Department of Environmental Protection

Jeb Bush
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

May 5, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Ms. Melody Russo
Environmental Superintendent
Cargill Fertilizer, Inc.
3200 Highway 60 West
Bartow, Florida 33830

Re: Typographical Error in Permit No. 1050046-008-AC (PSD-FL-255)
No. 3 Fertilizer (MAP/DAP) Plant

Dear Ms. Russo:

We discovered a typo in the referenced permit. Enclosed is a corrected copy of the affected page. If there are any questions, please contact John Reynolds at (850)921-9536.

Sincerely,

A. A. Linero, P.E., Administrator
New Source Review Section

AAL/jr

c: Bill Thomas, SWD
Joe King, Polk County
Gregg Worley, EPA
John Bunyak, NPS
David Buff, P.E., Golder Associates

SECTION III - EMISSIONS UNIT(S) SPECIFIC CONDITIONS

The Specific Conditions listed in this section apply to the following emission units:

EMISSION UNIT NO.	EMISSION UNIT DESCRIPTION
001	No. 3 Fertilizer (MAP/DAP) Plant

1. Unless otherwise indicated, the modification and operation of the subject No. 3 Fertilizer Plant shall be in accordance with the capacities and specifications stated in the application or in updated submittals. **[Rule 62-210.300, F.A.C.]**

2. The subject emissions unit shall comply with all applicable provisions of the 40 CFR 60 New Source Performance Standards for Diammonium Phosphate Plants, Subpart V. **[Rule 62-204.800 F.A.C.]**

3. The No. 3 MAP/DAP Plant shall not produce more than ~~1,470~~ 3,000 tons per day of MAP or DAP product or process more than 61.25 tons of P_2O_5 input per hour for either product as determined using the procedure in Specific Condition No. 13. **[Rule 62-210.200, F.A.C.]**

4. The subject emission unit is allowed to operate continuously (8760 hours/year). **[Rule 62-210.200, F.A.C.]**

5. Total fluoride emissions shall not exceed 2.5 lb/hr and 10.95 TPY based on 0.041 lb F/ton of P_2O_5 input. **[Rule 62-212.400, F.A.C.]**

6. Particulate matter emissions shall not exceed 11.0 lb/hr and 48.2 TPY based on 0.18 lb/ton P_2O_5 input. **[Rule 62-212.400, F.A.C.]**

7. Visible emissions from the stack shall not exceed 15% opacity based on recent stack tests. **[Rule 62-212.400, F.A.C.]**

8. During periods of firing natural gas only, sulfur dioxide emissions from the stack shall be presumed as minimal and a sulfur dioxide compliance test shall be waived. No. 6 fuel oil with a maximum sulfur content of 1.5% sulfur by weight may be fired up to a maximum of 338,000 gallons per year. The firing rate of either fuel shall not exceed 40 million BTU per hour. The permittee shall maintain records of the fuel oil supplier's sulfur content analysis. **[Rule 62-210.200(227), F.A.C.]**

9. The total pressure drop across the combined primary and secondary scrubber control systems shall be maintained at all times during normal operation at a minimum pressure drop of 15 inches H_2O. Instances may occur at other times such as low operating rates during which the total pressure drop may be less than the normal rate minimum of 15 inches H_2O. The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across each scrubber. Accuracy of the monitoring devices shall be $\pm$ 5% over the operating range. **[Rules 62-297.310, 62-296.800; 40 CFR 60.223(c), F.A.C.]**

10. Before this construction permit expires, and annually, the subject emissions units shall be tested for compliance with the above emission limits. For the duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

11. The Department's Southwest District office in Tampa shall be notified in writing at least 15 days prior to the compliance tests. Written reports of the test results shall be submitted to that office within 45 days of test completion. **[Rule 62-297.310, F.A.C.]**

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3. Article Addressed to:
Ms. Melody Russo, ES
Cargill Fertilizer
3200 Hwy 60 West
Bartow, FL 33830

4a. Article Number
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4b. Service Type
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PS Form **3800**, April 1995

105046-CLE-AC
DD-FL-255

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

11. Nitrogen oxides emissions from the reactor/granulator/dryer stack of each train shall not exceed the current limit of 12.6 lb/hr and 55.2 TPY. **[Rule 62-210.200(227), F.A.C.]**

12. All venturi scrubbers for each train shall be operated at a minimum pressure drop of 15 inches w.c. The permittee shall install, calibrate, operate and maintain monitoring devices that continuously measure and record the total pressure drop across each scrubbing system. Accuracy of the monitoring devices shall be ± 5% over the operating range. **[Rules 62-297.310, 62-296.800, F.A.C.; 40 CFR 60.223(c)]**

