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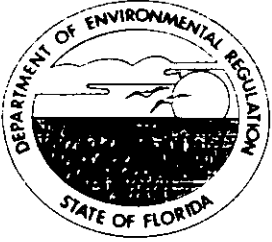
1. Show to whom delivered, date, and addressee's address. 2. Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. Pablo A. Carreno Director of Mill & Refinery Ops. Okeelanta Corporation P. O. Box 86 South Bay, FL 33493	4. Article Number P 407 852 693
Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input checked="" type="checkbox"/> COD <input type="checkbox"/> Express-Mail <input checked="" type="checkbox"/> Return Receipt for Merchandise	
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X <i>Calvin Bristol</i>	
7. Date of Delivery <i>5-20-91</i>	

PS Form 3811, Apr. 1989 * U.S.G.P.O. 1989-238-815 DOMESTIC RETURN RECEIPT

P 407 852 693
RECEIPT FOR CERTIFIED MAIL
 NO INSURANCE COVERAGE PROVIDED
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 (See Reverse)

U.S.G.P.O. 1989-234-555 PS Form 3800, June 1985	Sent to Mr. Pablo A. Cerreno
	Street and No. P. O. Box 86
	P.O., State and ZIP Code South Bay, FL 33493
	Postage
	Certified Fee
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	Restricted Delivery Fee
	Return Receipt showing to whom and Date Delivered
	Return Receipt showing to whom, Date, and Address of Delivery
	TOTAL Postage and Fees
	Postmark or Date Mailed: 5-17-91 Permit: AC 50-191876



Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

May 17, 1991

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. Pablo A. Carreno
Director of Mill and Refinery Operations
Okeelanta Corporation
P. O. Box 86
South Bay, Florida 33493

Dear Mr. Carreno:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit to construct an oil fired steam boiler (No. 16) at your sugar mill located on U.S. Highway 27, 6 miles south of South Bay, Palm Beach County, Florida.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Barry Andrews of the Bureau of Air Regulation.

Sincerely,

for C. H. Fancy, P.E.

Chief

Bureau of Air Regulation

CHF/WH/plm

Attachments

c: David Knowles, South Dist.
Isidore Goldman SE Dist.
Jim Stormer, Palm Beach Co.
David Buff, P.E.
Jewell Harper, EPA
C. Shaver, NPS

BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of
Application for Permit by:

Okeelanta Corporation
P. O. Box 86
South Bay, Florida 33493

DER File No. AC 50-191876
PSD-FL-169

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue an air construction permit (copy attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Okeelanta Corporation, applied on January 29, 1991, to the Department of Environmental Regulation for a permit to construct a new 205 MMBtu/hr No. 2 oil fired steam boiler (No. 16) at their existing sugar mill located off of U.S. Highway 27, 6 miles south of South Bay in Palm Beach County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Chapters 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application(s) have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame

constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION

Barry D. Ambrose

fr

C. H. Fancy, P.E.

Chief

Bureau of Air Regulation

Copies furnished to:

David Knowles, South Dist.
Isidore Goldman SE Dist.
Jim Stormer, Palm Beach Co.
David Buff, P.E.
Jewell Harper, EPA
C. Shaver, NPS

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 5-17-91.

FILING AND ACKNOWLEDGEMENT
FILED, on this date, pursuant to
§120.52(9), Florida Statute, with
the designated Department Clerk,
receipt of which is hereby
acknowledged.

