

STATEMENT OF BASIS

Okeelanta Corporation
Facility ID No. 0990005
New Hope Power Company
Facility ID No. 0990332

Title V Air Operation Permit Renewal
Permit No. 0990005-040-AV

APPLICANT

The applicant for this project is the Okeelanta Corporation and New Hope Power Company. The applicant's authorized representative and mailing address are: Mr. Jose Gonzalez, Vice President of Industrial Operations, New Hope Power Company, Okeelanta Cogeneration Plant, 8001 U.S. Highway 27 South, South Bay, Florida 33493.

FACILITY DESCRIPTION

The facility consists of two adjacent plants. Okeelanta Corporation (ARMS ID No. 0990005) operates an existing sugar mill (SIC No. 2061) and sugar refinery (SIC No. 2062) including sugar packaging and transshipment activities. New Hope Power Company (ARMS ID No. 0990332) operates an existing cogeneration plant that provides process steam for the sugar mill and refinery operations as well as generating electricity for sale to the power grid (SIC 4911). The existing facility is located off U.S. Highway 27 South, approximately six miles south of South Bay in Palm Beach County, Florida. The cogeneration plant, sugar mill and sugar refinery are all considered a single facility for purposes of the Prevention of Significant Deterioration (PSD) and Title V regulatory programs. The primary sources of air pollution include three 760 million British thermal units per hour (MMBtu/hr) cogeneration boilers, the transfer and storage of sugar and a paint spray booth. The facility includes other miscellaneous unregulated emissions units and activities.

PROJECT DESCRIPTION

The purpose of this permitting project is to renew the facility's Title V air operation permit including the sugar mill, refinery and transshipment facilities operated by the Okeelanta Corporation as well as the Okeelanta Cogeneration Plant operated by New Hope Power Company. The renewal permit incorporates the applicable requirements of concurrent air construction permit revision No. 0990332-022-AC and several clarifications and corrections to the language in the current Title V air operation permit.

The facility consists of the following emission units.

EU No.	Emission Unit Description (Facility ID No.0990005)
018	Central Vacuum System
019	Sugar Packaging Lines 0-9, including 8A and 8B
020	Sugar Grinder/Hopper
021	Rotary Dryer, Central Dust Collection System No. 1 with Rotoclone No. 1
022	Central Dust Collection System No. 2 with Roto-clone (No.2) "B" System
023	Cooler No. 1 with Roto-clone No. 3
024	Cooler No. 2 with Roto-clone No. 4
025	Fluidized Bed Dryer/Cooler with Baghouse
030	Sugar Silos Nos. 1, 2, and 3
031	Railcar Sugar Unloading Receiver 1
032	Railcar Sugar Unloading Receiver 2

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034	Bulk Load-Out Operation <i>with baghouse</i>
035	Transfer Bulk Load-Out Station
043	Sugar Refinery Alcohol Usage
045	Powdered Sugar Dryer/Cooler, Packaging Line 8A And 8B
046	Powdered Sugar Hopper
047	Sugar Packaging Lines 12, 13 and 14
048	Paint Booth
054	“A” System - Wet Roto-clone (No. 6)
055	“C” System - Wet Roto-clone (No. 7)
057	Specialty Sugar Product 300 hp gas-fired package boiler
059	Pkg. Lines 16, 17, 18 & 19 with baghouse
060	Reciprocating Internal Combustion Engines (11 Engines Total)
EU No.	Emission Unit Description (Facility ID No. 0990332)
001	Cogeneration Boiler A
002	Cogeneration Boiler B
003	Cogeneration Boiler C
004	Cogeneration Plant - Material Handling and Storage
007	Reciprocating Internal Combustion Engines (6 Engines Total)

The facility also consist of various unregulated emissions units and/or activities.

These documents along with all other associated documents in the issued draft/proposed permit package can be accessed by entering file number in the permit number field at the web link given below.

<http://www.dep.state.fl.us/air/emission/apds/default.asp>

PROCESSING SCHEDULE AND RELATED DOCUMENTS

12/04/2014 Received application to renew the facility’s Title V air operation permit. Application deemed complete.

02/26/2014 Draft/proposed Title V permit renewal issued.

PRIMARY REGULATORY REQUIREMENTS

The existing facility is regulated under:

Title III: The facility is identified as a potential major source of hazardous air pollutants (HAP).

Title IV: The facility does not operate any units subject to the Title IV acid rain provisions of the Clean Air Act.

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 213, Florida Administrative Code (F.A.C.)

PSD: The facility is a major stationary source of air pollution in accordance with Rule 62-212.400, F.A.C., for PSD of Air Quality.

NSPS: The following existing units are subject to the following New Source Performance Standards (NSPS) in Part 60 of Title 40, the Code of Federal Regulations (CFR).

Regulation	EU No. (0990005)	EU No. (0990332)
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40 CFR 60, Subpart A, NSPS General Provisions	060	001, 002, 003
40 CFR 60, Subpart Da (Electric Utility Steam Generating Units for which Construction is Commenced after September 18, 1978)		001, 002, 003
40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	060 stationary engines	007

NESHAP: The following existing units are subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) in 40 CFR 63.

