



# Department of Environmental Protection

Lawton Chiles  
Governor

South District  
2295 Victoria Avenue, Suite 364  
Fort Myers, Florida 33901-3881

Virginia B. Wetherell  
Secretary

**PERMITTEE:**

Okeelanta Corporation  
Florida Crystals Refinery, Inc.  
Post Office Box 86  
South Bay, Florida 33493

Facility I.D.: 0990005  
Permit Number: 0990005-002-AC  
Date of Issue: July 17, 1996  
Expiration Date: July 17, 2001  
County: Palm Beach  
Latitude: 26° 35' 00" N  
Longitude: 80° 45' 00" W  
Section/Town/Range: 16/45S/36E  
Project: Okeelanta Sugar Mill  
and Refinery

This permit is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Rules 62-4, 62-296, and 62-297. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents, attached hereto or on file with the Department and made a part hereof and specifically described as follows:

I. Construct (after the fact) a sugar refinery process and refined sugar handling systems with a design capacity of 850 tons per day of refined sugar. This unit employs a rotary dryer and two rotary coolers. Particulate (sugar dust) emissions are controlled as follows: The rotary dryer vents through an American Air Filter (AAF) skimmer to remove large particles and then through an AAF Wet Rotoclone to remove PM and PM10. Particulate emissions from the two rotary coolers pass through a pair of parallel wet cyclones. Particulate emissions from bucket elevators and conveyors are controlled by venting through the two rotoclones.

II. Construct a new fluidized bed dryer/cooler unit with a design capacity of 870 tons per day of refined sugar which will be the primary processing unit. The rotary dryer and coolers will be used for specialty sugars and in the event that the fluid bed dryer/cooler is off line for repairs.

The facility is located 6 miles south of South Bay, Florida, on U.S. Highway 27.

**For Title V Permits**

SIC Number 2062

SCC Numbers 3-02-015-01 General

3-02-015-99 Not Classified

**PERMITTEE:**  
Okeelanta Corporation  
Florida Crystals Refinery, Inc.

I.D. No.: 0990005  
Permit/Cert. No.: 0990005-002-AC  
Date of Issue: July 17, 1996  
Expiration Date: July 17, 2001

**SPECIFIC CONDITIONS**

**FACILITY OPERATIONS:**

1. The total hours of operation of the rotary dryer or the fluid bed dryer shall not exceed 7,200 hours per calendar year. The hours of operation of the Bulk Load-out Operation and the Transfer Bulk Load-out Operation are not restricted. [Reference Construction Permit Application Dated March 5, 1996]]

2. This facility shall be operated in such a fashion so as to preclude objectionable odors. [Reference Rule 62-296.320(2), F.A.C.]

3. There shall be no discharges of liquid effluents or contaminated runoff from the plant site.

4. Copies of all applications, reports, tests, and notifications shall also be submitted to the Air Pollution Control Section of the Palm Beach County Public Health Unit located at 901 Evernia Street (P.O. Box 29), West Palm Beach, Florida 33402-0029.

5. Any time this unit is found to be performing inadequately because of overloading, neglect, or other reasons, the owner shall discontinue its use until measures are provided to correct the cause of such performance.

6. Reasonable precautions shall be taken to prevent emissions of unconfined particulate matter. Reasonable precautions include the following:

A. Paving and maintenance of roads, parking areas, and yards.

B. Application of water when necessary to control emissions.

C. Removal of particulate matter from roads and other paved areas under control of the owner or operator to prevent reentrainment, and from buildings or work areas to prevent particulate.

D. Enclosure or covering of conveyor systems.

E. Posting of vehicle (or truck) speed limits.

[Reference Rule 62-296.320(4)(c), F.A.C.]

7. Circumvention. No person shall circumvent any air pollution control device, or allow the emission of air pollutants without the applicable air pollution control device operating properly. [Rule 62-210.650, F.A.C.]

**CONDITIONS OF COMPLIANCE:**

8. The applicant shall retain a registered professional engineer for the inspection of the construction of this project. Upon completion the engineer shall inspect for conformity to construction permit applications and associated documents. [Reference Rule 62-4.050(3), F.A.C.]

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## SPECIFIC CONDITIONS

### CONDITIONS OF COMPLIANCE:

9. The Department shall be notified and prior approval shall be obtained of any changes or revisions made during construction.

