FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

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PERMITTEE

Tampa Electric Company (TEC)
13031 Wyandotte Road
Apollo Beach, Florida 33572

Authorized Representative:
Mr. Byron Burrows, P.E.
Manager - Air Programs

Permit No. 0570039-059-AC
Permit Expires: 12/31/14
Air Construction Permit

Big Bend Station
Gypsum Handling Project and Transloading of Solid Fuels and Slag

PROJECT

This is the final air construction permit, which authorizes modifications of the existing gypsum storage and handling facilities (South-40), installation of new gypsum storage and handling facilities (new East-40 gypsum storage area and new redundant stack out conveyor and storage pile at the North stack out area), and the ability to transload the onsite produced gypsum by barge, rail and truck as needed to meet gypsum disposal or resale requirements. This permit also increases the allowable annual throughput for transloading coal, petroleum coke and slag from Emissions Unit No. 046 (EU 046) above the annual limit which was set in Air Construction Permit No. 0570039-025-AC and previous Power Plant Siting Conditions of Certification. The proposed work will be conducted at the existing Big Bend Station, which is an electrical power generation plant categorized under Standard Industrial Classification No. 4911. The existing facility is located in Hillsborough County at 13031 Wyandotte Road, Apollo Beach, Florida. The UTM coordinates are Zone 17; 361.9 km East and 3075.0 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); and 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.

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 is not subject to 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.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

On Behalf of:

Digitally signed by
Jonathan Holtom, P.E., CPM
Date: 2013.03.18 08:20:50
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Jeffery F. Koerner, Program Administrator
Office of Permitting and Compliance
Division of Air Resource Management

JFK/sa/jh

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.

Mr. Ronald D. Bishop, Director, TEC Big Bend Station: rdbishop@tecoenergy.com
Mr. Byron T. Burrows, P.E., Manager-Air Programs EHS, TEC: btburrows@tecoenergy.com
Mr. Robert Velasco, P.E., EHS Air Programs, TEC: ravelasco@tecoenergy.com
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Ms. Barbara Friday, DEP BAR: barbara.friday@dep.state.fl.us
Ms. Lynn Scearce, DEP OPC: lynn.scearce@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.

Barbara Friday

Digitally signed by Barbara Friday
DN: cn=Barbara Friday, o=Division of Air Resources Management, ou=FDEP, email=Barbara.Friday@dep.state.fl.us, c=US
Date: 2013.03.18 09:13:37 -04'00'

FACILITY DESCRIPTION

The existing facility includes the following main emissions units.

ID No.	Emission Unit Description
Unit 1-4	Fossil Fuel Fired Steam Generators
SCCT4A & B	Simple Cycle Combustion Turbines
046, 036, 010	Coal, Pet Coke, Limestone, Gypsum, Slag, Ash and fuel oil storage / handling / Transloading

PROPOSED PROJECT

This project will modify the following emissions units.

ID No.	Emission Unit Description
046	Coal, Petroleum Coke and Slag Transloading
036 (Unregulated)	Unregulated Emissions Units and/or activities (includes existing Gypsum Storage Area (South-40), new Gypsum Storage and Handling Operations (East-40) and new storage pile operations (North stack out area))
010	Solid Fuel Yard Fugitive Emissions

FACILITY REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility operates units subject to the acid rain provisions of the Clean Air Act (CAA).
- The facility is a Title V major source of air pollution in accordance with Chapter 62-213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400(PSD), F.A.C.
- The facility is subject to regulation pursuant to Power Plant Siting Conditions (PA 79-12).

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Office of Permitting and Compliance in the Division of Air Resource Management of the Department of Environmental Protection (Department). The Office of Permitting and Compliance mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Hillsborough County Environmental Protection Commission (HCEPC), Air Management Division. The mailing address and phone number of the HCEPC are 3629 Queen Palm Drive, Tampa, Florida 33619-1309; (813) 627-2600 and (813) 627-2620 (fax).
3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); and Appendix C (Common Conditions).
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) & 62-212.300(1)(a), F.A.C.]
7. Construction and Expiration: The expiration date shown on the first page of this permit provides time to complete the physical construction activities authorized by this permit, complete any necessary compliance testing, and obtain an operation permit. Notwithstanding this expiration date, all specific emissions limitations and operating requirements established by this permit shall remain in effect until the facility or emissions unit is permanently shut down. For good cause, the permittee may request that that a permit be extended. Pursuant to Rule 62-4.080(3), F.A.C., such a request shall be submitted to the Permitting Authority in writing before the permit expires. [Rules 62-4.070(4), 62-4.080 & 62-210.300(1), F.A.C.]
8. Application for Title V Permit: This permit authorizes construction of additional unregulated emissions units. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation of the new activities. 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 the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

This section of the permit addresses the following emissions unit.

