TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Mosaic Fertilizer, LLC
13830 Circa Crossing Drive
Lithia, Florida 33547

Plant City Facility

Facility ID No. 0570005

PROJECT

Project No. 0570005-064-AC
Application for Minor Air Construction Permit
Project Name: "C" SAP Waste Heat Boilers Replacement & Repair

COUNTY

Hillsborough County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Air and Solid Waste Permitting
Southwest District Office
Temple Terrace, Florida 33637-0926

February 11 2015

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. Facility Description:

The facility is a phosphate fertilizer production facility. The facility includes four sulfuric acid production plants, two phosphoric acid production plants, four ammonium phosphate production plants with associated storage and shipping units, a molten sulfur storage and handling system, a phosphogypsum stack, and four emergency diesel engines. Final products produced at the facility include sulfuric acid, phosphoric acid, ammonium sulfate, diammonium phosphate (DAP), and monoammonium phosphate (MAP). This facility is classified as a major source (Title V source) of Nitrogen Oxides (NOx), Particulate Matter - PM10, Sulfur Dioxide (SO_2), Fluorides (F) and Sulfuric Acid Mist (SAM). Additionally, the Department has determined that this facility is a major source of hazardous air pollutants (HAPs), based upon its estimation of emissions of hydrogen fluoride. If additional testing and modeling demonstrate: (1) that the facility is not and has never been a major source of hazardous air pollutants since at least June 10, 2002, or (2) if prospective changes to Subparts AA and BB warrant such an outcome, the Permittee shall have the right to request that the Department revise the determination of major source status and revise this permit to remove all requirements and conditions based on 40 CFR Part 63.

II. Project Description:

A. Applicant:

Mr. Ronald Brunk, Environmental Manager
Mosaic Fertilizer, LLC
13830 Circa Crossing Drive
Lithia, Florida 33547

B. Professional Engineer:

Mr. Rama Iyer, PE

Mosaic Fertilizer, LLC
13830 Circa Crossing Drive
Lithia, Florida 33547

C. Project Location:

This facility is located in Hillsborough County at 660 East County Line Road in Plant City, Florida

D. Project Summary:

This project is for the replacement and repair of component parts of an emissions unit. Specifically, this project is for the replacement of the primary waste heat boiler and for the re-tubing of the secondary waste heat boiler in the C-Sulfuric Acid Plant ("C" SAP). This project is also for other minor work such as replacing valves, ductwork and other minor maintenance activities during the facility's "C" SAP turnaround in March 2015. The facility is a sources of the pollutants nitrogen oxides (NOx), sulfuric acid mist (SAM) and sulfur dioxide (SO2); however, this project is not expected to result in increase in emissions for any of the pollutants. Additionally, this project is not expected to result in an increase production capacity. The purpose of the two affected waste heat boilers is to recover excess heat from the process.

E. Application Information:

Application Received on: 1/28/2015
Additional Information Received on: 2/11/2015
Application Complete on: 2/11/2015

III. Applicable State and Federal Regulations

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. – Permits Required	Y	subject to 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	This project is not a source of particulate matter.
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	Y	This emissions unit may be a source of odor.
Rule 62-296.401-418, F.A.C. - Stationary Source Emission Standards	Y	EU No. 007 is subject to 62-296.402, F.A.C. – Sulfuric Acid Plants.
Rule 62-296.500, F.A.C. - Reasonably Available Control Technology (VOC)	N	Hillsborough County is an air quality maintenance area for ozone but this process is not a VOC source and there is no applicable source category.

Subject to:	Y/N	Comments
Rule 62-296.700, F.A.C. - Reasonably Available Control Technology (PM)	N	This facility is located within the area of influence of an air quality maintenance area located in Hillsborough County. Per Rule 62-296.700(2)(b), the facility is exempt from provisions of the PM RACT rule.
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	Y	EU No. 007 is subject to NSPS - 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid Plants
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	This facility is subject to Rule 62-213 F.A.C
Compliance Test Requirements, F.A.C.	Y	NOx, SAM and VE testing is required for E.U. No. 007

IV. Summary of Emissions

Pollutant	**EU No. and brief description**	**Potential Emissions** (tpy)	**Allowable Emissions** (tpy)
NOx	007	52.1	52.1
SO2	007	1,329	1,329
SAM	007	44.2	44.2
VE Limitation			
VE	007		10% (except during start-up, shutdown, or malfunction, pursuant to Rule 62-210.700, F.A.C.).

Pollutant	Baseline Actual Emissions (TPY)	Projected Actual Emissions (TPY)	Projected Actual Minus Baseline Actual Emissions (TPY)	Significant Emissions Rate (TPY)	PSD Required? Y/N
EU No. 007					
NOx	36.9	44.9	8	40	No
SAM	18.0	19.6	2	7	No
SO_2	743	772	29	40	No

Note:

The PSD avoidance calculations (shown above) were provided by the applicant in an email dated 2/11/2015. The email revised the PSD avoidance calculations that were submitted with the as part of the construction permit application submitted on 1/28/2015.

A comparison of the "Baseline Actual Emissions" (in the table above) with the Allowable Emissions (shown in the "Summary of Emissions" table) for NOx clearly demonstrates that the Significant Emissions Rate cannot be exceeded without violating the NOx allowable permit limit. Therefore, annual emissions reporting will only be required for SAM and SO_2.

V. 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.

VI. 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).