Florida Department of Environmental Protection

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PERMITTEE

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

Authorized Representative:
Mr. Ron Yasurek, Plant Manager

Air Permit No. 1050059-066-AC
Mosaic Fertilizer, LLC
New Wales Facility, Multifos Plant Kiln C
Dump Chute, Air Intake, and Steam Feed
Expires: June 23, 2012

PROJECT AND LOCATION

This is the final air construction permit for the use of the existing kiln dump chute and for air intake into the scrubbing system during startup for the Multifos Plant Kiln C. Oxides of nitrogen (NOx) emissions limits will be maintained through operational control of steam feed into the kiln. This plant is at the existing New Wales Facility (SIC No. 2874), which is located in Polk County at 3095 Highway 640 in Mulberry, Florida. The UTM Coordinates are Zone 17, 396.6 kilometers (km) East and 3078.9 km North.

This final permit is organized into the following sections: Section 1 (General Information); Section 2 (Administrative Requirements); Section 3 (Emissions Unit Specific Conditions); Section 4 (Appendices). Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Tallahassee, Florida

Jeffery F. Koerner, Program Administrator
Permitting and Compliance Section
Division of Air Resource Management

7-22-11
(Date)

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit with Appendices) was sent by electronic mail, or a link to these documents made available electronically on a publicly accessible server, with received receipt requested before the close of business on 7-22-11 to the persons listed below.

Mr. Ron Yasurek, Mosaic Fertilizer, LLC (ronald.yasurek@mosaicco.com)
Mr. Rama Iyer, Mosaic Fertilizer, LLC (rama.iyer@mosaicco.com)
Mr. Pradeep Raval, Koogler & Associates, Inc. (praval@kooglerassociates.com)
Ms. Cindy Zang-Torres, DEP Southwest District Office (cindy.zhang-torres@dep.state.fl.us)
Ms. Kathleen Forney, EPA Region 4 (forney.kathleen@epa.gov)
Ms. Heather Abrams, EPA Region 4 (abrams.heather@epa.gov)
Ms. Vickie Gibson, DEP BAR Reading File (victoria.gibson@dep.state.fl.us)

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

Lynn Scarce (Clerk) July 22, 2011 (Date)

FACILITY DESCRIPTION

The existing Multifos animal feed ingredient facility consists of a common mixed feed preparation section for feeding phosphate-containing material to three rotary defluorination kilns and the associated processing and handling equipment. This permit supplements all previously issued air construction and operation permits for the Multifos Plant Kiln C.

PROJECT DESCRIPTION

The applicant request that the existing kiln dump chute and air intake into the scrubbing system during startup for the existing Multifos Plant Kiln C be permitted. The dump chute was installed as part of the original project and is used for separating the off-specification product. During plant startup, ambient air is used to maintain a proper operational flow rate to through the air scrubbing system. Mosaic conducted NOx emissions testing that demonstrated compliance with the limits by controlling the flow ratio of steam to natural gas fuel. The applicant requests that oxides of nitrogen (NOx) limits be implemented through operational control of steam feed into the kiln.

EMISSION UNITS

This project potentially affects the following existing emissions units.

EU No.	Emissions Units Description
074	Kiln C Scrubber Stack
075	Kiln C Cooler Baghouse
076	Kiln C Milling and Sizing Baghouse

REGULATORY CLASSIFICATION

- The facility is a major source of hazardous air pollutants (HAP).
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

APPENDICES

The following Appendices are attached as part of this permit.

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions

SECTION 2. ADMINISTRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Bureau of Air Regulation, Division of Air Resource Management, Florida Department of Environmental Protection (Department). The Bureau of Air Regulation's mailing address is 2600 Blair Stone Road (MS #5505), Tallahassee, Florida 32399-2400. All documents related to applications for permits to operate an emissions unit shall be submitted to the Air Resource Section of the Department's Southwest District Office at 13051 North Telecom Parkway, Temple Terrace, FL 33637-0926.
2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the Air Resource Section of the Department's Southwest District Office at 13051 North Telecom Parkway, Temple Terrace, FL 33637-0926.
3. Appendices: The following Appendices are attached as a part of this permit: Appendix A (Citation Formats and Glossary of Common Terms); Appendix B (General Conditions); and Appendix C (CEMS Requirements).
4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.
5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]
6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]
7. Application for Title V Permit: This permit authorizes installation of a NOx CEMS analyzer, the use of the existing dump chute and the intake of ambient air during startup of the Multifos Plant Kiln C. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit, but no later than 180 days after commencing operation. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority. [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

A. Multifos Plant Kiln C

This section of the permit addresses the following emissions units (EU).

