TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Mosaic Fertilizer, LLC
103830 Circa Crossing Drive
Lithia, Florida 33547

South Pierce Plant

Facility ID No. 1050055

PROJECT

Project No. 1050055-022-AC
Application for Minor Air Construction Permit
Project Name: Auxiliary Boiler Replacement

COUNTY

Polk, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air Resource Management
Southwest District Office
Temple Terrace, Florida 33637-7600

July 6, 2011

Prepared by Danny Stubbs

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. <u>Project Description:</u>

A. Applicant:

Mr. Thomas W. Fuchs, Plant Manager
Mosaic Fertilizer, LLC
103830 Circa Crossing Drive
Lithia, Florida 33547

B. Professional Engineer:

Mr. Rama Iyer
Mosaic Fertilizer, LLC
103830 Circa Crossing Drive
Lithia, Florida 33547

C. Project Location:

7450 Highway 630 in Mulberry, Florida.

D. Project Summary:

This project is for the installation of an auxiliary boiler (E.U. ID 053) that will replace the facility's existing auxiliary boiler (E.U. ID 001). After the auxiliary boiler is installed and operational, the facility's existing auxiliary boiler will be permanently shutdown and dismantled. The auxiliary boiler that will be installed will have a maximum design heat capacity of 100 MMBTU Btu/hr.

Details of this project are further described in the permit.

E. Application Information:

Application Received on: 11/29/2010
Additional Information Requested on: 1/26/2011
Additional Information Received on: 4/25/2011
Application Complete: 4/25/2011

II. Rule Applicability

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

Subject to:	Y/N	Comments
Rule 62-210.300, F.A.C. - Project Not Subject to Prevention of Significant Deterioration or Nonattainment Requirements, F.A.C.	Y	Not exempt from general permitting requirements.
Rule 62-212.400, F.A.C. - Prevention of Significant Deterioration	N	Facility is a PSD major source but this project does not trigger PSD review.
Rule 62-296.320(4), F.A.C. - General Particulate Emission Limiting Standards	N	Not applicable.
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	N	Not applicable.
Rule 62-296.400, F.A.C. - Stationary Source Emission Standards	Y	EU No. 053 is subject to 62-296.406(1), F.A.C. – Fossil Fuel Steam Generators with Less Than 250 Million Btu Per Hour Heat Input, New and Existing Emissions Units.

Subject to:	Y/N	Comments
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Polk County is not an air quality maintenance area for ozone.
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	Not applicable because this is a new emissions unit.
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	Y	40 CFR 60, Subpart Dc -Small Industrial-Commercial-Institutional Steam Generating Unit.
Rule 62-204.800, F.A.C. National Emission Standard for Hazardous Air Pollutants (NESHAPS – 40 CFR 61)	N	There is no applicable source category.
Rule 62-204.800, 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 source category.
Chapter 62-213, F.A.C. - Operation Permits for Major Sources of Air Pollution	Y	Facility is a Title V source.
Rule 62-297.310, F.A.C. - General Compliance Test Requirements, F.A.C.	Y	VE testing is required for EU No. 053.

III. Summary of Emissions

Pollutant	EU No. and brief description	Potential Emissions (tpy)	Allowable Emissions (tpy)
PM/PM10	053	0.6	
VOC	053	0.2	
NOx	053	6.3	
SO_2	053	2.2	
CO	053	3.7	
VE	053		20%/27% for up to 6 min/hr

Potential emissions were determined as follows: (1) the boiler was limited to a 10% annual capacity factor (or 87,600 MMBTU/year); (2) PM/PM10, SO2 and NOx emissions were determined based on emissions factors from AP-42, Table 1.3-1; CO and VOC emissions were determined based on emissions factors AP-42, Table 1.4-2; and SO_2 emissions were based on fuel oils with a maximum sulfur content of 0.05%, by weight (BACT).

Pollutant	Baseline Actual Emissions (TPY)	Potential to Emit (TPY)	Potential to Emit Minus Baseline Actual Emissions (TPY)	Significant Emissions Rate (TPY)	PSD Required? Y/N
PM/PM10	0	0.6	0.6	25/15	N
VOC	0	0.2	0.2	40	N
NOx	0	6.3	6.3	40	N
SO2	0	2.2	2.2	40	N
CO	0	3.7	3.7	100	N

Note: Significant emissions increase of PSD pollutants were determined in the table above using the "Baseline Actual-to-Potential Applicability Test for Construction of New Emissions Units" (See Rule 62-212.400(2)(a)2., F.A.C.). Baseline Actual Emissions were all assumed to be zero for each PSD pollutants in the applicability table.

IV. 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.

V. 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 Air Resource Management, Southwest District 13051 North Telecom Parkway, Temple Terrace, Florida 33637-7600.

Pursuant to Section 403.087, Florida Statutes and Section 62-4.070, Florida Administrative Code, the Department hereby gives notice of its intent to issue a permit to construct the aforementioned air pollution source in accordance with the draft permit and its conditions as stipulated (see attached).