Title V Air Operation Permit Renewal
Permit No. 0570008-066-AV
Renewal to Title V Air Operation No. 0570008-063-AV

APPLICANT

The applicant for this project is Mosaic Fertilizer, LLC. The applicant's responsible official and mailing address are: Lawrence Simpson, Plant Manager, Mosaic Fertilizer, LLC, Riverview Facility, 13830 Circa Crossing Drive, Lithia, FL 33547.

FACILITY DESCRIPTION

The applicant operates the Mosaic Riverview Facility, which is located in Hillsborough County at 8813 US Highway 41 South, Riverview, Florida.

This facility consists of several industrial processes that convert insoluble rock containing phosphorus ore into a soluble form suitable for agricultural use. The processes consist of one phosphoric acid plant (two trains), two ammoniated phosphate (AP) plants, three sulfuric acid plants, one material handling system, one auxiliary boiler, two animal feed plants, a molten sulfur storage and handling system and emergency compression ignition (CI) reciprocating internal combustion engines (RICE).

Molten sulfur is the feed for the double absorption sulfuric acid plants. Natural gas or No. 2 fuel oil is used for the cold start-up of the plants. These emission units are regulated under NSPS - 40 CFR 60, Subpart H, Standards of Performance for Sulfuric Acid, adopted and incorporated by reference in Rule 62-204.800(8), F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards; and Rule 296.402, F.A.C., Sulfuric Acid Plants. Sulfur dioxide from each sulfuric acid plant is controlled by a dual absorption tower, and acid mist is controlled by mist eliminator. These units utilize continuous emission monitors (CEMs) for sulfur dioxide (SO_2) emissions monitoring.

Phosphate rock and sulfuric acid are the primary feed for the phosphoric acid plant. This emission unit is regulated under National Emission Standards for Hazardous Air Pollutants (NESHAP) - 40 CFR 63, Subpart A – General Provisions; 40 CFR 63, Subpart AA - NESHAP From Phosphoric Acid Manufacturing Plants, adopted and incorporated by reference in Rule 62-204.800, F.A.C.; Administrative Order No. 03-C-AP for alternative MACT monitoring plan; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); and Rule 62-296.403, F.A.C., Phosphate Processing. Fluoride emissions from this source are controlled by scrubbers.

Phosphoric acid is the feed for the Fertilizer (AP) Plants. Each of these emission units consists of a reactor, granulator, dryer, cooler, mills, screens and ancillary equipment. The dryer is fired with natural gas with No. 2 fuel oil as a backup. These emission units are regulated under New Source Performance Standard (NSPS) - 40 CFR 60, Subpart V, Standards of Performance of Phosphate Fertilizer Industry: Diammonium Phosphate Plants; and NESHAP – 40 CFR 63, Subpart A – General Provisions; 40 CFR 63, Subpart BB – NESHAP From Phosphate Fertilizers Production Plants, adopted and incorporated by reference in Rule 62-204.800, F.A.C.; Rule 62-212.300, F.A.C., General Preconstruction Review Requirements; Rule 62-212.400, F.A.C., Prevention of Significant Deterioration (PSD); Rule 62-296.320, F.A.C., General Pollutant Emission Limiting Standards; Rule 62-296.403, F.A.C., Phosphate Processing. Emissions from this source are controlled by the scrubbers.

The Animal Feed Ingredient (AFI) facility consists of defluorinated acid batch tanks (3) and granulation system along with diatomaceous earth and limestone unloading systems, and the AFI loadout system. Emissions from loading and unloading activities are controlled by baghouses.

The material handling system transfers MAP, DAP, calcium phosphate animal feed, and phosphate rock from the storage buildings or rail cars to marine vessels and from the storage buildings to railcars, truck and container loadouts.

Particulate matter emissions generated during the transfer of materials are controlled by the existing baghouses and are minimized through: a) covered conveyors and equipment enclosures, b) the use of a telescopic chute during ship loading, c) limiting the drop height to 2 feet during ship loading, and d) restricting the operating hours. Fugitive particulate matter emissions generated by the material handling operations are controlled through reasonable precautions such as the use of partial enclosures, covered conveyors, coating of products with dust suppressant, etc. Particulate matter emissions from storage buildings do not vent outside.

The facility has existing emergency compression ignition reciprocating internal combustion engines (CI RICE) that are subject to 40 CFR 63, Subpart A – General Provisions and Subpart ZZZZ - NESHAP for Stationary RICE.

Also included in this permit are miscellaneous unregulated and insignificant emissions units and/or activities.

PROJECT DESCRIPTION

The purpose of this permit is to renew the Title V air operation permit No. 0570008-063-AV. This permit also incorporates existing compression ignition (CI) reciprocating internal combustion engines (RICE) that are subject to 40 CFR 63, Subpart A – General Provisions and Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants (NESHAPs).

PROCESSING SCHEDULE AND RELATED DOCUMENTS

Processing Schedule and related documents:
Initial Title V Air Operation Permit issued: 04/28/1999
Renewal Title V Air Operation Permit issued: 05/31/2006
Title V Air Operation Permit Revisions issued 10/27/2008 and 10/13/2010
Application for a Title V Air Operation Permit Renewal received 10/18/2010
Additional Information Request dated 12/15/2010
Additional Information Response received 03/15/2011
Notice of Intent to Issue Air Permit issued
Public Notice Published

PRIMARY REGULATORY REQUIREMENTS

Title III: The facility is identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility does operate units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility does operate units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAIR: The facility is not subject to the Clean Air Interstate Rule (CAIR) set forth in Rule 62-296.470, F.A.C.

SITING: No Unit was originally certified pursuant to the power plant siting provisions of Chapter 62-17, F.A.C.

CAM: Compliance Assurance Monitoring (CAM) applies to the applicable emission units at the facility, described as follows:

EU ID No.	Brief Description	Pollutants subject to CAM	Control Device subject to CAM
-007	No. 6 AP Plant	PM	Cooler venturi & tailgas scrubbers

PROJECT REVIEW

The TV Renewal permit is reformatted in accordance with the latest template available. A common appendices file has been created to bundle up the following documents together: Appendix A, Appendix TR (Testing Requirements), Appendix RR (Reporting Requirements), Appendix TV (Title V Conditions), Appendix U, Appendix I, Figure 1, Table 1, Table 2, and Table H. Subsections for EU Nos. 007 (No. 6 AP Plant), 055 (No. 5 Granulation Plant), and 073 (Phosphoric Acid Production Facility) have been streamlined by moving the NESHAP Subparts AA and BB conditions to the new Subsection named Common Conditions.

This permit also modifies the following emissions units in accordance with Construction Permit 0570008-067-AC, issued on June 8, 2011:

EU No.	From	To
075	AP Storage Building No. 2	AP Storage Building Nos. 2, 4, 5 & 6
076	AP Storage Building No. 4	AP Loadout between Storage Building Nos. 2 & 4
077	AP Truck Loading Station	AP Loadout adjacent to Storage Building No. 6

CONCLUSION

This project renews Title V air operation permit No. 0570008-063-AV, which was issued on 10/13/2010. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210 and 62-213, F.A.C.