Keri J. Ober
Clerk

5-17-91
Date

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue an air pollution construction permit to Okeelanta Corporation, P. O. Box 86, South Bay, Florida 33493. The permit will authorize the construction of a new 205 MMBtu/hr No. 2 oil fired steam boiler (No. 16) at their existing sugar mill that is located off from U.S. Highway 27, 6 miles south of South Bay in Palm Beach County, Florida. Boiler No. 16 will emit: 105.5 lbs/hr (221.6 TPY) sulfur dioxide; 11.0 lbs/hr (23.1 TPY) particulate; 36.9 lbs/hr (77.5 TPY) nitrogen oxides; 41.0 lbs/hr (86.1 TPY) carbon monoxide; and 18.5 lbs/hr (38.7 TPY) volatile organic compounds. The boiler is subject to the Prevention of Significant Deterioration (PSD) regulations for nitrogen oxides and sulfur dioxide. Best Available Control Technology (BACT) determinations were required for particulates, sulfur dioxide and nitrogen oxides. For sulfur dioxide, the maximum predicted concentrations due to this new source and other increment-consuming sources are below the PSD Class I and II increments. The maximum Everglades National Park Class I increment consumption is 17.3 vs 25.0 ug/m^3 allowable 3-hr average (68% of the Class I increment), 3.8 vs 5.0 ug/m^3 allowable 24-hr average (76% of increment), and 0.4 vs 2 allowable annual average (20% of increment). The maximum PSD Class II increment consumption is 91 vs 512 ug/m^3 allowable 3-hr average (18% of the Class II increment), 19 vs 91 ug/m^3 allowable 24-hr average (21% of increment), and 1.8 vs 20 ug/m^3 allowable annual average (9% of increment). The maximum predicted annual ambient air quality impact for nitrogen oxides ($0.33 \text{ug}/\text{m}^3$) is below the significant impact level. These impacts will not cause a violation of the ambient air quality standards. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Regulation offices located at:

2600 Blair Stone Road, Tallahassee, FL 32399-2400

2269 Bay Street, Fort Myers, FL 33901-2896

1900 S. Congress Avenue, Suite A, West Palm Beach, FL 33406

and Palm Beach County environmental office located at:

901 E. Everia Street, West Palm Beach, FL 33402

Any person may send written comments on the proposed action to Mr. Barry Andrews at the Department's Tallahassee address. All comments mailed within 30 days of the publication of this notice will be considered in the Department's final determination. Furthermore, a public hearing can be requested by any person. Such request must be submitted within 30 days of this notice.

Technical Evaluation
and
Preliminary Determination

Okeelanta Corporation
Palm Beach County
South Bay, Florida

Boiler No. 16

File No. AC 50-191876
PSD-FL-169

Department of Environmental Regulation
Division of Air Resources Management
Bureau of Air Regulation

May 17, 1991

I. General Information

A. Applicant

Okeelanta Corporation
P. O. Box 86
South Bay, Florida 33493

B. Request

On January 29, 1991, Okeelanta Corporation submitted an application for permit to construct a 205 MMBtu/hr No. 2 oil fired steam boiler (No. 16) at their existing sugar mill (SIC 2061) that is located off of U.S. Highway 27, 6 miles south of South Bay in Palm Beach County, Florida. The UTM coordinates of this plant are Zone 17, 524.9 km E and 2940.1 km N. The application was considered complete on February 21, 1991.

C. Project

The applicant is proposing to construct a 150,000 lbs/hr steam boiler (No. 16) to supply heat for refining sugar during a 175 day per year period between April and October. Because of the seasonal operation of the sugar business, the sugar mills will not be processing sugar cane during this period. During the other part of the year when the sugar cane is being processed, boiler No. 16 will not be in operation.

D. Air Pollution Control

Air pollution from boiler No. 16 will be controlled by limiting it to clean fuel (No. 2 oil with a maximum of 0.5% sulfur, and an off-season average sulfur content of 0.3%), by boiler design (low NOx burners and flue gas recirculation), and by restricting it to a maximum of 175 days per year operation.

The maximum emissions from boiler No. 16 are shown in the following table:

Pollutant	Emissions	
	lbs/hr	TPY*
Sulfur Dioxide	105.5	132.9
Particulate	11.0	23.1
Nitrogen Oxides	36.9	77.5
Carbon Monoxide	41.0	86.1
Volatile Organic Compounds	18.45	38.7

*Based on 4,200 hrs/yr operation

II. Rule Applicability

The proposed project, construction of an oil fired steam boiler (No. 16), is subject to preconstruction review under the provisions of Chapter 403, FS, and F.A.C. Chapter 17-2.

The plant is in an area designated nonattainment for ozone (F.A.C. Rule 17-2.410) and attainment for the other criteria pollutants (F.A.C. Rule 17-2.420).