13. Before this construction permit expires, the subject emissions units shall be tested for compliance with the above emission limits. For the duration of all tests the emission units shall be operating at permitted capacity. Permitted capacity is defined as 90-100 percent of the maximum operating rate allowed by the permit. If it is impracticable to test at permitted capacity, then the emission unit may be tested at less than permitted capacity (i.e., 90% of the maximum operating rate allowed by the permit); in this case, subsequent emission unit operation is limited to 110 percent of the test load until a new test is conducted. Once the emission unit is so limited, then operation at higher capacities is allowed for no more than 15 consecutive days for the purposes of additional compliance testing to regain the permitted capacity in the permit. **[Rule 62-297.310, F.A.C.]**

14. The Department's Southwest District office in Tampa shall be notified in writing at least 15 days prior to the compliance tests. Written reports of the test results shall be submitted to that office within 45 days of test completion. **[Rule 62-297.310, F.A.C.]**

15. The compliance test procedures shall be in accordance with EPA Reference Methods 1, 2, 3, 4, 5, 7E, 9 and 13A or 13B, as appropriate, as published in 40 CFR 60, Appendix A. 60, Appendix A. The baghouse may be tested for visible emissions in lieu of a Method 5 test. **[Rules 62-204.800 and 62-297.310(7)(c), F.A.C.]**

16. All measurements, records, and other data required to be maintained by this facility shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. **[Rule 62-4.070(3), F.A.C.]**

17. The permittee shall install, calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of ±5 percent over its operating range. The permittee shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using the flow monitoring device meeting the requirements of 40 CFR 60.223(a) and then by proceeding according to 40 CFR 60.224(b)(3). **[Rule 62-296.800, F.A.C.; 40 CFR 60.223(b)]**

18. No person shall cause, suffer, allow, or permit the discharge of air pollutants which cause or contribute to an objectionable odor. **[Rule 62-296.320, F.A.C.]**

nd then by proceeding according to 60.214(b)(3).

(c) The owner or operator of any uperphosphoric acid plant subject to he provisions of this part shall install, alibrate, maintain, and operate a nonitoring device which continuously neasures and permanently records the otal pressure drop across the process crubbing system. The monitoring de-ice shall have an accuracy of ±5 per-ent over its operating range.

10 FR 33155, Aug. 6, 1975, as amended at 54 'R 6670, Feb. 14, 1989]

60.214 Test methods and procedures.

(a) In conducting the performance ests required in §60.8, the owner or op-rator shall use as reference methods nd procedures the test methods in ap-endix A of this part or other methods nd procedures as specified in this sec-ion, except as provided in §60.8(b).

(b) The owner or operator shall deter-nine compliance with the total luorides standard in §60.212 as follows:

(1) The emission rate (E) of total luorides shall be computed for each un using the following equation:

$$E = \sum_{i=1}^{N} C_{si} Q_{sdi}/(P K)$$

where:

E=emission rate of total fluorides, g/metric ton (lb/ton) of equivalent P_2O_5 feed.

C_{si}=concentration of total fluorides from emission point "i," mg/dscm (mg/dscf).

Q_{sdi}=volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).

N=number of emission points associated with the affected facility.

P=equivalent P_2O_5 feed rate, metric ton/hr (ton/hr).

K=conversion factor, 1000 mg/g (453,600 mg/lb).

(2) Method 13A or 13B shall be used to determine the total fluorides concentration (C_{si}) and volumetric flow rate (Q_{sdi}) of the effluent gas from each of the emission points. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

(3) The equivalent P_2O_5 feed rate (P) shall be computed for each run using the following equation:

$P=M_p R_p$

where:

M_p=total mass flow rate of phosphorus-bearing feed, metric ton/hr (ton/hr).

$R_p=P_2O_5$ content, decimal fraction.

(i) The accountability system of §60.213(a) shall be used to determine the mass flow rate (M_p) of the phosphorus-bearing feed.

(ii) The Association of Official Analytical Chemists (AOAC) Method 9 (incorporated by reference—see §60.17) shall be used to determine the P_2O_5 content (R_p) of the feed.

[54 FR 6670, Feb. 14, 1989]

Subpart V—Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants

§60.220 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each granular diammonium phosphate plant having a design capacity of more than 15 tons of equivalent P_2O_5 feed per calendar day. For the purpose of this subpart, the affected facility includes any combination of: reactors, granulators, dryers, coolers, screens, and mills.

(b) Any facility under paragraph (a) of this section that commences construction or modification after October 22, 1974, is subject to the requirements of this subpart.

[42 FR 37938, July 25, 1977, as amended at 48 FR 7129, Feb. 17, 1983]

§60.221 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Granular diammonium phosphate plant* means any plant manufacturing granular diammonium phosphate by reacting phosphoric acid with ammonia.

(b) *Total fluorides* means elemental fluorine and all fluoride compounds as measured by reference methods specified in §60.224, or equivalent or alternative methods.

(c) *Equivalent P_2O_5 feed* means the quantity of phosphorus, expressed as phosphorus pentoxide, fed to the process.

[40 FR 33155, Aug. 6, 1975]

§60.222 Standard for fluorides.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain total fluorides in excess of 30 g/metric ton of equivalent P_2O_5 feed (0.060 lb/ton).

