



Florida Department of Environmental Protection

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PERMITTEE

New Hope Power Company (NHPC)
Post Office Box 9
South Bay, FL 33493

Authorized Representative:
Mr. Jose Gonzalez, Vice President,
Industrial Operations

Air Permit No. 0990332-024-AC
Okeelanta Cogeneration Plant
Increased Fossil Fuel Firing
Expires: June 30, 2017

FACILITY AND LOCATION

This is the final air construction permit, which authorizes the increased firing of natural gas and No. 2 fuel oil in the three cogeneration boilers at the NHPC Okeelanta Cogeneration Plant. The three boilers are fired with bagasse, wood, natural gas, and No. 2 fuel oil. This permit removes the restriction that natural gas and fuel oil may collectively constitute no more than 25 percent of total heat input to these boilers. The NHPC Cogeneration Plant is an electric utilities plant categorized under Standard Industrial Classification No. 4911. The plant is located adjacent to the Okeelanta Corporation sugar mill and refinery, approximately six miles south of the city of South Bay on U.S. Highway 27 South in western Palm Beach County. The UTM coordinates of the facility are Zone 17, 524.9 kilometers (km) East and 2940.1 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit. As noted in the Final Determination provided with this final permit, no were made to the draft permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Executed in Tallahassee, Florida

For:

Jeffery F. Koerner, Deputy Director
Division of Air Resource Management

FINAL PERMIT

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this final air permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on the date indicated below to the following persons.

Jose Gonzalez, NHPC: Jose.Gonzalez@floridacrystals.com

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Lynn Searce, DEP OPC: lynn.searce@dep.state.fl.us

DEP Siting Coordination Office: SCO@dep.state.fl.us

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

SECTION 1. GENERAL INFORMATION

FACILITY DESCRIPTION

The existing cogeneration plant consists of three biomass fired boilers and a 74.9 megawatt (MW) steam turbine electrical generator and a steam turbine electrical generator with a nameplate capacity of 70 MW.

EU ID No.	Brief Description
001	Cogeneration Boiler A (760 MMBtu per hour)
002	Cogeneration Boiler B (760 MMBtu per hour)
003	Cogeneration Boiler C (760 MMBtu per hour)
004	Material handling and storage
005	Miscellaneous support equipment (steam turbine electrical generators, condensers, cooling towers, etc.)

The facility consists of two adjacent plants. Okeelanta Corporation (ARMS ID No. 0990005) operates a sugar mill (SIC No. 2061) and sugar refinery (SIC No. 2062) including packaging and transshipment activities. New Hope Power Company (ARMS ID No. 0990332) operates a nominal 140 MW cogeneration plant that provides process steam for the sugar mill/refinery and generates electricity for sale to the power grid (SIC 4911). The cogeneration plant, sugar mill, and sugar refinery are all considered a single facility for purposes of the PSD and Title V regulatory programs. The facility is located off U.S. Highway 27 approximately six miles south of South Bay in Palm Beach County, Florida. The UTM coordinates are Zone 17, 524.90 km East, and 2940.10 km North. The map coordinates are latitude 26° 35' 00" N and longitude 80° 45' 00" W.

PROPOSED PROJECT

The usage of fossil fuels (natural gas and fuel oil) in the cogeneration boilers is currently limited to 25% of the total heat input to each boiler during any calendar quarter. This permit removes that restriction. No increases in the hourly capacity of the boilers is permitted, and the permittee does not plan to increase usage of the boilers. Because all relevant emissions factors are lower for natural gas or fuel oil than for bagasse or wood, no increases in emissions are expected as a result of this project. Permitting notes also clarify which federal emissions standards may change based on how much fossil fuel is combusted.

REGULATORY CLASSIFICATION

The following federal regulations apply to the cogeneration plant and this project.