Regulation	EU No. (0990005)	EU No. (0990332)
40 CFR 63, Subpart A, NESHAP General Provisions	060	007
40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	060	007
40 CFR 63, Subpart DDDDD, Industrial, Commercial, and Institutional Boilers and Process Heaters.	057	001, 002, 003

CAM: Emissions Units 001, 002 and 003 are subject to the Compliance Assurance Monitoring (CAM) plan requirements of 40 CFR 64 for emissions of particulate matter controlled by an electrostatic precipitator (ESP) from the cogeneration boilers.

SITING: The facility is subject to Chapter 62-17, F.A.C., for power plant site certification because it produces more than 75 megawatts (MW) of steam-generated electrical power. [Site Certification No. PA 04-46]

PROJECT REVIEW

As part of the renewal permit process, changes were made as follows:

This renewal permit identifies applicable requirements for the reciprocating internal combustion engines (RICE) at the facility that are subject to 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ. New sections were added to the permit to accommodate this (i.e., Sections **C.** and **H.**).

The previous exempt 300 HP natural gas boiler is now regulated under 40 CFR 63, Subpart DDDDD. These requirements are now included in new Section **I.** of the renewal permit.

A number of minor corrections and clarification to the permit text were also made.

As part of the renewal application, the permittee requested changes to specific conditions contained in the facility's current Title V air operation permit. These are described below.

Requested Changes by Applicant

Subsection A. Cogeneration Boilers

- Specific Condition **A.20.** states that "The CO₂ CEMS shall express the 1-hour emission average (CO₂ and O₂) in terms of 'percent by volume.'" However, since the CO₂ CEMS does not measure O₂, it is requested that the mention of the O₂ be removed from the statement.

Subsection D. Sugar Refinery

- Specific Condition **D.6.** lists the visible emission limit of 5 percent opacity. However, that the limit does not apply to the Bulk Transfer Station (EU 035) because the emissions unit does not have control equipment, and remains a fugitive dust source. Instead, EU 035's visible emission limit is 20% opacity (refer to previous Title V permit). Also, "fugitive emissions at the sugar refinery" should fall under the

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general visible emission limit in Rule 62-296.320, F.A.C. It is therefore requested that the 20 percent opacity limit be re-instated for EU 035 and for fugitive emission from the sugar refinery. Finally, since this condition now references Packaging Lines 16-19, the condition should also reference permit no. 0990005-037-AC.

- Specific Condition **D.14.** refers to particulate weight emission standards. The process weight table does not apply to these operations because there is no physical or chemical change to the material other than drying (removal of water).

Section F. Distillate Oil Storage Tanks

- Specific Condition **F.2.** requires that the facility maintain records of the types and amounts of fuel stored in each tank. Since none of the fuel storage tanks are regulated, this condition should be revised to require records for only the 50,000 gallon storage tank at the cogeneration plant.

Section 4. Appendices

Fuel Management Plan

- The applicant requests that the limits on chromium, copper and arsenic in the Fuel Management Plan be clarified to be on a “wet” basis. The TV permit is not clear on this issue. On page FM-2 of the Fuel Management Plan, it is stated “Based on the analysis of a composite sample, wood material containing more than 70.7 ppm arsenic or 83.3 ppm chromium or 62.8 ppm copper shall not be burned”. However, it is not specified as to whether the concentrations are on a wet or dry basis. Since dry basis is not specified, it could be assumed that the concentrations should be on a wet, as-received basis.

Department Response

The Department agrees with these recommended changes. The change dealing with the Fuel Management Plan requires a revision to air construction permit 0990332-017-AC. This air construction permit revision (0990332-022-AC) is being processed concurrently with the Title V air operation permit renewal.

To implement these changes, the following conditions of the Title V air operation permit are revised in the renewal permit as indicated below.

Note: Within this document and the draft/proposed permit, ~~strikethrough~~ formatting is used to denote the deletion of text, while double-underlines are used to denote the addition of text. All changes have also been emphasized with yellow highlighting within the draft/proposed permit document for ease of location.

Changes to Specific Conditions

A.12. Fuel Management Plan. The permittee shall abide by the Fuel Management Plan specified in Appendix FM. [Permit No. PSD-FL-196Q; 0990332-022-AC, Specific Condition 1.]

A.13.1. Emission Limits under 40 CFR 63, Subpart DDDDD.

<u>Mercury (Hg)</u> <u>Lb/MMBtu of heat</u> <u>input</u>	<u>Hydrogen Chloride</u> <u>(HCl)</u> <u>Lb/MMBtu of heat</u> <u>input</u>	<u>Carbon Monoxide (CO)</u> <u>ppmvd@3% Oxygen</u>	<u>Particulate Matter</u> <u>(PM)</u> <u>Lb/MMBtu of heat</u> <u>input or</u> <u>Total Selected Metals^b</u> <u>(TSM)</u> <u>Lb/MMBtu of heat</u> <u>input</u>
<u>5.7x10⁻⁶</u>	<u>0.022</u>	<u>2,800 (stack test)^c</u> <u>or</u> <u>900^a (CEMS – 30 day</u> <u>rolling average)</u>	<u>0.44 or 0.00045</u>

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^a To demonstrate compliance with the applicable alternative CO CEMS emission standard, the permittee must install, certify, operate, and maintain a CO CEMS and an oxygen analyzer.

