0	527.0	160.6	105.0	32.0
WDA	51.0	15.5	55.0	16.8	53.0	16.2
Storage and Safety mechanic	34.8	10.6	58.0	17.7	52.0	15.8
Boiler 4 Building	87.5	26.7	78.0	23.8	66.0	20.1
Boiler 5&6 Building	56.0	17.1	118.0	36.0	66.0	20.1
Boiler 1&2 Building	67.3	20.5	115.0	35.1	103.0	31.4
Power House	34.0	10.4	119.0	36.3	65.0	19.8
Warehouse	37.0	11.3	153.0	46.6	71.0	21.6
Machine Shop	39.0	11.9	309.0	94.2	106.0	32.3
B Mill Building	68.0	20.7	81.0	24.7	81.0	24.7
A Mill Building	69.0	21.0	243.0	74.1	67.0	20.4
Boiling House	93.7	28.6	181.0	55.2	155.0	47.2
Boiler 7 ESP	87.5	26.7	55.0	16.8	33.0	10.1
Boiler 7 Building	93.0	28.3	78.0	23.8	68.0	20.7
Sugar Warehouse #1	37.0	11.3	390.5	119.0	103.8	31.6
Sugar Warehouse #3	55.0	16.8	771.3	235.1	143.4	43.7

Table 6-16. Property Boundary Receptors Used in the Air Modeling Analysis

Receptor	Direction (degrees)	Distance (meters)	Receptor	Direction (degrees)	Distance (meters)	Receptor	Direction (degrees)	Distance (meters)
1	10	463	43	112	828	85	190	1135
2	20	485	44	114	762	86	192	1143
3	32	538	45	116	707	87	194	1152
4	34	550	46	118	663	88	196	1163
5	36	564	47	120	675	89	198	1176
6	38	579	48	122	690	90	200	1178
7	40	595	49	124	706	91	202	1076
8	42	614	50	126	723	92	204	991
9	44	634	51	128	742	93	206	919
10	46	656	52	130	764	94	208	858
11	48	681	53	132	787	95	210	806
12	50	709	54	134	813	96	212	760
13	52	741	55	136	842	97	214	721
14	54	776	56	138	874	98	216	686
15	56	815	57	140	910	99	218	655
16	58	861	58	142	950	100	220	627
17	60	912	59	144	995	101	222	602
18	62	971	60	146	1046	102	224	580
19	64	1040	61	148	1104	103	226	560
20	66	1121	62	150	1170	104	228	542
21	68	1217	63	152	1246	105	230	526
22	70	1333	64	154	1244	106	240	465
23	72	1476	65	156	1224	107	250	429
24	74	1654	66	158	1206	108	260	409
25	76	1885	67	158	1500	109	270	403
26	78	2062	68	160	1190	110	280	409
27	80	2048	69	160	1200	111	290	429
28	82	2037	70	162	1176	112	300	465
29	84	2028	71	162	1800	113	310	526
30	86	2022	72	164	1163	114	312	542
31	88	2018	73	166	1152	115	314	560
32	90	2017	74	168	1143	116	316	580
33	92	2018	75	170	1135	117	318	602
34	94	2022	76	172	1129	118	320	595
35	96	2028	77	174	1124	119	322	579
36	98	2037	78	176	1121	120	324	564
37	100	1785	79	178	1119	121	326	550
38	102	1491	80	180	1118	122	328	538
39	104	1281	81	182	1119	123	330	527
40	106	1125	82	184	1121	124	340	485
41	108	1003	83	186	1124	125	350	463
42	110	906	84	188	1129	126	360	456

Note: Distances are relative to Boiler No. 4 stack location and distance between receptors is 100 meter or less.

Table 6-17. Everglades National Park Receptors Utilized in the PSD Class I Modeling Analysis

Receptor	UTM Coordinates (m) East	UTM Coordinates (m) North	Receptor	UTM Coordinates (m) East	UTM Coordinates (m) North
1	557000	2789000	27	540000	2848600
2	556600	2792000	28	535000	2848600
3	556000	2796000	29	530000	2848600
4	553000	2796500	30	525000	2848600
5	548000	2796500	31	520000	2848600
6	542700	2796500	32	514500	2848600
7	542700	2800000	33	514500	2843000
8	542700	2805000	34	514500	2838000
9	542700	2810000	35	514500	2832500
10	542000	2811000	36	510000	2832500
11	541300	2814000	37	505000	2832500
12	542700	2816000	38	500000	2832500
13	544100	2820000	39	495000	2832500
14	543500	2824600	40	494500	2837000
15	545000	2829000	41	491500	2841000
16	545700	2832200	42	488500	2845500
17	546200	2835700	43	483000	2848500
18	548600	2837500	44	480000	2852500
19	550300	2839000	45	475000	2854000
20	545000	2839000	46	473500	2857000
21	540000	2839000	47	473500	2860000
22	550500	2844000	48	469000	2860000
23	545000	2844000	49	464000	2860000
24	540000	2844000	50	459500	2863200
25	550300	2848600	51	454000	2863200
26	545000	2848600			

Note: U.S. Sugar Clewiston coordinates are 506100E, 2956900N.
m = meter.

Table 6-18. Maximum Predicted Pollutant Impacts From Proposed Project
Screening Analysis - Future Boiler No. 4 @ 0.7 % S Oil,
Unit 1, 2, and 3 Used in Off-Season.

Averaging Time	Concentration[a] (ug/m^3)	Receptor Location[b]		Time Period (YYMMDDHH)
		Direction (degree)	Distance (m)	
SO_2				
Annual	6.69	300	1200	87123124
	5.55	310	900	88123124
	6.32	314	900	89123124
	6.20	300	1200	90123124
	6.73	300	1200	91123124
High 24-Hour	69.4	300	1500	87051824
	72.8	328	900	88071024
	82.5	316	1200	89060424
	65.2	300	1200	90050424
	85.6	314	1200	91052724
High 3-Hour	278	46	900	87071612
	318	228	900	88062415
	332	312	900	89071515
	324	312	900	90052815
	370	310	900	91072412
PM10				
Annual	2.45	300	1200	87123124
	2.10	310	900	88123124
	2.40	314	900	89123124
	2.30	310	900	90123124
	2.52	300	900	91123124
High 24-Hour	24.8	300	1500	87051824
	25.8	328	900	88071024
	29.3	316	1200	89060424
	23.8	300	1200	90050424
	30.5	314	1200	91052724
NOx				
Annual	1.76	300	1200	87123124
	1.74	270	1200	88123124
	2.01	314	900	89123124
	2.09	310	900	90123124
	1.97	300	1200	91123124
CO				
High 8-Hour	2430	310	900	87080716
	2834	260	900	88061816
	2911	316	900	89060516
	2307	322	900	90080816
	3378	310	900	91072416
High 1-Hour	6642	250	600	87080811
	7116	312	542	88072611
	6772	360	600	89073014
	7519	350	600	90081112
	7545	226	560	91080912

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending

Table 6-19. Maximum Predicted Pollutant Impacts From Proposed Project for Comparison to EPA Significant Impact Levels - Refined Analyses - Future Boiler No. 4 @ 0.7 % S Oil

Averaging Time	Concentration[a] ($\mu g/m^3$)	Receptor Location[b]		Time Period (YYMMDDHH)	EPA Significant Impact Levels ($\mu g/m^3$)
		Direction (degree)	Distance (m)		
SO_2					
Annual	6.69	300	1200	87123124	1
	6.73	300	1200	91123124	
High 24-Hour	82.5	316	1200	89060424	5
	85.6	314	1200	91052724	
High 3-Hour	370	310	900	91072412	25
PM_{10}					
Annual	2.45	300	1200	87123124	1
	2.52	300	900	91123124	
High 24-Hour	29.3	316	1200	89060424	5
	30.5	314	1200	91052724	
NO_x					
Annual	2.01	314	900	89123124	1
	2.09	310	900	90123124	
CO					
High 8-Hour	3378	310	900	91072416	500
High 1-Hour	7,519	350	600	90081112	2000
	7,545	226	560	91080912	

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Note: The project's significant impact distances (km) are SO_2 24HR/Annual - 35; SO_2 3HR - 75; PM_{10} - 12; CO -20; NO_x = 4.

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
EPA = Environmental Protection Agency

Table 6-20. Maximum Predicted Pollutant Impacts From Proposed Project at the Everglades National Park PSD Class I Area
Future Boiler No. 4 @ 0.7 % S Oil

Averaging Time	Concentration[a] (μg/m3)	UTM Receptor Location[b] (m)	(m)	Time Period (YYMMDDHH)	EPA Proposed Class I Significant Impact Levels ($\mu g/m^3$)
SO_2					
Annual	0.0057	454000	2863200	90123124	0.1
High 24-Hour	0.40	454000	2863200	90090323	0.2
High 3-Hour	1.88	454000	2863200	90090323	1.0
PM_{10}					
Annual	0.0033	454000	2863200	90123123	0.2
High 24-Hour	0.17	454000	2863200	90090332	0.3
NO_x					
Annual	0.0027	454000	2863200	90123123	0.1

[a] Based on Calpuff model using the South Florida Calmet wind field, 1990.

[b] Universal Mercator Transverse coordinate system

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
EPA = Environmental Protection Agency
PSD = Prevention of Significant Deterioration

Table 6-21. Maximum Predicted Pollutant Impacts Due to All Future Sources, AAQS Screening Analyses
- Boiler Nos. 1, 2, and 3 @ 213 ft Boiler No. 4 @ 0.7 % S

Averaging Time	Maximum Impact Scenario	Concentration [a] ($\mu g/m^3$)	Receptor Location [b]		Time Period (YYMMDDHH)
			Direction (degree)	Distance (m)	
SO_2					
Annual	Crop, Case C	24	130	3000	87123124
	Off-Crop, Case C	24	270	1200	88123124
		26	316	1200	89123124
		28	270	1200	90123124
		25	316	1200	91123124
H2H 24-Hour	Crop, Case C	215	316	1200	87032424
	Off-Crop, Case C	223	310	1200	88112024
		191	316	1500	89031524
		202	316	1500	90031624
		192	322	1200	91041624
H2H 3-Hour	Crop, Case B	523	314	1500	87031809
	Off-Crop, Case A	485	316	900	88021712
		497	310	900	89041015
		526	314	1200	90031603
		512	324	900	91041012
PM_{10}					
Annual	Crop, Case A	4	310	1200	87123124
	Off-Crop, Case B	4	270	1200	88123124
		5	316	1200	89123124
		5	310	1200	90123124
		5	312	1200	91123124
H2H 24-Hour	Crop, Case A				
	Off-Crop, Case B	39	314	1500	87032424
		38	310	1800	88040324
		31	316	1500	89031524
		36	316	1500	90020224
		34	322	1200	91041624
CO					
H2H 8-Hour	Crop, Case A [c]	2,954	310	900	87080716
		2,954	326	900	88072216
		3,241	318	900	89060416
		2,842	322	1200	90080816
		3,247	312	900	91070616
H2H 1-Hour	Crop, Case A [c]	6,306	318	900	87082912
		6,933	228	542	88071511
		6,729	280	600	89042611
		8,342	326	550	90082412
		8,421	226	560	91053011
NO_x					
Annual	Crop, Case D	6	310	1200	87123124
	Off-Crop, Case E	7	270	1200	88123124
		7	314	1200	89123124
		8	310	1200	90123124
		7	300	1200	91123124

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

[c] Crop season emissions modeled year-round.

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 6-22. Maximum Predicted Pollutant Impacts Due to All Future Sources For Comparison to AAQS, Refined Analysis - Boiler Nos. 1, 2, and 3 @ 213 ft Boiler No. 4 @ 0.7 % S

Averaging Time	Concentration ($\mu g/m^3$)			Receptor Location [b]		Time Period (YYMMDDHH)	Florida AAQS ($\mu g/m3$)
	Total	Modeled	Background	Direction (degree)	Distance (m)		
SO_2							
Annual	33.7	28.7	5	272	1300	90123124	60
H2H 24-Hour	228	215	13	316	1300	87032424	260
	236	223	13	310	1300	88040324	
H2H 3-Hour	572	525	47	314	1400	87031809	1300
	541	494	47	316	1000	88021712	
	550	503	47	310	1000	89041415	
	573	526	47	314	1200	90031603	
	562	515	47	324	1000	91041012	
PM_{10}							
Annual	28.1	5.1	23	310	1200	90123124	50
H2H 24-Hour	78	39	39	315	1300	87032224	150
	77	38	39	310	1700	88112024	
CO							
H2H 8-Hour	7,412	3,313	3,430	318	1000	9060416	10,000
	7,736	3,247	3,430	312	900	91070616	
H2H 1-Hour	14,057	8,342	5,715	326	550	90082412	
	14,136	8,421	5,715	226	560	91053011	40,000
NO_x							
Annual	30.8	7.8	23.0	308	1300	90123124	100

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 6-23. Maximum Predicted Pollutant PSD Class II Increment, Screening Analysis
- Boiler Nos. 1, 2, and 3 @ 213 ft Boiler No. 4 @ 0.7 % S

Averaging Time	Maximum Impact Scenario	Concentration[a] (μg/m3)	Receptor Location[b] Direction (degree)	Receptor Location[b] Distance (m)	Time Period (YYMMDDHH)
SO_2		2.0	70	35,000	87123124
Annual	Crop, Case C	3.3	70	35,000	88123124
	Off-Crop, Case C	2.6	70	35,000	89123124
		3.6	70	30,000	90123124
		2.7	70	35,000	91123124
H2H 24-Hour	Crop, Case C	67.2	300	1200	87061924
	Off-Crop, Case C	60.0	270	900	88073124
		73.2	320	900	89061524
		62.1	300	1200	90050324
		74.4	290	1200	91050924
H2H 3-Hour	Crop, Case B	263	310	900	87080715
	Off-Crop, Case A	292	312	900	88051915
		305	314	900	89061212
		319	314	900	90061815
		356	310	900	91070615
PM_{10}					
Annual	Crop, Case A	1.1	300	1800	87123124
	Off-Crop, Case B	0.7	312	1500	88123124
		0.7	312	1500	88123124
		0.2	312	1800	90123124
		0.2	310	1800	91123124
H2H 24-Hour	Crop, Case A	24.0	300	1200	87061924
	Off-Crop, Case B	21.2	270	900	88073024
		21.2	270	900	88073024
		22.2	300	1200	90050324
		26.3	290	1200	91050924
NO_x					
Annual	Crop, Case D	3.9	300	1500	87123124
	Off-Crop, Case E	3.9	312	1500	88123124
		4.1	312	1500	89123124
		4.4	310	1500	90123124
		3.9	300	1800	91123124

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.
PSD = Prevention of Significant Deterioration

Table 6-24. Maximum Predicted Pollutant PSD Increment Consumption For Comparison With PSD Class II Allowable Increments, Refined Analysis - Boiler Nos. 1, 2, and 3 @ 213 ft; Boiler No. 4 @ 0.7 % S

Averaging Time	Concentration (μg/m3)	Receptor Location[b]		Time Period (YYMMDDHH)	Allowable PSD Class II Increment (μg/m3)
		Direction (degree)	Distance (m)		
SO_2					
Annual	13	70.5	33600	90123124	20
H2H 24-Hour	73.9	320	1000	89061524	91
	74.6	290	1300	91050924	
H2H 3-Hour	357	310	1000	91070615	512
PM_{10}					
Annual	1.1	300	1800	87123124	17
H2H 24-Hour	25.7	304	1100	87061924	30
	26.3	290	1300	91050924	
NO_x					
Annual	4.1	312	1500	89123124	25
	4.4	310	1600	91123124	

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.
PSD = Prevention of Significant Deterioration
EPA = Environmental Protection Agency

Table A. Baseline Emissions Used in the Significant Impact Analysis for Clewiston Boiler No. 4

Pollutant	Emission Factor [a]	Heat Input [b] (MMBtu/hr)	Emissions (lb/hr)	Emissions (g/s)
Particulate Matter (PM)	0.12 lb/MMBtu	546	65.5	8.26
PM_{10}	0.112 lb/MMBtu	546	61.2	7.71
Sulfur Dioxide	0.008 lb/MMBtu	600	4.8	0.60
Nitrogen Oxides	0.082 lb/MMBtu	(c)	16.1	2.03
Carbon Monoxide	6.36 lb/MMBtu	600	3816.0	480.82

[a] Based on source test data from Boiler No. 4.

[b] Based on maximum steam rates actually reached in operation for Boiler No. 4.

[c] Based on baseline NO_x emissions of 70.6 TPY, assuming 8,760 hr/yr operation.

LOAD ANALYSIS MODELING RESULTS

PRIME OUTPUT FILE NUMBER 1 :LOAD03.087
PRIME OUTPUT FILE NUMBER 2 :LOAD03.088
PRIME OUTPUT FILE NUMBER 3 :LOAD03.089
PRIME OUTPUT FILE NUMBER 4 :LOAD03.090
PRIME OUTPUT FILE NUMBER 5 :LOAD03.091
First title for last output file is: 1987 US SUGAR CLEWISTON 3HR-SO2 EMIS.- LOAD ANALYSIS EM 8/2/20
Second title for last output file is: CROP AND OFF CROP SEASONS

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	CROPA				
HIGH 3-Hour					
	1987	499.45	166.	1152.	87102612
	1988	489.09	318.	900.	88040312
	1989	532.75	290.	900.	89042415
	1990	421.91	290.	1200.	90032412
	1991	475.69	324.	900.	91040812
HSH 3-Hour					
	1987	370.75	312.	1200.	87041418
	1988	392.87	118.	1200.	88042712
	1989	393.93	310.	1200.	89041015
	1990	376.76	290.	1500.	90032412
	1991	430.77	322.	1200.	91032715
SOURCE GROUP ID:	CROPB				
HIGH 3-Hour					
	1987	538.14	166.	1152.	87102612
	1988	547.85	318.	900.	88040312
	1989	609.42	290.	900.	89042415
	1990	494.35	290.	900.	90032412
	1991	539.46	324.	900.	91040812
HSH 3-Hour					
	1987	434.49	320.	1500.	87022803
	1988	435.94	250.	900.	88100612
	1989	455.91	318.	1500.	89040918
	1990	443.88	290.	1200.	90112815
	1991	491.58	324.	900.	91041012
SOURCE GROUP ID:	OFFA				
HIGH 3-Hour					
	1987	283.39	46.	900.	87071612
	1988	325.86	228.	900.	88062415
	1989	338.50	312.	900.	89071515
	1990	329.36	312.	900.	90052815
	1991	374.25	310.	900.	91072412
HSH 3-Hour					
	1987	262.99	310.	900.	87080715
	1988	291.78	312.	900.	88051915
	1989	305.13	314.	900.	89061212
	1990	319.19	314.	900.	90061815
	1991	355.92	310.	900.	91070615
SOURCE GROUP ID:	OFFB				
HIGH 3-Hour					
	1987	263.29	44.	900.	87071612
	1988	289.35	228.	900.	88062415
	1989	311.96	312.	900.	89071515
	1990	303.12	312.	900.	90052815
	1991	331.70	310.	900.	91072412
HSH 3-Hour					
	1987	231.81	310.	900.	87080715
	1988	256.17	312.	900.	88051915
	1989	272.74	314.	900.	89061212
	1990	285.85	314.	900.	90061815
	1991	322.47	310.	900.	91070615
SOURCE GROUP ID:	OFFC				
HIGH 3-Hour					
	1987	263.29	44.	900.	87071612
	1988	289.36	228.	900.	88062415
	1989	311.96	312.	900.	89071515
	1990	303.12	312.	900.	90052815
	1991	331.71	310.	900.	91072412
HSH 3-Hour					
	1987	231.81	310.	900.	87080715
	1988	256.18	312.	900.	88051915
	1989	272.74	314.	900.	89061212

	1990	285.85	314.	900.	90061815
	1991	322.48	310.	900.	91070615

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

PRIME OUTPUT FILE NUMBER 1 :LOAD24.087
PRIME OUTPUT FILE NUMBER 2 :LOAD24.088
PRIME OUTPUT FILE NUMBER 3 :LOAD24.089
PRIME OUTPUT FILE NUMBER 4 :LOAD24.090
PRIME OUTPUT FILE NUMBER 5 :LOAD24.091
First title for last output file is: 1987 US SUGAR CLEWISTON 24HR-SO2 EMIS.- LOAD ANALYSIS EM 8-2-00
Second title for last output file is: CROP AND OFF CROP SEASONS

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	CROPA				
Annual					
	1987	6.51	314.	1500.	87123124
	1988	8.50	270.	1500.	88123124
	1989	8.61	318.	1500.	89123124
	1990	12.29	270.	1500.	90123124
	1991	9.11	322.	1500.	91123124
HIGH 24-Hour					
	1987	168.00	312.	1200.	87041424
	1988	175.22	318.	1500.	88030324
	1989	171.13	312.	1500.	89040424
	1990	181.43	324.	1200.	90101024
	1991	156.88	320.	1200.	91032224
HSH 24-Hour					
	1987	156.13	314.	1500.	87032424
	1988	151.55	310.	1800.	88112024
	1989	129.11	316.	1500.	89031524
	1990	145.46	316.	1500.	90031624
	1991	143.00	322.	1200.	91041624
SOURCE GROUP ID:	CROPB				
Annual					
	1987	5.48	314.	1500.	87123124
	1988	7.13	270.	1500.	88123124
	1989	7.23	318.	1500.	89123124
	1990	10.31	270.	1500.	90123124
	1991	7.62	322.	1500.	91123124
HIGH 24-Hour					
	1987	142.39	312.	1200.	87041424
	1988	146.54	318.	1500.	88030324
	1989	143.07	312.	1500.	89040424
	1990	153.06	324.	1200.	90101024
	1991	131.31	320.	1200.	91032224
HSH 24-Hour					
	1987	131.00	314.	1500.	87032424
	1988	127.08	310.	1800.	88112024
	1989	108.64	316.	1500.	89031524
	1990	120.77	316.	1500.	90031624
	1991	119.21	322.	1200.	91041624
SOURCE GROUP ID:	CROPC				
Annual					
	1987	7.56	314.	1500.	87123124
	1988	9.89	270.	1500.	88123124
	1989	10.04	318.	1500.	89123124
	1990	14.20	270.	1500.	90123124
	1991	10.72	322.	1200.	91123124
HIGH 24-Hour					
	1987	194.87	312.	1200.	87041424
	1988	200.75	320.	1200.	88030324
	1989	192.97	312.	1200.	89040424
	1990	197.93	324.	1200.	90101024
	1991	180.86	320.	1200.	91032224
HSH 24-Hour					
	1987	174.44	314.	1200.	87032424
	1988	174.04	310.	1500.	88112024
	1989	150.42	316.	1500.	89040424
	1990	167.85	316.	1200.	90020224
	1991	165.80	322.	1200.	91041624
SOURCE GROUP ID:	CROPD				
Annual					
	1987	6.30	314.	1500.	87123124
	1988	8.25	270.	1500.	88123124
	1989	8.34	318.	1500.	89123124
	1990	11.86	270.	1500.	90123124

	1991	8.90	322.	1200.	91123124
HIGH 24-Hour					
	1987	163.81	312.	1200.	87041424
	1988	165.88	320.	1200.	88030324
	1989	161.24	312.	1200.	89040424
	1990	166.34	324.	1200.	90101024
	1991	150.08	320.	1200.	91032224
HSH 24-Hour					
	1987	146.48	314.	1200.	87032424
	1988	144.82	310.	1500.	88112024
	1989	123.02	316.	1500.	89040424
	1990	139.51	316.	1200.	90020224
	1991	136.84	322.	1200.	91041624
SOURCE GROUP ID:	OFFA				
Annual					
	1987	4.66	300.	1500.	87123124
	1988	3.51	310.	1200.	88123124
	1989	4.17	312.	1200.	89123124
	1990	4.09	300.	1500.	90123124
	1991	4.65	300.	1200.	91123124
HIGH 24-Hour					
	1987	55.32	300.	1800.	87051824
	1988	49.07	326.	1200.	88071024
	1989	60.51	316.	1200.	89060424
	1990	51.11	300.	1200.	90050424
	1991	70.30	290.	1500.	91052124
HSH 24-Hour					
	1987	50.09	300.	1500.	87061924
	1988	39.65	270.	1200.	88073124
	1989	54.65	318.	1200.	89061524
	1990	45.75	300.	1500.	90050324
	1991	52.25	290.	1800.	91050924
SOURCE GROUP ID:	OFFB				
Annual					
	1987	6.53	300.	1200.	87123124
	1988	5.22	310.	900.	88123124
	1989	5.90	314.	900.	89123124
	1990	5.70	300.	1200.	90123124
	1991	6.42	300.	1200.	91123124
HIGH 24-Hour					
	1987	72.23	300.	1500.	87051824
	1988	73.46	328.	900.	88071024
	1989	84.23	316.	1200.	89060424
	1990	67.55	300.	1200.	90050424
	1991	87.11	290.	1200.	91052124
HSH 24-Hour					
	1987	67.01	300.	1200.	87061924
	1988	56.57	270.	900.	88073124
	1989	72.72	320.	900.	89061524
	1990	61.87	300.	1200.	90050324
	1991	73.28	290.	1200.	91050924
SOURCE GROUP ID:	OFFC				
Annual					
	1987	6.61	300.	1200.	87123124
	1988	5.35	310.	900.	88123124
	1989	6.00	314.	900.	89123124
	1990	5.77	300.	1200.	90123124
	1991	6.48	300.	1200.	91123124
HIGH 24-Hour					
	1987	72.38	300.	1500.	87051824
	1988	73.60	328.	900.	88071024
	1989	84.82	316.	1200.	89060424
	1990	67.67	300.	1200.	90050424
	1991	87.39	314.	1200.	91052724
HSH 24-Hour					
	1987	67.31	300.	1200.	87061924
	1988	59.28	270.	900.	88073124
	1989	73.28	320.	900.	89061524
	1990	62.09	300.	1200.	90050324
	1991	74.36	290.	1200.	91050924
SOURCE GROUP ID:	OFFD				
Annual					
	1987	5.06	300.	1200.	87123124
	1988	3.90	310.	900.	88123124
	1989	4.51	312.	900.	89123124
	1990	4.40	300.	1200.	90123124
	1991	4.93	300.	900.	91123124

	1987	59.77	300.	1200.	87051824
	1988	55.08	250.	900.	88061424
	1989	62.79	316.	1200.	89060424
	1990	51.26	300.	1200.	90050424
	1991	71.48	290.	900.	91052124
HSH 24-Hour					
	1987	53.31	300.	1200.	87061924
	1988	49.36	250.	1200.	88070624
	1989	57.41	318.	900.	89061524
	1990	47.05	300.	1200.	90050324
	1991	54.89	290.	1200.	91050924
SOURCE GROUP ID:	OFFE				
Annual					
	1987	5.38	300.	1200.	87123124
	1988	4.25	310.	900.	88123124
	1989	4.85	312.	900.	89123124
	1990	4.68	300.	1200.	90123124
	1991	5.27	300.	900.	91123124
HIGH 24-Hour					
	1987	62.50	300.	1200.	87051824
	1988	57.14	250.	900.	88061424
	1989	67.04	316.	900.	89060424
	1990	54.12	300.	1200.	90050424
	1991	74.55	290.	900.	91052124
HSH 24-Hour					
	1987	56.22	300.	1200.	87061924
	1988	51.36	250.	1200.	88070624
	1989	60.51	318.	900.	89061524
	1990	49.93	300.	1200.	90050324
	1991	59.04	290.	1200.	91050924

All receptor computations reported with respect to a user-specified origin.

