TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

E.I. Dupont De Nemours & Co.
Post Office Box 753
Starke, Florida 32091

Trail Ridge Metallic Mineral Processing Facility
Facility ID No. 0190011

PROJECT

Project No. 0190011-015-AC
Application for Air Construction Permit
Emergency RICE Generator and RICE Air Compressor (after-the-fact)

COUNTY

Clay, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste and Air Resource Management program
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

4/16/14

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

Facility Description and Location

E.I. Dupont De Nemours & Co. is an existing Mineral Processing plant, which is categorized under Standard Industrial Classification Code No. 1099. The facility is be located in Clay County 5 miles east of Starke off of SR 230 in Clay County in Starke, Florida. The UTM coordinates of the existing facility are Zone 17, 400.23 km East and 3308.58 km North; Latitude: 29° 54’ 42” North and Longitude: 82° 02’ 00” West. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility **is not** a major source of hazardous air pollutants (HAP).
- The facility **has no** units subject to the acid rain provisions of the Clean Air Act.
- The facility **is** a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The 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.

Project Description

Air construction permit, which authorizes the (after-the-fact) addition of an Emergency RICE Generator and RICE Air Compressor.

Processing Schedule

3/26/14 Received the application for an air pollution construction permit.

4/1/14 Requested additional information.

4/11/14 Received additional information; application complete.

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

The facility **is** a Prevention of Significant Deterioration (PSD)-major source of air pollution due to the potential SO_2 emissions being above 250 TPY, in accordance with Rule 62-212.400, F.A.C.

EU008 Emergency RICE Generator.

ICE Class	Fuel	Mfg	Model No.	DOM	HP	L/Cyl	GEN Kw	Class
Emergency RICE	Diesel	Onan	100 DGDB	2/23/05	166	<30	122	Existing RICE ≤ 500 bhp

009 RICE Air Compressor.

ICE Class	Fuel	Mfg	Model No.	DOM	HP	L/Cyl	GEN Kw	Class
RICE Air Compressor	Diesel	Atlas Copco	XAS 185	7/20/12	49	<30	36	New RICE ≤ 500 bhp

As provided in the application, the following table summarizes potential emissions and PSD applicability for the project.

Table A. Potential Emissions (Tons/Year) and PSD Applicability.

Pollutant	Project Potential Emissions (TPY)	Significant Emissions Rate (TPY)	Subject To PSD?
CO	1.91	100	No
NO_X	7.0	40	No
PM/PM_{10}	0.1	25/15	No
SO_2	0.4	40	No
VOC	0.5	40	No

As shown in the above table, total project emissions will not exceed the PSD significant emissions rates; therefore, the project is not subject to PSD preconstruction review.

3. APPLICATION REVIEW

Discussion of Emissions

These EUs are not subject to any emissions standards. These EUs are subject to Work Practice Standards.

State Requirements

Rule 62-296.320, F.A.C.

Federal NSPS Provisions

009 RICE Air Compressor. This unit is subject to 40 CFR 60, Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart A- General

Federal NESHAP Provisions

EU008 Emergency RICE Generator. This unit is subject to Provisions and 40 CFR 63, Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines and 40 CFR 63, Subpart A- General Provisions.

009 RICE Air Compressor. This EU is subject to 40 CFR 63, Subpart ZZZZ-National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines and 40 CFR 63, Subpart NESHAP A- General Provisions.

Other Draft Permit Requirements

Air construction permit, which authorizes the (after-the-fact) addition of an Emergency RICE Generator and RICE Air Compressor.

No additional production, operation limitations, or monitoring requirements, etc. as specified in all other Construction permits or Title V Permits.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Leslie Maybin is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.