TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Lhoist North America
750 Old Hickory Blvd.
Brentwood, TN 37027

Lowell Plant

Facility ID No. 0830016

PROJECT

Project No. 0830016-017-AC
Application for Synthetic Minor Source Air Construction Permit
Project Name: Mill Modification

COUNTY

Marion County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste and Air Resource Programs
Central District Office
Orlando, Florida 32803-3767
DEP_CD@dep.state.fl.us

November 10, 2014

Prepared by Jeff Rustin, P.E.

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.

I. Project Description:

A. Applicant:

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B. Professional Engineer:

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C. Application Contact:

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jim.ruddell@lhoit.com

D. Project Location:

Lowell Plant
11661 NW Gainesville Rd.
Lowell, FL 32663-0010

E. Project Summary:

This is an Air Construction Permit for the removal of the rotary dryer (EU 006), which is equipped with two cyclones and a wet scrubber; and the modification of Mill Systems (EU 001 and EU 008), Silo 5 (EU 012), and the Fine Grind Loadout Area (EU 007). Mill System (EU 008) will include a new classifier and dust collection to further classify sizing of limestone. Material transfer will be modified for Mill System (EU 001) and Silo 5 (EU 012) to accommodate the material. The modification of material transfer includes enclosed screw augers and piping for pneumatic transfer of material. The Fine Grind Loadout Area (EU 007) will include the removal of two existing bins and the construction of a new silo, loadout and dust collection system.

Additionally, this permit clarifies that there are two particulate matter emission limits for the facility: a 30 tons per consecutive 12-month period limit for the Limestone Fluidized Bed Dryer (Condition A.7.) and a 55 tons per consecutive 12-month period limit for the Material Handling System (Condition B.4.).

F. Application Information:

Application Received on: 08/25/2014
Requested Additional Information on: 09/15/2014
Received Additional Information on: 10/06/2014
Application determined to be complete on: 10/06/2014

II. PSD Applicability for Project

Based on the proposed changes (rotary dryer removed, material handling system modifications), the PTE for the facility will remain approximately the same. No additional PSD Applicability Evaluation is necessary.

III. Rule Applicability

This project is subject to the preconstruction review requirements of Chapter 403, Florida Statutes, and Chapters 62-204 through 62-297, F.A.C., as indicated below.

Subject to:	Y/N	Comments
Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration	N	Facility is not a PSD major source.
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	Y	The facility is a potential source of unconfined particulate matter emissions.
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	The facility is a potential source of VOCs and odor.
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Marion County is an attainment area for ozone
Rule 62-204.800(8), F.A.C. - Standards of Performance for New Stationary Sources (NSPS– 40 CFR 60)	Y	• EU No. 002, EU 004, and EU 013 are subject to 40 CFR 60, Subpart A, where applicable. The modifications do not affect these emission units. • EU No. 002, EU 004, and EU 013 are subject to 40 CFR 60, Subpart OOO. EU 002 (#1 Granular System), EU 004 (Granular System #2 with baghouse), and EU 013 (Ball mill and feed silo) meet the applicability provisions of 40 CFR 60.670. (The modifications in this permit do not affect emission units that are subject to 40 CFR 60, Subpart OOO.)
Rule 62-204.800(8), F.A.C. - Standards of Performance for New Stationary Sources (NSPS– 40 CFR 60), continued		• EU 001 (66" Raymond Mill) and EU 008 (73" Raymond Mill) are not subject to 40 CFR 60, Subpart OOO because the capacities of the mills are less than 150 tons/hr. • EU 007, EU 009, EU 011, and EU 012 involve pneumatic transfer of material and not open conveyors.

Subject to:	Y/N	Comments
Rule 62-204.800(11), F.A.C. National Emission Standard for Hazardous Air Pollutants for Source Categories a.k.a. MACT (NESHAPS –40 CFR 63)	N	There is no applicable category.
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	N	Facility is a synthetic minor source.
Rule 62-297.310, F.A.C. - General Compliance Test Requirements	Y	Conduct visible emission testing within 90 days of commencement of operations after modifications have been completed for the following Emission Units: EU No. 001, EU 007, EU 008, and EU 012.

IV. Summary of Emissions

Pollutant	EU No. and brief description	Potential Emissions (tons/year)
Emissions from baghouses		
PM	Material Handling System (all EUs except EU 005)	50.2*
PM	EU 005, Fluid Bed Dryer	28.1**
Emissions from Fuel Use		
SO2	EU 005, Fluid Bed Dryer (using natural gas)	0.1**
NOx	EU 005, Fluid Bed Dryer (using natural gas)	20.0**
CO	EU 005, Fluid Bed Dryer (using natural gas)	16.8**
VOC	EU 005, Fluid Bed Dryer (using natural gas	1.1**
SO2	EU 005, Fluid Bed Dryer (using fuel oil)	20.4**
NOx	EU 005, Fluid Bed Dryer (using fuel oil)	73.3**
CO	EU 005, Fluid Bed Dryer (using fuel oil)	6.7**
VOC	EU 005, Fluid Bed Dryer (using fuel oil)	1.7**

*based on 8,760 hours of operation and PTE Summary – Material Handling System Attachment with 0830016-017-AC Application dated 8/25/14 and received 8/28/14.

** based on 8,000 hours of operation and PTE Summary – Drying System Attachment with 0830016-017-AC Application dated 8/25/14 and received 8/28/14.

The particulate emission factor of 0.020 grains/DSCF*** used in calculations (see Potential to Emit Summary Attachment of Application No. 0830016-017-AC) is an industry standard for filling silos (material handling) equipped with baghouses.

*** Previously listed as DSCFM instead of DSCF, correction made on 11/10/2014.

V. Discussion

Recent visual emission testing was conducted on August 13, 2014. The testing results were received by the Department on August 19, 2014. They met the VE limits.

VI. Federal NSPS and/or NESHAP Provisions

A. NSPS, 40 CFR 60 Subpart A, General Provisions

B. NSPS, 40 CFR 60 Subpart OOO, Standards of Performance for Nonmetallic Mineral Processing Plants applies to EU 002, EU 004, and EU 013. (These emission units are not affected by the modifications.)

VII. Conclusions

The emission limits proposed by the applicant will meet all of the requirements of Chapters 62-204 through 297, F.A.C.

The General and Specific Conditions listed in the proposed permit (attached) will assure compliance with all the applicable requirements of Chapters 62-204 through 297, F.A.C.

VIII. 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. Additional details of this analysis may be obtained by contacting the project engineer at the Florida Department of Environmental Protection, Waste & Air Resource Programs, Central District Office, 3319 Maguire Blvd., Ste. 232, Orlando, FL 32803-3767, by email at jeff.rustin@dep.state.fl.us or by phone at 407-897-2930.