GRID	0.00	0.00
DISCRETE	0.00	0.00

PRIME OUTPUT FILE NUMBER 1 :LOADPM.087
PRIME OUTPUT FILE NUMBER 2 :LOADPM.088
PRIME OUTPUT FILE NUMBER 3 :LOADPM.089
PRIME OUTPUT FILE NUMBER 4 :LOADPM.090
PRIME OUTPUT FILE NUMBER 5 :LOADPM.091
First title for last output file is: 1987 US SUGAR CLEWISTON PM10 LOAD ANALYSIS 8/21/00
Second title for last output file is: CROP AND OFF CROP SEASONS

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID:	CROPA				
Annual					
	1987	0.83	118.	663.	87123124
	1988	0.86	110.	906.	88123124
	1989	0.81	110.	906.	89123124
	1990	0.89	270.	1500.	90123124
	1991	0.74	34.	550.	91123124
HIGH 24-Hour					
	1987	10.86	270.	1200.	87111624
	1988	11.05	320.	1500.	88030324
	1989	10.24	312.	1500.	89040424
	1990	12.28	326.	1200.	90101024
	1991	9.86	320.	1500.	91032224
HSH 24-Hour					
	1987	9.71	316.	1200.	87032424
	1988	9.63	322.	1500.	88112624
	1989	7.73	316.	1800.	89031524
	1990	8.97	316.	1500.	90020224
	1991	8.81	322.	1200.	91041624
SOURCE GROUP ID:	OFFA				
Annual					
	1987	1.68	300.	1200.	87123124
	1988	1.35	310.	1200.	88123124
	1989	1.60	314.	1200.	89123124
	1990	1.56	300.	1200.	90123124
	1991	1.73	300.	1200.	91123124
HIGH 24-Hour					
	1987	18.13	300.	1800.	87051824
	1988	16.38	260.	900.	88061824
	1989	20.26	316.	1200.	89060424
	1990	17.43	300.	1200.	90050424
	1991	23.26	290.	1200.	91052124
HSH 24-Hour					
	1987	16.77	300.	1500.	87061924
	1988	13.55	270.	1200.	88073024
	1989	18.15	320.	1200.	89060424
	1990	15.38	300.	1500.	90050324
	1991	17.51	290.	1500.	91050924
SOURCE GROUP ID:	OFFB				
Annual					
	1987	2.44	300.	1200.	87123124
	1988	2.08	310.	900.	88123124
	1989	2.37	314.	900.	89123124
	1990	2.25	310.	900.	90123124
	1991	2.49	300.	900.	91123124
HIGH 24-Hour					
	1987	25.34	300.	1500.	87051824
	1988	25.89	326.	900.	88071024
	1989	29.66	316.	1200.	89060424
	1990	24.23	300.	1200.	90050424
	1991	30.76	314.	1200.	91052724
HSH 24-Hour					
	1987	24.04	300.	1200.	87061924
	1988	21.10	270.	900.	88073024
	1989	25.74	320.	900.	89061524
	1990	22.19	300.	1200.	90050324
	1991	26.26	290.	1200.	91050924
SOURCE GROUP ID:	OFFC				
Annual					
	1987	2.33	300.	1200.	87123124
	1988	1.98	310.	900.	88123124
	1989	2.25	314.	900.	89123124
	1990	2.14	310.	900.	90123124

	1991	2.37	300.	900.	91123124
HIGH 24-Hour					
	1987	24.12	300.	1500.	87051824
	1988	23.95	326.	900.	88071024
	1989	28.12	316.	1200.	89060424
	1990	23.13	300.	1200.	90050424
	1991	29.37	290.	1200.	91052124
HSH 24-Hour					
	1987	22.85	300.	1200.	87061924
	1988	19.96	270.	900.	88073024
	1989	24.53	320.	900.	89061524
	1990	21.06	300.	1200.	90050324
	1991	24.83	290.	1200.	91050924
SOURCE GROUP ID:	OFFD				
Annual					
	1987	2.26	300.	900.	87123124
	1988	1.89	310.	900.	88123124
	1989	2.18	314.	900.	89123124
	1990	2.08	310.	900.	90123124
	1991	2.30	300.	900.	91123124
HIGH 24-Hour					
	1987	24.56	300.	1200.	87051824
	1988	22.45	260.	900.	88061824
	1989	26.80	316.	900.	89060424
	1990	21.89	300.	1200.	90050424
	1991	29.71	290.	900.	91052124
HSH 24-Hour					
	1987	22.57	300.	1200.	87061924
	1988	18.82	250.	1200.	88070624
	1989	23.77	318.	900.	89061524
	1990	20.06	300.	1200.	90050324
	1991	23.48	290.	1200.	91050924

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

PRIME OUTPUT FILE NUMBER 1 :LOADCO.087
PRIME OUTPUT FILE NUMBER 2 :LOADCO.088
PRIME OUTPUT FILE NUMBER 3 :LOADCO.089
PRIME OUTPUT FILE NUMBER 4 :LOADCO.090
PRIME OUTPUT FILE NUMBER 5 :LOADCO.091
First title for last output file is: 1987 US SUGAR CLEWISTON CO LOAD ANALYSIS 8/22/2000
Second title for last output file is: NO SEASONS, YEAR-ROUND OPERATION

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: CROPA					
HIGH 8-Hour					
	1987	861.06439	310.	1200.	87080716
	1988	978.70508	260.	1200.	88061816
	1989	1019.61761	318.	900.	89060516
	1990	1094.30347	324.	1500.	90021608
	1991	1131.98303	310.	900.	91072416
HSH 8-Hour					
	1987	833.95898	310.	1200.	87061416
	1988	833.14020	326.	900.	88072216
	1989	937.85004	318.	1200.	89060416
	1990	852.07263	322.	1200.	90080816
	1991	914.55371	312.	900.	91070616
HIGH 1-Hour					
	1987	2513.74048	250.	600.	87080811
	1988	2422.26050	314.	560.	88072611
	1989	2727.09082	280.	600.	89073011
	1990	2628.63452	324.	564.	90080511
	1991	2592.06348	226.	600.	91080912
HSH 1-Hour					
	1987	1951.18799	322.	900.	87082911
	1988	2043.72778	226.	560.	88071511
	1989	2025.67529	280.	600.	89042611
	1990	2579.05981	326.	550.	90082412
	1991	2478.27954	224.	580.	91053011

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

PRIME OUTPUT FILE NUMBER 1 :LOADNOX.087
PRIME OUTPUT FILE NUMBER 2 :LOADNOX.088
PRIME OUTPUT FILE NUMBER 3 :LOADNOX.089
PRIME OUTPUT FILE NUMBER 4 :LOADNOX.090
PRIME OUTPUT FILE NUMBER 5 :LOADNOX.091
First title for last output file is: 1987 US SUGAR CLEWISTON 24-HR NOX EMIS. - LOAD ANALYSIS EM 8/14/2000
Second title for last output file is: OFF CROP SEASONS

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: OFFA					
Annual					
	1987	1.94180	300.	1500.	87123124
	1988	1.46355	310.	1500.	88123124
	1989	1.71593	310.	1500.	89123124
	1990	1.71183	300.	1500.	90123124
	1991	1.92929	300.	1500.	91123124
SOURCE GROUP ID: OFFB					
Annual					
	1987	2.57604	300.	1200.	87123124
	1988	2.06370	310.	1200.	88123124
	1989	2.32945	312.	1200.	89123124
	1990	2.25799	300.	1200.	90123124
	1991	2.54912	300.	1200.	91123124
SOURCE GROUP ID: OFFC					
Annual					
	1987	2.51025	300.	1200.	87123124
	1988	2.01026	310.	1200.	88123124
	1989	2.27062	312.	1200.	89123124
	1990	2.20213	300.	1200.	90123124
	1991	2.48831	300.	1200.	91123124
SOURCE GROUP ID: OFFD					
Annual					
	1987	2.89653	300.	1200.	87123124
	1988	2.17730	310.	1200.	88123124
	1989	2.55898	310.	1200.	89123124
	1990	2.53144	300.	1200.	90123124
	1991	2.82432	300.	1200.	91123124
SOURCE GROUP ID: OFFE					
Annual					
	1987	2.90354	300.	1200.	87123124
	1988	2.19073	310.	1200.	88123124
	1989	2.56796	310.	1200.	89123124
	1990	2.53715	300.	1200.	90123124
	1991	2.83104	300.	1200.	91123124

All receptor computations reported with respect to a user-specified origin
GRID 0.00 0.00
DISCRETE 0.00 0.00

PRIMEBOB RELEASE 990515

PRIME OUTPUT FILE NUMBER 1 :LOADNC.087
PRIME OUTPUT FILE NUMBER 2 :LOADNC.088
PRIME OUTPUT FILE NUMBER 3 :LOADNC.089
PRIME OUTPUT FILE NUMBER 4 :LOADNC.090
PRIME OUTPUT FILE NUMBER 5 :LOADNC.091
First title for last output file is: 1987 US SUGAR CLEWISTON 24-HR NOX EMIS. - LOAD ANALYSIS EM 8/22/2000
Second title for last output file is: CROP SEASONS

AVERAGING TIME	YEAR	CONC (ug/m3)	DIR (deg) or X (m)	DIST (m) or Y (m)	PERIOD ENDING (YYMMDDHH)
SOURCE GROUP ID: CRA					
Annual					
	1987	1.89625	314.	1800.	87123124
	1988	2.46391	270.	1800.	88123124
	1989	2.50528	318.	1800.	89123124
	1990	3.58941	270.	1800.	90123124
	1991	2.65309	322.	1500.	91123124
SOURCE GROUP ID: CRB					
Annual					
	1987	1.90611	138.	1800.	87123124
	1988	2.47660	270.	1800.	88123124

	1989	2.51608	318.	1800.	89123124
	1990	3.61471	270.	1800.	90123124
	1991	2.66033	322.	1500.	91123124

SOURCE GROUP ID: CRC
Annual

1987	1.97606	138.	1800.	87123124
1988	2.44658	270.	1500.	88123124
1989	2.51080	318.	1500.	89123124
1990	3.54221	270.	1500.	90123124
1991	2.64462	322.	1500.	91123124

SOURCE GROUP ID: CRD
Annual

1987	2.01656	138.	1800.	87123124
1988	2.46659	270.	1500.	88123124
1989	2.52227	318.	1500.	89123124
1990	3.58160	270.	1500.	90123124
1991	2.65409	322.	1500.	91123124

All receptor computations reported with respect to a user-specified origin

GRID	0.00	0.00
DISCRETE	0.00	0.00

U.S. SUGAR CLEWISTON

BOILER NOS. 1, 2, AND 3
HISTORIC TEST DATA

COMPILATION OF PARTICULATE EMISSION TESTS
U.S. Sugar Corporation, Clewiston Mill and Bryant 5

Test Number	Date	Steam Production (lb/hr)	Heat Input (10⁶ Btu/hr)		Particulate Emissions (lb/10⁶ Btu)		Particulate Emissions (lb/hr)		Actual Flow Rate (ACFM)	Stack Temperature (°F)
			Bagasse	Oil	Actual (Avg.)†	Allowable	Actual	Allowable		
					CLEWISTON BOILER 1					
1	11/16/76	186,600	367.1	0	0.166	0.3	60.9	110.1		
2	11/16/76	179,000	352.1	0	0.164 (0.166)	0.3	57.8	105.6		
3	11/16/76	179,200	318.3	35.1	0.168	0.28	59.3	99.0		
4	02/09/78	206,100	408.6	0	0.131	0.3	53.7	122.6		
5	02/13/78	197,200	378.3	10.4	0.151 (0.145)	0.3	58.8	114.5		
6	02/13/78	218,000	425.7	0	0.152	0.3	64.6	127.7		
7	01/05/79	213,100	412.9	0	0.149	0.3	61.7	123.9		
8	01/05/79	205,200	395.0	0	0.168 (0.164)	0.3	66.4	118.5		
9	01/05/79	209,300	394.4	0	0.176	0.3	69.5	119.8		
10	12/03/79	210,201	404.3	0	0.173	0.3	70.1	121.3		
11	12/03/79	222,928	405.3	0	0.192 (0.197)	0.3	77.7	121.6		
12	12/03/79	225,000	409.1	0	0.225	0.3	92.1	122.7		
13	12/20/80	223,228	432.3	0	0.179	0.3	77.5	129.7	135,805	159
14	12/20/80	221,564	422.4	0	0.156 (0.165)	0.3	66.0	126.7	129,154	160
15	12/20/80	223,977	427.2	0	0.160	0.3	68.2	128.2	140,192	160
16	11/19/81	210,750	393.6	0	0.253	0.3	99.5	118.1	139,301	161
17	11/20/81	218,892	421.6	0	0.164 (0.222)	0.3	69.2	126.5	146,264	157
18	11/20/81	220,729	428.5	0	0.250	0.3	106.9	128.6	137,885	165
19	11/15/82	236,250	462.3	0	0.199	0.3	91.9	138.7	147,022	162
20	11/15/82	220,798	393.9	0	0.220 (0.203)	0.3	86.8	118.2	141,764	158
21	11/15/82	210,375	412.7	0	0.191	0.3	79.0	123.8	145,712	160

COMPILATION OF PARTICULATE EMISSION TESTS
U.S. Sugar Corporation, Clewiston Mill and Bryant 5
(Continued, Page 2 of 6)

Test Number	Date	Steam Production (lb/hr)	Heat Input (10^6 Btu/hr)		Particulate Emissions ($lb/10^6$ Btu)			Particulate Emissions (lb/hr)		Actual Flow Rate (ACFM)	Stack Temperature (°F)
			Bagasse	Oil	Actual (Avg.)†		Allowable	Actual	Allowable		
					CLEWISTON BOILER 2						
1	11/10/75	175,000	314.2	33.3	0.147		0.28	52.1	97.6		
2	11/10/75	175,000	303.4	50.8	0.146	(0.156)	0.27	51.8	96.1		
3	11/10/75	175,000	315.9	49.3	0.175		0.27	63.8	99.7		
4	01/04/77	185,780	343.6	50.0	0.202		0.28	79.6	108.1		
5	01/04/77	186,876	358.3	18.0	0.165	(0.180)	0.29	62.0	109.3		
6	01/05/77	174,558	328.9	14.9	0.172		0.29	59.0	100.2		
7	02/08/78	198,200	361.0	0	0.123		0.3	44.4	108.3		
8	02/08/78	206,300	379.5	0	0.127	(0.143)	0.3	48.3	113.9		
9	02/08/78	211,000	388.8	0	0.180		0.3	70.1	116.6		
10	01/15/79	209,400	401.6	0	0.213		0.3	85.5	120.5		
11	01/15/79	215,100	410.4	0	0.129	(0.192)	0.3	52.9	123.1		
12	01/15/79	183,800	351.1	0	0.234		0.3	82.3	105.3		
13	12/04/79	203,450	370.0	0	0.198		0.3	73.2	111.0		
14	12/04/79	201,159	376.5	0	0.202	(0.192)	0.3	76.1	113.0		
15	12/04/79	207,360	377.0	0	0.175		0.3	65.8	113.1		
16	12/22/80	199,452	361.2	0	0.147		0.3	53.3	108.4	137,360	159
17	12/22/80	204,750	371.6	0	0.118	(0.151)	0.3	43.8	111.5	142,915	157
18	12/22/80	203,067	368.3	0	0.188		0.3	69.3	110.5	141,986	161
19	02/11/82	208,319	369.0	62.8	0.144		0.27	62.0	117.0	158,489	157
20	02/11/82	204,750	380.6	42.8	0.156	(0.136)	0.28	66.1	118.4	155,621	155
21	02/11/82	212,318	384.3	40.5	0.107		0.28	41.1	119.3	152,127	156
22	11/17/82	203,097	416.2	0	0.189		0.3	78.8	124.9	153,869	162
23	11/17/82	204,750	423.2	0	0.139	(0.165)	0.3	58.8	127.0	153,891	163
24	11/17/82	214,817	453.2	0	0.167		0.3	75.9	136.0	149,671	158

COMPILATION OF PARTICULATE EMISSION TESTS
U.S. Sugar Corporation, Clewiston Mill and Bryant 5
(Continued, Page 3 of 6)

Test Number	Date	Steam Production (lb/hr)	Heat Input (10^6 Btu/hr)		Particulate Emissions ($lb/10^6$ Btu)		Particulate Emissions (lb/hr)		Actual Flow Rate (ACFM)	Stack Temperature (°F)
			Bagasse	Oil	Actual (Avg.)†	Allowable	Actual	Allowable		
					CLEWISTON BOILER 3					
1	11/12/75	100,000	146.2	47.4	0.114	0.25	21.6	48.6		
2	11/12/75	100,000	123.5	77.5	0.134 (0.185)	0.22	27.0	44.8		
3	11/12/75	100,000	135.1	61.7	0.306	0.24	60.3	46.7		
4	11/19/76	87,600	145.3	24.7	0.144	0.27	24.5	46.1		
5	11/19/76	88,200	146.6	25.6	0.156 (0.153)	0.27	26.8	46.5		
6	11/19/76	81,000	130.7	21.2	0.158	0.27	24.0	41.3		
7	02/14/78	82,600	160.5	0	0.122	0.3	19.6	48.2		
8	02/14/78	82,500	160.5	0	0.149 (0.140)	0.3	23.9	48.2		
9	02/14/78	81,800	155.2	2.5	0.150	0.3	23.7	46.8		
10	12/18/78	111,800	125.8	102.8	0.107	0.21	24.5	48.0		
11	12/19/78	107,500	168.5	42.2	0.105 (0.118)	0.26	22.1	54.8		
12	12/19/78	105,600	148.4	63.5	0.142	0.24	30.0	50.9		
13	12/12/79	90,426	186.4	0	0.260	0.3	48.4	55.9		
14	12/12/79	91,969	189.4	0	0.264 (0.248)	0.3	50.0	56.8		
15	12/12/79	93,462	183.8	8.9	0.219	0.29	42.2	56.0		
16	12/23/80	107,693	203.1	18.9	0.127	0.28	28.5	62.8	81,798	159
17	12/23/80	107,432	206.8	14.6	0.118 (0.123)	0.28	26.5	63.5	83,018	161
18	12/23/80	107,156	199.2	21.7	0.123	0.27	28.0	61.9	78,292	158
19	11/23/81	110,455	205.9	5.6	0.222	0.3	47.0	62.3	89,348	151
20	11/23/81	109,929	190.6	2.0	0.218 (0.204)	0.3	41.9	57.4	77,278	152
21	11/23/81	117,149	201.4	3.9	0.172	0.3	35.4	60.8	87,779	153
22	11/16/82	177,900	246.9	0	0.181	0.3	44.6	74.1	95,944	156
23	11/17/82	125,337	268.1	0	0.163 (0.170)	0.3	43.8	80.4	104,168	154
24	11/17/82	128,483	275.0	0	0.167	0.3	46.0	82.5	101,931	156

NONFOSSIL FUELED BOILERS

Emission Test Report
U.S. Sugar Company
Bryant, Florida for Boiler #2 at Bryan.

Project No.: 80-WFB-6

Prepared for

Environmental Protection Agency
Office of Air Quality Planning and Standards
Emission Measurement Branch
Research Triangle Park
North Carolina 27711

by

James A. Peters and Charles F. Duncan

Contract 68-02-2818, Work Assignment No. 25

May 1980

MONSANTO RESEARCH CORPORATION
DAYTON LABORATORY
1515 Nicholas Road
Dayton, Ohio 45407

TABLE OF CONTENTS

SECTION 2

SUMMARY OF RESULTS

Pollutants which were measured for this emission test were particulate matter, particle size, CO_2, CO, SO_2, NO_x, and plume opacity. Table 1 presents the sampling and analysis schedule in condensed form.

TABLE 1. BRYANT PLANT SAMPLING AND ANALYSIS SCHEDULE

Sampling site	Total number of samples	Sample type	Sampling method	Minimum sampling time	Initial analysis Type	Initial analysis Method
Scrubber outlet	3	Particulate matter	EPA 5	60 min		
Scrubber outlet	3	Particle-size distribution	Andersen			
Scrubber outlet	3	Integrated gas analysis	EPA 3		CO_2, O_2, CO	EPA 3
Scrubber outlet	3	SO_2	EPA 6, option 2	Same as Method 5		
Scrubber outlet	3 runs, 4 samples each	NO_x	EPA 7	15 min intervals		
Scrubber outlet	3	Opacity	EPA 9			
Scrubber outlet	3 samples, 2 fuel analyses each	ASTM			Ultimate analysis and heating value	ASTM

The Bryant Mill operates three waste-fired boilers fed with bagasse. The center boiler, Boiler #2, was tested. Boiler #2 utilizes dual scrubbers in parallel for pollution abatement. The outlet stack is located directly above the scrubbers.

TABLE 4. SUMMARY OF INTEGRATED GAS ANALYSES, U.S. SUGAR-BRYANT MILL, DECEMBER 17-18, 1979

Run number	Date	CO_2, %	CO, %	O_2, %	N_2, %	MW lb/lb mole
1	12/17/79	10.8	0.0	9.2	80.0	30.1
2	12/18/79	11.1	0.0	9.0	79.9	30.1
3	12/18/79	11.3	0.0	9.4	79.3	30.2
Average		11.1	0.0	9.2	79.7	30.1

TABLE 5. SUMMARY OF ANDERSEN PARTICLE SIZING RESULTS, U.S. SUGAR-BRYANT MILL, DECEMBER 17-18, 1979

Run No. 1

Discarded

Run No. 2

Flow rate = 0.927 acfm
Isokinetic rate = 107.1%

Stage	Size range	Percent in size range	Cumulative % <size range
Preimpactor	>10.50	3.99	94.55
0	>10.50	1.46	94.55
1	6.50 - 10.50	3.06	91.52
2	4.30 - 6.50	7.98	83.54
3	2.95 - 4.30	11.30	72.24
4	1.88 - 2.95	12.40	59.94
5	0.94 - 1.88	12.90	46.94
6	0.58 - 0.94	19.15	27.79
7	0.39 - 0.58	16.49	11.30
Filter	0.0 - 0.39	11.30	0

Run No. 3

Flow rate = 0.908 acfm
Isokinetic rate = 105.5%

Stage	Size range	Percent in size range	Cumulative % <size range
Preimpactor	>10.60	6.56	91.43
0	>10.60	2.01	91.43
1	6.60 - 10.60	4.28	87.14
2	4.40 - 6.60	7.47	79.67
3	3.00 - 4.40	8.66	71.01
4	1.90 - 3.00	8.66	62.35
5	0.96 - 1.90	10.48	51.87
6	0.59 - 0.96	20.60	31.27
7	0.40 - 0.59	16.68	14.59
Filter	0.0 - 0.40	14.59	0

Golder Associates Inc.

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Golder Associates

September 8, 2000

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SEP 11 2000

BUREAU OF AIR REGULATION

Florida Department of Environmental Protection
New Source Review Section
2600 Blair Stone Road
Tallahassee, FL

Attention : Jeffery Koerner, P.E.

RE: United States Sugar Corporation
PSD Permit Application for Boiler No. 4 and
the Sugar Refinery at the Clewiston Mill
Revised ISC-PRIME Modeling Scenario
Request for Additional Information No. 2

Dear Mr. Koerner:

United States Sugar Corporation (U.S. Sugar) has received the Florida Department of Environmental Protection's (FDEP) letter dated June 21, 2000, requesting additional information in regards to the revised ISC-PRIME modeling scenario for the Clewiston Mill. Revised modeling scenario results were submitted to the FDEP in a letter from Golder Associates Inc. dated May 3, 2000. The purpose of this letter is to address the questions in the FDEP's letter in order to address all outstanding issues. The comments are addressed below, in the same order as they appear in the comment letter. Note that U.S. Sugar has performed revised dispersion modeling for all pollutants for both the "crop season" and "off-season" operating scenarios, as described below. Note that a complete set of Section 6.0 tables (from the PSD report) are attached, revised to be consistent with the current modeling.