The facility (SIC 2061) is a major source of particulate matter, sulfur dioxide, nitrogen oxides, and carbon monoxide because the permitted emissions of each of these pollutants exceeds 100 TPY (F.A.C. Rule 17-2.100). The new installation is subject to the Prevention of Significant Deterioration (PSD) regulations (F.A.C. Rule 17-2.500) because the increases in emissions of sulfur dioxide and nitrogen oxides from the proposed boiler exceed the Significant Emission Rates listed in Table 500-2 of F.A.C. Rule 17-2.500(2)(d)2. Therefore, the project is subject to the Preconstruction Review Requirements of F.A.C. Rule 17-2.500(5). The allowable emissions of sulfur dioxide and nitrogen oxides are established by a Best Available Control Technology (BACT) determination (F.A.C. Rule 17-2.500(5)(c)). In addition, BACT is required for particulates (F.A.C. Rule 17-2.600(6)). The proposed boiler is also subject to the federal regulation, 40 CFR 60, Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

III. Technical Evaluation

The allowable emissions of sulfur dioxide and nitrogen oxides are established by a BACT determination. The applicant proposed and the Department accepted the use of No. 2 distillate fuel with a maximum of 0.5% sulfur as BACT for sulfur dioxide, provided that the off-season average does not exceed 0.3%. The sulfur dioxide emissions at maximum fuel consumption for boiler No. 16, 1,463 gallons per hour for a heat input of 205 MMBtu/hr, are estimated to be 105.5 lbs/hr (132.9 TPY) for 175 days/year operation. These emissions will not violate any ambient air quality increment or standard on public accessible property.

The applicant proposed and the Department accepted the use of boiler design, low NOx burners, and flue gas recirculation as BACT for the control of nitrogen oxides. This equipment will reduce nitrogen oxides emissions to a maximum of 36.9 lbs/hr and 77.5 TPY.

The emissions of particulate (PM and PM₁₀), carbon monoxide, and volatile organic compounds requested are based on boiler design information. As a small increase in emissions of any of these pollutants would trigger PSD (NSR for VOC), the design emissions of these pollutants will be accepted as the emission standards for boiler No. 16.

The proposed emission limits are summarized in Table 2-2 of the application. These limits comply with the new source performance standards for industrial boilers. The federal

regulations also limit visible emissions to 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity.

IV. Air Quality Report

A. Introduction

The operation of the new steam boiler will result in emissions increases which are projected to be greater than the PSD significant emission rates for the following pollutants: NO_x and SO₂. Therefore, the project is subject to the PSD review requirements contained in F.A.C. Rule 17-2.500 for these pollutants. Part of these requirements is an air quality impact analysis for these pollutants, which includes:

- An analysis of existing air quality;
- A PSD increment analysis (for SO₂ and NO_x);
- An ambient Air Quality Standards analysis (AAQS);
- An analysis of impacts on soils, vegetation, visibility and growth-related air quality impacts; and
- A Good Engineering Practice (GEP) stack height determination.

The analysis of existing air quality generally relies on preconstruction monitoring data collected in accordance with EPA-approved methods. The PSD increment and AAQS analyses are based on air quality dispersion modeling completed in accordance with EPA guidelines.

Based on these required analyses, the Department has reasonable assurance that the projected emissions increases, as described in this report and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A brief description of the modeling methods used and results of the required analyses follow. A more complete description is contained in the permit application on file.

B. Analysis of the Existing Air Quality

Preconstruction ambient air quality monitoring may be required for pollutants subject to PSD review. However, an exemption to the monitoring requirement can be obtained if the maximum air quality impact resulting from the projected emissions increase, as determined through air quality modeling, is less than a pollutant-specific de minimus concentration. The predicted maximum concentration increase for each pollutant subject to PSD review is given below:

	<u>SO₂</u>	<u>NOx</u>
PSD de minimus Concentration (ug/m ³)	13	14
Averaging Time	24-hr	Annual
Maximum Predicted Impact (ug/m ³)	18	0.33

