Florida Department of Environmental Protection

Northeast District
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Jacksonville, Florida 32256

Rick Scott
Governor

Carlos Lopez-Cantera
Lt. Governor

Jonathan P. Steverson
Secretary

PERMITTEE

The Chemours Company TT, LLC
Post Office Box 753
Starke, Florida 32091

Authorized Representative:
Clement J. Hilton, Plant Manager

Air Permit No. 0070001-010-AC
Permit Expires: February 5, 2017
Air Construction Permit

Highland
Replacing fuel oil burner with a natural gas burner in the dryer

PROJECT

This is the final air construction permit, which authorizes the replacement of the existing fuel oil burner with a 23 MMBtu/hr natural gas burner in the existing Ilmenite Dryer, and to remove the requirement to submit the operational data, and recordkeeping along with the Annual Operating Report (AOR).

The proposed work will be conducted at the existing Highland, which is a Mineral Processing plant (Standard Industrial Classification No. 1099). The facility is located in Bradford County 1.2 miles east of U.S. Highway 301 on 125, north of Lawtey in Bradford County; UTM Coordinates: Zone 17, 398.70 km East and 3325.00 km North; Latitude: 30° 03' 12" North and Longitude: 82° 03' 04" West.

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. As noted in the Final Determination provided with this final permit, only minor changes and clarifications 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 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 Jacksonville, Florida

Richard S. Rachal III, P.G.
Program Administrator
Permitting Program

FILING AND ACKNOWLEDGEMENT & CERTIFICATE OF SERVICE

Filed on this date pursuant to § 120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged. The undersigned hereby certifies that this Construction permit and all copies were sent before the close of business on February 5, 2016 to the listed persons.

Clement J. Hilton, Plant Manager, The Chemours Company TT, LLC, (clement.j.hilton@chemours.com)
Connie Henderson, Environmental Manager, The Chemours Company TT, LLC, (Connie.Henderson@chemours.com)
Veronica Sgro, Staff Engineer, Koogler and Associates, (vsgro@kooglerassociates.com)
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Leslie Maybin February 5, 2016
Clerk Date

FACILITY DESCRIPTION

Existing Facility

This facility mines and processes heavy mineral sand (Ilmenite, Zircon, Staurolite). The facility contains a fuel oil fired rotary dryer, dry cyclone, a feed system, and a load-out system.

Feed to the rotary dryer comes from the stockpile of scrubbed wet mill concentrate via the hopper, bin loading belt conveyor, disk feeder bin and the dryer feed belt conveyor. The dried heavy mineral sands are discharged onto a conveyor and taken in to the dry processing facility. The dry cyclone is used for product recovery. The cyclone undersize is then wet to control fugitive emissions and returned to a wet settling pond.

The dried mineral sands are sent to other plants for processing to titanium dioxide.
The heavy mineral sand is not milled for size reduction in any of the processes and is only physically separated from the quartz sands by gravity prior to introduction to the rotary dryer.

The following is a brief description of the facility emissions units:

Ilmenite Dryer. This emissions unit consists of a rotary dryer with a maximum process rate of 76.16 tons per hour of dry mineral sand and a maximum heat input rate of 22.0 MMBtu per hour. Heat is provided by the burning of either No. 6 fuel oil, On-spec used oil, No. 4 fuel oil or No. 5 fuel oil. A cyclone is used for product recovery and exhaust gases are emitted through a single vertical stack.

Product Handling and Transfer Operations Fugitive Emissions. This emissions unit consists of various screens, bucket elevators, storage bins, belt conveyors, and a loading station.

Portable Screening System. This is a screening system (manufacturer: McCloskey International, Model: MCB-516RE) that consists of a Caterpillar (95 KW, 2200 rpm) non road diesel engine, feed hopper, screener and multiple conveyor belts. The screener is used to reclaim metallic minerals from previously processed material. The ore piles are in the open and have a significant amount of moisture. A mobile excavator is used to pick up the material and drops it into the screen hopper. The open screen separates the material and has an integral belt conveyor that drops the material into a truck for load out. A similar conveyor drops the oversize material onto another material pile.

Internal Combustion Engine
One Caterpillar (95 KW, 2200 rpm) non-emergency use diesel engine for the portable screening system.
The engine was built on June 15, 2006, and is certified by manufacturer according to 40 CFR part 89 or 40 CFR part 94, and meets the emissions standards of 40 CFR 60.4204 (a).

E.U. ID No	Emissions Unit Brief Description
001	Ilmenite Dryer with Cyclone for Product Recovery
002	Product Handling and Transfer Operations Fugitive Emissions
003	Portable Screening System
004	Non-emergency use Internal Combustion Engine for E.U. 003
xxx*	* List of Unregulated Emissions Units and Activities

PROPOSED PROJECT

Air construction permit, which authorizes the replacement of the existing fuel oil burner with a 23 MMBtu/hr natural gas burner in the existing Ilmenite Dryer, and to remove the requirement to submit the operational data, and recordkeeping along with the Annual Operating Report (AOR).