1. Operation of Boiler Nos. 1-3 during the off-season would not be considered a change in the method of operation under FDEP's rules, and therefore would not constitute a modification. The state's definition of modification at Rule 62-210.200(188)2. reads as follows:

   "For any pollutant that is specifically regulated by EPA under the Clean Air Act, a change in the method of operation shall not include an increase in the hours of operation or in the production rate, unless such change would be prohibited under any federally enforceable permit condition established after January 6, 1975."

   Boiler Nos. 1-3 currently do not have any federally enforceable restriction on operating hours. These three boilers have never had a federally enforceable restriction on operating hours. As a result, by FDEP rules, Boiler Nos. 1-3 operating in the off-season

would not constitute a change in the method of operation, and would therefore not be a "modification".

U.S. Sugar has provided information concerning start and end dates of historic crop seasons. From the startup of the Clewiston mill in 1929 through 1961, crop seasons routinely spanned 7 months and from time to time spanned 8 months. The U.S. Sugar Bryant mill began operating in 1962, and therefore U.S. Sugar's total sugar cane supply was shared between the two mills, and crop seasons generally spanned 6 to 7 months thereafter. The 1972-1973 crop season spanned 7 months, from October through April. Based on this historical information, the baseline months for PSD increment consumption for the Clewiston mill will span 7 months, from October through April. O-A

The future crop season for Clewiston will also be modeled as 7 months, from October through April. This is the anticipated future maximum crop season length. U.S. Sugar does not agree with placing a limit in the permit on the crop season length. The FDEP requires "reasonable assurance" that ambient standards or PSD increments will not be violated. The dispersion modeling is already very conservative, and provides the FDEP with that reasonable assurance. O-A

The approach recommended by FDEP will be utilized in the modeling, i.e., the future scenario will be modeled as two facilities in a single model run – a "crop season" facility and an "off-season" facility. The crop season facility will be modeled for 7 months, October through April, and the off-season facility will be modeled as the remaining 5 months. An annual average will then be obtained for all months. The PSD baseline sources for the Clewiston mill will be modeled for 7 months, from October through April.

2. No discussion required.
3. No discussion required.
4. No discussion required.
5. No discussion required.
6. No discussion required.
7. Refer to Comment 16 for a discussion of worst case operating scenarios for various pollutants for the crop season operation
8. Refer to Comments 18-20.
9. Refer to Comments 18-20.
10. Although we do not agree with the FDEP on this issue, for purposes of expediting this application, the emission tables have been revised to reflect 55% thermal efficiency for both bagasse and fuel oil burning.
11. Many previous permit applications and modeling analysis for Florida bagasse boilers have used the presumption of 93% of PM emissions is equal to PM_{10} emissions. The

basis of this presumption is a stack test performed on a bagasse boiler at Bryant by EPA (copy of test results attached). Two tests using an Andersen impactor were performed. The first test showed 91.5% of total PM was 10.5 microns or less, while the second test showed 87.1% of total PM as less than 10.5 microns in size. The average of the two runs was 89%. Thus, the 93% factor used in developing the PM_{10} emissions for Clewiston overestimates actual PM_{10} emissions, based on this testing.

12. The SO_2 emissions shown in the initial construction permit for the GCRF were based on a similar industry. Subsequently, tests were conducted on the sugar decolorization process that indicated minimal sulfur concentrations in the feed material, and that this sulfur was not removed by the GCRF. Therefore, no SO_2 emissions are expected from the GCRF except for that due to fuel sulfur. No SO_2 compliance tests have been conducted on the GCRF because Permit No. 0510003-009-AC was issued on Nov. 11, 1999, prior to any initial compliance testing, and this revised permit did not require any SO_2 tests. Since all SO_2 is due to fuel oil burning, there is no need to test for SO_2 emissions.

13. The modeling has been revised to reflect appropriate volumetric flow rates and velocities whenever a reduced steam production is indicated for the scenario.

14. Permit No. 051-0003-009-AC, issued Nov. 11, 1999, required that an application be submitted for modification that included, among other information, the latest emission information. Since certain emission limits for Boiler No. 4 were established in this permit that were lower than those in the initial application, the purpose of providing Table 3-4 was to bring the project increases up to date. The current request, as the FDEP points out, is only to revise the modeling analysis.

15. U.S. Sugar will agree that these boilers will not be operated in the future.

16. a. The current permit limit of 0.06 lb SO_2/MMBtu for Boiler No. 4 has been used throughout the revised emission calculations and modeling analysis.

    b. An SO_2 emission rate of 0.06 lb/MMBtu for bagasse burning on all boilers has been used in the revised analysis (except for Boiler No. 7), in order to add consistency to the analysis. Boiler Nos. 1, 2 and 3 have the same type wet scrubbing system and burn the same bagasse fuel as Boiler No. 4, so SO_2 emissions should be similar. As presented previously to the FDEP, a total of 16 test runs on Boiler No. 4 resulted in an average SO_2 emission rate from bagasse of 0.007 lb/MMBtu and a maximum of 0.014 lb/MMBtu. Therefore, the 0.06 lb/MMBtu emission factor for Boiler Nos. 1, 2 and 3 is conservatively high.

    c. The maximum 1-hr steam production rates and heat input rates for Boiler Nos. 1-3 are shown in the attached tables, and are as follows:

        Boiler No. 1: 255,000 lb/hr steam; 495.6 MMBtu/hr

        Boiler No. 2: 230,000 lb/hr steam; 447.0 MMBtu/hr

        Boiler No. 3: 130,000 lb/hr steam; 265.3 MMBtu/hr

    These maximum rates are based on recent compliance test rates, with an adequate margin of safety.

d. Various operating scenarios have been developed to appropriately determine a reasonable "worst case" operating scenario. Both crop season and off-season operations were assessed. The operating scenarios were developed based on steam production requirements, practical operating rates for the boilers (i.e., several boilers would not be operated at less than 50% load when fewer boilers at higher capacity could provide the same steam requirements), fuel burning capabilities of the boilers, etc. The oil firing rates for Boiler Nos. 1 – 4 were based on the maximum physical capabilities of these boilers (1500, 1500, 900, and 1500 gallons per hour, respectively), except that certain total fuel oil burning limitations for Boiler Nos. 1-4 were taken where as necessary to maintain acceptable impacts.

The scenarios were pollutant and averaging time specific. Screening runs were performed for the various scenarios to identify the overall worst-case. The Clewiston facility only was modeled (crop season facility and off-season facility) to determine the scenario resulting in worst-case impacts. This scenario was then used for the final refined modeling analysis to assess compliance with AAQS and PSD increments with all sources.

Note that as a result of the revised analysis, U.S. Sugar will raise the stacks on Boiler Nos. 1-3 to a minimum height of 213 feet.

The following forms the basis of the modeling analysis for the crop season operation.

Crop season operation

O-A

- All boilers (Nos. 1, 2, 3, 4, and 7) operating at maximum capacity (based on permit limitations, Boiler Nos. 4 and 7 operate at slightly reduced rates for the 24-hour averaging time).
- Boiler Nos. 1, 2 and 3 are restricted to burning fuel oil with no greater than 2.5% sulfur.
- Boiler No. 4 is restricted to burning fuel oil with no greater than 0.7% sulfur (with a separate fuel oil tank).
- Boiler No. 7 is restricted to burning fuel oil with no greater than 0.05% sulfur (with a separate fuel oil tank).
- The worst case for SO_2 emissions occur with Boiler Nos. 1, 2, 3 and 4 burning the maximum amount of fuel oil, with the remainder of heat input due to bagasse burning. The worst case SO_2 emissions for Boiler No. 7 are when burning 100 percent bagasse.
- SO_2 3-hour averaging time: No. 6 fuel oil consumption (total of Boiler Nos. 1, 2, 3 and 4) is limited to 16,200 gallons per 3-hour period. Two scenarios were evaluated: A) all boilers operating at maximum heat input, and B) all boilers operating at 80% load.
- SO_2 24-hour averaging time: No. 6 fuel oil consumption is limited to 88,800 gallons per 24-hour period. Four scenarios were evaluated: A&B) all boilers operating at maximum heat input, with the total fuel oil burning distributed differently, and C&D) all boilers operating at 80 percent load, with the total fuel oil burning distributed differently.

What level

OK

- For SO_2, Five scenarios were evaluated, representing various boiler loads and fuel oil burning rates, with total steam production and oil burning for Boiler Nos. 1-4 limited as described above.
- Maximum PM and CO emissions occur under 100 percent bagasse firing in all boilers. Scenarios A-D analyzed for SO_2 emissions were also evaluated for PM_{10} emissions. To simplify the analysis, the crop season CO emissions were modeled for both the crop season and the off-season scenarios.

17. – 20. Refer to Comments 11 and 16 above.

21. Lake Worth Generating and the FPL Martin new combustion turbines will be incorporated into the evaluation.

22. FDEP investigated the potential applicability of PSD prior to issuing the 1996 and 1997 permits for the sugar refinery. The 1997 permit includes an express determination by FDEP that PSD did not apply. In addition, the recent permit (No. 051-0003-009-AC/PSD-FL-272) imposed BACT upon all of the refinery units, and the current modeling analysis incorporates the refinery sources as well as the new refinery structures, which should satisfy any FDEP concerns.

23. There have been no modifications to these boilers that have affected maximum steam production or heat input rates. Past compliance test data indicate that, during the period 1976 to 1982, Boiler No. 1 achieved a maximum steam rate during compliance testing of 236,250 lb/hr and a maximum heat input rate of 462.3 MMBtu/hr (see attached tables taken from the Clewiston Boiler No. 4 application dated 1984). Similarly, during the period 1975 to 1982, Boiler No. 2 achieved a maximum steam rate during compliance testing of 215,100 lb/hr and a maximum heat input rate of 410.4 MMBtu/hr. During the period 1975 to 1982, Boiler No. 3 achieved a maximum steam rate during compliance testing of 128,483 lb/hr and a maximum heat input rate of 275.0 MMBtu/hr. The steam production rates and heat input rates measured during recent compliance testing of Boilers 1, 2, and 3 are comparable to these historical values. Our answer to Question 16.c presents the maximum production rates and heat input values used in the current modeling effort. Current and historical steam production rates and heat inputs are within 90% of the modeled maximums.

24. Boiler Nos. 1 – 3 will be included in the off season significant impact analysis for both the PSD Class I and Class II areas. The annual concentration will be determined by modeling the crop season and off-season scenarios in the same model run. The radii of significant impact for all Class II significant impact analyses (both crop season and off-season) is provided in the appropriate table.

Revised Air Quality Impact Assessment

Based upon the above model related comments, Golder Associates has performed additional modeling analysis in order to bring the project impacts up to date. All model runs have been re-executed using the ISC-PRIME model. All modeling was performed with the final selected control option of raising the existing stacks on Boiler Nos. 1, 2 and 3 from the current 165 feet to a height of 213 feet. Note that a complete set of tables from

B12

Section 6.0 are being provided, including additional tables reflecting crop-season emissions and impacts.

A shown in the attached Section 6.0 tables, compliance with all standards and increments is predicted with the ISC-PRIME model. All model input and output files will be placed at ftp.golder.com/gville/srm/cleve/USSCLEW – Golder's FTP site for access by FDEP and EPA.

Thank you for consideration of this information. Please call or e-mail me if you have any additional questions.

Sincerely,

Golder Associates Inc.

David A. Buff

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Table 3 HR OFFCROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Off-Season Operation - 3-hr Averaging Time (7/20/00)

Boilers 1-3 @ 1.6% sulfur fuel oil; 213 ft stack height

Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

	Boiler Design Rates			Operating Rate					Modeled SO_2 Emissions				Stack Flow		
	Steam	Heat	Heat Input	Steam	Heat Input	Heat Input from		Fuel Oil							
Boiler	Rate[a] (lb/hr)	Input (MMBtu/hr)	From Oil (MMBtu/hr)	Rate (lb/hr)	Rate (MMBtu/hr)	Bagasse (MMBtu/hr)	Oil (MMBtu/hr)	Usage[b] (gal/hr)	Fuel Oil[b] (lb/hr)	Bagasse[c] (lb/hr)	Total (lb/hr)	Total (g/s)	Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
						CASE A (3-hr)									
1	255,000	495.6	225.1	255,000	495.6	270.6	225.0	1,500	393.6	16.2	409.8	51.64	190,000	63.0	19.20
2	230,000	447.0	225.1	230,000	447.0	222.0	225.0	1,500	393.6	13.3	406.9	51.27	171,400	56.8	17.32
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	236.2	7.8	244.0	30.74	83,800	27.8	8.47
4	300,000	633.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	385,000	812.0	249.0	385,000	812.0	812.0	0.0	0	0.0	138.0	138.0	17.39	290,000	85.2	25.96
Totals	1,300,000	2,652.9	1,059.3	1,000,000	2,019.9	1,434.9	585.0	3,900 (11,700 gal/3-hr period)	1,023.4	175.4	1,198.8	151.0			
						CASE B (3-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	214,000	415.9	190.9	225.0	1,500	393.6	11.5	405.1	51.04	159,477	52.9	16.12
3	130,000	265.3	135.0	121,000	246.9	111.9	135.0	900	236.2	6.7	242.9	30.60	77,998	25.9	7.88
4	300,000	633.0	225.1	280,000	590.8	365.8	225.0	1,500	172.2	21.9	194.1	24.46	249,013	77.6	23.66
7	385,000	812.0	249.0	385,000	812.0	812.0	0.0	0	0.0	138.0	138.0	17.39	290,000	85.2	25.96
Totals	1,300,000	2,652.9	1,059.1	1,000,000	2,065.6	1,480.6	585.0	3,900 (11,700 gal/3-hr period)	802.0	178.2	980.1	123.5			

[a] Maximum 3-hour average steam rate.

b No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 0.06 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

CASE C ?

Table 24 HR OFFCROP PM10
U.S. Sugar Clewiston Mill Maximum PM10 Emissions - Future Off-Season Operation (07/26/00)
Boiler Nos. 1-3 @ 213 feet

Boiler	Boiler Design Rates		Operating Rate		Modeled PM10 Emissions				Stack Flow Rate	Stack Velocity	
	Steam Rate[a] (lb/hr)	Heat Input (MMBtu/hr)	Steam from Bagasse (lb/hr)	Heat Input From Bagasse (MMBtu/hr)	PM (lb/MMBtu)	PM10 Factor	PM10 (lb/hr)	PM10 (g/s)	(acfm)	ft/s	m/s
				CASE A (24-hr)							
1	255,000	495.6	235,000	456.7	0.25	93%	106.2	13.38	175,098	58.1	17.70
2	230,000	447.0	215,000	417.9	0.25	93%	97.2	12.24	160,222	53.1	16.19
3	130,000	265.3	0	0.0	0.25	93%	0.0	0.00	0	0.0	0.00
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0	0.00
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,612.6			225.5	28.4			
				CASE B (24-hr)							
1	255,000	495.6	160,000	311.0	0.25	93%	72.3	9.11	119,216	39.5	12.05
2	230,000	447.0	160,000	311.0	0.25	93%	72.3	9.11	119,235	39.5	12.05
3	130,000	265.3	130,000	265.3	0.30	93%	74.0	9.33	83,800	27.8	8.47
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0	0.00
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,625.2			240.8	30.3			
				CASE C (24-hr)							
1	255,000	495.6	186,600	362.7	0.25	93%	84.3	10.62	139,035	46.1	14.05
2	230,000	447.0	168,300	327.1	0.25	93%	76.0	9.58	125,420	41.6	12.68
3	130,000	265.3	95,100	194.1	0.30	93%	54.1	6.82	61,303	20.3	6.20
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0	0.00
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,621.8			236.7	29.8			
				CASE D (24-hr)							
1	255,000	495.6	0	0.0	0.25	93%	0.0	0.00	0	0.0	0.00
2	230,000	447.0	160,000	311.0	0.25	93%	72.3	9.11	119,235	39.5	12.05
3	130,000	265.3	90,000	183.7	0.30	93%	51.2	6.46	58,015	19.2	5.86
4	285,000	600.0	200,000	421.1	0.15	93%	58.7	7.40	177,867	55.5	16.90
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4	23.60
Totals	1,250,000	2,545.9	800,000	1,653.7			204.4	25.8			

[a] Maximum 24-hour average steam rate.

Table 24 HR NOx CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And NO_x Emissions - Future Crop Season Operation - 24-hr Averaging Time (8/22/00)
Boilers 1-3 @ 2.5% sulfur fuel oil; 213 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil[a] (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr[b]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled NO_x Emissions: Fuel Oil[c] (lb/hr)	Bagasse[d] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
					CASE A: MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	495.6	225.1	1,400	210.0	285.6	77.0	57.1	134.1	16.90	190,000	63.0	19.20
2	447.0	225.1	1,400	210.0	237.0	77.0	47.4	124.4	15.67	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	49.5	26.1	75.6	9.52	83,800	27.8	8.47
4	600.0	225.1	0	0.0	600.0	0.0	120.0	120.0	15.12	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	184.5	184.5	23.25	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	555.0	1,990.9	203.5	435.1	638.6	80.5			
					CASE B: MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	495.6	225.1	900	135.0	360.6	49.5	72.1	121.6	15.32	190,000	63.0	19.20
2	447.0	225.1	900	135.0	312.0	49.5	62.4	111.9	14.10	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	49.5	26.1	75.6	9.52	83,800	27.8	8.47
4	600.0	225.1	1,000	142.0	458.0	55.0	91.6	146.6	18.47	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	184.5	184.5	23.25	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	547.0	1,998.9	203.5	436.7	640.2	80.7			
					CASE C: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	396.48	225.1	1,400	210.0	186.5	77.0	37.3	114.3	14.40	152,000	50.4	15.36
2	357.6	225.1	1,400	210.0	147.6	77.0	29.5	106.5	13.42	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	49.5	15.4	64.9	8.18	67,040	22.2	6.78
4	480.0	225.1	0	0.0	480.0	0.0	96.0	96.0	12.10	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	147.6	147.6	18.60	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	555.0	1,481.7	203.5	325.9	529.4	66.7			
					CASE D: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	396.48	225.1	900	135.0	261.5	49.5	52.3	101.8	12.83	152,000	50.4	15.36
2	357.6	225.1	900	135.0	222.6	49.5	44.5	94.0	11.85	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	49.5	15.4	64.9	8.18	67,040	22.2	6.78
4	480.0	225.1	1,000	142.0	338.0	55.0	67.6	122.6	15.45	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	147.6	147.6	18.60	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	547.0	1,489.7	203.5	327.5	531.0	66.9			

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 55 lb/1000 gal for No. 6 fuel oil; permit limit for Boiler No. 7 of 0.2 lb/MMBtu.

[d] Based on 0.20 lb/MMBtu due to bagasse firing; based on permit limit of 0.25 lb/MMBtu for Boiler No. 7.

Table 24 HR OFFCROP NOx. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And NOx Emissions - Future Off-Season Operation - 24-hr Averaging Time (8/22/00)
Boilers 1-3 @ 1.6% sulfur fuel oil; 213 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

	Boiler Design Rates			Operating Rate		Heat Input from		Fuel Oil	Modeled NO_x Emissions				Stack Flow		
Boiler	Steam Rate[a] (lb/hr)	Heat Input (MMBtu/hr)	Heat Input From Oil (MMBtu/hr)	Steam Rate (lb/hr)	Heat Input Rate (MMBtu/hr)	Bagasse (MMBtu/hr)	Oil (MMBtu/hr)	Usage[b] (gal/hr)	Fuel Oil[c] (lb/hr)	Bagasse[d] (lb/hr)	Total (lb/hr)	Total (g/s)	Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
						CASE A (24-hr)									
1	255,000	495.6	225.1	235,000	456.7	279.2	177.5	1,183	65.1	55.8	120.9	15.24	175,098	58.1	17.70
2	230,000	447.0	225.1	215,000	417.9	257.9	160.0	1,067	58.7	51.6	110.2	13.89	160,222	53.1	16.19
3	130,000	265.3	135.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.3	800,000	1,612.6	1,275.1	337.5	2,250 (54,000 gal/day)	123.8	291.9	415.7	52.4			
						CASE B (24-hr)									
1	255,000	495.6	225.0	160,000	311.0	209.7	101.3	675	37.1	41.9	79.1	9.96	119,216	39.5	12.05
2	230,000	447.0	225.0	160,000	311.0	209.7	101.3	675	37.1	41.9	79.1	9.96	119,235	39.5	12.05
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	49.5	26.1	75.6	9.52	83,800	27.8	8.47
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,625.2	1,287.7	337.5	2,250 (54,000 gal/day)	123.8	294.4	418.2	52.7			
						CASE C (24-hr)									
1	255,000	495.6	225.0	186,600	362.7	261.4	101.3	675	37.1	52.3	89.4	11.27	139,035	46.1	14.05
2	230,000	447.0	225.0	168,300	327.1	225.8	101.3	675	37.1	45.2	82.3	10.37	125,420	41.6	12.68
3	130,000	265.3	135.0	95,100	194.1	59.1	135.0	900	49.5	11.8	61.3	7.73	61,303	20.3	6.20
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,621.8	1,284.3	337.5	2,250 (54,000 gal/day)	123.8	293.8	417.5	52.6			
						CASE D (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	62.2	62.2	7.84	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	71.3	112.4	749	41.2	14.3	55.5	6.99	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	196.0	225.1	1,501	82.5	39.2	121.7	15.34	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	123.8	300.1	423.9	53.4			
						CASE E (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	62.2	62.2	7.84	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	48.7	135.0	900	49.5	9.7	59.2	7.46	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	218.6	202.5	1,350	74.3	43.7	118.0	14.86	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	184.5	184.5	23.25	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	123.8	300.1	423.9	53.4			

[a] Maximum 24-hour average steam rate.

[b] No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 55 lb/1000 gal for No. 6 fuel oil; permit limit of 0.20 lb/MMBtu for Boiler No. 7.

[d] Based on 0.20 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.25 lb/MMBtu.