As shown above, the predicted impact for NOx is less than the corresponding de minimus concentration; therefore, no preconstruction monitoring is required for NOx. However, since the predicted SO₂ impact is greater than the de minimus concentration, a preconstruction ambient monitoring analysis is required for SO₂. The Florida Sugar Cane League (FSCL) has operated an ambient monitoring network in the sugar cane growing area for several years. The network contains one continuous ambient SO₂ monitor, located at the Florida Celery Exchange in Belle Glade about 15 km northeast of the Okeelanta Mill. According to PSD guidelines, a "regional" monitoring site may be used if the proposed source will be located in an area that is generally free from the impact of other points and area sources associated with human activities. The regional site must be located in an area of similar terrain and represent the air quality across a broad region. The SO₂ monitoring site in Belle Glade meets this criteria, since, during the time the proposed boiler will operate (i.e., off-season), there are very few stationary air pollution sources in the sugar cane area that are operating. The FSCL SO₂ monitor has had full PSD approval for several years and meets all PSD requirements including quality assurance requirements. Values of 64 ug/m³, 3-hr average; 19 ug/m³, 24-hr average; and 9 ug/m³, annual average; were based on data collected between April 1988 and June 1990.

C. Modeling Method

The EPA-approved Industrial Source Complex Short-Term (ISCST) dispersion model was used by the applicant to predict the impact of the proposed project on the surrounding ambient air. All recommended EPA default options were used. Direction-specific downwash parameters were used because the stacks were less than the good engineering practice (GEP) stack height. Five years of sequential hourly surface and mixing depth data from the West Palm Beach, Florida National Weather Service (NWS) station collected during 1982 through 1986 were used in the model. Since five years of data were used, the highest-second-high (HSH) short-term predicted concentrations are compared with the appropriate ambient air quality standards or PSD increments. For the annual averages, the highest predicted yearly average was compared with the standards.

D. Modeling Results

The applicant first evaluated the potential increase in ambient ground-level concentrations associated with the project to determine if these predicted ambient concentration increases would be greater than specified PSD significant impact levels for SO₂ and NO_x. For this analysis, dispersion modeling was performed using both polar grid and discrete receptors. Since the boiler will operate in the off-season, the ISCST model was executed for 245 days each year (March 1 - October 31) to determine maximum impacts. The discrete receptor grid consisted of 36 property boundary receptors representing the minimum boundary distance from the proposed boiler within every 10-degree direction interval from 0 to 360°. Additional discrete receptors were located off of plant property at distances of 5.0 km, 7.0 km, and 9.0 km to fill in gaps between plant property boundaries and the full polar receptor grid ring distances of 11.0 and 14.0 km from the proposed boiler. The results of this modeling presented below show that the increases in ambient ground-level concentrations for all averaging times are greater than the PSD significant impact levels for SO₂, thus requiring the applicant to do a full impact analysis for SO₂ to demonstrate compliance with AAQS and PSD increments. The increase for NO_x is less than the PSD significant impact level, thus no further dispersion modeling for comparison with AAQS and PSD increment consumption is required for NO_x.

<u>Pollutant</u>	<u>Averaging Time</u>	<u>PSD Significance Level (ug/m³)</u>	<u>Ambient Concentration Increase (ug/m³)</u>
SO ₂	Annual	1.0	1.1
	3-hour	25.0	65
	24-hour	5.0	13.9
NO _x	Annual	1.0	0.33

The significant impact area (SIA) for SO₂ extends out 14 km from the mill; therefore, all sources within 50 km of the SIA were evaluated by the applicant for use in the PSD Class II and AAQS analyses. The PSD Class I emission inventory included only those sources within 100 km of the Everglades Class I area. Concurrent operation of the proposed off-season boiler with other sugar mills can occur only during the one month period from March 1 to March 31. Concurrent operation with non sugar mill sources located within 50 km of Okeelanta can occur any time the proposed boiler is operating (i.e., between March 1 and October 31). Because of this difference in operation, source interaction is based on the time of year. Therefore, two sets of analyses were done for comparison with the AAQS and PSD increments. One set was based on modeling only during the period March 1 to March 31 while the other set was based on the period April 1 to October 31. Screening analyses were performed for predicting maximum SO₂ concentrations for comparison to the PSD Class I and Class II increments and the AAQS using the same receptor grid described above. Refined AAQS and PSD increment

analyses were based on modeling the years during which the overall HSH 3-hr, HSH 24-hr, and highest annual concentrations were predicted in the screening analysis. The refined grid was centered on the receptor with the HSH short-term concentrations or the highest annual concentration determined from the screening analyses. The composite results of these refined analyses are presented in the following tables:

<u>SO₂ AAQS Analysis (all values in ug/m³)</u>			
<u>Avg. Time</u>	<u>3-hr</u>	<u>24-hr</u>	<u>Annual</u>
Max. Predicted Concentration	421	102	15.6
Includes Background Value	64	19	9
<u>AAQS</u>	<u>1300</u>	<u>260</u>	<u>60</u>

<u>PSD Increment Analyses (all values in ug/m³)</u>			
<u>Avg. Time</u>	<u>3-hr</u>	<u>24-hr</u>	<u>Annual</u>
Max. Predicted Consumption Concentration	91	19	1.8
<u>Increment</u>	<u>512</u>	<u>91</u>	<u>20</u>

<u>Class I Area</u>			
<u>Avg. Time</u>	<u>3-hr</u>	<u>24-hr</u>	<u>Annual</u>
Max. Predicted Consumption Concentration	17.3	3.8	0.4
<u>Increment</u>	<u>25</u>	<u>5</u>	<u>2</u>

As shown in these tables, the maximum predicted SO₂ concentrations are all less than the appropriate AAQS and PSD increments.

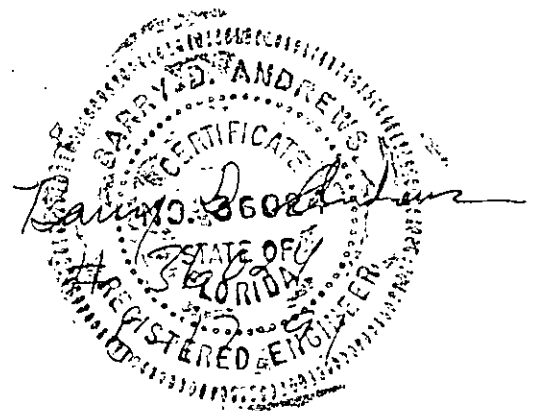
E. Additional Impacts Analysis

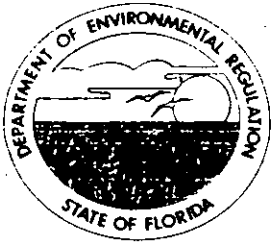
A Level-1 screening analysis using the EPA model, VISCREEN was used to determine any potential adverse visibility impacts on the Class I Everglades National Park located about 90 km away. Based on this analysis, the maximum predicted visual impacts due to the proposed project are less than the screening criteria both

inside and outside the Class I area. The maximum predicted NOx and SO₂ emissions are less than the AAQS and the PSD increments. As such no harmful effects on soils and vegetation is expected. In addition, the proposed modification will not significantly change employment, population, housing, or commercial/industrial development in the area to the extent that a significant air quality impact will result.

V. Conclusion

Based on the information provided by Okeelanta Corporation, the Department has reasonable assurance that the proposed construction and operation of boiler No. 16, as described in this evaluation, and subject to the conditions proposed herein, will not cause or contribute to a violation of any air quality standard, PSD increment, or any other technical provision of Chapter 17-2 of the Florida Administrative Code.





Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Lawton Chiles, Governor

Carol M. Browner, Secretary

PERMITTEE:

Okeelanta Corporation
P. O. Box 86
South Bay, Florida 33493

Permit Number: AC 50-191876
PSD-FL-169

Expiration Date: March 1, 1993

County: Palm Beach

Latitude/Longitude: 26°35'00"N
80°45'00"W

Project: Oil Fired Steam Boiler
No. 16

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

Construction of a 150,000 lbs steam/hr, No. 2 oil fired, 205 MMBtu/hr heat input Babcock & Wilcox Model FM 120-97 package boiler using Coen's LO-NOx burners and designed for 12% flue gas recirculation (or equivalent boiler with controls) equipped with a 5 ft. diameter by 75 ft. high stack. The boiler will be located at the permittee's existing sugar mill (SIC 2061) that is approximately 6 miles south of South Bay, Palm Beach County, Florida off of U.S. Highway 27. The UTM coordinates of this site are Zone 17, 524.9 km E and 2940.1 km N.