^b Total selected metals (TSM) means the sum of the following metallic hazardous air pollutants: arsenic, beryllium, cadmium, chromium, lead, manganese, nickel and selenium.

^c EPA has proposed to revise this limit to 3,500 ppmvd.

[40 CFR 63.7500; Table 2.]

A.20. CEMS and COMS.

b. *Data Collection.* Each CEMS shall be designed and operated to sample, analyze, and record emissions data evenly spaced over a 1-hour period. Each 1-hour average shall be computed using at least one data point in each fifteen minute quadrant of the 1-hour block during which the unit combusted fuel. Notwithstanding this requirement, each 1-hour average shall be computed from at least two data points separated by a minimum of 15 minutes. All valid measurements or data points collected during a 1-hour block shall be used to calculate the 1-hour emission averages. CO, NO_x, and SO₂ CEMS shall express the 1-hour emission averages in terms of “lb/MMBtu of heat input”. The CO₂ CEMS shall express the 1-hour emission average (CO₂ and O₂) in terms of “percent by volume”. A 30-day rolling emission average shall be the average of all valid 1-hour emission averages collected during the 30-day period. A 12-month rolling emission average shall be the average of all valid 1-hour emission averages collected during the 12-month period. NO_x and SO₂ CEMS shall comply with NSPS Subpart Da in 40 CFR 60.

A.28. – A.52. These new specific conditions contain requirements under 40 CFR 63, Subpart DDDDD. Please refer to the draft/proposed Title V air operation permit for details of the conditions added.

B.1. Equipment. The authorized methods of operation include the following:

- a. *Biomass Handling and Storage Operations:* The permittee is authorized to handle and store biomass fuels. The following activities are associated with these operations: truck unloading (dumps #1, #2 and #3, unloading bay); chain conveyors (#1 and #2); unloading conveyor; disk screen; hogger; storage conveyor; radial stacker; biomass storage pile (active and inactive); underpile chain reclaimers (#1 and #2); boiler feed conveyor; boiler feed conveyor hopper; sugar mill bagasse feed conveyor; sugar mill bagasse conveyor hopper; chain distribution conveyors (#1 and #2); boiler meter bins; recycle conveyor; and the fixed recycle stacker.

Section C. is new and details RICE requirements for the emergency and non-emergency engines at the cogeneration plant.

D.6. Visible Emissions.

- a. Visible emissions shall not exceed 5 percent opacity from the following exhaust points: Rotary Dryer, Central Dust Collection System No. 1 with Roto-clone No. 1 (EU-021); Central Dust Collection System No. 2 with “B” System Roto-clone No. 2 (EU-022); Cooler No. 1 with Roto-clone No. 3 (EU-023); Cooler No. 2 with Rotoclone No.4 (EU-024); Also “A” System “Roto-clone No. 6 (EU-054), “C” System Roto-clone No. 7, (EU-055), Fluidized Bed, Dryer/Cooler Baghouse (EU-025) and Baghouse for Packaging Lines No. 16, 17, 18 and 19. (EU-059).
- b. Visible emissions shall not exceed 5 percent opacity from the following areas: the Bulk Load-Out Operation (EU-034), the Transfer Bulk Load-out Station (EU-035) and fugitive emissions at the sugar refinery.
- c. Visible emissions shall not exceed 20 percent opacity from the following areas: the Transfer Bulk Load-out Station (EU-035) and fugitive emissions at the sugar refinery.

[Rules 62-296.320(4) and 62-297.620(4), F.A.C.; Permit No. 0990005-035-AC; 0990005-021-AC, Specific Condition 6; 099000-037-AC.]

D.14. Weight Emission Standard: The process weight table is not being applied to the emission units listed in

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~~the previous condition.~~

F.2. Records. The permittee shall maintain records of the types and amounts of fuel stored in ~~each tank~~ **EU-005**. Distillate oil shall meet the requirements of the Ash and Fuel Management Plans in Appendix AM and FM of this permit. [Rule 62-4.070(3), F.A.C.]

OTHER CHANGES

In Section **3.A.** the requirements of 40 CFR 63, Subpart DDDDD were added for the cogeneration boilers.

Section **3.C.** is new and details the RICE requirements for the emergency and non-emergency engines at the Okeelanta Cogeneration Plant.

Section **3.H.** is new and details the RICE requirements for the emergency and non-emergency engines at the sugar mill and refinery.

Section **3.I.** is new and details the 40 CFR 63, Subpart DDDDD requirements for the 300 HP natural gas boiler.

Table H, Permit History, was updated to reflect the latest projects.

The Title V air operation permit was redesigned to conform to the new format implemented by the Tallahassee office several years ago.

CONCLUSION

This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-210 and 62-213, F.A.C.