EU No.	Emissions Units Description
074	Kiln C Scrubber Stack
075	Kiln C Cooler Baghouse
076	Kiln C Milling & Sizing Baghouse

PREVIOUS PERMITS

1. Permit Scope: Conditions of this permit supplement all previously issued air construction and operation permits for the affected emissions units. These conditions are in addition to all other applicable permit conditions and regulatory requirements. Unless otherwise specified by this permit, the permittee shall continue to comply with the conditions of those permits, which include restrictions and standards regarding capacities, production, operation, fuels, emissions, monitoring, record keeping, reporting, etc.
[Rule 62-4.070, F.A.C.]

EMISSION AND PERFORMANCE REQUIREMENTS

2. Dump Chute: The permittee is authorized to operate a dump chute for separating off-specification material from the Multifos Plant Kiln C. Such operation is expected to be intermittent and infrequent. To the extent practicable, the permittee shall minimize use of the dump chute.
[Plant Design and Rule 62-4.070, F.A.C.]

3. Scrubber Intake Air: During startup of the Multifos Plant Kiln C, the permittee is authorized to introduce ambient air into the scrubber system to maintain the flow rate necessary to operate within the parametric ranges specified in the Compliance Assurance Monitoring (CAM) plan.
[Design and Rule 62-4.070, F.A.C.]

4. Steam Flow Rate: Oxides of nitrogen (NOx) limits will be maintained through operational control of steam feed into the kiln. The permittee shall maintain a flow ratio into the kiln of 8 pounds of steam per one standard cubic foot of natural gas fuel (8:1). The 8:1 steam to fuel gas ratio will be maintained within a 24-hour block average and within a 10% operational variability or a minimum ratio of 7.2:1. There is no maximum steam to fuel gas ratio as the minimum is in place to limit the emissions of thermal NOx through combustion.

   The permittee may elect to conduct additional stack testing to establish a revised steam to gas ratio in compliance with the NOx standard. Within 90 days of firing the kiln with fuel oil, the permittee shall conduct additional stack testing to demonstrate compliance with the NOx standard. A steam to fuel oil ratio in pounds of steam per gallon of fuel oil will be established by stack testing.

   Compliance shall be determined for each 24-hour block averaging period by calculating the arithmetic average of all valid 15 minute periods that occur within that 24-hour block averaging period. The 24-hour block average may consist of less than 24- hours of data.
[Rule 62-4.070, F.A.C.]

RECORDKEEPING

5. Operational Records: The permittee shall maintain the following records in written or electronic operational logs: date, time and duration of dump chute operation; date, time and duration of ambient air intake to the scrubber system during kiln startup. Operational records of kiln production, steam feed, fuel flow rates, and steam to fuel ratio will be maintained in written or electronic format.
[Rule 62-4.070(3), F.A.C.]

Contents

Appendix A. Citation Formats and Glossary of Common Terms

Appendix B. General Conditions

CITATION FORMATS

The following illustrate the formats used in the permit to identify applicable requirements from permits and regulations.

Old Permit Numbers

Example: Permit No. AC50-123456 or Permit No. AO50-123456

Where: "AC" identifies the permit as an Air Construction Permit
"AO" identifies the permit as an Air Operation Permit
"123456" identifies the specific permit project number

New Permit Numbers

Example: Permit Nos. 099-2222-001-AC, 099-2222-001-AF, 099-2222-001-AO, or 099-2222-001-AV

Where: "099" represents the specific county ID number in which the project is located

"2222" represents the specific facility ID number for that county

"001" identifies the specific permit project number

"AC" identifies the permit as an air construction permit

"AF" identifies the permit as a minor source federally enforceable state operation permit

"AO" identifies the permit as a minor source air operation permit

"AV" identifies the permit as a major Title V air operation permit

PSD Permit Numbers

Example: Permit No. PSD-FL-317

Where: "PSD" means issued pursuant to the preconstruction review requirements of the Prevention of Significant Deterioration of Air Quality

"FL" means that the permit was issued by the State of Florida

"317" identifies the specific permit project number

Florida Administrative Code (F.A.C.)