REVISIONS TO CHAPTER 6.0 TABLES

CROP

Table 3 HR CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Crop Season Operation - 3-hr Averaging Time (7/18/00)

Boilers 1-3 @ 2.5% sulfur fuel oil; 213 ft stack height

Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr [a]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled SO_2 Emissions: Fuel Oil [b] (lb/hr)	Bagasse [c] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
					CASE A: MAXIMUM HEAT INPUT							
1	495.6 [c]	225.1	1,500	225.0	270.6	615.0	16.2	631.2	79.54	190,000	63.0	19.20
2	447.0 [c]	225.1	1,500	225.0	222.0	615.0	13.3	628.3	79.17	171,400	56.8	17.32
3	265.3 [c]	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8	8.47
4	633.0	225.1	1,500	213.0	420.0	153.3	25.2	178.5	22.49	266,800	83.2	25.35
7	812.0	249.0	0	0.0	812.0	0.0	138.0	138.0	17.39	290,000	85.2	25.96
Totals	2,652.9		5,400 (16,200 gallons per 3-hour period)	798.0	1,854.9	1,752.3	200.6	1,952.9	246.1			
					CASE B: 80% OF MAXIMUM HEAT INPUT							
1	396.5 [c]	225.1	1,500	225.0	171.5	615.0	10.3	625.3	78.79	152,000	50.4	15.36
2	357.6 [c]	225.1	1,500	225.0	132.6	615.0	8.0	623.0	78.49	137,120	45.5	13.86
3	212.2 [c]	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2	6.78
4	506.4	225.1	1,500	213.0	293.4	153.3	17.6	170.9	21.53	213,440	66.5	20.28
7	649.6	249.0	0	0.0	649.6	0.0	110.4	110.4	13.91	232,000	68.1	20.77
Totals	2,122.3		5,400 (16,200 gallons per 3-hour period)	798.0	1,324.3	1,752.3	150.9	1,903.2	239.8			

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 0.06 lb/MMBtu SO_2 due to bagasse firing, based on industry test data, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 6-2. Summary of Stack Parameters for Future Sources Used in Modeling of U.S. Sugar Clewiston Mill

Emission Unit	Modeling ID	Stack Height		Stack Diameter		Temperature		Flow Rate		Velocity [a]		Relative Location [b]			
												X		Y	
		(ft)	(m)	(ft)	(m)	(F)	(K)	(dscfm)	(acfm)	(ft/s)	(m/s)	(ft)	(m)	(ft)	(m)
BOILERS															
Crop [c]															
Boiler 1	USSBLR1	213	64.9	8.00	2.44	165	347.0	--	152,000	50.4	15.36	185	56.39	-5	-1.52
Boiler 2	USSBLR2	213	64.9	8.00	2.44	150	338.7	--	137,120	45.5	13.86	143	43.59	-5	-1.52
Boiler 3	USSBLR3	213	64.9	8.00	2.44	140	333.2	--	67,040	22.2	6.78	95	28.96	18	5.49
Boiler 4	USSBLR4	150	45.7	8.25	2.51	160	344.3	--	213,440	66.5	20.28	0	0.00	0	0.00
Boiler 7	USSBLR7	225	68.6	8.50	2.59	270	405.4	--	232,000	68.1	20.77	-58	-17.68	65	19.81
Off-Crop [d]															
Boiler 1	USSBLR1	213	64.9	8.00	2.44	165	347.0	--	139,035	46.1	14.05	185	56.39	-5	-1.52
Boiler 2	USSBLR2	213	64.9	8.00	2.44	150	338.7	--	125,420	41.6	12.68	143	43.59	-5	-1.52
Boiler 3	USSBLR3	213	64.9	8.00	2.44	140	333.2	--	61,303	20.3	6.20	95	28.96	18	5.49
Boiler 4	USSBLR4	150	45.7	8.25	2.51	160	344.3	--	0	0.0	0.00	0	0.00	0	0.00
Boiler 7	USSBLR7	225	68.6	8.50	2.59	270	405.4	--	263,636	77.4	23.60	-58	-17.68	65	19.81
REFINERY SOURCES															
Screening & Distribution Vacuum	S1	65	19.8	0.50	0.15	68	293.2	990	1,705	0.29	0.01	664.79	202.63	-155.17	-47.30
100 lb Bagging Vacuum System	S2	65	19.8	0.50	0.15	90	305.4	872	1,564	0.29	0.01	700.98	213.66	-147.48	-44.95
5 lb Bagging Vacuum System	S3	65	19.8	0.50	0.15	90	305.4	984	1,585	0.29	0.01	700.98	213.66	-147.48	-44.95
Packaging Dust Collector	S4	60	18.3	1.94	0.59	125	324.8	9,589	11,500	0.29	0.01	774.34	236.02	-131.39	-40.20
Screening and Distribution #1	S5	72	21.9	0.95	0.29	125	324.8	2,668	3,200	0.29	0.01	700.98	213.66	-147.48	-44.95
Screening and Distribution #2	S6	72	21.9	1.94	0.59	125	324.8	8,755	10,500	0.29	0.01	700.98	213.66	-147.48	-44.95
Conditioning Silo No. 2	S7	130	39.6	1.37	0.42	110	316.5	2,641	3,000	0.29	0.01	637.28	194.24	-150.8	-45.96
Conditioning Silo No. 4	S8	130	39.6	1.37	0.42	110	316.5	2,641	3,000	0.29	0.01	602.07	183.51	-158.28	-48.24
Conditioning Silo No. 6	S9	130	39.6	1.37	0.42	110	316.5	2,641	3,000	0.29	0.01	566.85	172.78	-165.77	-50.53
White Sugar Dryer Baghouse	S10	75	22.9	7.31	2.23	115	319.3	94,488	113,000	0.29	0.01	695.66	212.04	-194.62	-59.32
V. H. P. Sugar Dryer Baghouse	S11	10	3.0	4.79	1.46	115	319.3	110,042	127,000	0.29	0.01	2045.01	623.32	214.88	65.50
Granular Carbon Furnace	S12	30	9.1	2.00	0.61	160	344.3	--	4,300	22.8	6.9	603.97	184.09	-398.13	-121.35
Conditioning Silo No. 1	S13	130	39.6	1.37	0.42	110	316.5	2,641	4,300	0.29	0.09	622.85	189.84	-92.52	-28.20
Conditioning Silo No. 2	S14	130	39.6	1.37	0.42	110	316.5	2,641	4,300	0.29	0.09	588.61	179.41	-99.8	-30.42
Conditioning Silo No. 3	S15	130	39.6	1.37	0.42	110	316.5	2,641	4,300	0.29	0.09	549.49	167.48	-108.12	-32.95
Powdered Sugar Starch Bins	S16	55	16.8	2.00	0.61	100	310.9	6,128	--	34.5	10.5	767.14	233.82	-266.32	-81.17

[a] All refinery sources except granular carbon furnace have horizontal discharge: velocity set at 0.01 m/s for modeling purposes.

[b] Relative to Boiler No. 4 stack location.

[c] Crop season stack data October - April, velocity data for SO_2 24-hour Case C.

[d] Off-crop season stack data May - September, velocity data for SO_2 24-hour Case C.

TABLE 6-3

REFER TO LOAD ANALYSIS EMISSION TABLES

Table 6-5. Summary of PM/PM_{10} Emissions from the Baghouses Associated With the Sugar Refinery, U.S. Sugar Corporation

Source / Vent Name	New Stack Number	Design Capacity	Operating Hours	PM/PM10 Emissions (gr/dscf)	(lb/hr)	(g/s)	(TPY)
Existing Sources							
Screening & Distribution Vacuum	S-1	990 dscfm	8,760	0.00754 [a]	0.064 [b]	0.00806	0.280
100 lb Bagging Vacuum System	S-2	872 dscfm	8,760	0.00856 [a]	0.064 [b]	0.00806	0.280
5 lb Bagging Vacuum System	S-3	984 dscfm	8,760	0.00759 [a]	0.064 [b]	0.00806	0.280
Packaging Dust Collector	S-4	9,589 dscfm	8,760	0.0025	0.205	0.0259	0.900
Screening and Distribution #1	S-5	2,668 dscfm	8,760	0.0025	0.057	0.00720	0.250
Screening and Distribution #2	S-6	8,755 dscfm	8,760	0.0025	0.188	0.0236	0.822
Conditioning Silo No. 2	S-7	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 4	S-8	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 6	S-9	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
White Sugar Dryer	S-10	94,488 dscfm	8,760	0.00177 [a]	1.436 [b]	0.181	6.29
V.H.P. Sugar Dryer	S-11	110,042 dscfm	8,760	0.00172 [a]	1.625 [b]	0.205	7.12
Granular Carbon Furnace	S-12	--	8,760	--	0.650	0.0819	2.85
Proposed Sources							
Conditioning Silo No. 1	S-13	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 3	S-14	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Conditioning Silo No. 5	S-15	2,641 dscfm	8,760	0.0025	0.057	0.00713	0.248
Powdered Sugar Bins	S-16	6,128 dscfm	8,760	0.0025	0.131	0.01655	0.575
				Total =	4.82	0.61	21.13

Footnotes:

[a] Dack calculated from guaranteed emission rate and design flow rate.

[b] Manufacturer's guaranteed emission rate.

Note: dscfm = dry standard cubic foot per minute.
gr/dscf = grains per dry standard cubic foot
lb/hr = pounds per hour
TPY = tons per year

Table 6-4a. U.S. Sugar Clewiston Boiler Maximum PM_{10} and CO Emissions (7/20/00)
Future Crop Season Operation

Source	Maximum Heat Input (MMBtu/hr)	Emission Factor		Emissions (lb/hr)	Emissions (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
MAXIMUM 24-HOUR CASE - PM10 EMISSIONS								
Boilers		PM Emission Factor	PM_{10} Emission Factor					
Boiler 1	495.6	0.25 lb/MMBtu	93% of PM	115.2	14.52	190,000	63.0	19.20
Boiler 2	447.0	0.25 lb/MMBtu	93% of PM	103.9	13.09	171,400	56.8	17.32
Boiler 3	265.3	0.30 lb/MMBtu	93% of PM	74.0	9.33	83,800	27.8	8.47
Boiler 4	600.0	0.15 lb/MMBtu	93% of PM	83.7	10.55	252,891	78.8	24.03
Boiler 7	738.0	0.03 lb/MMBtu	100% of PM	22.1	2.79	263,571	77.4	23.60
MAXIMUM 1-HR AND 8-HR CO EMISSIONS								
Boilers								
Boiler 1	495.6	13.0 lb/MMBtu		6,442.80	811.79	190,000	63.0	19.20
Boiler 2	447.0	13.0 lb/MMBtu		5,811.00	732.19	171,400	56.8	17.32
Boiler 3	265.3	10.0 lb/MMBtu		2,653.00	334.28	83,800	27.8	8.47
Boiler 4	633.0	6.5 lb/MMBtu		4,114.50	518.43	266,800	83.2	25.35
Boiler 7	812.0	0.7 lb/MMBtu		568.40	71.62	290,000	85.2	25.96

Note: PM emissions are based on allowable or maximum emission rates for bagasse firing.
CO emissions for Boiler Nos. 1, 2, and 3 are based on actual test data.
CO emissions for Boiler Nos. 4 and 7 are based on allowable emissions for bagasse firing.

Table 6-6. Summary of SO_2 Facilities Considered for Inclusion in the Annual and 24-Hour AAQS and PSD Class II Air Modeling Analyses (revised 8/15/2000)

APIS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to U.S. Sugar [a] X (km)	Relative to U.S. Sugar [a] Y (km)	Relative to U.S. Sugar [a] Distance (km)	Relative to U.S. Sugar [a] Direction [a] (deg)	Maximum SO_2 Emissions (TPY)	Q, Emission Threshold [b] (Dist -35) x 20	Include in Modeling Analysis ?
52FTM260001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	1,216	SIA	YES
50PMB500086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	98	SIA	YES
52FTM260015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	409	SIA	YES
50PMB500332	Okeelanta	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	939	SIA	YES
52FTM500026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	2,555	SIA	YES
52FTM500061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	2,698	SIA	YES
52FTM500016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	2,023	93.7	YES
52FTM500016	Atlantic Sugar	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	954	264.8	YES
50WPB430001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	78,522	332.5	YES
50WPB430102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	2,629	350.2	YES
50PMB500021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	504	445.0	YES
50WPB500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	1,533	895.4	YES
52FTM360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	490	956.4	NO
52FTM36	FPL - Fort Myers	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	22,702	981.9	YES
50WPB430021	Stuart Contracting	Martin	575.2	3006.8	69.1	49.9	85.2	54	100	1004.7	NO
50PMB500045	Lake Worth Utilities [c]	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	8,996	1054.0	YES
50PMB500042	FPL -Riviera Beach [c]	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	73,475	1063.6	YES
50WPB062120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	896	1137.0	NO
50WPB560003	Fort Pierce Utilities [c]	St. Lucie	566.8	3036.3	60.7	79.4	99.9	37	2,708	1298.9	YES
50WPB062119	South Broward Resource Recovery	Broward	579.6	2883.3	73.5	-73.6	104.0	135	1,318	1380.3	NO
50BRO060037	FPL -Lauderdale [c]	Broward	580.1	2883.3	74.0	-73.6	104.4	135	47,858	1387.4	YES
50BRO060036	FPL -Port Everglades [c]	Broward	587.4	2885.3	81.3	-71.6	108.3	131	170,215	1466.7	YES
50DAD130020	Tarmac	Dade	562.9	2861.7	56.8	-95.2	110.9	149	2,792	1517.1	NO
50DAD130348	Dade Co. Resource Recovery	Dade	564.3	2857.4	58.2	-99.5	115.3	150	857	1605.4	NO
30ORL310029	Vero Beach Power	St. Lucie	567.1	3056.5	61.0	99.6	116.8	31	11,832	1635.9	NO
[a] U.S. Sugar Clewiston Mill Coordinates:			506.1	2956.9							

[b] Proposed project's 24-hour emissions are significant to 35 km.
Emission inventory is limited to facilities within 85 km but includes major power plants outside the proposed project's significant impact distance.

[c] Large emission sources outside the modeled area which are included in the analysis.

Table 6-7. Summary of SO_2 Facilities Considered for Inclusion in the 3 Hour AAQS and PSD Class II Air Modeling Analyses (revised 8/14/2000)

APIS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	X (km)	Y (km)	Distance (km)	Direction (deg)	Maximum SO_2 Emissions (TPY)	Q, Emission Threshold [b] (Dist -75) x 20	Include in Modeling Analysis ?
52FTM260001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	1,216	SIA	YES
50PMB500086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	98	SIA	YES
52FTM260015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	409	SIA	YES
50PMB500332	Okeelanta	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	939	SIA	YES
52FTM500026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	2,555	SIA	YES
52FTM500061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	2,698	SIA	YES
52FTM500016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	2,023	SIA	YES
52FTM500016	Atlantic Sugar	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	954	SIA	YES
50WPB430001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	78,522	SIA	YES
50WPB430102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	2,629	SIA	YES
50PMB500021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	504	SIA	YES
50WPB500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	1,533	95.4	YES
52FTM360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	490	156.4	YES
52FTM36	FPL - Fort Myers	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	22,702	181.9	YES
50WPB430021	Stuart Contracting	Martin	575.2	3006.8	69.1	49.9	85.2	54	100	204.7	NO
50PMB500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	8,996	254.0	YES
50PMB500042	FPL -Riviera Beach	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	73,475	263.6	YES
50WPB062120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	896	337.0	YES
50WPB560003	Fort Pierce Utilities	St. Lucie	566.8	3036.3	60.7	79.4	99.9	37	2,708	498.9	YES
50WPB062119	South Broward Resource Recovery	Broward	579.6	2883.3	73.5	-73.6	104.0	135	1,318	580.3	YES
50BRO060037	FPL -Lauderdale	Broward	580.1	2883.3	74.0	-73.6	104.4	135	47,858	587.4	YES
50BRO060036	FPL -Port Everglades	Broward	587.4	2885.3	81.3	-71.6	108.3	131	170,215	666.7	YES
50DAD130020	Tarmac	Dade	562.9	2861.7	56.8	-95.2	110.9	149	2,792	717.1	YES
50DAD130348	Dade Co. Resource Recovery	Dade	564.3	2857.4	58.2	-99.5	115.3	150	857	805.4	YES
30ORL310029	Vero Beach Power	St. Lucie	567.1	3056.5	61.0	99.6	116.8	31	11,832	835.9	YES
[a] US Sugar Clewiston Mill Coordinates:			506.1	2956.9							

[b] Proposed project's 3-hour emissions are significant to 75 km.

Table 6-8. Summary of SO_2 Sources Included in the Air Modeling Analysis (revised 8/14/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
	US Sugar[a] - Clewiston - PSD Baseline												
		Unit 1 PSD Baseline	BLR1B	23.1	1.86	344.0	30.20	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	BLR2B	23.1	1.86	343.0	35.70	-79.86	-58.21	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	BLR3B	27.4	2.29	342.0	14.70	-48.30	-33.20	EXP	No	Yes	Yes
		East Pellet Plant PSD Baseline	EPELLET	12.2	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
		West Pellet Plant PSD Baseline	WPELLET	15.7	1.52	347.0	8.54	-10.30	-10.30	EXP	No	Yes	Yes
52FTM260001	Everglades Sugar[b] Main Boiler		EVERGLAD	21.9	1.10	477.0	10.10	34.90	34.90	NO	Yes	No	No
50FMB500086	Glades Corr Institute		GLADCORR	9.8	0.40	389.0	11.28	2.82	2.82	NO	Yes	No	No
50FTM260015	Southern Gardens Citrus - PSD												
		Peel Dryer	SGARDDRY	38.1	1.73	316.0	7.45	5.29	5.29	CON	Yes	Yes	Yes
		Boilers 1-3	SGARDBLR	16.8	1.22	478.0	14.22	6.88	6.88	CON	Yes	Yes	Yes
50FMB500332	Okeelanta[a]												
		Boiler 4 PSD Baseline	OKBLR4B	22.9	2.29	333.0	7.36	-10.95	-10.95	EXP	No	Yes	Yes
		Boiler 5 PSD Baseline	OKBLR5B	22.9	2.29	333.0	12.07	-15.64	-15.64	EXP	No	Yes	Yes
		Boiler 6 PSD Baseline	OKBLR6B	22.9	2.29	334.0	8.74	-15.64	-15.64	EXP	No	Yes	Yes
		Boiler 10 PSD Baseline	OKBLR10B	22.9	2.29	334.0	10.35	-17.15	-17.15	EXP	No	Yes	Yes
		Boiler 11 PSD Baseline	OKBLR11B	22.9	2.29	342.0	9.89	-16.79	-16.79	EXP	No	Yes	Yes
		Okeelanta Power Blrs 1,2,3[b]	OKCOGEN	68.6	3.05	438.7	17.46	27.0	27.0	CON	Yes	Yes	Yes
52FTM500026	Sugar Cane Growers[a]												
		Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	41.20	41.20	CON	Yes	Yes	Yes
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	16.20	16.20	CON	Yes	Yes	Yes
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	38.20	38.20	CON	Yes	Yes	Yes
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	27.90	27.90	CON	Yes	Yes	Yes
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	23.50	23.50	CON	Yes	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	24.4	1.40	344.0	11.40	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	SUGCN3B	24.4	1.60	344.0	15.60	-4.40	-4.40	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	SUGCN4B	25.9	1.63	344.0	11.20	-24.20	-24.20	EXP	No	Yes	Yes
		Unit 5 PSD Baseline	SUGCN5B	24.4	1.40	344.0	15.20	-16.20	-16.20	EXP	No	Yes	Yes
		Unit 6&7 PSD Baseline	SUGCN67B	12.2	1.52	606.0	11.20	-51.00	-51.00	EXP	No	Yes	Yes
52FTM500061	US Sugar-Bryant[a]												
		Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	45.70	45.70	CON	Yes	Yes	Yes
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	109.50	109.50	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	USSBRY1B	19.8	1.68	494.0	44.30	-36.50	-36.50	EXP	No	Yes	Yes
		Unit 2&3 PSD Baseline	USBRY23B	19.8	1.68	344.0	37.90	-73.00	-73.00	EXP	No	Yes	Yes
52FTM500019	Osceola Farms[a]												
		Unit 2	OSBLR2	27.4	1.52	339.0	18.63	17.12	17.12	CON	Yes	Yes	Yes
		Unit 3	OSBLR3	27.4	1.92	344.0	14.34	30.74	30.74	CON	Yes	Yes	Yes
		Unit 4	OSBLR4	27.4	1.83	344.0	16.53	17.12	17.12	CON	Yes	Yes	Yes
		Unit 5	OSBLR5	27.4	1.52	344.0	17.85	18.00	18.00	CON	Yes	Yes	Yes
		Unit 6	OSBLR6	27.4	1.92	339.0	18.25	33.39	33.39	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	OSBLR1B	22.0	1.52	342.0	8.18	-5.07	-5.07	EXP	No	Yes	Yes

Table 6-8. Summary of SO_2 Sources Included in the Air Modeling Analysis (revised 8/14/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
		Unit 2 PSD Baseline	OSBLR2B	22.0	1.52	341.0	18.10	-16.32	-16.32	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	OSBLR3B	22.0	1.93	341.0	14.50	-7.26	-7.26	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	OSBLR4B	22.0	1.83	341.0	18.80	-13.61	-13.61	EXP	No	Yes	Yes
52FTM500016	Atlantic Sugar [a]												
		Unit 1	ATLSUG1	27.4	1.83	346.0	17.97	16.28	16.28	CON	Yes	Yes	Yes
		Unit 2	ATLSUG2	27.4	1.83	350.0	23.36	16.28	16.28	CON	Yes	Yes	Yes
		Unit 3	ATLSUG3	27.4	1.83	350.0	21.56	16.02	16.02	CON	Yes	Yes	Yes
		Unit 4	ATLSUG4	27.4	1.83	344.0	25.16	16.21	16.21	CON	Yes	Yes	Yes
		Unit 5 PSD [b]	ATLSUG5	27.4	1.68	339.0	19.24	8.41	8.04	CON	Yes	Yes	Yes
		Unit 1 PSD Baseline	ATLSUG1B	18.9	1.92	506.0	12.70	-17.24	-17.24	EXP	No	Yes	Yes
		Unit 2 PSD Baseline	ATLSUG2B	18.9	1.92	511.0	10.90	-22.50	-22.50	EXP	No	Yes	Yes
		Unit 3 PSD Baseline	ATLSUG3B	21.9	1.83	522.0	17.50	-16.88	-16.88	EXP	No	Yes	Yes
		Unit 4 PSD Baseline	ATLSUG4B	18.3	1.83	344.0	15.00	-10.76	-10.76	EXP	No	Yes	Yes
50WPB430001	FPL Martin												
		Units 1&2	MART12	152.1	7.99	420.9	21.03	1743.79	1743.79	NO	Yes	No	No
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	12.90	12.90	CON	Yes	Yes	Yes
		Diesel Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	0.51	0.51	CON	Yes	Yes	Yes
		Units 3&4 PSD	MART34	64.9	6.10	410.9	18.90	470.40	470.40	CON	Yes	Yes	Yes
		2 Simple Cycle CT	MARTCTs	18.3	6.17	853.2	37.63	25.98	25.98	CON	Yes	Yes	Yes
50WPB430102	Bechtel Indiantown PSD		BECHTIND	150.9	4.88	333.2	30.50	75.64	75.64	CON	Yes	Yes	Yes
50WPB500234	Pratt & Whitney												
		Heater	PRATARCH	15.2	0.91	810.9	143.73	13.99	13.99	CON	Yes	Yes	Yes
		Boiler BO-12	PRATBO12	4.6	0.76	533.2	6.92	0.51	0.51	CON	Yes	Yes	Yes
50WPB500234	Palm Beach Co. Resource Recovery												
		1&2 PSD	PBCRRF	76.2	2.04	505.2	24.90	85.05	85.05	CON	Yes	Yes	Yes
52FTM360119	Lee County RRF PSD		LEECORRF	83.8	1.88	388.5	19.81	14.00	14.00	CON	Yes	Yes	Yes
52FTM360002	FPL Fort Myers												
		Unit 1 PSD	FMU1	91.8	2.90	422.0	29.90	-585.50	-585.50	EXP	No	Yes	Yes
		Unit 2 PSD	FMU2	121.2	5.52	408.0	19.20	-1334	-1334.0	EXP	No	Yes	Yes
		HRSGs 1 - 6	FMYHR1_6	38.1	5.79	377.6	14.2	3.86	3.9	CON	Yes	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	9.75	4.42	797.0	35.7	649.2	649.2	NO	Yes	No	No
50PMB500045	Lake Worth Utilities												
		Unit 3	LAKWTHU3	38.1	2.13	408.2	7.71	103.95	103.95	NO	Yes	No	No
		Unit 4	LAKWTHU4	35.1	2.29	418.2	17.00	129.85	129.85	NO	Yes	No	No
		Unit 5	LAKWTHU5	22.9	0.94	450.4	18.29	11.59	11.59	NO	Yes	No	No
		HRSG	LAKWTHHR	45.7	5.49	377.6	13.74	12.79	12.79	CON	Yes	Yes	Yes
50PMB500042	FPL Riviera												
		Units 3&4 at 2.5%s fuel oil	RIVU34	90.8	4.88	401.5	18.90	2113.65	2113.65	NO	Yes	No	No

Table 6-8. Summary of SO_2 Sources Included in the Air Modeling Analysis (revised 8/14/2000)

APIS Number	Facility	Units	Modeling ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s): 3-Hour	24-Hour	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II	Class I
50WPB062120	North Broward RRF PSD		NBCRRF	58.5	3.96	381.0	18.01	35.40	35.40	CON	Yes	Yes	Yes
50WPB560003	Fort Pierce Utilities												
		Units 6&7	FTPIER67	45.7	2.19	408.2	12.50	77.87	77.87	NO	Yes	No	No
50WPB062116	South Broward RRF PSD		SBCRRF	59.4	3.96	381.0	18.01	37.91	37.91	CON	Yes	Yes	Yes
50BR0060037	FPL - Lauderdale												
		CTs 1-4 PSD	LAUDU45	45.7	5.49	438.7	14.60	271.15	271.15	CON	Yes	Yes	Yes
		GT 1-12 (0.5% fuel oil)	LDGT1_12	13.7	2.37	733.2	114.31	552.80	552.80	NO	Yes	No	No
		GT 13-24 (0.5% fuel oil)	LDGT1324	13.4	4.75	733.2	28.43	552.80	552.80	NO	Yes	No	No
		4&5 PSD Baseline	FTLAU45B	46.0	4.27	422.0	14.63	-457.00	-457.00	EXP	No	Yes	Yes
50BR0060036	FPL Port Everglades												
		Units 1&2 at 2.5%s fuel oil	PTEVU12	104.5	4.27	415.9	26.72	1593.90	1593.90	NO	Yes	No	No
		Units 3&4 at 2.5%s fuel oil	PTEVU34	104.5	5.52	414.8	23.88	2772.00	2772.00	NO	Yes	No	No
		GT 1-12 (0.5% fuel oil)	PTEVGTS	13.4	4.75	733.2	28.43	530.70	530.70	NO	Yes	No	No
50DAD130348	Dade County RRF PSD												
		Units 1&2	DCRRF12	76.2	3.66	405.4	15.86	26.41	12.32	CON	Yes	Yes	Yes
		Units 3&4	DCRRF34	76.2	3.66	405.4	15.86	26.41	12.32	CON	Yes	Yes	Yes
50DAD130020	Tarmac												
		Kiln 1	TARMC1	61.0	2.44	465.0	12.80	5.67	5.67	NO	Yes	No	No
		Kiln 2 PSD Baseline	TARMC2B	61.0	2.44	465.0	12.84	-5.71	-5.71	EXP	No	Yes	Yes
		Kiln 3 PSD Baseline	TARMC3B	61.0	4.57	472.0	10.78	-2.76	-2.76	EXP	No	Yes	Yes
		Kiln 2 PSD	TABMC2P	61.0	2.44	422.0	9.10	24.57	24.57	CON	Yes	Yes	Yes
		Kiln 3 PSD	TARMC3P	61.0	4.57	450.0	11.04	51.43	51.43	CON	Yes	Yes	Yes
30ORL310029	Vero Beach Power												
		Unit 1	VERBU1	60.96	1.07	437.0	32.42	28.77	28.77	NO	Yes	No	No
		Unit 2	VERBU2	60.96	1.07	434.3	37.57	84.21	84.21	NO	Yes	No	No
		Unit 3	VERBU3	60.96	1.83	440.4	19.93	142.07	142.07	NO	Yes	No	No
		Unit 4	VERBU4	60.96	2.13	425.4	24.36	69.05	69.05	NO	Yes	No	No
		Unit 5 Simple Cycle CT	VERBU5	38.10	3.35	416.5	19.56	15.50	15.50	CON	Yes	Yes	Yes

[a] Facilities or sources within facilities that operate only during the October 1 through April 31 crop season

[b] Sugar mill sources that operate all year

Note: EXP = PSD expanding source.
CON = PSD consuming source.
NO = Source does not affect PSD increment.