E.U. ID No.	Emission Unit Description
046	Transloading and Off-site Transfer of Solid Fuels or Slag (by truck, rail and barge)

Emissions unit No. 046 is housed within the solid fuel yard and is comprised of transfer and loading equipment designed to take material from the blending bins (E.U. ID No. 029) and/or the storage pile in the fuel yard using mobile equipment to load trucks, railcars and barges for shipment off-site. The material that is allowed to be loaded for off-site shipment is coal, petcoke and slag. The main purpose of the transloading operation is to provide coal and petcoke to the Tampa Electric Company's Polk Power Station; however, the permittee is authorized to operate as a fuel and slag supplier to other non-Tampa Electric Company facilities, as well. The coal or petcoke is treated with a chemical surfactant prior to arriving at the Big Bend Station. The slag has minimal dust potential due to its glassine properties and, therefore, does not need to be treated with a chemical surfactant.

Emissions unit ID No. 046 is comprised of the following emissions points:

Point ID	Description of Emissions Point
FH-065	Loadout Conveyor to Rail Transfer Conveyor
FH-066	Railcar Loading
FH-067	Non-TEC Fuel Stockpile to Loadout Conveyor
FH-068	Non-TEC Fuel Truck Loading
FH-069	Polk Fuel Truck Loading
FH-074a	Reclaim from Petcoke Storage Pile to Trucks
FH-074b	Reclaim from Coal Storage Pile to Trucks
FH 074c	Reclaim from Slag Storage Pile to Trucks
FH-075a	Truck Traffic to Offsite Locations (paved roads, empty trucks)
FH-075b	Truck Traffic to Offsite Locations (paved roads, full trucks)
FH-076a	Truck Traffic to Offsite Locations (unpaved roads, empty trucks)
FH-076b	Truck Traffic to Offsite Locations (unpaved roads, full trucks)
FH-080a	Truck Traffic to Barge Transloading (paved roads, empty trucks)
FH-080b	Truck Traffic to Barge Transloading (paved roads, full trucks)
FH-081a	Truck Traffic to Barge Transloading (unpaved roads, empty trucks)
FH-081b	Truck Traffic to Barge Transloading (unpaved roads, full trucks)

{Permitting note(s): This emissions unit is regulated under Rules: 62-210.300, F.A.C., Permits Required; 62-296.320(4)(b), General Visible Emissions Standard; and, 62-296.320(4)(c), F.A.C., Unconfined Emissions of Particulate Matter.}

COMPLIANCE WITH EXISTING PERMIT CONDITIONS

A.1. Existing Permits. This permit supplements all existing valid air permits. Unless otherwise specified, the permittee shall continue to comply with all applicable conditions from valid air construction and operation permits. [Rule 62-4.070(3), F.A.C.]

PERFORMANCE RESTRICTIONS

A.2. Reasonable Precautions to Prevent Unconfined Particulate Matter Emissions. The transloading, from storage piles of solid fuels (petcoke or coal) or slag, to trucks, railcars and barges by mobile equipment (e.g. front end loaders) is subject to the facility-wide general visible emission standard of 20%; however, annual visible emissions compliance testing is not required for these sources of fugitive emissions. The solid fuels and slag transloading operations shall be controlled under existing management practices at the facility for

minimizing fugitive dust (e.g., watering open storage areas and roads sufficient to minimize entrained dust). Fugitive emissions of particulate matter associated with transloading these solid materials shall be minimized using reasonable precautions such as paving and maintenance of roads, parking areas or yards, or application of water or dust suppressant chemicals at each transloading emission point (e.g. FH-74a for reclaiming from petcoke storage pile to trucks, FH-74b for reclaiming from coal storage piles to trucks, and FH-074c for reclaiming from slag storage pile to trucks). Fugitive particulate matter emissions shall also be controlled onsite using reasonable precautions (e.g., tarps, applications of water or chemicals for suppression of road dust) for fugitive emission points associated with transport vehicles on paved and unpaved roads (emission points FH-75a through FH-81b). [Rules 62-4.070 & 62-296.320(4)(b)1., F.A.C.]

A.3. Permitted Capacity. The maximum solid fuels/slag transloading rate for Emissions Unit No. 046 (EU 046) shall not exceed 4,000 tons per hour on a 24-hour average and a total of 1,853,030 tons per year for all solid fuel and slag materials transloaded onto trucks, railcars and barges for shipment off-site. [PA 79-12C and Application No. 0570039-059-AC]

The above condition supersedes all previous solid fuels and slag transloading rate limitations established in: permit No. 570039-025-AC, all other air construction or operation permits, and all prior Power Plant Siting Conditions of Certification issued as PA 79-12 (including all revisions).