- The existing facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality and Rule 62-210.200 (Definitions), F.A.C.
- The existing facility is a major source of hazardous air pollutants (HAP).
- The existing facility has no units regulated under the acid rain provisions of the Clean Air Act.
- The existing facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C., as part of the Title V permit for the Okeelanta Corporation sugar mill (Facility ID No. 0990005).
- The proposed project includes units subject to the New Source Performance Standards (NSPS) of 40 CFR 60.
- The proposed project includes units subject to the National Emission Standards of Hazardous Air Pollutants NESHAP of 40 CFR 63.

RELEVANT DOCUMENTS

The permit application and additional information received to make it complete are not a part of this permit. However this information can be accessed at the following Webpage.

[NHPC Okeelanta Cogeneration Plant, Increased Fossil Fuel Firing project, Air Construction permit application](#)

SECTION 2. ADMINISTRATIVE REQUIREMENTS

GENERAL REQUIREMENTS

1. Permitting Authority: The Permitting Authority for this project is the Office of Permitting and Compliance (OPC) in the Division of Air Resource Management of the Department. The mailing address for the OPC is 2600 Blair Stone Road, MS #5505, Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the OPC Section.
2. Compliance Authority: All documents related to compliance activities such as reports, tests and notifications shall be submitted to the Florida Department of Health in Palm Beach County. The mailing address and phone number of the Florida Department of Health in Palm Beach County is: Post Office Box 29, West Palm Beach, Florida 33402-0029, (561) 837-5900. Copies of all such documents shall be submitted to the Air Resources Section of the Department's South District Office at 2295 Victoria Avenue, Suite 364, Fort Myers, Florida 33901-2549. The telephone number is (239) 344-5600, and the fax number is (850) 412-0590.
3. Appendices: The following Appendices are attached as part of this permit:
 - a. Appendix A. Citation Formats and Glossary of Common Terms;
 - b. Appendix B. General Conditions;
 - c. Appendix C. Common Conditions;
 - d. Appendix D. Common Testing Requirements;
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.
[Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Construction and Expiration: The permit expiration date includes sufficient time to complete construction, perform required testing, submit test reports, and submit an application for a Title V operation permit to the Department. For good cause, the permittee may request that this air construction permit be extended. Such a request shall be submitted to the Office of Permitting and Compliance at least sixty (60) days prior to the expiration of this permit. [Rules 62-4.070(4), 62-4.080, and 62-210.300(1), F.A.C.]
8. Source Obligation:
 - a. Authorization to construct shall expire if construction is not commenced within 18 months after receipt of the permit, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time. This provision does not apply to the time period between construction of the approved phases of a phased construction project except that each phase must commence construction within 18 months of the commencement date established by the Department in the permit.
 - b. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation)

SECTION 2. ADMINISTRATIVE REQUIREMENTS

solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

- c. At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

[Rule 62-212.400(12), F.A.C.]

9. Title V Permit: This permit authorizes specific modifications and/or new construction on the affected emissions units as well as initial operation to determine compliance with conditions of this permit. A Title V operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after completing the required work and commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to each Compliance Authority.

[Rules 62-4.030, 62-4.050, 62-4.220, and Chapter 62-213, F.A.C.]

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Cogeneration Boilers A, B, and C (E.U. Nos. 001, 002, and 003)

This section of the permit addresses the following emissions units.

EU ID No.	Brief Description
001	Cogeneration Boiler A (760 MMBtu per hour)
002	Cogeneration Boiler B (760 MMBtu per hour)
003	Cogeneration Boiler C (760 MMBtu per hour)

COMPLIANCE WITH EXISTING PERMIT CONDITIONS

1. **Existing Permits:** This permit supplements all existing valid permits. The permittee shall continue to comply with all applicable conditions from valid air construction and Title V operation permits, except as modified by this permit. [Application No. 0990332-024-AC; Rule 62-4.070(3), F.A.C.]