Table 6-9. Summary of PM Facilities Considered for Inclusion in the AAQS and PSD Class II Air Modeling Analyses (8/21/00)

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to U.S. Sugar [a] X (km)	Relative to U.S. Sugar [a] Y (km)	Relative to U.S. Sugar [a] Distance (km)	Relative to U.S. Sugar [a] Direction (deg)	Maximum PM Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -12) x 20	Include in Modeling Analysis ?
510001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	41	SIA	YES
990086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	30	107.7	NO
510015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	54	130.3	NO
990332	Okeelanta Power	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	283	303.1	NO
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	1,032	340.5	YES
990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	979	451.3	YES
990016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	700	553.7	YES
990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	684	724.8	NO
850102	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	9,103	792.5	YES
510006	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	270	810.2	NO
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	30	905.0	NO
850007	Dickerson	Martin	569.5	2995.9	63.4	39.0	74.4	58	47	1248.7	NO
500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	26	1355.4	NO
710002	FPL - Fort Myers [c]	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	1,685	1441.9	YES
500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	468	1514.0	NO
500042	FPL -Riviera Beach [c]	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	3,340	1523.6	YES
112120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	103	1597.0	NO
110037	FPL -Lauderdale [c]	Broward	580.1	2883.3	74.0	-73.6	104.4	135	852	1847.4	YES
110036	FPL -Port Everglades [c]	Broward	587.4	2885.3	81.3	-71.6	108.3	131	3,247	1926.7	YES
[a] U.S. Sugar Clewiston Mill Coordinates:			506.1	2956.9							

[b] Proposed project's emissions are significant to 12 km.
Emission inventory is limited to facilities within 62 km but includes major power plants outside the proposed project's significant impact distance.

[c] Large emissions sources outside the significant impact area that were included in the analysis.

Table 6-10. Summary of PM Sources Included in the Air Modeling Analysis

AIRS Number	Facility	Units	ISCST3 ID Name	Stack Parameters Height (m)	Diameter (m)	Temp. (K)	Velocity (m/s)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled in AAQS	Modeled in Class II
510003	US Sugar - Clewiston [a]										
		PSD Baseline (On-crop season only)									
		Unit 1 PSD Baseline	BRL1B	23.1	1.86	344.0	30.20	-7.48	EXP	No	Yes
		Unit 2 PSD Baseline	BLR2B	23.1	1.86	343.0	35.70	-7.04	EXP	No	Yes
		Unit 3 PSD Baseline	BLR3B	27.4	2.29	342.0	14.70	-4.57	EXP	No	Yes
		East Pellet Plant PSD Baseline	EPELLET	12.2	1.52	347.0	8.54	-1.69	EXP	No	Yes
		West Pellet Plant PSD Baseline	WPELLET	15.7	1.52	347.0	8.54	-0.82	EXP	No	Yes
		Units 5 PSD Baseline	BLR5B	23.1	1.86	494.0	44.30	-26.46	EXP	No	Yes
		Units 6 PSD Baseline	BLR6B	23.1	1.86	494.0	44.30	-26.46	EXP	No	Yes
510001	Everglades Sugar [b] Main Boiler		EVERGLAD	21.9	1.10	477.0	10.10	2.37	NO	Yes	No
990026	Sugar Cane Growers [a]										
		Unit 1&2	SUGCN12	45.7	1.87	339.0	21.75	6.49	CON	Yes	Yes
		Unit 3	SUGCN3	27.4	1.52	339.0	22.25	12.95	CON	Yes	Yes
		Unit 4 PSD	SUGCN4	54.9	2.44	339.0	21.73	12.45	CON	Yes	Yes
		Unit 5	SUGCN5	45.7	2.30	339.0	15.94	12.45	CON	Yes	Yes
		Unit 8 PSD	SUGCN8	47.2	2.90	339.0	13.62	8.57	CON	Yes	Yes
		Unit 1&2 PSD Baseline	SUGCN12B	24.4	1.40	344.0	11.40	-18.94	EXP	No	Yes
		Unit 3 PSD Baseline	SUGCN3B	24.4	1.60	344.0	15.60	-5.70	EXP	No	Yes
		Unit 4 PSD Baseline	SUGCN4B	25.9	1.63	344.0	11.20	-10.90	EXP	No	Yes
		Unit 5 PSD Baseline	SUGCN5B	24.4	1.40	344.0	15.20	-9.10	EXP	No	Yes
		Unit 6&7 PSD Baseline	SUGCN67B	12.2	1.52	606.0	11.20	-2.50	EXP	No	Yes
990061	US Sugar-Bryant [a]										
		Unit 5 PSD	USSBRY5	42.7	2.90	345.0	11.49	12.59	CON	Yes	Yes
		Unit 1,2&3	USBRY123	19.8	1.64	342.0	36.40	43.66	CON	Yes	Yes
		Unit 1 PSD Baseline	USSBRY1B	19.8	1.68	494.0	44.30	-82.40	EXP	No	Yes
		Unit 2&3 PSD Baseline	USBRY23B	19.8	1.68	344.0	37.90	-12.04	EXP	No	Yes
990019	Osceola Farms [a]										
		Unit 2	OSBLR2	27.4	1.52	339.0	18.63	7.06	CON	Yes	Yes
		Unit 3	OSBLR3	27.4	1.92	344.0	14.34	7.36	CON	Yes	Yes
		Unit 4	OSBLR4	27.4	1.83	344.0	16.53	10.58	CON	Yes	Yes
		Unit 5	OSBLR5	27.4	1.52	344.0	17.85	8.09	CON	Yes	Yes
		Unit 6	OSBLR6	27.4	1.92	339.0	18.25	7.17	CON	Yes	Yes
		Unit 1 PSD Baseline	OSBLR1B	22.0	1.52	342.0	8.18	-3.38	EXP	No	Yes
		Unit 2 PSD Baseline	OSBLR2B	22.0	1.52	341.0	18.10	-7.52	EXP	No	Yes
		Unit 3 PSD Baseline	OSBLR3B	22.0	1.93	341.0	14.50	-4.03	EXP	No	Yes
		Unit 4 PSD Baseline	OSBLR4B	22.0	1.83	341.0	18.80	-6.01	EXP	No	Yes

Table 6-10. Summary of PM Sources Included in the Air Modeling Analysis

AIRS Number	Facility	Units	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temp. (K)	Velocity (m/s)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled in: AAQS	Class II
850001	FPL -Martin										
		Units 1&2	MART12	152.1	7.99	420.9	21.03	218.00	CON	Yes	Yes
		Aux Blr PSD	MARTAUX	18.3	1.10	535.4	15.24	0.01	CON	Yes	Yes
		Diesel Gens PSD	MARTGEN	7.6	0.30	785.9	39.62	0.22	CON	Yes	Yes
		Units 3&4 PSD	MART34	64.9	6.10	410.9	18.90	30.54	CON	Yes	Yes
		2 Simple Cycle CT	MARTCTs	18.3	6.17	853.2	37.63	4.28	CON	Yes	Yes
710002	FPL - Fort Myers										
		Unit 1 PSD	FMU1	91.8	2.90	422.0	29.90	-21.30	EXP	No	Yes
		Unit 2 PSD	FMU2	121.2	5.52	408.0	19.20	-48.50	EXP	No	Yes
		HRSGs 1 - 6	FMYHR1_6	228.6	5.79	377.6	14.2	7.56	CON	Yes	Yes
		Gas Turbines 1 -12	FMYGT112	117.00	4.42	797.0	35.7	37.68	NO	Yes	No
		Cooling Towers 1 - 12	FMYCT112	164.64	9.75	304.3	7.59	1.61	CON	Yes	Yes
500042	FPL - Riviera Beach										
		Units 3 and 4 at 2.5% S fuel oil	RIVU34	90.8	4.88	401.5	18.90	96.08	NO	Yes	No
060037	FPL-Lauderdale										
		CTs 1-4 PSD	LAUD45	45.72	5.49	438.7	48.37	7.31	CON	Yes	Yes
		GT 1-12 (0.5% fuel oil)	LDGT1_13	13.72	2.37	733.2	114.31	8.19	NO	Yes	No
		GT 13-24 (0.5% fuel oil)	LDGT1324	13.41	4.75	733.2	28.43	8.19	NO	Yes	No
060036	FPL-Port Everglades										
		232 MW FFSG UNIT #1	PTEVU1	104.85	4.27	408.2	18.51	14.34	NO	Yes	No
		232 MW FFSG UNIT #2	PTEVU2	104.85	4.27	416.5	5.15	13.23	NO	Yes	No
		401 MW FFSG UNIT #3	PTEVU3	104.55	5.52	408.2	19.25	27.76	NO	Yes	No
		401 MW FFSG UNIT #4	PTEVU4	104.55	5.52	408.2	19.25	26.31	NO	Yes	No
		GT 1-12 (0.5% fuel oil)	PTEVGTS	104.85	4.75	683.2	10.78	8.62	NO	Yes	No

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

[b] Sugar mill sources that operate all year.

Table 6-11. Summary of CO Facilities Considered for Inclusion in the AAQS Air Modeling Analyses (revised 8/21/2000)

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	X (km)	Y (km)	Distance (km)	Direction (deg)	Maximum CO Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -20) x 20	Include in Modeling Analysis ?
510001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	15	SIA	YES
510015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	1,888	SIA	YES
990332	Okeelanta Power	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	3,297	SIA	YES
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	33,771	SIA	YES
990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	19,958	SIA	YES
990016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	25,175	93.7	YES
990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	25,065	264.8	YES
850001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	2,285	332.5	YES
850102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	1,651	350.2	YES
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	30	445.0	NO
360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	238	956.4	NO
710002	FPL - Fort Myers [c]	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	4,478	981.9	YES
500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	204	1054.0	NO
[a] U.S. Sugar Clewiston Mill Coordinates:				506.1	2956.9						

[b] Proposed project's emissions are significant to 20 kilometers.
Emission inventory is limited to facilities within 70 km of U. S. Sugar facility but includes major power plants outside the proposed project's significant impact distance.

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

Table 6-12. Summary of CO Sources Included in the Air Modeling Analysis (revised 8/18/2000)

APIS Number	Facility	Units	ISCST3 ID Name	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s)
0510001	Everglades Sugar [b]	Main Boiler	EVERGLAD	21.9	1.07	477.6	10.06	0.44
510015	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
990332	Okeelanta	Cogen Blrs 1,2,& 3	OKCOGEN	68.6	3.05	438.7	17.46	94.61
990026	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
990061	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
990016	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
990016	Atlantic Sugar [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
0710119	Lee County Energy Recovery Facility	Units 1 & 2	LEECORRF	84.1	1.98	416.5	22.86	6.85
850001	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
850102	Bechtel Indiantown		BECHTIND	150.9	4.88	333.2	30.50	47.38
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 6-13. Summary of NO_2 Facilities Considered for Inclusion in the Annual AAQS and PSD Class II Air Modeling Analyses (revised 8/19/2000)

APIS Number	Facility	East (km)	North (km)	X (km)	Y (km)	Distance (km)	Direction[a] (deg)	Maximum NOx Emissions (TPY)	Q, Emission Threshold (Dist -4) x 20	Include in Modeling Analysis ?
0510001	EVERGLADES SUGAR	509.6	2954.2	3.5	-2.7	4.4	128	1,410	SIA	YES
0510015	SOUTHERN GARDENS CITRUS PROCESSING CORP.	487.6	2957.6	-18.5	0.7	18.5	272	167	SIA	YES
0430008	ATLAS-TRANSOIL INC	489.2	2966.6	-16.9	9.7	19.5	300	35	SIA	YES
0990005	OKEELANTA CORP	525.0	2937.4	18.9	-19.5	27.2	136	3,432	SIA	YES
0990026	SUGAR CANE GROWERS CO-OP	534.9	2953.3	28.8	-3.6	29.0	97	3,243	SIA	YES
0990061	U.S.SUGAR CORP. BRYANT MILL	538.8	2969.1	32.7	12.2	34.9	70	1,984	SIA	YES
0990019	OSCEOLA FARMS	544.2	2968.0	38.1	11.1	39.7	74	1,044	93.7	YES
0110351	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	522.3	2912.2	16.2	-44.7	47.5	160	737	250.2	YES
0990016	ATLANTIC SUGAR ASSOCIATION	552.9	2945.2	46.8	-11.7	48.2	104	2,266	264.8	YES
0990549	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	554.2	2940.5	48.1	-16.5	50.8	109	199	316.7	NO
0850001	FP&L MARTIN	543.1	2992.9	37.0	36.0	51.6	46	35,489	332.5	YES
0850102	INDIANTOWN COGENERATION, L.P.	545.6	2991.5	39.5	34.6	52.5	49	2,583	350.2	YES
0850129	AMERICAN POWER TECH, INC	549.1	2990.8	43.0	33.9	54.7	52	10	394.6	NO
0510011	HENDRY CORRECTIONAL INSTITUTION	476.1	2909.9	-30.0	-47.0	55.7	213	2	415.0	NO
0710002	FP&L FORT MYERS [a]	422.1	2952.9	-84.0	-4.0	84.1	267	33,272	981.9	YES
0990045	LAKE WORTH UTILITIES [a]	592.8	2943.7	86.7	-13.2	87.7	99	8,615	1054.0	YES
0990042	FP&L RIVIERA [a]	594.2	2960.6	88.1	3.7	88.2	88	16,565	1063.6	YES
US Sugar Clewiston Mill Coordinates:			506.1	2956.9						

Proposed project's annual emissions are significant to 4km.

Emission inventory is limited to facilities within 54 km but includes major power plants at outside the proposed project's significant impact distance.

[a] Large emission source outside the modeled area which are include in the model

Table 6-14. Summary of NO_2 Sources Included in the Air Modeling Analysis (8/23/00)

AIRS Number	Facility	Units	EU #	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate: (TPY)	(g/s)	PSD Source? (EXP/CON)	Modeled In: AAQS	Class II
510003	US Sugar - Clewiston [a]												
		PSD Baseline (Crop season only)											
		Unit 1 PSD Baseline		BRL1B	23.1	1.86	344.0	30.20	-93.7	-6.27	EXP	No	Yes
		Unit 2 PSD Baseline		BLR2B	23.1	1.86	343.0	35.70	-94.0	-6.29	EXP	No	Yes
		Unit 3 PSD Baseline		BLR3B	27.4	2.29	342.0	14.70	-45.1	-3.03	EXP	No	Yes
		Units 4 PSD Baseline		BLR4B	45.7	2.51	344.3	25.40	-127.9	-8.76	EXP	No	Yes
		Units 5 PSD Baseline		BLR5B	23.1	1.86	494.0	44.30	-20.9	-1.54	EXP	No	Yes
		Units 6 PSD Baseline		BLR6B	23.1	1.86	494.0	44.30	-18.0	-1.34	EXP	No	Yes
0510001	EVERGLADES SUGAR	MAIN BOILER [b]	2	EVERGLAD	21.95	1.07	477.6	10.06	168.0	4.82	NO	Yes	No
0990005	OKEELANTA [a]	BOILER #4 PSD Baseline	3	OKBLR4B	22.90	2.29	333.0	7.36	-27.3	-1.36	EXP	No	Yes
		BOILER #5 PSD Baseline	4	OKBLR5B	22.90	2.29	333.0	12.07	-37.8	-1.89	EXP	No	Yes
		BOILER #6 PSD Baseline	5	OKBLR6B	22.90	2.29	334.0	8.74	-31.9	-1.59	EXP	No	Yes
		BOILER # 10 PSD Baseline	9	OKBLR10B	22.90	2.29	334.0	10.35	-36.0	-1.80	EXP	No	Yes
		BOILER # 11 PSD Baseline	10	OKBLR11B	22.90	2.29	342.0	9.89	-46.0	-2.30	EXP	No	Yes
		BOILER # 12 PSD Baseline	12	OKBLR12B	22.90	2.29	330.0	8.20	-57.7	-2.88	EXP	No	Yes
		BOILER # 14 PSD Baseline	14	OKBLR14B	22.90	2.29	333.0	8.30	-63.6	-3.18	EXP	No	Yes
		BOILER # 15 PSD Baseline	15	OKBLR15B	22.90	2.29	332.0	10.20	-50.5	-2.52	EXP	No	Yes
		COGEN Units 1, 2, & 3 [b]		OKCOGEN	60.66	3.05	438.70	17.5	1,410	40.5	CON	Yes	Yes
0990026	SUGAR CANE	BOILER #1 & #2		SUGCN12	45.72	1.87	339.00	21.75	1,097	37.88	CON	Yes	Yes
	GROWERS [a]	BOILER #3	3	SUGCN3	27.43	1.52	339.00	22.25	227	12.96	CON	Yes	Yes
		BOILER #4	4	SUGCN4	54.90	2.44	339.00	21.73	939	32.41	CON	Yes	Yes
		BOILER #5	5	SUGCN5	45.72	2.30	339.00	15.94	721	24.90	CON	Yes	Yes
		BOILER # 8	8	SUGCN8	47.24	2.90	339.00	13.62	449	15.50	CON	Yes	No
		BOILER #1 & #2 PSD Baseline		SUGCN12B	24.40	1.32	344.00	16.90	-68.01	-3.40	EXP	No	Yes
		BOILER #3 PSD Baseline	3	SUGCN3B	24.40	1.60	344.00	15.60	-41.64	-2.08	EXP	No	Yes
		BOILER #4 PSD Baseline	4	SUGCN4B	25.90	2.82	344.00	10.60	-77.67	-3.88	EXP	No	Yes
		BOILER #5 PSD Baseline	5	SUGCN5B	24.40	1.40	344.00	15.20	-51.82	-2.59	EXP	No	Yes
0990061	U.S. SUGAR, BRYANT [a]	BOILERS #s 1, 2, & 3		USBRY123	19.81	1.65	344.26	26.52	1,060	65.49	NO	Yes	No
		BOILER #5	5	USBRY5	42.67	2.90	345.37	17.07	384.2	20.37	NO	Yes	No
		DIESEL ELECTRIC GENERATOR #1	7	USBRY7	8.53	0.37	519.26	12.19	262.0	7.54	NO	Yes	No
		DIESEL ELECTRIC GENERATOR #2	8	USBRY8	8.53	0.37	519.26	12.80	278.0	7.99	NO	Yes	No
0990019	OSCEOLA FARMS [a]	BOILER #2	2	OSBLR2	27.43	1.52	342.04	31.39	241.9	15.88	CON	Yes	Yes
		BOILER #3	3	OSBLR3	27.43	1.92	341.48	23.77	124.0	8.14	CON	Yes	Yes
		BOILER #4	4	OSBLR4	25.60	1.83	340.93	12.50	241.9	15.88	CON	Yes	Yes
		BOILER # 5	5	OSBLR5	27.43	1.52	340.93	31.39	285.1	18.71	NO	Yes	No
		BOILER #6	6	OSBLR6	27.43	1.92	341.48	17.07	150.9	9.90	CON	Yes	Yes
		BOILER #1 PSD Baseline	1	OSBLR1B	22.00	1.52	342.00	8.18	-101.6	-5.08	EXP	No	Yes
		BOILER #2 PSD Baseline	2	OSBLR2B	22.00	1.52	342.00	18.10	-37.64	-1.88	EXP	No	Yes
		BOILER #3 PSD Baseline	3	OSBLR3B	22.00	1.93	341.00	14.50	-16.89	-0.84	EXP	No	Yes
		BOILER #4 PSD Baseline	4	OSBLR4B	22.00	1.83	341.00	18.80	-30.37	-1.52	EXP	No	Yes
		BOILER #6 PSD Baseline	6	OSBLR6B	27.43	1.93	341.48	17.07	-39.93	-2.00	EXP	No	Yes

Table 6-14. Summary of NO_2 Sources Included in the Air Modeling Analysis (8/23/00)

AIRS Number	Facility	Units	EU #	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (TPY)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled In: AAQS	Modeled In: Class II
0990016	ATLANTIC SUGAR ASSOCIATION [a]	BOILER #1	1	ATLSUG1	27.43	1.89	344.26	16.82	550.4	31.75	No	Yes	No
		BOILER #2	2	ATLSUG2	27.43	1.89	344.26	12.50	550.4	31.75	No	Yes	No
		BOILER #3	3	ATLSUG3	18.29	1.83	338.71	16.15	512.5	14.74	No	Yes	No
		BOILER # 4	4	ATLSUG4	27.43	1.83	338.71	16.15	542.0	15.59	No	Yes	No
		BOILER # 5 [b]	5	ATLSUG5	27.43	1.68	338.71	19.20	110.7	8.00	CON	Yes	Yes
		BOILER # 5 [b] PSD Baseline	5	ATLSUG5B	27.40	1.68	339.00	15.70	-14.78	-0.74	EXP	No	Yes
0850001	FP&L Martin	Units 1 & 2		MART12	152.10	7.99	420.93	21.03	22,732	653.94	NO	Yes	No
		Units 3 & 4		MART34	64.92	6.10	410.93	18.59	12,432	89.21	CON	Yes	Yes
		2 Simple Cycle CTs		MARTCTs	18.30	6.71	853.20	37.63	325	93.39	CON	Yes	Yes
		Unit 1 & 2 PSD Baseline		MART12B	152.10	9.14	472.00	17.77	-3,652	-104.8	EXP	No	Yes
0850102	Beckter Indiantown	Pulverized Coal Main Boiler	1	INDTWN1	150.88	4.88	333.15	28.41	2,549	73.33	CON	Yes	Yes
		(2) Auxiliary Boilers	3	INDTWN3	64.01	1.52	449.82	26.70	34	9.02	CON	Yes	Yes
0710002	FP&L Fort Myers [c]	Gas Turbines 1 - 12		FMYGT112	9.75	4.42	797.04	57.73	31,272	900.00	NO	Yes	No
		HRSGs 1 - 6		FMYHR16	38.10	5.79	377.59	21.43	1,708	49.14	CON	Yes	Yes
		CT1 - 2		FMCT1_2	24.40	6.25	852.00	39.08	293	84.12	CON	Yes	Yes
		Unit No. 1 PSD Baseline		FMU1B	91.74	2.90	435.90	28.04	-488.0	-14.01	EXP	No	Yes
		Unit No. 2 PSD Baseline		FMU2B	121.31	5.52	414.30	21.03	-3,890	-111.64	EXP	No	Yes
0990045	Lake Worth Utilities [c]	Diesel Peking Units # 1-5		LAKWTH15	5.18	0.56	625.93	37.09	2,185	62.87	NO	Yes	No
		GAS TURBINE # 1	6	LAKWTH6	14.02	4.88	720.37	24.84	1,715	49.39	NO	Yes	No
		STEAM GENERATING #1	7	LAKWTH7	18.29	1.52	422.04	10.52	243	7.06	NO	Yes	No
		STEAM GENERATOR #3	9	LAKWTH8	34.44	2.13	418.15	15.67	712	20.54	NO	Yes	No
		STEAM GENERATOR #4	10	LAKWTH9	35.05	2.29	418.15	17.01	918	26.46	NO	Yes	No
		COMBINED CYCLE UNIT (GT-2/S-5)	11	LAKWTH10	22.86	3.05	479.82	26.67	1,252	36.04	CON	Yes	Yes
		HRSG		LADWTHHR	45.70	5.49	377.60	24.29	1,591	45.66	CON	Yes	Yes
0990042	FP&L Riviera [c]	Units 3 & 4		RIVU34	90.83	4.88	401.48	26.88	16,565	476.53	NO	Yes	No

[a] Facilities or sources within facilities that operate only during the October 1 through April 31 crop season

[b] Sugar mill sources that operate all year

[c] Large source outside the 24-hour significant impact distance, but included in analysis

Note: EXP = PSD expanding source.
CON = PSD consuming source.
NO = Source does not affect PSD increment.