10. It shall be assumed that all the Volatile Organic Compounds (VOC) which are used in the processing are emitted to the atmosphere as fugitive emissions and are to be reported as such. Any VOC that is included in the Hazardous Air Pollutant (HAP) list must be reported separately from the total VOCs.

11. This facility shall comply with the Process Weight Table Emission Rates shown in Table 296.320-1. Interpolation of the data in Table 296.320-1 for the process weight rates up to 30 tons per hour shall be accomplished by the use of the equation:  $E = 3.59 * P^{0.62}$ , where P is less than or equal to 30 tons per hour; and interpolation and extrapolation of the data for process weight rates in excess of 30 tons per hour shall be accomplished by use of the equation:  $E = 17.31 * P^{0.16}$ , where P is greater than 30 tons per hour. Where: E = Emissions in pounds per hour, P = Process weight rate in tons per hour. [Reference Rule 62-296.320(4)(a)2., F.A.C.]

12. Each of the emission units has the potential to emit less than 100 tons per year of particulate matter and is equipped with either a baghouse or a wet cyclone(s). Therefore the department waives any particulate matter compliance test requirements for such emissions unit specified in any otherwise applicable rule, and specifies an alternative standard of 5% opacity.

If the Department has reason to believe that the particulate weight emission standard applicable to such an emissions unit is not being met, it shall require that compliance be demonstrated by the test method specified in the applicable rule. [Reference Rule 62-297.620(4), F.A.C.]

13. Florida Crystals, Inc., the Permittee, has requested lower emissions limits than what is allowed in the Process Weight Tables. The computation and emission factors used are found in Table A-1 and A-2 in Appendix A of the Application For Air Permit submitted on March 6, 1996 and therefore are a part of this permit. Based on process equipment and control equipment manufacturer's guarantees, these emissions would be the basis for the Title V fees and are shown in the following tables (excerpted from the application):

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Okeelanta Corporation  
Florida Crystals Refinery, Inc.

I.D. No.: 0990005  
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Expiration Date: July 17, 2001

### SPECIFIC CONDITIONS

#### CONDITIONS OF COMPLIANCE:

##### ROTARY DRYING SYSTEM

| Source Emission Point Description | Throughput<br>(lb/hr) | PM<br>(Tons/year) | PM10<br>(Tons/year) |
|-----------------------------------|-----------------------|-------------------|---------------------|
| Bulk Load-out Operation           | 25,000                | 2.86              | 1.35                |
| Transfer Bulk Load-out Operation  | 53,333                | 1.22              | 0.58                |
| Cooler No. 1 Wet Cyclone          | 70,840                | 17.13             | 9.48                |
| Cooler No. 2 Wet Cyclone          | 70,840                | 17.13             | 9.48                |
| AAF Skimmer/Wet Rotoclone No.1    | 70,840                | 5.788             | 2.32                |
| AAF Wet Rotoclone No. 2           | 70,840                | 1.158             | 0.46                |
| <b>TOTAL</b>                      |                       | <b>45.29</b>      | <b>23.66</b>        |

##### FLUIDIZED BED DRYING SYSTEM

| Source Emission Point Description | Throughput<br>(lb/hr) | PM<br>(Tons/year) | PM10<br>(Tons/year) |
|-----------------------------------|-----------------------|-------------------|---------------------|
| Bulk Load-out Operation           | 25,000                | 2.86              | 1.35                |
| Transfer Bulk Load-out Operation  | 53,333                | 1.22              | 0.58                |
| Fluidized Bed Baghouse            | 72,500                | 6.91              | 0.28                |
| AAF Skimmer/Wet Rotoclone No.1    | 72,500                | 0.59              | 0.23                |
| AAF Wet Rotoclone No. 2           | 72,500                | 0.391             | 0.16                |
| <b>TOTAL</b>                      |                       | <b>11.97</b>      | <b>2.60</b>         |

#### REQUIRED TESTING:

14. Visible emissions test are required to show continuing compliance with the standards of the Department. The test results must provide reasonable assurance that the unit is capable of compliance at the permitted maximum operating rate. Tests shall be conducted in accordance with EPA Method Nine as published in 40 CFR-60 Appendix A, or State approved equivalent method. Such test shall be conducted within 30 days of initial operation. The Department shall be notified at least 15 days prior to testing to allow witnessing. [Reference Rules 62-297.310(7)(a)9. and 62-297.310(7)(a)4.a., F.A.C.]