AUTHORIZED CAPACITY AND FUELS

2. **Permitted Capacity:** The maximum heat input rate to each cogeneration boiler shall not exceed 760 MMBtu/hr when burning 100 percent biomass, 400 MMBtu/hr when burning 100 percent natural gas, and 490 MMBtu/hr when burning 100 percent distillate oil. The steam production rate of each boiler shall not exceed an average of 506,100 pounds per hour at 1,500 psig and 975°F. The operating hours of the cogeneration boilers are not restricted (8760 hours per year). [Permit No. PSD-FL-196P; Rules 62-4.070(3), Rule 62-210.200 (PTE), and 62-212.400 (BACT), F.A.C.]
3. **Biomass:** Biomass, which shall consist of bagasse and authorized wood material, is an authorized fuel for these boilers. Bagasse is the fibrous vegetative residue remaining after the sugarcane milling process. Authorized wood material is clean construction and demolition wood debris, yard trash, land clearing debris, and other clean cellulose and vegetative matter. Each cogeneration boiler shall combust no more than 30 percent by weight yard waste (yard trash) on a calendar quarter basis that is defined as a municipal solid waste in 40 CFR 60.51a. The biomass fuel used at the cogeneration plant shall not contain hazardous substances, hazardous wastes, biomedical wastes, or garbage. The fuel used at the cogeneration plant shall not contain special wastes, except wood, lumber, trees, tree remains, bagasse, cane tops and leaves, and other clean vegetative and cellulose matter. The permittee shall perform a daily visual inspection of any wood material or similar vegetative matter that has been delivered to the plant for use as fuel. Any shipment observed to contain prohibited materials shall not be used as fuel, unless such materials can be readily segregated and removed from the wood material and vegetative matter. The permittee shall abide by the Ash and Fuel Management Plans specified in Appendices AM and FM of the facility's Title V operation permit. [Application No. 0990332-024-AC, Permit No. PSD-FL-196P; Rules 62-4.070(3), Rule 62-210.200 (PTE), and 62-212.400 (BACT), F.A.C.]
4. **Fossil Fuels:** Natural gas and distillate oil are authorized fuels for these boilers. The maximum sulfur content of distillate oil is limited to 0.05 percent by weight. The permittee shall abide by the Ash and Fuel Management Plans specified in Appendices AM and FM of the facility's Title V operation permit. [Application No. 0990332-024-AC, Permit No. PSD-FL-196P; Rules 62-4.070(3), Rule 62-210.200 (PTE), and 62-212.400 (BACT), F.A.C.]
5. **Fossil Fuel Limitation:** The fossil fuel (distillate oil and natural gas) heat input to each cogeneration boiler during any calendar quarter is not limited. [Application No. 0990332-024-AC]

EMISSION LIMITS

6. **NSPS Sulfur Dioxide Limit:** Emissions of SO₂ shall not exceed 0.15 lb/MMBtu of heat input, on a 30-day rolling average basis. [40 CFR 60.43Da(a)(4)]

{Permitting note: These boilers are not classified as resource recovery units under Subpart Da because there is no restriction on the percentage of heat input that may consist of fossil fuel. For this reason, the 1.2

SECTION 3. EMISSIONS UNIT SPECIFIC CONDITIONS

A. Cogeneration Boilers A, B, and C (E.U. Nos. 001, 002, and 003)

lb/MMBtu SO₂ limit in Subpart Da does not apply. The SO₂ BACT limit for these boilers is 0.10 lb/MMBtu, on a 30-day rolling average basis; therefore compliance with the BACT limit assures compliance with the applicable NSPS limit of 0.15 lb/MMBtu.

{Permitting note: If any of these boilers burns oil for more than 10.0 percent of the average annual heat input during any three consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year, that unit will become subject to 40 CFR 63, Subpart UUUUU.}

{Permitting note: These boilers are not subject to the emissions guidelines for greenhouse gases from electric generating units in 40 CFR 60, Subpart UUUU, because they have historically limited annual net-electric sales to a utility distribution system to no more than 219,000 megawatt-hours. Increasing electric sales beyond that threshold could trigger applicability for this subpart.}