TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

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

New Wales Facility

Facility ID No. 1050059

PROJECT

Project No. 1050059-091-AC
Application for Minor Air Construction Permit
Project Name: Concrete batch Plant

COUNTY

Polk County, Florida

PERMITTING AUTHORITY

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

September 4, 2014

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:

This facility is a phosphate fertilizer manufacturing complex. The fertilizer complex processes phosphate rock into several different fertilizer products and animal feed ingredients. This is accomplished by reacting phosphate rock with sulfuric acid to produce phosphoric acid and then converting the phosphoric acid to fertilizer and animal feed ingredient products. This facility consists of five double absorption sulfuric acid plants; three phosphoric acid plants; a phosphoric acid clarification and storage area; three diammonium phosphate (DAP) plants; a monoammonium phosphate (MAP) plant; a granular monoammonium phosphate (GMAP) plant; an animal feed ingredients (AFI) plant; a molten sulfur storage & handling system; a limestone storage silo/rock grinding operation; and a phosphogypsum stack.

II. Project Description:

A. Applicant:
Mr. Ghani Baig, Environmental Manager
Mosaic Fertilizer, LLC
New Wales Facility
13830 Circa Crossing Drive
Lithia, FL 33547

B. Professional Engineer:

Mr. Rama Iyer, P.E.
Mosaic Fertilizer, LLC
New Wales Facility
13830 Circa Crossing Drive
Lithia, FL 33547

C. Project Location:

3095 Highway 640 in Mulberry, Florida (Polk County)

D. Project Summary:

This project will add a temporary Concrete Batch Plant to the facility to remediate a geological anomaly in the facility's closed north gypsum stack area. The concrete batch plant will make grout using aggregate, cement, bentonite and water and other proprietary materials. The remediation project is expected to be completed in approximately six months.

E. Application Information:

Application Received on: 08/19/2014
Application Complete on: 08/19/2014

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	Y	facility is a source of unconfined particulate matter emissions or subject to process weight table
Rules 62-296.320(1) and (2), F.A.C. - General Pollutant Emission Limiting Standards (VOCs and Odor)	N	This project is not a source of VOCs or Odor
Rule 62-296.401-418, F.A.C. - Stationary Source Emission Standards	Y	EU No. 092 is subject to 62-296.414, F.A.C. – Concrete Batch Plants
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	this is a new source, therefore not subject to PM RACT rule
Rule 62-204.800, F.A.C. - Standards of Performance for New Stationary Sources (NSPS)	N	there is no applicable source category
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

Subject to:	Y/N	Comments
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 or PM testing is required for EU No. 092.

IV. Summary of Emissions

Pollutant	EU No. and brief description	Potential Emissions (tpy)	Allowable Emissions (tpy)
PM	**092 -** Concrete Batch Plant (Note: includes batch plant, dump to storage pile, unpaved road, diesel engines emissions)	2.52	n/a
PM10	**092 -** Concrete Batch Plant (See PM note)	2.4	n/a
VOC	**092 -** Concrete Batch Plant (Note: diesel engines emissions)	2.7	n/a
NOx	**092 -** Concrete Batch Plant (Note: diesel engines emissions)	32.5	n/a
SO2	**092 -** Concrete Batch Plant (Note: diesel engines emissions)	2.1	n/a
CO	**092 -** Concrete Batch Plant (Note: diesel engines emissions)	7.0	n/a
VE Limitation			
VE	092 – Concrete Batch Plant		Stack emissions shall be limited to 5 percent opacity

Notes: *Potential emissions are based on processing approximately 5,000 tons of material (which will consists of approximately 1,815 tons of cement, 907 tons of flyash, 1519 tons of pea gravel, 759 tons of sand) and burning approximately of 107,640 gallons of diesel fuel. Emissions factors from AP-42, Section 11.12 (Concrete Batching) Table 11.12-2 were used to calculate PM emissions for the batch operations; emissions factors from AP-42, Sections 13.2.2 (Unpaved Roads) and 13.2.4 (Aggregate Handling and Storage Piles) were used to calculate unpaved road emissions; and emissions factors from AP-42 Section 3.3 (Gasoline and Diesel Industrial Engines) were used to calculate diesel engines emissions. Additionally, a water spray efficiency of 70% was assumed to estimate some controlled emissions factors for processes described in AP-42, Section 11.12.*

Pollutant	Baseline Actual Emissions (TPY)	Projected Actual Emissions (TPY)	Projected Actual Minus Baseline Actual Emissions (TPY)	Significant Emissions Rate (TPY)	PSD Required? Y/N
PM	0	2.52	2.52	25	N
PM10	0	2.4	2.4	15	N
VOC	0	2.7	2.7	40	N
NOx	0	32.5	32.5	40	N
SO2	0	2.1	2.1	40	N
CO	0	7.0	7.0	100	N

Note: *Actual emissions reporting of PSD pollutants will not be required for this project because the each PSD pollutants has a potential to emit value that is below the PSD Significant Emissions Rate. Also, the duration of this project is only six months.*

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).