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**SPECIFIC CONDITIONS**

**REQUIRED TESTING:**

15. Testing of emissions should be conducted with the source operating within 10% of its rated capacity. Testing may be conducted at less than 90% of rated capacity; however, if so, subsequent source operation is limited to up to 110% of the test load. Once the unit is so limited, then operation at higher capacities is allowed for purposes of additional compliance testing to regain rated capacity in the permit with prior notification to the Department's South District. [Reference Rule 62-297.310(2), F.A.C.]

16. Notification of the Department prior to any required testing shall include as a minimum: the date and time of the test, the exact location of the test, and the name and telephone number of the contact person at the site. [Reference Rule 62-297.310(7)(a)9., F.A.C.]

**REPORTS AND RECORD KEEPING:**

17. An annual operation report (DEP Form 62-210.900(5) ) shall be submitted by March 1st each year. [Rule 62-4.070(3), and Rule 62-210.370(3), F.A.C.]

**GENERAL CONDITIONS:**

18. An integral part of this permit is the attached 15 General Conditions. [Rule 62-4.160, F.A.C.]

Note: In the event of an emergency the permittee shall contact the Department by calling (904) 413-9911. During normal business hours, the permittee shall call (941) 332-6975.

Issued this 17th day of July, 1996.

STATE OF FLORIDA  
DEPARTMENT OF  
ENVIRONMENTAL PROTECTION

David M. Knowles  
David M. Knowles, P.E.  
District Air  
Program Administrator

DMK/AEL/jw

10 Pages Attached

**PERMITTEE:**  
Okeelanta Corporation  
Florida Crystals Refinery, Inc.

I.D. No.: 0990005  
Permit/Cert. No.: 0990005-002-AC  
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**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 acknowledgment 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 any order from the Department.
6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and 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.

**GENERAL CONDITIONS:**

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 non-compliance, 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.

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 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 Section 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.

**GENERAL CONDITIONS:**

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-30.300, 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 Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- ( ) 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 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;
- 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 the 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.



**CERTIFICATION**

Permit Application No.: 0990005-002-AC

Applicant: Okeelanta Corporation

Project: Florida Crystals Refinery, Inc. Dryer System

I HEREBY CERTIFY that the engineering features described in the above referenced application provide reasonable assurance of compliance with applicable provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Title 62. However, I have not evaluated and I do not certify aspects of the proposal outside of my area of expertise or authority (including, but not limited to, the electrical, mechanical, structural, hydrological, and geological features).

*David M. Knowles*

\_\_\_\_\_  
(Signed)

*July 18, 1996*

\_\_\_\_\_  
(Date)

(Seal)





RECEIVED  
D.E.P.

96 NOV 19 AM 10:40  
SOUTH DISTRICT

November 15, 1996

Mr. David Knowles  
Florida Department of Environmental Protection  
2295 Victoria Avenue, Suite 364  
Fort Myers, FL 33901

Re: Florida Crystals Refinery, Inc.  
Facility I.D. 0990005  
Permit No.0990005-002-AC

Dear Mr. Knowles:

Florida Crystals Refinery (FCR) is in receipt of the above-referenced construction permit. Upon review of the permit, FCR would like to make some minor corrections and clarifications. These are described below.

1. The project name at the top of Page 1 is shown as *Okeelanta Sugar Mill and Refinery*. We would like this clarified to read as *Florida Crystals Sugar Refinery*, because the sugar mill and refinery are considered separate operating units within the facility.
2. The daily refined sugar throughputs have been revised from those originally stated in the permit application and FCR's comment letter dated July 17, 1996. The revised maximum daily average throughput using the rotary drying system is 950 tons per day (TPD) and 1,000 TPD for the fluidized bed drying system. The increased daily rates are not due to any refinery design changes, but rather to the automation of internal operational processes, revised operating procedures, and increased process optimization. One of the primary changes that has affected the refinery's efficiency is the inclusion of a maintenance shutdown every 2 weeks. This shutdown allows FCR to repair, clean, and optimize any process in the refinery on a regular basis to ensure that these processes are running at peak performance. Even though the short-term refinery throughputs have increased, the total annual refined sugar throughput of 261,000 tons per year (TPY), as originally stated in the permit application, will not change.

The production rates stated in the application and revised for the first time by our July 17, 1996, letter were meant to be maximum daily average rates, not maximum hourly rates. For example, the revised 950 TPD production rate for the existing rotary drying operation is appropriate for a maximum daily rate. However, the peak hourly rate for the system may be as high as 45 tons per hour (TPH), instead of 39.58 TPH derived by dividing the 950 TPD rate by 24 hours per day. Also, certain processes do not operate all day long and, therefore, operate at much higher short-term rates (e.g., transfer to bulk loadout operation) while operating within the stated daily rate.