Table 6-15. A Summary of Building Structures Considered in the Air Modeling Analysis

Structure	Height		Length		Width	
	ft	m	ft	m	ft	m
Mill Expansion Buildings						
Electrical Equipment	100.0	30.5	95.6	29.1	27.6	8.4
Support Structure	133.0	40.5	95.6	29.1	76.2	23.2
Dryer Area	100.0	30.5	95.6	29.1	41.8	12.7
Screening & Distribution Towers	150.0	45.7	132.2	40.3	68.7	20.9
Specialty Packaging Facility	40.0	12.2	82.1	25.0	201.6	61.4
Packaging Facility	60.0	18.3	65.0	19.8	280.0	85.3
Warehouse	28.0	8.5	339.7	103.5	289.7	88.3
Electrical & Conditioning Equipment	24.0	7.3	59.7	18.2	52.3	15.9
Bulk Loading	40.0	12.2	84.4	25.7	53.8	16.4
Sugar Silos	136.0	41.5	111.6	34.0	68.1	20.8
Other Mill Buildings						
Pellet Warehouse	46.0	14.0	527.0	160.6	105.0	32.0
WDA	51.0	15.5	55.0	16.8	53.0	16.2
Storage and Safety mechanic	34.8	10.6	58.0	17.7	52.0	15.8
Boiler 4 Building	87.5	26.7	78.0	23.8	66.0	20.1
Boiler 5&6 Building	56.0	17.1	118.0	36.0	66.0	20.1
Boiler 1&2 Building	67.3	20.5	115.0	35.1	103.0	31.4
Power House	34.0	10.4	119.0	36.3	65.0	19.8
Warehouse	37.0	11.3	153.0	46.6	71.0	21.6
Machine Shop	39.0	11.9	309.0	94.2	106.0	32.3
B Mill Building	68.0	20.7	81.0	24.7	81.0	24.7
A Mill Building	69.0	21.0	243.0	74.1	67.0	20.4
Boiling House	93.7	28.6	181.0	55.2	155.0	47.2
Boiler 7 ESP	87.5	26.7	55.0	16.8	33.0	10.1
Boiler 7 Building	93.0	28.3	78.0	23.8	68.0	20.7
Sugar Warehouse #1	37.0	11.3	390.5	119.0	103.8	31.6
Sugar Warehouse #3	55.0	16.8	771.3	235.1	143.4	43.7

Table 6-16. Property Boundary Receptors Used in the Air Modeling Analysis

Receptor	Direction (degrees)	Distance (meters)	Receptor	Direction (degrees)	Distance (meters)	Receptor	Direction (degrees)	Distance (meters)
1	10	463	43	112	828	85	190	1135
2	20	485	44	114	762	86	192	1143
3	32	538	45	116	707	87	194	1152
4	34	550	46	118	663	88	196	1163
5	36	564	47	120	675	89	198	1176
6	38	579	48	122	690	90	200	1178
7	40	595	49	124	706	91	202	1076
8	42	614	50	126	723	92	204	991
9	44	634	51	128	742	93	206	919
10	46	656	52	130	764	94	208	858
11	48	681	53	132	787	95	210	806
12	50	709	54	134	813	96	212	760
13	52	741	55	136	842	97	214	721
14	54	776	56	138	874	98	216	686
15	56	815	57	140	910	99	218	655
16	58	861	58	142	950	100	220	627
17	60	912	59	144	995	101	222	602
18	62	971	60	146	1046	102	224	580
19	64	1040	61	148	1104	103	226	560
20	66	1121	62	150	1170	104	228	542
21	68	1217	63	152	1246	105	230	526
22	70	1333	64	154	1244	106	240	465
23	72	1476	65	156	1224	107	250	429
24	74	1654	66	158	1206	108	260	409
25	76	1885	67	158	1500	109	270	403
26	78	2062	68	160	1190	110	280	409
27	80	2048	69	160	1200	111	290	429
28	82	2037	70	162	1176	112	300	465
29	84	2028	71	162	1800	113	310	526
30	86	2022	72	164	1163	114	312	542
31	88	2018	73	166	1152	115	314	560
32	90	2017	74	168	1143	116	316	580
33	92	2018	75	170	1135	117	318	602
34	94	2022	76	172	1129	118	320	595
35	96	2028	77	174	1124	119	322	579
36	98	2037	78	176	1121	120	324	564
37	100	1785	79	178	1119	121	326	550
38	102	1491	80	180	1118	122	328	538
39	104	1281	81	182	1119	123	330	527
40	106	1125	82	184	1121	124	340	485
41	108	1003	83	186	1124	125	350	463
42	110	906	84	188	1129	126	360	456

Note: Distances are relative to Boiler No. 4 stack location and distance between receptors is 100 meter or less.

Table 6-17. Everglades National Park Receptors Utilized in the PSD Class I Modeling Analysis

Receptor	UTM Coordinates (m) East	UTM Coordinates (m) North	Receptor	UTM Coordinates (m) East	UTM Coordinates (m) North
1	557000	2789000	27	540000	2848600
2	556600	2792000	28	535000	2848600
3	556000	2796000	29	530000	2848600
4	553000	2796500	30	525000	2848600
5	548000	2796500	31	520000	2848600
6	542700	2796500	32	514500	2848600
7	542700	2800000	33	514500	2843000
8	542700	2805000	34	514500	2838000
9	542700	2810000	35	514500	2832500
10	542000	2811000	36	510000	2832500
11	541300	2814000	37	505000	2832500
12	542700	2816000	38	500000	2832500
13	544100	2820000	39	495000	2832500
14	543500	2824600	40	494500	2837000
15	545000	2829000	41	491500	2841000
16	545700	2832200	42	488500	2845500
17	546200	2835700	43	483000	2848500
18	548600	2837500	44	480000	2852500
19	550300	2839000	45	475000	2854000
20	545000	2839000	46	473500	2857000
21	540000	2839000	47	473500	2860000
22	550500	2844000	48	469000	2860000
23	545000	2844000	49	464000	2860000
24	540000	2844000	50	459500	2863200
25	550300	2848600	51	454000	2863200
26	545000	2848600			

Note: U.S. Sugar Clewiston coordinates are 506100E, 2956900N.
m = meter.

Table 6-18. Maximum Predicted Pollutant Impacts From Proposed Project Screening Analysis - Future Boiler No. 4 @ 0.7 % S Oil, Unit 1, 2, and 3 Used in Off-Season.

Averaging Time	Concentration[a] (ug/m^3)	Receptor Location[b] Direction (degree)	Receptor Location[b] Distance (m)	Time Period (YYMMDDHH)	
SO_2					
Annual	6.69	300	1200	87123124	1
	5.55	310	900	88123124	
	6.32	314	900	89123124	
	6.20	300	1200	90123124	
	6.73	300	1200	91123124	
High 24-Hour	69.4	300	1500	87051824	
	72.8	328	900	88071024	
	82.5	316	1200	89060424	5
	65.2	300	1200	90050424	
	85.6	314	1200	91052724	
High 3-Hour	278	46	900	87071612	
	318	228	900	88062415	
	332	312	900	89071515	25
	324	312	900	90052815	
	370	310	900	91072412	
PM10					
Annual	2.45	300	1200	87123124	
	2.10	310	900	88123124	
	2.40	314	900	89123124	1
	2.30	310	900	90123124	
	2.52	300	900	91123124	
High 24-Hour	24.8	300	1500	87051824	
	25.8	328	900	88071024	
	29.3	316	1200	89060424	5
	23.8	300	1200	90050424	
	30.5	314	1200	91052724	
NOx					
Annual	1.76	300	1200	87123124	
	1.74	270	1200	88123124	
	2.01	314	900	89123124	1
	2.09	310	900	90123124	
	1.97	300	1200	91123124	
CO					
High 8-Hour	2430	310	900	87080716	
	2834	260	900	88061816	
	2911	316	900	89060516	500
	2307	322	900	90080816	
	3378	310	900	91072416	
High 1-Hour	6642	250	600	87080811	
	7116	312	542	88072611	
	6772	360	600	89073014	2000
	7519	350	600	90081112	
	7545	226	560	91080912	

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending

Table 6-19. Maximum Predicted Pollutant Impacts From Proposed Project for Comparison to EPA Significant Impact Levels - Refined Analyses - Future Boiler No. 4 @ 0.7 % S Oil

Averaging Time	Concentration[a] ($\mu g/m^3$)	Receptor Location[b] Direction (degree)	Receptor Location[b] Distance (m)	Time Period (YYMMDDHH)	EPA Significant Impact Levels ($\mu g/m^3$)
SO_2					
Annual	6.69	300	1200	87123124	1
	6.73	300	1200	91123124	
High 24-Hour	82.5	316	1200	89060424	5
	85.6	314	1200	91052724	
High 3-Hour	370	310	900	91072412	25
PM_{10}					
Annual	2.45	300	1200	87123124	1
	2.52	300	900	91123124	
High 24-Hour	29.3	316	1200	89060424	5
	30.5	314	1200	91052724	
NO_x					
Annual	2.01	314	900	89123124	1
	2.09	310	900	90123124	
CO					
High 8-Hour	3378	310	900	91072416	500
High 1-Hour	7,519	350	600	90081112	2000
	7,545	226	560	91080912	

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Note: The project's significant impact distances (km) are SO_2 24HR/Annual - 35; SO_2 3HR - 75; PM_{10} - 12; CO -20; NO_x = 4.

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
EPA = Environmental Protection Agency

Table 6-20. **Maximum** Predicted Pollutant Impacts From Proposed Project at the Everglades National Park PSD Class I Area
Future Boiler No. 4 @ 0.7 % S Oil and Offseason Operation of Boilers No. 1, 2, and 3

Averaging Time	Concentration[a] (µg/m3)		UTM Receptor Location[b] (m)	(m)	Time Period (YYMMDDHH)	EPA Proposed Class I Significant Impact Levels (µg/m^3)
SO_2		JSC				
Annual	0.0057	0.08	454000	2863200	90123124	0.1
High 24-Hour	0.40	1.65	454000	2863200	90090323	0.2
High 3-Hour	1.88	12.7	454000	2863200	90090323	1.0
PM_{10}						
Annual	0.0033	0.005	454000	2863200	90123123	0.2
High 24-Hour	0.17	0.31	454000	2863200	90090332	0.3
NO_x						
Annual	0.0027	0.008	454000	2863200	90123123	0.1

[a] Based on Calpuff model using the South Florida Calmet wind field, 1990.

[b] Universal Mercator Transverse coordinate system

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
EPA = Environmental Protection Agency
PSD = Prevention of Significant Deterioration

B 1, 2, 3 also included

Table 6-21. Maximum Predicted Pollutant Impacts Due to All Future Sources, AAQS Screening Analyses
- Boiler Nos. 1, 2, and 3 @ 213 ft Boiler No. 4 @ 0.7 % S

Averaging Time	Maximum Impact Scenario	Concentration [a] (ug/m^3)	Receptor Location [b]		Time Period (YYMMDDHH)
			Direction (degree)	Distance (m)	
SO_2					
Annual	Crop, Case C	24	130	3000	87123124
	Off-Crop, Case C	24	270	1200	88123124
		26	316	1200	89123124
		28	270	1200	90123124
		25	316	1200	91123124
H2H 24-Hour	Crop, Case C	215	316	1200	87032424
	Off-Crop, Case C	223	310	1200	88112024
		191	316	1500	89031524
		202	316	1500	90031624
		192	322	1200	91041624
H2H 3-Hour	Crop, Case B	523	314	1500	87031809
	Off-Crop, Case A	485	316	900	88021712
		497	310	900	89041015
		526	314	1200	90031603
		512	324	900	91041012
PM_{10}					
Annual	Crop, Case A	4	310	1200	87123124
	Off-Crop, Case B	4	270	1200	88123124
		5	316	1200	89123124
		5	310	1200	90123124
		5	312	1200	91123124
H2H 24-Hour	Crop, Case A				
	Off-Crop, Case B	39	314	1500	87032424
		38	310	1800	88040324
		31	316	1500	89031524
		36	316	1500	90020224
		34	322	1200	91041624
CO					
H2H 8-Hour	Crop, Case A [c]	2,954	310	900	87080716
		2,954	326	900	88072216
		3,241	318	900	89060416
		2,842	322	1200	90080816
		3,247	312	900	91070616
H2H 1-Hour	Crop, Case A [c]	6,306	318	900	87082912
		6,933	228	542	88071511
		6,729	280	600	89042611
		8,342	326	550	90082412
		8,421	226	560	91053011
NO_x					
Annual	Crop, Case D	6	310	1200	87123124
	Off-Crop, Case E	7	270	1200	88123124
		7	314	1200	89123124
		8	310	1200	90123124
		7	300	1200	91123124

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

[c] Crop season emissions modeled year-round.

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 6-22. Maximum Predicted Pollutant Impacts Due to All Future Sources For Comparison to AAQS, Refined Analysis - Boiler Nos. 1, 2, and 3 @ 213 ft Boiler No. 4 @ 0.7 % S

Averaging Time	Concentration ($\mu g/m^3$)			Receptor Location [b]		Time Period	Florida
	Total	Modeled	Background	Direction (degree)	Distance (m)	(YYMMDDHH)	AAQS ($\mu g/m3$)
SO_2							
Annual	33.7	28.7	5	272	1300	90123124	60
H2H 24-Hour	228	215	13	316	1300	87032424	260
	236	223	13	310	1300	88040324	
H2H 3-Hour	572	525	47	314	1400	87031809	1300
	541	494	47	316	1000	88021712	
	550	503	47	310	1000	89041415	
	573	526	47	314	1200	90031603	
	562	515	47	324	1000	91041012	
PM_{10}							
Annual	28.1	5.1	23	310	1200	90123124	50
H2H 24-Hour	78	39	39	315	1300	87032224	150
	77	38	39	310	1700	88112024	
CO							
H2H 8-Hour	7,412	3,313	3,430	318	1000	9060416	10,000
	7,736	3,247	3,430	312	900	91070616	
H2H 1-Hour	14,057	8,342	5,715	326	550	90082412	
	14,136	8,421	5,715	226	560	91053011	40,000
NO_x							
Annual	30.8	7.8	23.0	308	1300	90123124	100

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.

Table 1. Structure Dimensions Used in the U.S. Sugar Bryant Boiler No. 5 Modeling Analysis

Structure	Actual Building Dimensions					
	Height		Length		Width	
	ft	m	ft	m	ft	m
Sugar Warehouse No. 1	79	23.9	280	85.3	155	47.2
Sugar Warehouse No. 2	55	16.8	700	213.4	145	44.2
Sugar Warehouse No. 3	55	16.8	500	152.4	145	44.2
Sugar Warehouse No. 4	55	16.8	700	213.4	145	44.2
Bagasse Building Storage	52	15.8	76	23.2	30	9.1
Boiler No. 5	62	18.9	26	7.9	14	4.3
Power House	51	15.5	74	22.6	43	13.1
Chemical Storage	31	9.4	74	22.6	45	13.7
Turbo Generator 22,000 KW	60	18.3	40	12.2	70	21.3
Employee Facility	15	4.6	100	30.5	50	15.2
Warehouse	16	4.9	75	22.9	155	47.2
Cooling Tower	56	17.1	35	10.7	105	32.0
Mill Building	57	17.4	200	61.0	70	21.3
Boiling House	102	31.1	200	61.0	125	38.1
Boiler Building	61	18.6	202	61.6	70	21.3
Machine Shop	51	15.5	75	22.9	148	45.1
Molasses Tank No. 1	28	8.5	112	34.1	N/A	N/A
Molasses Tank No. 2	28	8.5	112	34.1	N/A	N/A
Molasses Tank No. 3	28	8.5	112	34.1	N/A	N/A

SUPPORTIVE MODELING INFORMATION

Table 6-23. Maximum Predicted Pollutant PSD Class II Increment, Screening Analysis
- Boiler Nos. 1, 2, and 3 @ 213 ft Boiler No. 4 @ 0.7 % S

Averaging Time	Maximum Impact Scenario	Concentration[a] (μg/m3)	Receptor Location[b] Direction (degree)	Receptor Location[b] Distance (m)	Time Period (YYMMDDHH)
SO_2		2.0	70	35,000	87123124
Annual	Crop, Case C	3.3	70	35,000	88123124
	Off-Crop, Case C	2.6	70	35,000	89123124
		3.6	70	30,000	90123124
		2.7	70	35,000	91123124
H2H 24-Hour	Crop, Case C	67.2	300	1200	87061924
	Off-Crop, Case C	60.0	270	900	88073124
		73.2	320	900	89061524
		62.1	300	1200	90050324
		74.4	290	1200	91050924
H2H 3-Hour	Crop, Case B	263	310	900	87080715
	Off-Crop, Case A	292	312	900	88051915
		305	314	900	89061212
		319	314	900	90061815
		356	310	900	91070615
PM_{10}					
Annual	Crop, Case A	1.1	300	1800	87123124
	Off-Crop, Case B	0.7	312	1500	88123124
		0.7	312	1500	88123124
		0.2	312	1800	90123124
		0.2	310	1800	91123124
H2H 24-Hour	Crop, Case A	24.0	300	1200	87061924
	Off-Crop, Case B	21.2	270	900	88073024
		21.2	270	900	88073024
		22.2	300	1200	90050324
		26.3	290	1200	91050924
NO_x					
Annual	Crop, Case D	3.9	300	1500	87123124
	Off-Crop, Case E	3.9	312	1500	88123124
		4.1	312	1500	89123124
		4.4	310	1500	90123124
		3.9	300	1800	91123124

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.
PSD = Prevention of Significant Deterioration

Table 6-24. Maximum Predicted Pollutant PSD Increment Consumption For Comparison With PSD Class II Allowable Increments, Refined Analysis - Boiler Nos. 1, 2, and 3 @ 213 ft; Boiler No. 4 @ 0.7 % S

Averaging Time	Concentration (μg/m3)	Receptor Location[b] Direction (degree)	Receptor Location[b] Distance (m)	Time Period (YYMMDDHH)	Allowable PSD Class II Increment (μg/m3)
SO_2					
Annual	13	70.5	33600	90123124	20
H2H 24-Hour	73.9	320	1000	89061524	91
	74.6	290	1300	91050924	
H2H 3-Hour	357	310	1000	91070615	512
PM_{10}			1500		
Annual	1.1	300	~~1800~~	87123124	17
H2H 24-Hour	25.7	304	1100	87061924	30
	26.3	290	1300	91050924	
NO_x					
Annual	4.1	312	1500	89123124	25
	4.4	310	1600	91123124	

[a] Based on 5-year meteorological record, West Palm Beach, 1987-91

[b] Relative to Boiler Number 4 Stack Location

Legend: YYMMDDHH = Year, Month, Day, Hour Ending
H2H = Highest, 2nd-Highest Concentration in 5 years.
PSD = Prevention of Significant Deterioration
EPA = Environmental Protection Agency

Table 6-26 Maximum Predicted SO2 Impacts Due to All Future Source at Everglades NP, PSD Class I Analysis

Averaging Time	Concentration [a] (ug/m^3)	Receptor Locations [b] Distance (m)	Receptor Locations [b] Distance (m)	Time Period (YYMMDDHH)	Allowable PSD Class I Increment (ug/m^3)
HSH 24-Hour	2.1	550,300	2,848,600	87102324	5
	3.0	545,000	2,848,600	88060224	
	2.1	545,000	2,844,000	89020224	
	2.5	545,000	2,848,600	90042924	
	2.8	550,300	2,848,600	91121524	
HSH 3-Hour	15.3	545,000	2,848,600	87031421	25
	17.9	535,000	2,848,600	88021621	
	18.2	543,500	2,824,600	89011003	
	19.7	540,000	2,848,600	90012224	
	15.6	535,000	2,848,600	91121109	

Notes:

a Predicted with the ISCST3 model and 5-years of meteorological data from West Palm Beach, 1987-1991.

b Relative to No. 4 Boiler stack location.

Legend: YYMMDDHH = Year, Month, Day, Hour Ending

Table A. Baseline Emissions Used in the Significant Impact Analysis for Clewiston Boiler No. 4

Pollutant	Emission Factor [a]	Heat Input [b] (MMBtu/hr)	Emissions (lb/hr)	Emissions (g/s)
Particulate Matter (PM)	0.12 lb/MMBtu	546	65.5	8.26
PM_{10}	0.112 lb/MMBtu	546	61.2	7.71
Sulfur Dioxide	0.008 lb/MMBtu	600	4.8	0.60
Nitrogen Oxides	0.082 lb/MMBtu	(c)	16.1	2.03
Carbon Monoxide	6.36 lb/MMBtu	600	3816.0	480.82

[a] Based on source test data from Boiler No. 4.

[b] Based on maximum steam rates actually reached in operation for Boiler No. 4.

[c] Based on baseline NO_x emissions of 70.6 TPY, assuming 8,760 hr/yr operation.

LOAD ANALYSIS MODELING RESULTS

From Initial Application for Boiler 4 Project

Table 6-3. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Operation @ 2.5% S Fuel Oil

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil (MMBtu/hr)	Fuel Oil		Bagasse		SO_2 Emissions			
			gal/hr [a]	MMBtu/hr	MMBtu/hr	lb/hr(dry)	Fuel Oil (lb/hr)	Bagasse [b] (lb/hr)	Total (lb/hr)	Total (g/s)
					MAXIMUM 3-HOUR CASE					
1	495.6 [c]	225.1	1,500	225.0	270.6	37,583	615.0	18.8	633.8	79.86
2	495.6 [c]	225.1	1,500	225.0	270.6	37,583	615.0	18.8	633.8	79.86
3	342.0 [c]	135.1	900	135.0	207.0	28,750	369.0	14.4	383.4	48.31
4	633.0	225.1	1,500	225.0	408.0	56,667	615.0	67.7 [d]	682.7	86.02 [e]
7	812.0	249.0	0	0.0	812.0	112,778	0.0	138.0 [d]	138.0	17.39
Totals	2,778.2		5,400 (16,2001 gallons per 3-hour period)	810.0	1,968.2	273,361	2,214.0	257.7	2,471.7	311.4
					MAXIMUM 24-HOUR CASE					
1	495.6	225.1	1,070	160.5	335.1	46,542	438.7	23.3	462.0	58.21
2	495.6	225.1	1,070	160.5	335.1	46,542	438.7	23.3	462.0	58.21
3	342.0	135.1	600	90.0	252.0	35,000	246.0	17.5	263.5	33.20
4	600.0	225.1	960	144.0	456.0	63,333	393.6	75.7 [d]	469.3	59.13 [e]
7	738.0	249.0	0	0.0	738.0	102,500	0.0	125.5 [d]	125.5	15.81
Totals	2,671.2		3,700 (88,800 gallons per 24-hour period)	555.0	2,116.2	293,917	1,517.0	265.2	1,782.2	224.6

[a] Total fuel usage for all boilers based on current permit limits. Individual boiler rates selected to maximize SO_2 emissions.

[b] Assumes 75 percent removal of SO_2 due to bagasse firing, based on industry test data.

[c] Permit limit for 24-hour average.

[d] Based on permit limit of 0.166 lb/MM Btu for Boiler No. 4, and 0.17 lb/MMBtu for Boiler No. 7.

[e] For modeling purposes, this SO_2 emission rate is slightly higher than that shown in Table 2-1 for Boiler No. 4. This is due to not accounting for the differneces in combustion efficiency between bagasse and fuel oil.

Note: Fuel Oil - 8.2 lb/gal
18,300 Btu/lb; 150,000 Btu/gal
2.5% sulfur
Bagasse - 7,200 Btu/lb (dry); 3,600 Btu/lb (wet)
0.1% sulfur average, dry basis

Table 24 HR CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Crop Season Operation - 24-hr Averaging Time (7/18/00)

Boilers 1-3 @ 2.5% sulfur fuel oil; 213 ft stack height

Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil[a] (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr[a]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled SO_2 Emissions: Fuel Oil[b] (lb/hr)	Bagasse[c] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
					CASE A: MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	495.6	225.1	1,400	210.0	285.6	574.0	17.1	591.1	74.48	190,000	63.0	19.20
2	447.0	225.1	1,400	210.0	237.0	574.0	14.2	588.2	74.12	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8	8.47
4	600.0	225.1	0	0.0	600.0	0.0	36.0	36.0	4.54	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	125.5	125.5	15.81	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	555.0	1,990.9	1,517.0	200.6	1,717.6	216.4			
					CASE B: MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	495.6	225.1	900	135.0	360.6	369.0	21.6	390.6	49.22	190,000	63.0	19.20
2	447.0	225.1	900	135.0	312.0	369.0	18.7	387.7	48.85	171,400	56.8	17.32
3	265.3	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8	8.47
4	600.0	225.1	1,000	142.0	458.0	102.2	27.5	129.7	16.34	252,891	78.8	24.03
7	738.0	249.0	0	0.0	738.0	0.0	125.5	125.5	15.81	263,571	77.4	23.60
Totals	2,545.9		3,700 (88,800 gal/day)	547.0	1,998.9	1,209.2	201.1	1,410.3	177.7			
					CASE C: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	396.48	225.1	1,400	210.0	186.5	574.0	11.2	585.2	73.73	152,000	50.4	15.36
2	357.6	225.1	1,400	210.0	147.6	574.0	8.9	582.9	73.44	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2	6.78
4	480.0	225.1	0	0.0	480.0	0.0	28.8	28.8	3.63	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	100.4	100.4	12.65	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	555.0	1,481.7	1,517.0	153.8	1,670.8	210.5			
					CASE D: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	396.48	225.1	900	135.0	261.5	369.0	15.7	384.7	48.47	152,000	50.4	15.36
2	357.6	225.1	900	135.0	222.6	369.0	13.4	382.4	48.18	137,120	45.5	13.86
3	212.2	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2	6.78
4	480.0	225.1	1,000	142.0	338.0	102.2	20.3	122.5	15.43	213,440	66.5	20.28
7	590.4	249.0	0	0.0	590.4	0.0	100.4	100.4	12.65	232,000	68.1	20.77
Totals	2,036.7		3,700 (88,800 gal/day)	547.0	1,489.7	1,209.2	154.3	1,363.5	171.8			

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 0.06 lb/MMBtu SO_2 due to bagasse firing, based on industry test data, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 24 HR OFFCROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Off-Season Operation - 24-hr Averaging Time (7/26/00)

Boilers 1-3 @ 1.6% sulfur fuel oil; 213 ft stack height

Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Boiler Design Rates: Steam Rate[a] (lb/hr)	Boiler Design Rates: Heat Input (MMBtu/hr)	Boiler Design Rates: Heat Input From Oil (MMBtu/hr)	Operating Rate: Steam Rate (lb/hr)	Operating Rate: Heat Input Rate (MMBtu/hr)	Heat Input from: Bagasse (MMBtu/hr)	Heat Input from: Oil (MMBtu/hr)	Fuel Oil Usage[b] (gal/hr)	Modeled SO_2 Emissions: Fuel Oil[b] (lb/hr)	Modeled SO_2 Emissions: Bagasse[c] (lb/hr)	Modeled SO_2 Emissions: Total (lb/hr)	Modeled SO_2 Emissions: Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity ft/s	Stack Velocity m/s
						CASE A (24-hr)									
1	255,000	495.6	225.1	235,000	456.7	279.2	177.5	1,183	310.5	16.8	327.3	41.23	175,098	58.1	17.70
2	230,000	447.0	225.1	215,000	417.9	257.9	160.0	1,067	279.9	15.5	295.4	37.22	160,222	53.1	16.19
3	130,000	265.3	135.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.3	800,000	1,612.6	1,275.1	337.5	2,250 (54,000 gal/day)	590.4	157.7	748.1	94.3			
						CASE B (24-hr)									
1	255,000	495.6	225.0	160,000	311.0	209.7	101.3	675	177.1	12.6	189.7	23.9	119,216	39.5	12.05
2	230,000	447.0	225.0	160,000	311.0	209.7	101.3	675	177.1	12.6	189.7	23.9	119,235	39.5	12.05
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	236.2	7.8	244.0	30.74	83,800	27.8	8.47
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.8[a]	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,625.2	1,287.7	337.5	2,250 (54,000 gal/day)	590.4	158.4	748.8	94.6			
						CASE C (24-hr)									
1	255,000	495.6	225.0	186,600	362.7	261.4	101.3	675	177.1	15.7	192.8	24.29	139,039	46.1	14.05
2	230,000	447.0	225.0	168,300	327.1	225.8	101.3	675	177.1	13.6	190.7	24.02	125,420	41.6	12.68
3	130,000	265.3	135.0	95,100	194.1	59.1	135.0	900	236.2	3.5	239.7	30.20	61,303	20.3	6.20
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,621.8	1,284.3	337.5	2,250 (54,000 gal/day)	590.4	158.2	748.6	94.3			
						CASE D (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	18.7	18.7	2.35	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	71.3	112.4	749	196.6	4.3	200.9	25.31	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	196.0	225.1	1,501	172.3	11.8	184.0	23.19	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	368.9	160.2	529.1	66.7			
						CASE E (24-hr)									
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0	0.00
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	18.7	18.7	2.35	119,235	39.5	12.05
3	130,000	265.3	135.0	90,000	183.7	48.7	135.0	900	236.2	2.9	239.1	30.12	58,015	19.2	5.86
4	285,000	600.0	225.1	200,000	421.1	218.6	202.5	1,350	155.0	13.1	168.1	21.18	177,867	55.5	16.90
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4	23.60
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	391.1	160.2	551.3	69.5			

[a] Maximum 24-hour average steam rate.