TESTING REQUIREMENTS

A.4. Visible Emissions Testing. The annual visible emissions testing that was required by Specific Condition III.4. of permit No. 0570039-025-AC for loading trucks and railcars from storage piles (FH-074a, FH-074b and FH-074c) by mobile equipment is hereby removed. As explained in Specific Condition A.2., these material handling operations for reclaiming solid fuels or slag from storage piles are only subject to the general visible emissions standard of 20% opacity, which does not require an annual test. [Rules 62-4.070 & 62-296.320(4)(b), F.A.C.; and Application No. 0570039-059-AC]

Subsection B. Gypsum Handling and Storage Facilities

This section of the permit addresses the following unregulated emissions unit:

E.U. ID No.	Emission Unit Description
036 (Unregulated)	Unregulated Emissions Units and/or Activities (includes existing gypsum storage area (South-40), new Gypsum Storage Area (East-40), Transloading Gypsum by Truck, Rail and Barge, and new storage pile operations (North stack out area)

Emissions unit No. 036 is a grouping of unregulated activities which include storage and handling of gypsum, storage and handling of slag and bottom ash, fuel oil storage tanks, and on-site vehicle fueling operations. The gypsum that is created from the operation of the flue gas desulfurization units is currently processed through a dewatering building and then transferred either by a fixed conveyor to the South-40 storage area or by a radial conveyor belt to a kidney shaped open pile in the North stack out area. To provide redundancy for overflow and to serve as a back up in the event the radial conveyor to the North stack out area malfunctions, the gypsum will be dumped onto a new back up stack out pile near the dewatering building by way of a new fixed conveyor authorized by this permit (as described in Specific Condition B.1.).

Following the construction of the East-40 gypsum storage and handling area and the eventual removal of the existing conveyance system to the South-40 storage area, all of the gypsum will be transferred by the existing radial conveyor belt to the kidney shaped open pile in the North stack out area and/or onto the new back up stack out pile near the dewatering building by way of the new fixed conveyor.

From the stack out piles, the gypsum is then loaded into trucks and transferred to various locations including the new East-40 storage area, the existing South-40 storage area, the barge loading area at the Big Bend Station dock, and off-site for reuse customers and/or disposal.

{Permitting Note: The existing gypsum storage and handling operation located on the south side of the facility (South-40) will have lower levels of storage and the new gypsum pile and handling operations on the northeast side of the plant (East-40) will receive and store gypsum in a manner that minimizes offsite impacts. Transloading gypsum from storage piles by truck at a rate of 750,000 tpy of gypsum to barge was used for netting emissions calculations. A new stack-out conveyor (with telescoping shoot at the drop point) will move gypsum from the product storage building to a conical storage pile to be used as a backup storage area in support of the existing kidney shaped gypsum storage pile in the North stack out area.}

EQUIPMENT

B.1. New Backup Gypsum Stack Out Belt Conveyor. The permittee is authorized to construct a new backup gypsum stack out belt conveyor near the existing kidney shaped stack out pile in the area known as the North stack out area (North of the dewatering building) to provide redundancy in the gypsum handling operations. The new belt conveyor is designed to be 20 inches wide, have a length of 1,240 feet, and a gypsum transfer capacity of 300 tons per hour. The gypsum will exit the belt conveyor through a telescoping chute onto a conical shaped storage pile, which will then be transferred by truck to other locations within the plant (i.e. East-40 storage pile, South-40 storage pile, barge transloading area, etc.). The temporary storage pile will be contained with knee walls and is not expected to exceed 45 feet in height. Total designed storage capacity of this pile is approximately 3,350 tons of gypsum. [Application No. 0570039-059-AC]

{Permitting Note: Potential emissions from this new conveyor belt and temporary storage pile are expected to be less than 0.2 tons per year due to the high moisture content of the gypsum being transferred. Visible emissions resulting from the fugitive particulate matter generated at the fixed drop point of the conveyor onto the temporary storage pile are subject to Hillsborough County's general facility-wide 5% opacity standard. Compliance with this standard is assured due to the high moisture content of the gypsum and the use of the telescoping loadout chute. Fugitive emissions from the open stock pile itself are subject to the State's general facility-wide visible emissions standard of 20% opacity. Because these facility-wide standards are not considered "unit specific emissions limitations", annual visible emissions testing is not required.}

NOTIFICATION REQUIREMENTS

B.2. Construction Notice. Notification shall be provided to the Department and to the Hillsborough County Environmental Protection Commission before commencing construction of the new conveyor and again upon completion of construction. [62-4.070 & 62-4.160, F.A.C.]