Example: [Rule 62-213.205, F.A.C.]

Means: Title 62, Chapter 213, Rule 205 of the Florida Administrative Code

Code of Federal Regulations (CFR)

Example: [40 CRF 60.7]

Means: Title 40, Part 60, Section 7

GLOSSARY OF COMMON TERMS

° F: degrees Fahrenheit

µg: microgram

AAQS: Ambient Air Quality Standard

acf: actual cubic feet

acfm: actual cubic feet per minute

ARMS: Air Resource Management System (Department's database)

BACT: best available control technology

bhp: brake horsepower

Btu: British thermal units

CAM: compliance assurance monitoring

CEMS: continuous emissions monitoring system

cfm: cubic feet per minute

CFR: Code of Federal Regulations

CAA: Clean Air Act

CMS: continuous monitoring system

CO: carbon monoxide

CO_2: carbon dioxide

COMS: continuous opacity monitoring system

DARM: Division of Air Resource Management

DEP: Department of Environmental Protection

Department: Department of Environmental Protection

dscf: dry standard cubic feet

dscfm: dry standard cubic feet per minute

EPA: Environmental Protection Agency

ESP: electrostatic precipitator (control system for reducing particulate matter)

EU: emissions unit

F: fluoride

F.A.C.: Florida Administrative Code

F.A.W.: Florida Administrative Weekly

F.D.: forced draft

F.S.: Florida Statutes

FGD: flue gas desulfurization

FGR: flue gas recirculation

ft^2: square feet

ft^3: cubic feet

gpm: gallons per minute

gr: grains

HAP: hazardous air pollutant

Hg: mercury

I.D.: induced draft

ID: identification

kPa: kilopascals

lb: pound

MACT: maximum achievable technology

MMBtu: million British thermal units

MSDS: material safety data sheets

MW: megawatt

NESHAP: National Emissions Standards for Hazardous Air Pollutants

NO_X: nitrogen oxides

NSPS: New Source Performance Standards

O&M: operation and maintenance

O_2: oxygen

Pb: lead

PM: particulate matter

PM_{10}: particulate matter with a mean aerodynamic diameter of 10 microns or less

ppm: parts per million

ppmv: parts per million by volume

ppmvd: parts per million by volume, dry basis

QA: quality assurance

QC: quality control

PSD: prevention of significant deterioration

psi: pounds per square inch

PTE: potential to emit

RACT: reasonably available control technology

RATA: relative accuracy test audit

RBLC: EPA's RACT/BACT/LAER Clearinghouse

SAM: sulfuric acid mist

scf: standard cubic feet

scfm: standard cubic feet per minute

SIC: standard industrial classification code

SIP: State Implementation Plan

SNCR: selective non-catalytic reduction (control system used for reducing emissions of nitrogen oxides)

SO_2: sulfur dioxide

TPD: tons/day

TPH: tons per hour

TPY: tons per year

TRS: total reduced sulfur

UTM: Universal Transverse Mercator coordinate system

VE: visible emissions

VOC: volatile organic compounds

General Conditions

The permittee shall comply with the following general conditions from Rule 62-4.160, F.A.C.

1. The terms, conditions, requirements, limitations and restrictions set forth in this permit, are "permit conditions" and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.

4. This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

6. The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

   a. Have access to and copy any records that must be kept under conditions of the permit;

   b. Inspect the facility, equipment, practices, or operations regulated or required under this permit; and

   c. Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

   a. A description of and cause of noncompliance; and

   b. The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.

11. This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit or a copy thereof shall be kept at the work site of the permitted activity.

13. This permit also constitutes:

    a. Determination of Best Available Control Technology (NA);

    b. Determination of Prevention of Significant Deterioration (NA); and

    c. Compliance with New Source Performance Standards (NA).

14. The permittee shall comply with the following:

    a. Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.

    b. The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

    c. Records of monitoring information shall include:

        (a) The date, exact place, and time of sampling or measurements;

        (b) The person responsible for performing the sampling or measurements;

        (c) The dates analyses were performed;

        (d) The person responsible for performing the analyses;

        (e) The analytical techniques or methods used;

        (f) The results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.