[b] No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 0.06 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

- Maximum PM and CO emissions occur under 100 percent bagasse firing and maximum steam rate for all boilers.

The following forms the basis of the modeling analysis for the off-season operation.

Off-season operation

1-, 3- and 8-Hour Operation:

- Total steam production from all boilers (Nos. 1, 2, 3, 4, and 7) is limited to 1,000,000 lb/hr steam.
- Total steam production from Boiler Nos. 1-4 will not exceed 615,000 lb/hr.
- For Boiler Nos. 1-4, only three of these boilers will operate at any one time.
- Boiler Nos. 1, 2 and 3 are restricted to burning fuel oil with no greater than 1.6% sulfur during the off-season. U.S. Sugar will comply with this requirement by minimizing the amount of No. 6 fuel oil contained in the fuel oil tank for Boiler Nos. 1, 2 and 3 at the end of each crop season, and purchasing only No. 6 oil with a maximum sulfur content of 1.6% during the off-season. (Note: a separate tank provides these boilers with fuel oil)
- Boiler No. 4 is restricted to burning fuel oil with no greater than 0.7% sulfur (with a separate fuel oil tank).
- Boiler No. 7 is restricted to burning fuel oil with no greater than 0.05% sulfur (with a separate fuel oil tank).
- Total No. 6 fuel oil consumption (total of Boiler Nos. 1, 2, 3 and 4) is limited to 11,700 gallons per 3-hour period.
- For SO_2, two scenarios were evaluated: A) Boiler Nos. 1-3 and 7 operating at maximum steam rate, max fuel oil burning in Boiler Nos. 1-3; B) Boiler Nos. 2, 3 and 4 operating at reduced load, max oil firing in Boiler Nos. 2, 3 and 4.

24-Hour Operation:

- Total steam production from all boilers (Nos. 1, 2, 3, 4, and 7) is limited to 800,000 lb/hr steam (24-hr average).
- Total steam production from Boiler Nos. 1-4 is limited to 450,000 lb/hr steam (24-hr average).
- For Boiler Nos. 1-4, only three of these boilers will operate at any one time.
- Boiler Nos. 1, 2 and 3 are restricted to burning fuel oil with no greater than 1.6% sulfur during the off-season.
- Boiler No. 4 continues to be restricted to burning fuel oil with no greater than 0.7% sulfur (with a separate fuel oil tank).
- Boiler No. 7 continues to be restricted to burning fuel oil with no greater than 0.05% sulfur (with a separate fuel oil tank).
- Total No. 6 fuel oil consumption (total of Boiler Nos. 1, 2, 3 and 4) is limited to 54,000 gallons per 24 period.

Table 4-5
BACKGROUND SOURCE EMISSIONS INVENTORY - BACKGROUND SOURCES

Source No. & ID	UTM Coords (km) East	UTM Coords (km) North	Stack Parameters H_s (m)	Stack Parameters T_s (K)	Stack Parameters V_s (m/s)	Stack Parameters D_s (m)	Emission Rates (g/s) SO_2	Emission Rates (g/s) PM	Emission Rates (g/s) NO_2	Distance From Indiantown (km)
14- FPL Martin 1&2	543.1	2992.9	152.1	421	21.1	8.0	1743.8	218.0	654.0	5.64
15- Everglades Sugar	509.6	2954.2	21.9	477	10.1	1.1	40.5	(1)	(1)	53.16
16- U.S. Sugar Corp.	506.1	2956.9	22.9	344	25.3	1.9	68.3	51.6	(1)	54.0
17- Atlantic Sugar	552.9	2945.2	27.4	342	13.0	1.9	30.9	32.8	(1)	45.7
18- Osceola Farms	544.2	2968.0	27.4	341	23.6	1.9	56.4	30.1	(1)	23.1
19- Sugar Cane Growers	534.9	2953.3	24.4	336	14.4	1.6	51.6	52.8	17.1	39.7
20- U.S. Sugar Bryant Plant	538.8	2968.1	19.8	342	36.4	1.6	35.5	47.0	(1)	24.5
21- Pratt & Whitney	559.2	2978.3	15.2	533	40.2	0.9	74.0	(1)	60.5	16.5
22- FPL Riviere Plant	594.2	2960.6	90.8	408	18.9	4.9	2238.5	(1)	454.6	54.9
23- Caulkins Citrus Co.	548.1	2911.5	28.7	343	11.9	1.0	(1)	3.5	(1)	0.8

H_s = Stack Height; T_s = Stack Exit Temperature; V_s = Stack Exit Velocity; D_s = Stack Exit Diameter
(1) No emissions data are available from FDER.
Source: FPL Martin PSD, 1989.

Table 4-4
BACKGROUND SOURCE EMISSIONS INVENTORY - PSD SOURCES

Source No. & ID	UTM Coords (km) East	UTM Coords (km) North	Stack Parameters H_s (m)	Stack Parameters T_s (K)	Stack Parameters V_s (m/s)	Stack Parameters D_s (m)	Emission Rates (g/s) SO_2	Emission Rates (g/s) PM	Emission Rates (g/s) NO_2	Distance From Indiantown (km)
1 - Power Ventures	569.4	2975.9	19.2	422	22.6	0.9	6.8	(1)	88.1	25.8
2 - Fort Pierce Util.	566.8	3036.3	45.7	408	12.5	2.4	77.9	(1)	(1)	49.2
3 - U.S. Sugar Corp.	506.1	2956.9	45.7	340	25.2	2.2	85.7	14.7	(1)	54.0
4 - Atlantic Sugar	552.9	2945.2	27.4	339	9.7	2.0	11.8	4.8	(1)	45.7
5 - Osceola Farms	544.2	2968.0	27.4	341	16.9	1.9	33.4	7.2	(1)	23.1
6 - Sugar Cane Growers	534.9	2953.3	47.2	344	10.6	3.0	71.2	12.0	15.5	39.7
7 - U.S. Sugar Bryant Plant	538.8	2968.1	30.5	344	22.4	2.1	32.5	11.0	17.5	24.5
8 - Pratt & Whitney	558.1	2979.1	4.6	644	13.4	3.4	23.4	(1)	(1)	15.2
9 - Palm Beach	585.8	2960.2	76.2	505	24.9	2.0	44.1	(1)	(1)	48.4
10- FPL Martin CT [2]	542.9	2992.4	65.0	411	18.8	6.1	463.6	30.4	232.4	5.6
11- FPL Martin CT [2]	543.2	2992.4	65.0	411	18.8	6.1	463.6	30.4	232.4	5.3
12- FPL Martin AB [3]	543.0	2992.5	18.3	535	15.2	1.1	6.5	0.2	1.4	5.5
13- FPL Martin AB [3]	543.2	2992.5	18.3	535	15.2	1.1	6.5	0.2	1.4	5.5
14- FPL Martin DG [4]	543.0	2992.5	7.6	786	39.6	0.3	0.3	0.3	3.9	5.4
15- FPL Martin DG [4]	543.2	2992.5	7.6	786	39.6	0.3	0.3	0.3	3.9	5.4

H_s = Stack Height; T_s = Stack Exit Temperature; V_s = Stack Exit Velocity; D_s = Stack Exit Diameter
(1) No emissions data are available from FDER.
(2) Each source contains 4 units; emissions shown are the total amount (No. 2 oil @ 40 °F).
(3) Auxiliary boiler.
(4) Diesel generator.
Source: FPL Martin PSD, 1989.

Table 6-11. Summary of CO Facilities Considered for Inclusion in the AAQS Air Modeling Analyses (revised 8/21/2000)

AIRS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	X (km)	Y (km)	Distance (km)	Direction (deg)	Maximum CO Emissions (TPY)	Q, (TPY) Emission Threshold [b] (Dist -20) x 20	Include in Modeling Analysis ?
510001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	15	SIA	YES
510015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	1,888	SIA	YES
990332	Okeelanta Power	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	3,297	SIA	YES
990026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	33,771	SIA	YES
990061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	19,958	SIA	YES
990016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	25,175	93.7	YES
990016	Atlantic Sugar Association	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	25,065	264.8	YES
850001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	2,285	332.5	YES
850102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	1,651	350.2	YES
990021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	30	445.0	NO
360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	238	956.4	NO
710002	FPL - Fort Myers [c]	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	4,478	981.9	YES
500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	204	1054.0	NO
[a] U.S. Sugar Clewiston Mill Coordinates:				506.1	2956.9						

[b] Proposed project's emissions are significant to 20 kilometers.
Emission inventory is limited to facilities within 70 km of U. S. Sugar facility but includes major power plants outside the proposed project's significant impact distance.

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

Table 6-12. Summary of CO Sources Included in the Air Modeling Analysis (revised 8/18/2000)

APIS Number	Facility	Units	ISCST3 ID Name	Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (g/s)
0510001	Everglades Sugar [b]	Main Boiler	EVERGLAD	21.9	1.07	477.6	10.06	0.44
510015	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
990332	Okeelanta	Cogen Blrs 1,2,& 3	OKCOGEN	68.6	3.05	438.7	17.46	94.61
990026	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
990061	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
990016	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
990016	Atlantic Sugar [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
0710119	Lee County Energy Recovery Facility	Units 1 & 2	LEECORRF	84.1	1.98	416.5	22.86	6.85
850001	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
850102	Bechtel Indiantown		BECHTIND	150.9	4.88	333.2	30.50	47.38
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 6-13. Summary of NO_2 Facilities Considered for Inclusion in the Annual AAQS and PSD Class II Air Modeling Analyses (revised 8/19/2000)

APIS Number	Facility	East (km)	North (km)	X (km)	Y (km)	Distance (km)	Direction[a] (deg)	Maximum NOx Emissions (TPY)	Q, Emission Threshold (Dist -4) x 20	Include in Modeling Analysis ?
0510001	EVERGLADES SUGAR	509.6	2954.2	3.5	-2.7	4.4	128	1,410	SIA	YES
0510015	SOUTHERN GARDENS CITRUS PROCESSING CORP.	487.6	2957.6	-18.5	0.7	18.5	272	167	SIA	YES
0430008	ATLAS-TRANSOIL INC	489.2	2966.6	-16.9	9.7	19.5	300	35	SIA	YES
0990005	OKEELANTA CORP	525.0	2937.4	18.9	-19.5	27.2	136	3,432	SIA	YES
0990026	SUGAR CANE GROWERS CO-OP	534.9	2953.3	28.8	-3.6	29.0	97	3,243	SIA	YES
0990061	U.S.SUGAR CORP. BRYANT MILL	538.8	2969.1	32.7	12.2	34.9	70	1,984	SIA	YES
0990019	OSCEOLA FARMS	544.2	2968.0	38.1	11.1	39.7	74	1,044	93.7	YES
0110351	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	522.3	2912.2	16.2	-44.7	47.5	160	737	250.2	YES
0990016	ATLANTIC SUGAR ASSOCIATION	552.9	2945.2	46.8	-11.7	48.2	104	2,266	264.8	YES
0990549	SOUTH FLORIDA WATER MANAGEMENT DISTRICT	554.2	2940.5	48.1	-16.5	50.8	109	199	316.7	NO
0850001	FP&L MARTIN	543.1	2992.9	37.0	36.0	51.6	46	35,489	332.5	YES
0850102	INDIANTOWN COGENERATION, L.P.	545.6	2991.5	39.5	34.6	52.5	49	2,583	350.2	YES
0850129	AMERICAN POWER TECH, INC	549.1	2990.8	43.0	33.9	54.7	52	10	394.6	NO
0510011	HENDRY CORRECTIONAL INSTITUTION	476.1	2909.9	-30.0	-47.0	55.7	213	2	415.0	NO
0710002	FP&L FORT MYERS [a]	422.1	2952.9	-84.0	-4.0	84.1	267	33,272	981.9	YES
0990045	LAKE WORTH UTILITIES [a]	592.8	2943.7	86.7	-13.2	87.7	99	8,615	1054.0	YES
0990042	FP&L RIVIERA [a]	594.2	2960.6	88.1	3.7	88.2	88	16,565	1063.6	YES
US Sugar Clewiston Mill Coordinates:			506.1	2956.9						

Proposed project's annual emissions are significant to 4km.

Emission inventory is limited to facilities within 54 km but includes major power plants at outside the proposed project's significant impact distance.

[a] Large emission source outside the modeled area which are include in the model

Table 6-14. Summary of NO_2 Sources Included in the Air Modeling Analysis (8/23/00)

AIRS Number	Facility	Units	EU #	ISCST3 ID Name	Stack Parameters: Height (m)	Diameter (m)	Temper. (K)	Velocity (m/s)	Emission Rate (TPY)	Emission Rate (g/s)	PSD Source? (EXP/CON)	Modeled In: AAQS	Modeled In: Class II
510003	US Sugar - Clewiston [a]												
		PSD Baseline (Crop season only)											
		Unit 1 PSD Baseline		BRL1B	23.1	1.86	344.0	30.20	-93.7	-6.27	EXP	No	Yes
		Unit 2 PSD Baseline		BLR2B	23.1	1.86	343.0	35.70	-94.0	-6.29	EXP	No	Yes
		Unit 3 PSD Baseline		BLR3B	27.4	2.29	342.0	14.70	-45.1	-3.03	EXP	No	Yes
		Units 4 PSD Baseline		BLR4B	45.7	2.51	344.3	25.40	-127.9	-8.76	EXP	No	Yes
		Units 5 PSD Baseline		BLR5B	23.1	1.86	494.0	44.30	-20.9	-1.54	EXP	No	Yes
		Units 6 PSD Baseline		BLR6B	23.1	1.86	494.0	44.30	-18.0	-1.34	EXP	No	Yes
0510001	EVERGLADES SUGAR	MAIN BOILER [b]	2	EVERGLAD	21.95	1.07	477.6	10.06	168.0	4.82	NO	Yes	No
0990005	OKEELANTA [a]	BOILER #4 PSD Baseline	3	OKBLR4B	22.90	2.29	333.0	7.36	-27.3	-1.33	EXP	No	Yes
		BOILER #5 PSD Baseline	4	OKBLR5B	22.90	2.29	333.0	12.07	-37.8	-1.89	EXP	No	Yes
		BOILER #6 PSD Baseline	5	OKBLR6B	22.90	2.29	334.0	8.74	-31.9	-1.59	EXP	No	Yes
		BOILER # 10 PSD Baseline	9	OKBLR10B	22.90	2.29	334.0	10.35	-36.0	-1.80	EXP	No	Yes
		BOILER # 11 PSD Baseline	10	OKBLR11B	22.90	2.29	342.0	9.89	-46.0	-2.30	EXP	No	Yes
		BOILER # 12 PSD Baseline	12	OKBLR12B	22.90	2.29	330.0	8.20	-57.7	-2.88	EXP	No	Yes
		BOILER # 14 PSD Baseline	14	OKBLR14B	22.90	2.29	333.0	8.30	-63.6	-3.18	EXP	No	Yes
		BOILER # 15 PSD Baseline	15	OKBLR15B	22.90	2.29	332.0	10.20	-50.5	-2.52	EXP	No	Yes
		COGEN Units 1, 2, & 3 [b]		OKCOGEN	60.66	3.05	438.70	17.5	1,410	40.5	CON	Yes	Yes
0990026	SUGAR CANE GROWERS [a]	BOILER #1 & #2		SUGCN12	45.72	1.87	339.00	21.75	1,097	37.88	CON	Yes	Yes
		BOILER #3	3	SUGCN3	27.43	1.52	339.00	22.25	227	12.96	CON	Yes	Yes
		BOILER #4	4	SUGCN4	54.90	2.44	339.00	21.73	939	32.41	CON	Yes	Yes
		BOILER #5	5	SUGCN5	45.72	2.30	339.00	15.94	721	24.90	CON	Yes	Yes
		BOILER # 8	8	SUGCN8	47.24	2.90	339.00	13.62	449	15.50	CON	Yes	No
		BOILER #1 & #2 PSD Baseline		SUGCN12B	24.40	1.32	344.00	16.90	-68.01	-3.40	EXP	No	Yes
		BOILER #3 PSD Baseline	3	SUGCN3B	24.40	1.60	344.00	15.60	-41.64	-2.18	EXP	No	Yes
		BOILER #4 PSD Baseline	4	SUGCN4B	25.90	2.82	344.00	10.60	-77.67	-3.88	EXP	No	Yes
		BOILER #5 PSD Baseline	5	SUGCN5B	24.40	1.40	344.00	15.20	-51.82	-2.59	EXP	No	Yes
0990061	U.S. SUGAR, BRYANT [a]	BOILERS #s 1, 2, & 3		USBRY123	19.81	1.65	344.26	26.52	1,060	65.49	NO	Yes	No
		BOILER #5	5	USBRY5	42.67	2.90	345.37	17.07	384.2	20.37	NO	Yes	No
		DIESEL ELECTRIC GENERATOR #1	7	USBRY7	8.53	0.37	519.26	12.19	262.0	7.54	NO	Yes	No
		DIESEL ELECTRIC GENERATOR #2	8	USBRY8	8.53	0.37	519.26	12.80	278.0	7.99	NO	Yes	No
0990019	OSCEOLA FARMS [a]	BOILER #2	2	OSBLR2	27.43	1.52	342.04	31.39	241.9	15.88	CON	Yes	Yes
		BOILER #3	3	OSBLR3	27.43	1.92	341.48	23.77	124.0	8.14	CON	Yes	Yes
		BOILER #4	4	OSBLR4	25.60	1.83	340.93	12.50	241.9	15.88	CON	Yes	Yes
		BOILER # 5	5	OSBLR5	27.43	1.52	340.93	31.39	285.1	18.71	NO	Yes	No
		BOILER #6	6	OSBLR6	27.43	1.92	341.48	17.07	150.9	9.90	CON	Yes	Yes
		BOILER #1 PSD Baseline	1	OSBLR1B	22.00	1.52	342.00	8.18	-101.6	-5.08	EXP	No	Yes
		BOILER #2 PSD Baseline	2	OSBLR2B	22.00	1.52	342.00	18.10	-37.64	-1.88	EXP	No	Yes
		BOILER #3 PSD Baseline	3	OSBLR3B	22.00	1.93	341.00	14.50	-16.89	-0.84	EXP	No	Yes
		BOILER #4 PSD Baseline	4	OSBLR4B	22.00	1.83	341.00	18.80	-30.37	-1.52	EXP	No	Yes
		BOILER #6 PSD Baseline	6	OSBLR6B	27.43	1.93	341.48	17.07	-39.93	-2.00	EXP	No	Yes

US SUGAR CLEWISTON MILL - RESPONSE TO COMMENTS
AUGUST, 2000

FILENAME	FILE DESCRIPTION
LOAD ANALYSIS (INPUT, OUTPUT AND SUMMARY FILES)	
LOADS24.ZIP	SO2 ANNUAL AND 24-HOUR CROP-SEASON AND OFF-CROP SEASON - LOAD ANALYSIS
LOADS03.ZIP	SO2 3-HOUR CROP-SEASON AND OFF-CROP SEASON - LOAD ANALYSIS
LOADPM.ZIP	PM10 ANNUAL AND 24-HOUR CROP-SEASON AND OFF-CROP SEASON - LOAD ANALYSIS
LOADCO.ZIP	CO 8-HOUR AND 1-HOUR CROP-SEASON AND OFF-CROP SEASON - LOAD ANALYSIS
LOADNOX.ZIP	NOX ANNUAL CROP-SEASON AND OFF-CROP SEASON - LOAD ANALYSIS
LOADREF.ZIP	PM AND SO2 24 HOUR CROP-SEASON AND OFF-CROP SEASON -LOAN ANALYSIS REFINEMENTS
SIGNIFICANT IMPACT ANALYSIS (INPUT, OUTPUT AND SUMMARY FILES)	
SSIG24.ZIP	SO2 ANNUAL AND 24-HOUR SIGNIFICANT IMPACT ANALYSIS 24HR MAX EMISS
SSIG03.ZIP	SO2 3-HOUR SIGNIFICANT IMPACT ANALYSIS 3HR MAX EMISS
PMSIG.ZIP	PM10 SIGNIFICANT IMPACT ANALYSIS
NSIG.ZIP	NOX SIGNIFICANT IMPACT ANALYSIS
COSIG.ZIP	CO SIGNIFICANT IMPACT ANALYSIS
AAQS ANALYSIS (INPUT, OUTPUT AND SUMMARY FILES)	
SAQS24.ZIP	SO2 AAQS 24- AND ANNUAL AVERAGE IMPACTS
SAQS03.ZIP	SO2 AAQS 3-HR AVERAGE IMPACTS
SAQS24R.ZIP	SO2 AAQS - 24-HOUR AND ANNUAL REFINEMENTS
SAQS03R.ZIP	SO2 AAQS - 3-HOUR REFINEMENTS
PMAQS.ZIP	PM AAQS - SCREENING
PMAQSR.ZIP	PM AAQS - REFINEMENTS
COAQS.ZIP	CO AAQS - SCREENING
COAQSR.ZIP	CO AAQS - REFINEMENTS
NAQS.ZIP	NOX AAQS - SCREENING
NAQSR.ZIP	NOX AAQS - REFINEMENTS
CLASS II PSD INCREMENT ANALYSIS (INPUT, OUTPUT AND SUMMARY FILES)	
SCL2_24.ZIP	SO2 PSD CLASS 2 24-HOUR AND ANNUAL SCREENING - 24-HOUR EMIS
SCL2_03.ZIP	SO2 PSD CLASS 2 3-HOUR SCREENING - 3-HOUR EMIS
SCL224R.ZIP	SO2 PSD CLASS 2 24-HOUR REFINEMENTS
SCL203R.ZIP	SO2 PSD CLASS 2 3-HOUR REFINEMENTS
SCL2ANR.ZIP	SO2 PSD CLASS 2 ANNUAL REFINEMENTS
PMCL2.ZIP	PM PSD CLASS 2 SCREENING
PMCL2R.ZIP	PM PSD CLASS 2 REFINEMENTS
NCL2.ZIP	NOX PSD CLASS 2 SCREENING
NCL2R.ZIP	NOX PSD CLASS 2 REFINEMENTS
CLASS I LOAD ANALYSIS (INPUT, OUTPUT AND SUMMARY FILES)	
LOAD24C1.ZIP	SO2 ANNUAL AND 24-HOUR CROP-SEASON AND OFF-CROP SEASON - CLASS I LOAD ANALYSIS

LOAD03C1.ZIP SO2 3-HOUR CROP-SEASON AND OFF-CROP SEASON - CLASS I LOAD ANALYSIS
LOADPMC1.ZIP PM10 ANNUAL AND 24-HOUR CROP-SEASON AND OFF-CROP SEASON - CLASS I LOAD ANALYSIS
LOADNC1.ZIP NOX ANNUAL CROP-SEASON AND OFF-CROP SEASON - CLASS I LOAD ANALYSIS

CLASS I SIGNIFICANT IMPACT ANALYSIS (INPUT, OUTPUT AND SUMMARY FILES)
(note: the significant impact analysis was redone with CALPUFF below)

S24CL1SG.ZIP SO2 ANNUAL AND 24-HOUR SIGNIFICANT IMPACT ANALYSIS 24HR MAX EMISS
S3CL1SIG.ZIP SO2 3-HOUR SIGNIFICANT IMPACT ANALYSIS 3HR MAX EMISS
PMCL1SIG.ZIP PM10 SIGNIFICANT IMPACT ANALYSIS
NCL1SIG.ZIP NOX SIGNIFICANT IMPACT ANALYSIS

CLASS I PSD INCREMENT ANALYSIS (INPUT, OUTPUT AND SUMMARY FILES)

SC1INC24.ZIP SO2 PSD CLASS 1 24-HOUR AND ANNUAL SCREENING - 24-HOUR EMIS
SC1INC3.ZIP SO2 PSD CLASS 1 3-HOUR SCREENING - 3-HOUR EMIS

CALPUFF - SIGNIFICANT IMPACT AND REGIONAL HAZE ANALYSIS (CALPOST VISIB OUTPUT)

PUFFINP - CALPUFF INPUT FILE
PUFFLST - CALPUFF LIST AND HOURLY RH OUTPUT FILE
POSTINP - CALPOST INPUT FILES
POSTLST - CALPOST LIST FILES

506.1 29569

Table 6-6. Summary of SO_2 Facilities Considered for Inclusion in the Annual and 24-Hour AAQS and PSD Class II Air Modeling Analyses (revised 8/15/2000)

APIS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	Relative to U.S. Sugar [a] X (km)	Relative to U.S. Sugar [a] Y (km)	Relative to U.S. Sugar [a] Distance (km)	Relative to U.S. Sugar [a] Direction [a] (deg)	Maximum SO_2 Emissions (TPY)	Q, Emission Threshold [b] (Dist -35) x 20	Include in Modeling Analysis ?
52FTM260001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	1,216	SIA	YES
50PMB500086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	98	SIA	YES
52FTM260015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	409	SIA	YES
50PMB500332	Okeelanta	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	939	SIA	YES
52FTM500026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	2,555	SIA	YES
52FTM500061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	2,698	SIA	YES
52FTM500016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	2,023	93.7	YES
52FTM500016	Atlantic Sugar	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	954	264.8	YES
50WPB430001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	78,522	332.5	YES
50WPB430102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	2,629	350.2	YES
50PMB500021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	504	445.0	YES
50WPB500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	1,533	895.4	YES
52FTM360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	490	956.4	NO
52FTM36	FPL - Fort Myers	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	22,702	981.9	YES
50WPB430021	Stuart Contracting	Martin	575.2	3006.8	69.1	49.9	85.2	54	100	1004.7	NO
50PMB500045	Lake Worth Utilities [c]	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	8,996	1054.0	YES
50PMB500042	FPL -Riviera Beach [c]	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	73,475	1063.6	YES
50WPB062120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	896	1137.0	NO
50WPB560003	Fort Pierce Utilities [c]	St. Lucie	566.8	3036.3	60.7	79.4	99.9	37	2,708	1298.9	YES
50WPB062119	South Broward Resource Recovery	Broward	579.6	2883.3	73.5	-73.6	104.0	135	1,318	1380.3	NO
50BRO060037	FPL -Lauderdale [c]	Broward	580.1	2883.3	74.0	-73.6	104.4	135	47,858	1387.4	YES
50BRO060036	FPL -Port Everglades [c]	Broward	587.4	2885.3	81.3	-71.6	108.3	131	170,215	1466.7	YES
50DAD130020	Tarmac	Dade	562.9	2861.7	56.8	-95.2	110.9	149	2,792	1517.1	NO
50DAD130348	Dade Co. Resource Recovery	Dade	564.3	2857.4	58.2	-99.5	115.3	150	857	1605.4	NO
30ORL310029	Vero Beach Power	St. Lucie	567.1	3056.5	61.0	99.6	116.8	31	11,832	1635.9	NO

[a] U.S. Sugar Clewiston Mill Coordinates: 506.1 2956.9

[b] Proposed project's 24-hour emissions are significant to 35 km.
Emission inventory is limited to facilities within 85 km but includes major power plants outside the proposed project's significant impact distance.