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

Attachments are listed below:

1. Application received Jan. 29, 1991.
2. KBN letter dated Feb. 19, 1991.
3. BACT Determination.

PERMITTEE:
Okeelanta Corporation

Permit Number: AC 50-191876
PSD-FL-169
Expiration Date: March 1, 1993

GENERAL CONDITIONS:

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

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

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

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

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

PERMITTEE:
Okeelanta Corporation

Permit Number: AC 50-191876
PSD-FL-169
Expiration Date: March 1, 1993

GENERAL CONDITIONS:

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

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

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

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

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

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

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Okeelanta Corporation

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PSD-FL-169
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The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

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

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

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

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

13. This permit also constitutes Determination of Prevention of Significant Deterioration (PSD), Determination of Best Available Control Technology (BACT), and Compliance with New Source Performance Standards (NSPS).

14. The permittee shall comply with the following:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance

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records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

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

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

SPECIFIC CONDITIONS:

Construction Details

1. The boiler shall be a flue gas recirculation type and equipped with low NOx distillate oil burners. The design shall be for a heat release rate greater than 70,000 Btu/hr-ft³.
2. The stack sampling facilities must comply with F.A.C. Rule 17-2.700(4).
3. The 5 ft. diameter stack shall have a minimum height of 75 ft.
4. The boiler shall be equipped with instruments to measure the opacity of the stack emissions and the steam production, temperature, and pressure.

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SPECIFIC CONDITIONS:

Emission Restrictions

5. Air pollutant emissions shall not exceed any of the quantities listed below:

Pollutant	lbs/MMBtu	Emissions		Compliance Test Method
		lbs/hr	TPY	EPA Test Methods (July 1, 1990)
PM	0.054	11.0	23.1	5
PM ₁₀	0.027	5.5	11.6	201 or 201A
SO ₂	0.51	105.5	132.9	Certified Fuel Anaysis
NOx	0.18	36.9	77.5	7, 7A, 7E
CO	0.20	41.0	86.1	10
VOC	0.09	18.5	38.7	25
VE	20% opacity (6-minute average) except 27% (max.) for 1 6-minute period/hr.			9

Compliance Requirements

6. Particulate matter, visible emissions, and nitrogen oxides emissions tests shall be conducted annually while the boiler is operating between 90-100% of its permitted capacity (135-150,000 lbs steam/hr). The volume and sulfur content of each fuel oil delivery shall be kept in a log for a minimum of 3 years. Tests for other pollutants may be required when the Department has good reason to believe the emission standard is being exceeded.

Federal Requirements

7. Boiler No. 16 shall comply with all applicable requirements of 40 CFR 60, including Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Unit (December 18, 1989).

40 CFR 60.7, Notification and record keeping. Timely notification of the items listed to the Department (South District) and EPA.

40 CFR 60.8, Compliance tests. Minimum of 30 days prior notice of the initial compliance tests which must be conducted between 60 to 180 days of initial startup of the source to the Department and EPA.

40 CFR 60.42b, Standard for sulfur dioxide. Sulfur content of the No. 2 distillation oil fuel shall not exceed 0.5%. Annual off-season average shall not exceed 0.3% sulfur. The permittee shall maintain fuel analysis or receipts to confirm compliance with this condition.

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40 CFR 60.43b, Standard for particulate matter. Visible emissions shall not exceed 20% opacity (6-minute average), except for one 6-minute period per hour of not more than 27% opacity.

40 CFR 60.44b, Standard for nitrogen oxides for high heat release boiler No. 16, expressed as NO₂, is 0.20 lbs/MMBtu.

40 CFR 60.45b, Sulfur dioxide compliance tests, fuel receipts or analysis for sulfur content is required to confirm compliance with this condition.

40 CFR 60.46b, Particulate and nitrogen oxides compliance tests. Method 9 test required to determine compliance with the opacity standard. Method 7, 7A, or 7E test for nitrogen oxides.

40 CFR 60.47b, Sulfur dioxide monitoring. Fuel analysis or receipts required to confirm compliance with this condition.

40 CFR 60.48b, Particulate and nitrogen oxides monitoring. Continuous emissions monitor required to measure opacity.

40 CFR 60.49b, Reporting and record keeping requirements. Permittee required to report date of initial start up, design heat input capacity, fuels used, annual capacity factor, performance test data, plan to monitor NO_x, nitrogen content of the distillate oil, opacity, nitrogen dioxide emissions, monitor down time, "F" factor, exceedances, and other information required by this paragraph.