Therefore, in Specific Condition 13, FCR would prefer to be limited to a maximum daily rate; this would be easier for tracking purposes and would allow for short-term fluctuations. Since the refinery is primarily a particulate matter (PM) emitting source and ambient standards for PM are for averaging times of 24 hours or annual average, there is no regulatory reason for limiting production to an hourly basis. However, I leave this to the discretion of the Department.

16104A/2

6241 Northwest 23rd Street  
Suite 500  
Gainesville, Florida 32653-1500  
352-336-6000 FAX 352-336-0003

5405 West Cypress Street  
Suite 215  
Tampa, Florida 33607  
813-287-1717 FAX 813-287-1716

1801 Clint Moore Road  
Suite 105  
Boca Raton, Florida 33487  
407-994-9910 FAX 407-994-9393

7785 Baymeadows Way  
Suite 105  
Jacksonville, Florida 32256  
904-739-5600 FAX 904-739-7777

1616 P Street NW  
Suite 350  
Washington, DC 20036  
202-462-1100 FAX 202-462-2270

Mr. David Knowles  
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If maximum daily rates are acceptable, the following rates should be used (some are already stated in the permit):

Rotary Drying System

|                                 |         |
|---------------------------------|---------|
| Bulk Loadout Operation          | 300 TPD |
| Transfer Bulk Loadout Operation | 640 TPD |
| Cooler No. 1 Wet Cyclone        | 950 TPD |
| Cooler No. 2 Wet Cyclone        | 950 TPD |
| AAF Skimmer/Wet Rotoclone No. 1 | 950 TPD |
| AAF Rotoclone No. 2             | 950 TPD |

Fluidized Bed Drying System

|                                 |           |
|---------------------------------|-----------|
| Bulk Loadout Operation          | 300 TPD   |
| Transfer Bulk Loadout Operation | 640 TPD   |
| Fluidized Bed Cooler Baghouse   | 1,000 TPD |
| AAF Skimmer/Wet Rotoclone No. 1 | 1,000 TPD |
| AAF Rotoclone No. 2             | 1,000 TPD |

If the Department feels that maximum hourly rates are necessary, the following should be used *in addition* to the maximum daily rates stated above:

Rotary Drying System

|                                 |                          |
|---------------------------------|--------------------------|
| Bulk Loadout Operation          | 44 TPH, or 88,000 lb/hr  |
| Transfer Bulk Loadout Operation | 72 TPH, or 144,000 lb/hr |
| Cooler No. 1 Wet Cyclone        | 45 TPH, or 90,000 lb/hr  |
| Cooler No. 2 Wet Cyclone        | 45 TPH, or 90,000 lb/hr  |
| AAF Skimmer/Wet Rotoclone No. 1 | 45 TPH, or 90,000 lb/hr  |
| AAF Rotoclone No. 2             | 45 TPH, or 90,000 lb/hr  |

Fluidized Bed Drying System

|                                 |                          |
|---------------------------------|--------------------------|
| Bulk Loadout Operation          | 44 TPH, or 88,000 lb/hr  |
| Transfer Bulk Loadout Operation | 72 TPH, or 144,000 lb/hr |
| Fluidized Bed Cooler Baghouse   | 45 TPH, or 90,000 lb/hr  |
| AAF Skimmer/Wet Rotoclone No. 1 | 45 TPH, or 90,000 lb/hr  |
| AAF Rotoclone No. 2             | 45 TPH, or 90,000 lb/hr  |

Even though the above-mentioned short-term rates have increased, the total annual throughput of refined sugar will not change; therefore, there is no increase in maximum annual emissions. As a result, no additional review of the permit application should be necessary.

Mr. David Knowles  
Page 3  
November 18, 1996



I apologize for any inconvenience that revising the permit may cause. I know that FCR's July 17th comment letter on the draft permit crossed in the mail with the final permit, and we faxed a copy of the comments at the last minute to Art Lyall. Therefore, all of our concerns may not have been expressed clearly or were not able to be incorporated into the permit. I am confident that this request addresses our remaining concerns. Please call me if you have any questions.

Sincerely,

David A. Buff, P.E.  
Principal, FL PE #19011

DB/vjp

cc: Matt Capone, Okeelanta Corporation  
Paul Wesson, KBN  
File (2)