[c] Large emission sources outside the modeled area which are included in the analysis.

Table 6-7. Summary of SO_2 Facilities Considered for Inclusion in the 3 Hour AAQS and PSD Class II Air Modeling Analyses (revised 8/14/2000)

APIS Number	Facility	County	UTM Coordinates East (km)	UTM Coordinates North (km)	X (km)	Y (km)	Distance (km)	Direction (deg)	Maximum SO_2 Emissions (TPY)	Q, Emission Threshold [b] (Dist -75) x 20	Include in Modeling Analysis ?
52FTM260001	Everglades Sugar	Hendry	509.6	2954.2	3.5	-2.7	4.4	128	1,216	SIA	YES
50PMB500086	Glades Correctional Institute	Palm Beach	523.4	2955.2	17.3	-1.7	17.4	96	98	SIA	YES
52FTM260015	Southern Gardens Citrus	Hendry	487.6	2957.6	-18.5	0.7	18.5	272	409	SIA	YES
50PMB500332	Okeelanta	Palm Beach	525.0	2937.4	18.9	-19.5	27.2	136	939	SIA	YES
52FTM500026	Sugar Cane Growers	Palm Beach	534.9	2953.3	28.8	-3.6	29.0	97	2,555	SIA	YES
52FTM500061	U.S. Sugar -Bryant	Palm Beach	538.8	2968.1	32.7	11.2	34.6	71	2,698	SIA	YES
52FTM500016	Osceola Farms	Palm Beach	544.2	2968.0	38.1	11.1	39.7	74	2,023	SIA	YES
52FTM500016	Atlantic Sugar	Palm Beach	552.9	2945.2	46.8	-11.7	48.2	104	954	SIA	YES
50WPB430001	FPL -Martin	Martin	543.1	2992.9	37.0	36.0	51.6	46	78,522	SIA	YES
50WPB430102	Bechtel Indiantown	Martin	545.6	2991.5	39.5	34.6	52.5	49	2,629	SIA	YES
50PMB500021	Pratt & Whitney	Palm Beach	559.2	2978.3	53.1	21.4	57.3	68	504	SIA	YES
50WPB500234	Palm Beach Resource Recovery	Palm Beach	585.8	2960.2	79.7	3.3	79.8	88	1,533	95.4	YES
52FTM360119	Lee County Resource Recovery	Lee	424.0	2946.0	-82.1	-10.9	82.8	262	490	156.4	YES
52FTM36	FPL - Fort Myers	Lee	422.1	2952.9	-84.0	-4.0	84.1	267	22,702	181.9	YES
50WPB430021	Stuart Contracting	Martin	575.2	3006.8	69.1	49.9	85.2	54	100	204.7	NO
50PMB500045	Lake Worth Utilities	Palm Beach	592.8	2943.7	86.7	-13.2	87.7	99	8,996	254.0	YES
50PMB500042	FPL -Riviera Beach	Palm Beach	594.2	2960.6	88.1	3.7	88.2	88	73,475	263.6	YES
50WPB062120	North Broward Resource Recovery	Broward	583.6	2907.6	77.5	-49.3	91.9	122	896	337.0	YES
50WPB560003	Fort Pierce Utilities	St. Lucie	566.8	3036.3	60.7	79.4	99.9	37	2,708	498.9	YES
50WPB062119	South Broward Resource Recovery	Broward	579.6	2883.3	73.5	-73.6	104.0	135	1,318	580.3	YES
50BRO060037	FPL -Lauderdale	Broward	580.1	2883.3	74.0	-73.6	104.4	135	47,858	587.4	YES
50BRO060036	FPL -Port Everglades	Broward	587.4	2885.3	81.3	-71.6	108.3	131	170,215	666.7	YES
50DAD130020	Tarmac	Dade	562.9	2861.7	56.8	-95.2	110.9	149	2,792	717.1	YES
50DAD130348	Dade Co. Resource Recovery	Dade	564.3	2857.4	58.2	-99.5	115.3	150	857	805.4	YES
30ORL310029	Vero Beach Power	St. Lucie	567.1	3056.5	61.0	99.6	116.8	31	11,832	835.9	YES
[a] US Sugar Clewiston Mill Coordinates:			506.1	2956.9							

[b] Proposed project's 3-hour emissions are significant to 75 km.

ISCPRIME

Crop SO2 7-18-00
7/21/2000
8:45 AM

Table 3 HR CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Crop Season Operation - 3-hr Averaging Time (7/18/00)
Boilers 1-3 @ 2.5% sulfur fuel oil; 185 ft stack height → 213ft
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr [a]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled SO_2 Emissions: Fuel Oil [b] (lb/hr)	Bagasse [c] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity (ft/s)
					CASE 1: MAXIMUM HEAT INPUT						
1	495.6 [c]	225.1	1,500	225.0	270.6	615.0	16.2	631.2	79.54	190,000	63.0
2	447.0 [c]	225.1	1,500	225.0	222.0	615.0	13.3	628.3	79.17	171,400	56.8
3	265.3 [c]	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8
4	633.0	225.1	1,500	213.0	420.0	153.3	25.2	178.5	22.49	266,800	83.2
7	812.0	249.0	0	0.0	812.0	0.0	138.0	138.0	17.39	290,000	85.2
Totals	2,652.9		5,400 (16,200 gallons per 3-hour period)	798.0	1,854.9	1,752.3	200.6	1,952.9	246.1		
					CASE 2: 80% OF MAXIMUM HEAT INPUT						
1	396.5 [c]	225.1	1,500	225.0	171.5	615.0	10.3	625.3	78.79	152,000	50.4
2	357.6 [c]	225.1	1,500	225.0	132.6	615.0	8.0	623.0	78.49	137,120	45.5
3	212.2 [c]	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2
4	506.4	225.1	1,500	213.0	293.4	153.3	17.6	170.9	21.53	213,440	66.5
7	649.6	249.0	0	0.0	649.6	0.0	110.4	110.4	13.91	232,000	68.1
Totals	2,122.3		5,400 (16,200 gallons per 3-hour period)	798.0	1,324.3	1,752.3	150.9	1,903.2	239.8		

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 0.06 lb/MMBtu SO_2 due to bagasse firing, based on industry test data, exceptBoiler No. 7 based onpermit limit of 0.17 lb/MMBtu.

Table 24 HR CROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Crop Season Operation - 24-hr Averaging Time (7/18/00)

Boilers 1-3 @ 2.5% sulfur fuel oil; 185 ft stack height

Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

Boiler	Total Maximum Heat Input (MMBtu/hr)	Maximum Heat Input From Fuel Oil[a] (MMBtu/hr)	Rates Used For Modeling Purposes: Fuel Oil gal/hr[a]	Fuel Oil MMBtu/hr	Bagasse (MMBtu/hr)	Modeled SO_2 Emissions: Fuel Oil[b] (lb/hr)	Bagasse[c] (lb/hr)	Total (lb/hr)	Total (g/s)	Stack Flow Rate (acfm)	Stack Velocity (ft/s)
				CASE 1: MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	495.6	225.1	1,400	210.0	285.6	574.0	17.1	591.1	74.48	190,000	63.0
2	447.0	225.1	1,400	210.0	237.0	574.0	14.2	588.2	74.12	171,400	56.8
3	265.3	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8
4	600.0	225.1	0	0.0	600.0	0.0	36.0	36.0	4.54	252,891	78.8
7	738.0	249.0	0	0.0	738.0	0.0	125.5	125.5	15.81	263,571	77.4
Totals	2,545.9		3,700 (88,800 gal/day)	555.0	1,990.9	1,517.0	200.6	1,717.6	216.4		
				CASE 2: MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	495.6	225.1	900	135.0	360.6	369.0	21.6	390.6	49.22	190,000	63.0
2	447.0	225.1	900	135.0	312.0	369.0	18.7	387.7	48.85	171,400	56.8
3	265.3	135.1	900	135.0	130.3	369.0	7.8	376.8	47.48	83,800	27.8
4	600.0	225.1	1,000	142.0	458.0	102.2	27.5	129.7	16.34	252,891	78.8
7	738.0	249.0	0	0.0	738.0	0.0	125.5	125.5	15.81	263,571	77.4
Totals	2,545.9		3,700 (88,800 gal/day)	547.0	1,998.9	1,209.2	201.1	1,410.3	177.7		
				CASE 3: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-3 FIRING OIL							
1	396.48	225.1	1,400	210.0	186.5	574.0	11.2	585.2	73.73	152,000	50.4
2	357.6	225.1	1,400	210.0	147.6	574.0	8.9	582.9	73.44	137,120	45.5
3	212.2	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2
4	480.0	225.1	0	0.0	480.0	0.0	28.8	28.8	3.63	213,440	66.5
7	590.4	249.0	0	0.0	590.4	0.0	100.4	100.4	12.65	232,000	68.1
Totals	2,036.7		3,700 (88,800 gal/day)	555.0	1,481.7	1,517.0	153.8	1,670.8	210.5		
				CASE 4: 80% OF MAXIMUM HEAT INPUT w/BOILERS 1-4 FIRING OIL							
1	396.48	225.1	900	135.0	261.5	369.0	15.7	384.7	48.47	152,000	50.4
2	357.6	225.1	900	135.0	222.6	369.0	13.4	382.4	48.18	137,120	45.5
3	212.2	135.1	900	135.0	77.2	369.0	4.6	373.6	47.08	67,040	22.2
4	480.0	225.1	1,000	142.0	338.0	102.2	20.3	122.5	15.43	213,440	66.5
7	590.4	249.0	0	0.0	590.4	0.0	100.4	100.4	12.65	232,000	68.1
Totals	2,036.7		3,700 (88,800 gal/day)	547.0	1,489.7	1,209.2	154.3	1,363.5	171.8		

[a] Based on maximum capacity of fuel oil burners.

[b] No. 6 fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 2.5% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No. 4.

[c] Based on 0.06 lb/MMBtu SO_2 due to bagasse firing, based on industry test data, exceptBoiler No. 7 based onpermit limit of 0.17 lb/MMBtu.

Table 6-4a. U.S. Sugar Clewiston Boiler Maximum PM10 and CO Emissions (7/18/00) - Future Crop Season Operation

Source	Maximum Heat Input (MMBtu/hr)	Emission Factor		Emissions (lb/hr)	Emissions (g/s)
		MAXIMUM 24-HOUR CASE - PM10 EMISSIONS			
Boilers		PM Emission Factor	PM10 Emission Factor		
Boiler 1	495.6	0.25 lb/MMBtu	93% of PM	115.2	14.52
Boiler 2	447.0	0.25 lb/MMBtu	93% of PM	103.9	13.09
Boiler 3	265.3	0.30 lb/MMBtu	93% of PM	74.0	9.33
Boiler 4	600.0	0.15 lb/MMBtu	93% of PM	83.7	10.55
Boiler 7	738.0	0.03 lb/MMBtu	100% of PM	22.1	2.79
		MAXIMUM 1-HR AND 8-HR CO EMISSIONS			
Boilers					
Boiler 1	495.6	13.0 lb/MMBtu		6,442.80	811.79
Boiler 2	447.0	13.0 lb/MMBtu		5,811.00	732.19
Boiler 3	265.3	10.0 lb/MMBtu		2,653.00	334.28
Boiler 4	633.0	6.5 lb/MMBtu		4,114.50	518.43
Boiler 7	812.0	0.7 lb/MMBtu		568.40	71.62

Note: PM emissions are based on allowable or maximum emission rates for bagasse fiing.
CO emissions for Boiler Nos. 1, 2 and 3 are based on actual test data.
CO emissions for Boiler Nos. 4 and 7 are based on allowable emissions for bagasse firing.

Table 3 HR OFFCROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Off-Season Operation - 3-hr Averaging Time (7/20/00)
Boilers 1-3 @ 1.6% sulfur fuel oil; 185 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

	Boiler Design Rates			Operating Rate									Stack	
	Steam	Heat	Heat Input	Steam	Heat Input	Heat Input from		Fuel Oil	Modeled SO_2 Emissions				Flow	Stack
Boiler	Rate[a] (lb/hr)	Input (MMBtu/hr)	From Oil (MMBtu/hr)	Rate (lb/hr)	Rate (MMBtu/hr)	Bagasse (MMBtu/hr)	Oil (MMBtu/hr)	Usage[b] (gal/hr)	Fuel Oil[b] (lb/hr)	Bagasse[c] (lb/hr)	Total (lb/hr)	Total (g/s)	Rate (acfm)	Velocity (ft/s)
						CASE A (3-hr)								
1	255,000	495.6	225.1	255,000	495.6	270.6	225.0	1,500	393.6	16.2	409.8	51.64	190,000	63.0
2	230,000	447.0	225.1	230,000	447.0	222.0	225.0	1,500	393.6	13.3	406.9	51.27	171,400	56.8
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	236.2	7.8	244.0	30.74	83,800	27.8
4	300,000	633.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
7	385,000	812.0	249.0	385,000	812.0	812.0	0.0	0	0.0	138.0	138.0	17.39	290,000	85.2
Totals	1,300,000	2,652.9	1,059.3	1,000,000	2,019.9	1,434.9	585.0	3,900 (11,700 gal/3-hr period)	1,023.4	175.4	1,198.8	151.0		
						CASE B (3-hr)								
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
2	230,000	447.0	225.0	214,000	415.9	190.9	225.0	1,500	393.6	11.5	405.1	51.04	159,477	52.9
3	130,000	265.3	135.0	121,000	246.9	111.9	135.0	900	236.2	6.7	242.9	30.60	77,998	25.9
4	300,000	633.0	225.1	280,000	590.8	365.8	225.0	1,500	172.2	21.9	194.1	24.46	249,013	77.6
7	385,000	812.0	249.0	385,000	812.0	812.0	0.0	0	0.0	138.0	138.0	17.39	290,000	85.2
Totals	1,300,000	2,652.9	1,059.1	1,000,000	2,065.6	1,480.6	585.0	3,900 (11,700 gal/3-hr period)	802.0	178.2	980.1	123.5		
						CASE C (3-hr)								
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
2	230,000	447.0	225.0	214,000	415.9	190.9	225.0	1,500	393.6	11.5	405.1	51.04	159,477	52.9
3	130,000	265.3	135.0	121,000	246.9	111.9	135.0	900	236.2	6.7	242.9	30.60	77,998	25.9
4	300,000	633.0	225.1	280,000	590.8	365.8	225.0	1,500	172.2	21.9	194.1	24.46	249,013	77.6
7	385,000	812.0	249.0	385,000	812.0	812.0	0.0	0	0.0	138.0	138.0	17.39	290,000	85.2
Totals	1,300,000	2,652.9	1,059.1	1,000,000	2,065.6	1,480.6	585.0	3,900 (11,700 gal/3-hr period)	802.0	178.2	980.1	123.5		

[a] Maximum 3-hour average steam rate.

b No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 0.06 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 24 HR OFFCROP. U.S. Sugar Clewiston Mill Maximum Fuel Oil Burning And SO_2 Emissions - Future Off-Season Operation - 24-hr Averaging Time (7/18/00)
Boilers 1-3 @ 1.6% sulfur fuel oil; 185 ft stack height
Boiler 4 @ 0.7% sulfur fuel oil; 150 ft stack height

	Boiler Design Rates			Operating Rate					Modeled SO_2 Emissions				Stack Flow	Stack
	Steam	Heat	Heat Input	Steam	Heat Input	Heat Input from		Fuel Oil						
Boiler	Rate[a]	Input	From Oil	Rate	Rate	Bagasse	Oil	Usage[b]	Fuel Oil[b]	Bagasse[c]	Total		Rate	Velocity
	(lb/hr)	(MMBtu/hr)	(MMBtu/hr)	(lb/hr)	(MMBtu/hr)	(MMBtu/hr)	(MMBtu/hr)	(gal/hr)	(lb/hr)	(lb/hr)	(lb/hr)	(g/s)	(acfm)	(ft/s)
						CASE A (24-hr)								
1	255,000	495.6	225.1	90,000	174.9	0.0	174.9	1,166	306.0	0.0	306.0	38.55	67,059	22.2
2	230,000	447.0	225.1	230,000	447.0	419.4	27.6	184	48.3	25.2	73.4	9.25	171,400	56.8
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	236.2	7.8	244.0	30.74	83,800	27.8
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4
Totals	1,250,000	2,545.9	1,059.3	800,000	1,625.2	1,287.7	337.5	2,250 (54,000 gal/day)	590.4	158.4	748.8	94.4		
						CASE B (24-hr)								
1	255,000	495.6	225.0	160,000	311.0	209.7	101.3	675	177.1	12.6	189.7	23.90	119,216	39.5
2	230,000	447.0	225.0	160,000	311.0	209.7	101.3	675	177.1	12.6	189.7	23.90	119,235	39.5
3	130,000	265.3	135.0	130,000	265.3	130.3	135.0	900	236.2	7.8	244.0	30.74	83,800	27.8
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4
Totals	1,250,000	2,545.9	1,059.1	800,000	1,625.2	1,287.7	337.5	2,250 (54,000 gal/day)	590.4	158.4	748.8	94.4		
						CASE C (24-hr)								
1	255,000	495.6	225.0	186,600	362.7	261.4	101.3	675	177.1	15.7	192.8	24.29	139,035	46.1
2	230,000	447.0	225.0	168,300	327.1	225.8	101.3	675	177.1	13.6	190.7	24.02	125,420	41.6
3	130,000	265.3	135.0	95,100	194.1	59.1	135.0	900	236.2	3.5	239.7	30.20	61,303	20.3
4	285,000	600.0	225.1	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4
Totals	1,250,000	2,545.9	1,059.1	800,000	1,621.8	1,284.3	337.5	2,250 (54,000 gal/day)	590.4	158.2	748.6	94.3		
						CASE D (24-hr)								
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	18.7	18.7	2.35	119,235	39.5
3	130,000	265.3	135.0	90,000	183.7	71.3	112.4	749	196.6	4.3	200.9	25.31	58,015	19.2
4	285,000	600.0	225.1	200,000	421.1	196.0	225.1	1,501	172.3	11.8	184.0	23.19	177,867	55.5
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	368.9	160.2	529.1	66.7		
						CASE E (24-hr)								
1	255,000	495.6	225.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0	0.00	0	0.0
2	230,000	447.0	225.0	160,000	311.0	311.0	0.0	0	0.0	18.7	18.7	2.35	119,235	39.5
3	130,000	265.3	135.0	90,000	183.7	48.7	135.0	900	236.2	2.9	239.1	30.12	58,015	19.2
4	285,000	600.0	225.1	200,000	421.1	218.6	202.5	1,350	155.0	13.1	168.1	21.18	177,867	55.5
7	350,000	738.0	249.0	350,000	738.0	738.0	0.0	0	0.0	125.5	125.5	15.81	263,636	77.4
Totals	1,250,000	2,545.9	1,059.1	800,000	1,653.7	1,316.2	337.5	2,250 (54,000 gal/day)	391.1	160.2	551.3	69.5		

[a] Maximum 24-hour average steam rate.

b No. 6 Fuel oil @ 150,000 Btu/gal; 8.2 lb/gal; 1.6% sulfur for Boiler Nos. 1-3; 0.7% sulfur for Boiler No.4.

[c] Based on 0.06 lb/MMBtu for all boilers, except Boiler No. 7 based on permit limit of 0.17 lb/MMBtu.

Table 24 HR OFFCROP PM10
U.S. Sugar Clewiston Mill Maximum PM10 Emissions - Future Off-Season Operation (07/17/00)
Boiler Nos. 1-3 @ 185 feet

Boiler	Boiler Design Rates		Operating Rate		Modeled PM10 Emissions				Stack Flow	Stack
	Steam Rate[a] (lb/hr)	Heat Input (MMBtu/hr)	Steam from Bagasse (lb/hr)	Heat Input From Bagasse (MMBtu/hr)	PM (lb/MMBtu)	PM10 Factor	PM10 (lb/hr)	PM10 (g/s)	Rate (acfm)	Velocity (ft/s)
				CASE A (24-hr)						
1	255,000	495.6	90,000	174.9	0.25	93%	40.7	5.12	67,059	22.2
2	230,000	447.0	230,000	447.0	0.25	93%	103.9	13.10	171,400	56.8
3	130,000	265.3	130,000	265.3	0.25	93%	61.7	7.77	83,800	27.8
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4
Totals	1,250,000	2,545.9	800,000	1,625.2			228.4	28.8		
				CASE B (24-hr)						
1	255,000	495.6	160,000	311.0	0.25	93%	72.3	9.11	119,216	39.5
2	230,000	447.0	160,000	311.0	0.25	93%	72.3	9.11	119,235	39.5
3	130,000	265.3	130,000	265.3	0.30	93%	74.0	9.33	83,800	27.8
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4
Totals	1,250,000	2,545.9	800,000	1,625.2			240.8	30.3		
				CASE C (24-hr)						
1	255,000	495.6	186,600	362.7	0.25	93%	84.3	10.62	139,035	46.1
2	230,000	447.0	168,300	327.1	0.25	93%	76.0	9.58	125,420	41.6
3	130,000	265.3	95,100	194.1	0.30	93%	54.1	6.82	61,303	20.3
4	285,000	600.0	0	0.0	0.15	93%	0.0	0.00	0	0.0
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4
Totals	1,250,000	2,545.9	800,000	1,621.8			236.7	29.8		
				CASE D (24-hr)						
1	255,000	495.6	0	0.0	0.25	93%	0.0	0.00	0	0.0
2	230,000	447.0	160,000	311.0	0.25	93%	72.3	9.11	119,235	39.5
3	130,000	265.3	90,000	183.7	0.30	93%	51.2	6.46	58,015	19.2
4	285,000	600.0	200,000	421.1	0.15	93%	58.7	7.40	177,867	55.5
7	350,000	738.0	350,000	738.0	0.03	100%	22.1	2.79	263,636	77.4
Totals	1,250,000	2,545.9	800,000	1,653.7			204.4	25.8		

[a] Maximum 24-hour average steam rate.