Operation Requirements

8. Only No. 2 fuel oil containing a maximum of 0.5% sulfur (off-season average 0.3% sulfur) shall be used as fuel.

9. Maximum heat input to the boiler shall not exceed 1,463 gallons per hour of No. 2 distillate fuel oil (205 MMBtu/hr).

10. The boiler shall not operate for more than 175 days (4,200 hours) during any 12 month period. The boiler shall only operate during the off-season months (April through October).

11. Steam production shall not exceed 150,000 lbs/hr, 380 psig, and 650°F.

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Administrative Requirements

12. The permittee shall maintain a log that shows the boiler's operation time, steam production, and fuel consumption.
13. The Department's South District shall be notified in writing at least 30 days in advance of the initial compliance test and 15 days in advance of any annual compliance tests to be conducted on this boiler.
14. Stack test results shall be submitted to the Department within 45 days of the test.
15. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit (F.A.C. Rule 17-4.090).
16. An application for an operation permit must be submitted to the South District office at least 90 days prior to the expiration date of this construction permit. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. Rules 17-4.055 and 17-4.220).

Issued this _____ day
of _____, 1991

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL REGULATION.

Carol M. Browner, Secretary

Best Available Control Technology (BACT) Determination
Okeelanta Corporation
Palm Beach County

The applicant plans to permanently install a 205 MMBtu/hr No. 2 oil-fired steam boiler at their facility 6 miles south of South Bay, Florida. The boiler will be used to supply process steam. The boiler is scheduled to operate during the off-season of April through October (4,200 hours) when the other boilers at this facility are shutdown.

A BACT determination is required for particulates and sulfur dioxide as set forth in the Florida Administrative Code Rule 17-2.600(6) - Emissions Limiting and Performance Standards. In addition, the Department performed a BACT determination for nitrogen oxides (NOx) since those emissions are greater than the PSD significant rate of 40 tons per year.

BACT Determination Request by the Applicant:

Particulate, sulfur dioxide, nitrogen oxides emissions to be controlled by the firing of No. 2 fuel oil with a 0.5% sulfur content.

Date of Receipt of a BACT Application:

January 29, 1991

BACT Determined by DER:

The amount of particulate and sulfur dioxide emissions from the boiler will be limited by the firing of No. 2 fuel oil with a 0.3% off season average and a 0.5% maximum sulfur content.

Nitrogen oxides emissions shall not exceed 0.18 lbs/MMBtu heat input using low NOx burners/flue gas recirculation.

BACT Determination Rationale:

Sulfur in fuel is a primary air pollution concern in that most of the fuel sulfur becomes SO₂ and particulate emissions from fuel burning are related to the sulfur content. The Department has determined that the firing of No. 2 fuel oil with an off-season average of 0.3% sulfur and maximum of 0.5% sulfur content is BACT for particulates and SO₂. These sulfur content limitations are representative of what has been recently established as BACT for oil-fired equipment.

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Okeelanta Corp.
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The emission rate of nitrogen oxides proposed by the applicant is equivalent to 0.18 pound per million Btu heat input. A review of other BACT determinations for oil fired boilers indicates that the proposed emission level for nitrogen oxides meets or exceeds several of the determinations on record. In addition, this emission level is equivalent to what has been determined to be BACT for oil-fired turbines. Additional NOx control could be provided by using add on control devices such as selective catalytic reduction (SCR) or selective noncatalytic reduction (SNCR). A review of these control technologies indicates a cost effectiveness ranging from \$6802 to \$7321 per ton of NOx removed. These costs exceed those which have been previously judged to be representative of BACT, thereby dismissing these technologies as BACT for this facility. In accordance with these criteria, the applicant's proposed NOx emission rate is justified as BACT for this source.

Details of the Analysis May Be Obtained By Contacting:

G. Preston Lewis, P.E., BACT Coordinator
Department of Environmental Regulation
Bureau of Air Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

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

Date

Approved By:

Carol M. Browner, Secretary
Department of Environmental Regulation

Date

Department of Environmental Regulation
Routing and Transmittal Slip

To: (Name, Office, Location)

1. *Patty*
- 2.
- 3.
- 4.

Remarks:

*David Buff, KBO, is distributing
copies of the application and his latest
response on Okelata Corp to:*

*Palm Beach Co.
Park Service
S FL District
EPA*

From:

uml

Date

2-27-91

Phone