[40 FR 33155, Aug. 6, 1975]

§60.223 Monitoring of operations.

(a) The owner or operator of any granular diammonium phosphate plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a flow monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The flow monitoring device shall have an accuracy of ±5 percent over its operating range.

(b) The owner or operator of any granular diammonium phosphate plant shall maintain a daily record of equivalent P_2O_5 feed by first determining the total mass rate in metric ton/hr of phosphorus-bearing feed using a flow monitoring device meeting the requirements of paragraph (a) of this section and then by proceeding according to §60.224(b)(3).

(c) The owner or operator of any granular diammonium phosphate plant subject to the provisions of this part shall install, calibrate, maintain, and operate a monitoring device which continuously measures and permanently records the total pressure drop across the scrubbing system. The monitoring device shall have an accuracy of ±5 percent over its operating range.

[40 FR 33155, Aug. 6, 1975, as amended at 54 FR 6670, Feb. 14, 1989]

§60.224 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the total fluorides standard in §60.222 as follows:

(1) The emission rate (E) of total fluorides shall be computed for each run using the following equation:

$$E = \sum_{i=1}^{N} C_{si} Q_{sdi}/(PK)$$

where:

E=emission rate of total fluorides, g/metric ton (lb/ton) of equivalent P_2O_5 feed.

C_{si}=concentration of total fluorides from emission point "i," mg/dscm (mg/dscf).

Q_{sdi}=volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).

N=number of emission points associated with the affected facility.

P=equivalent P_2O_5 feed rate, metric ton/hr (ton/hr).

K=conversion factor, 1000 mg/g (453,600 mg/lb).

(2) Method 13A or 13B shall be used to determine the total fluorides concentration (C_{si}) and volumetric flow rate (Q_{sdi}) of the effluent gas from each of the emission points. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

(3) The equivalent P_2O_5 feed rate (P) shall be computed for each run using the following equation:

$P=M_p R_p$

where:

M_p=total mass flow rate of phosphorus-bearing feed, metric ton/hr (ton/hr).

$R_p=P_2O_5$ content, decimal fraction.

(i) The accountability system of §60.223(a) shall be used to determine the mass flow rate (M_p) of the phosphorus-bearing feed.

(ii) The Association of Official Analytical Chemists (AOAC) Method 9 (incorported by reference—see §60.17) shall be used to determine the P_2O_5 content (R_p) of the feed.

[54 FR 6670, Feb. 14, 1989]

Subpart W—Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants

§60.230 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each triple superphosphate plant having a design capacity of more than 15 tons of

5. Particulate and fluoride emissions from the kiln feed mix facility shall be controlled by a Nickols Engineering and Research Venturi-Impingement Plant Scrubber. The scrubber shall be provided with adequate access for inspection.

   The unit shall have a nominal 400 gallons per minute of scrubbing liquid and operate at a pressure drop of 9.2" water gage minimum. The unit shall be equipped with a device for the continuous measurement of the pressure drop across the scrubber.
   (9 VAC 5-80-10 H of State Regulations)

6. Particulate, sulfur dioxide and fluoride emissions from the No. 3 defluorination kiln shall be controlled by a gas handling circuit consisting of the kiln plenum chamber, an Andersen 2000 Model HS-125 Venturi Horizontal Spray Baffled Scrubber, and a BACT model 034 variable ME multiple port variable throat venturi scrubber. Each scrubber shall be provided with adequate access for inspection.

   The pH of the Andersen 2000 scrubbing liquid and the BACT scrubbing liquid shall be controlled so as to be above a level of 5.8 and 6.2, respectively, based on an eight hour rolling average. The BACT unit shall operate at a pressure drop of at least 21.3" water gauge across the venturi.

   All gas handling circuits, including the BACT scrubber unit, shall be equipped with a device for the continuous measurement of pressure drop across the entire circuit. The Andersen scrubber shall be manually sampled and analyzed on an hourly basis for pH. Process variations shall be reported to the Director, Southwest Regional Office, if, based on an eight hour rolling average, the limits are not met. This condition is based on the calculated lowest average. System measurements are to be arranged with the Director, Southwest Regional Office.
   (9 VAC 5-80-10 H of State Regulations)

7. Particulate emissions from clinker conveying shall be controlled by wet suppression.
   (9 VAC 5-80-10 H of State Regulations)

8. Particulate emissions from the operation of the belt conveyor at the exit of the reclaim crusher shall be controlled by wet suppression and enclosure. The control systems shall be provided with adequate access for inspection.
   (9 VAC 5-80-10 H of State Regulations)

9. The approved fuels for the defluorination kiln are coal and distillate fuel oil. The burner for the defluorination kiln shall not be fired with natural gas without first receiving a permit modification to do so. Any change in the fuels may require a permit to modify and operate.
   (9 VAC 5-170-160 of State Regulations)

10. The permitted facility shall be constructed so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at the appropriate locations.
    (9 VAC 5-50-30 F of State Regulations)