This project will modify the following emissions units.

Facility ID No. 007001	
ID No.	**Emission Unit Description**
001	Ilmenite Dryer with Cyclone for Product Recovery

FACILITY REGULATORY CLASSIFICATION

- The facility **is not** a major source of hazardous air pollutants (HAP).
- The facility **does not operate** 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., due to the potential SO_2 emissions being above 250 TPY. After this project is implemented, the SO2 emissions will be below PSD major levels.

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Northeast District Office (Air Permitting) of the Department of Environmental Protection (Department). The Northeast District Office mailing address is 8800 Baymeadows Way, W., Jacksonville, Florida 32256.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Northeast District Office (Compliance Assurance) at: 8800 Baymeadows Way, W., Jacksonville, Florida 32256.

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); Appendix C (Common Conditions); and 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 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. 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) 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.

9. Application for Title V Permit: This permit authorizes construction of the permitted emissions units and initial operation to determine compliance with Department rules. 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. 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 and Chapter 62-213, F.A.C.]

A. EU001 Ilmenite Dryer

This section of the permit addresses the following emissions unit.

EU No.	Emission Unit Description
001	Ilmenite Dryer with Cyclone for Product Recovery

The Ilmenite Dryer operates at a maximum production rate of 76.16 tons per hour of heavy mineral sands. Heat is provided by the burning of natural gas for a maximum heat input rate of 23 MMBtu per hour.

A.1. **Relation to Other Permits.** The conditions of this permit supersede all other previously issued air construction and operation permits for this emissions units.

[Rules 62-4.030, and 62-210.300(1)(b), F.A.C.]

A.2. **Ilmenite Dryer (EU001)**

a. The permittee is authorized to remove the existing fuel oil burner for the dryer and replace it with a natural gas burner.
b. The total natural gas capacity for this emissions unit shall not exceed 23 MMBtu/hr.

[Rules 62-4.160(2), 62-210.200(PTE), F.A.C., Application No. 0070001-010-AC]

PERFORMANCE RESTRICTIONS

A.3. **Authorized Fuel**. The dryer is authorized to fire natural gas only.

[Application No. 0070001-010-AC and Rule 62-210.200(PTE), F.A.C.]

A.4. **Permitted Capacity.** The maximum production rate shall be 76.16 tons per hour of dried Ilmenite ore.

[Rules 62-4.160(2), 62-210.200(PTE), F.A.C., and Application No. 0070001-010-AC]

A.5. **Hours of Operation.** This emissions unit may operate continuously, i.e., 8,760 hours/year.

[Rules 62-4.160(2) and 62-210.200, (PTE), F.A.C.]

EMISSIONS STANDARDS

A.6. **General Visible Emissions Standard.** No person shall cause, let, permit, suffer or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than 20 percent opacity. No annual visible emissions testing is required.

[Rule 62-296.320(4)(b)1., F.A.C.]

A.7. **Sulfur Dioxide.** Sulfur Dioxide emissions will be controlled by the firing of natural gas.

[Rule 62-4.070(3), F.A.C.]

TESTING REQUIREMENTS

A.8. **VE Compliance Tests**. Upon the Department's request, when a test is required, the test method for visible emissions shall be EPA Method 9, incorporated and adopted by reference in Rule 62-297, F.A.C.

[Rule 62-297.310(8)(c)., F.A.C.]

A.9. **Test Requirements**. When testing is required, the permittee shall notify the Compliance Authority in writing at least 15 days prior to any required tests. Tests shall be conducted in accordance with the applicable requirements specified in Appendix D (Common Testing Requirements) of this permit.

[Rule 62-297.310(9), F.A.C.]

REPORTING

A.10. **Test Reports**. The permittee shall prepare and submit reports for all required tests in accordance with the requirements specified in Appendix D (Common Testing Requirements) of this permit. For each test run, the report shall also indicate the maximum production rate.

[Rule 62-297.310(10), F.A.C.]

A.11. **Operational Data**. A record of operational data for this emissions unit shall be maintained on site, and made available during inspection if requested.

The report shall include the following minimum data:

- Hours of Operation (each month total for a combined hours/year),
- Yearly process input rate (each month total for a combined tons/year),
- Yearly natural gas usage (each month total for a combined MMCF/year).

[Rule 62-4.070(3), F.A.C.]

A.12. This facility is also subject to the requirements of the attached Combined Appendices.

A.13. **Commencement of Construction and Operation.** The permittee shall submit to the Air Compliance Authority of this Office written notification of the date of commencement of construction, and then notification of operation of the replacement of the existing fuel oil burner with a natural gas burner for the dryer at **EU001**. These notifications shall be submitted or postmarked within as many days prior to the date of construction, and operation as practical, but no later than fifteen (15) business day following commencement of construction and operation to Christopher L. Kirts at christopher.kirts@dep.state.fl.us.

[Rule 62-4.070(3), F.A.C.]