INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

August 30, 2004

TO: Interested Parties / Applicant

RE: U.S. Gypsum Company / 089-19361-00333

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision – Approval

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to 326 IAC 2, this approval was effective immediately upon submittal of the application.

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-AM.dot 9/16/03

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August 30, 2004

Mr. Jalon L. King
Plant Manager
United States Gypsum Company
301 Riley Road
East Chicago, IN 46312

Re: **089-19361**
Second Administrative Amendment to
Part 70 089-7532-00333

Dear Mr. King:

U.S. Gypsum Company was issued a permit on July 6, 1999, for a stationary gypsum wallboard and gypsum products manufacturing plant. A letter requesting a change was received on July 6, 2004.

The changes are summarized as follows:

1. Particulate matter emissions from kettle feed bin #2 in the stucco production process, which are currently controlled by baghouse MBH-8, will be redirected to a new baghouse, identified as MBH-27.

2. Particulate matter emissions from kettle feed bin #3 in the stucco production process, which are currently controlled by baghouse MBH-8, will be redirected to a new baghouse, identified as MBH-28.

3. Baghouse MBH-8 will remain in service in the landplaster production process.

The revised conditions and changed permit pages are shown in the attached Technical Support Document, with deleted language as ~~strikeouts~~ and new language **bolded.** Pursuant to the provisions of 326 IAC 2-7-11, the permit is hereby administratively amended.

All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this amendment and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Patrick Brennan, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, at 631-691-3395 or in Indiana at 800-451-6027, ask for extension 631-691-3395.

Sincerely,

Original Signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

PTB/MES
Attachments
cc: File - Lake County
U.S. EPA, Region V
Lake County Health Department
Northwest Regional Office
Air Compliance Section Inspector - Richard Massoels
Compliance Branch
Administrative and Development Section
Technical Support and Modeling - Michele Boner

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PART 70 OPERATING PERMIT
OFFICE OF AIR QUALITY

United States Gypsum Company
301 Riley Road
East Chicago, Indiana 46312

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 and 326 IAC 2-1-3.2 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T089-7532-00333	
Issued by: Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: July 6, 1999 Expiration Date: July 6, 2004

1st Significant Permit Modification No. 089-11767-00333	Issuance Date: November 13, 2002
2nd Significant Permit Modification No. 089-16805-00333	Issuance Date: March 14, 2003
3rd Significant Permit Modification No. 089-18554-00333	Issuance Date: May 12, 2004
1st Administrative Amendment No: 089-19720-00333	Issuance Date:

Second Administrative Amendment No.: AA 089-19361-00333	Sections Affected: A.2 and D.3
Issued by: Original Signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: August 30, 2004

(g) One (1) enclosed rock shed, with a maximum capacity of 125,000 tons.

(h) One (1) synthetic gypsum stockpile, identified as F-1, with particulate matter emissions exhausting directly to the atmosphere.

A landplaster production process, consisting of the following equipment:

(a) A conveying system, consisting of belt and screw conveyors, with particulate matter emissions controlled by partial or total enclosure, and exhausting to associated processes or directly to the atmosphere. Some portions of the conveyor system are controlled by one (1) baghouse, identified as MBH-2, and exhausting through one (1) stack, identified as M-2.

(b) One (1) dryer mill bin #1, with a maximum capacity of 60 tons and a throughput of 40 tons per hour, with particulate matter emissions uncontrolled, and exhausting directly to the atmosphere.

(c) One (1) dryer mill bin #2, with a maximum capacity of 60 tons and a throughput of 40 tons per hour, with particulate matter emissions uncontrolled, and exhausting directly to the atmosphere.

(d) One (1) dryer mill #1, with a maximum throughput of 35 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-8, and exhausting through one (1) stack, identified as M-8.

(e) One (1) natural gas-fired burner for the dryer mill #1, with a heat input capacity of 20 MMBtu per hour, and exhausting through one (1) stack, identified as M-8.

(f) One (1) screening station #1, with a maximum throughput of 35 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-8, and exhausting through one (1) stack, identified as M-8.

(g) One (1) dryer mill #2, with a maximum throughput of 35 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-12, and exhausting through one (1) stack, identified as M-12.

(h) One (1) natural gas-fired burner for the dryer mill #2, with a heat input capacity of 20 MMBtu per hour, and exhausting through one (1) stack, identified as M-12.

(i) One (1) screening station #2, with a maximum throughput of 35 tons per hour, with particulate matter emissions controlled by one (1) baghouse identified as MBH-12, and exhausting through one (1) stack, identified as M-12.

(j) One (1) mill landplaster bin, with a maximum capacity of 20 tons, with particulate matter controlled by one (1) baghouse, identified as MBH-19, and exhausting through one stack, identified as M-19.

A stucco production process, consisting of the following equipment:

(a) Two (2) kettle feed bins, known as kettle feed bin #1 and kettle feed bin #2, each with a maximum capacity of 60 tons, with particulate matter emissions controlled by two (2) baghouses. Emissions from kettle feed bin #1 will be controlled by one (1) baghouse, known as MBH-25, and exhausting through one (1) stack, identified as M-25. Emissions from kettle feed bin #2 will be controlled by one (1) baghouse, known as MBH-27, and exhausting through one (1) stack, identified as M-27.

(b) One (1) calcining kettle, known as calcining kettle #1, with a maximum throughput of 11.5 tons per hour, with particulate emissions controlled by one (1) baghouse, identified as MBH-22, and exhausting through one (1) stack, identified as M-22**.**

(c) One (1) calcining kettle, known as calcining kettle #2, with a maximum throughput of 45 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-16, and exhausting through one (1) stack, identified as M-16.

(d) One (1) natural gas-fired burner for calcining kettle #1, with a heat input capacity of 7.5 MMBtu per hour, and exhausting through one (1) stack, identified as M-22.

(e) Six (6) natural gas-fired burners for the calcining kettle #2, each with a heat input capacity of 5 MMBtu per hour, and exhausting through one (1) stack, identified as M-14.

(f) One (1) kettle feed bin, known as kettle feed bin #3, with a maximum capacity of 60 tons, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-28, and exhausting through one (1) stack, identified as M-28.

(g) One (1) calcining kettle, known as calcining kettle #3, with a maximum throughput of 30 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-1, and exhausting through one (1) stack, identified as M-1.

(h) One (1) natural-gas fired burner for the calcining kettle #3, with a heat input capacity of 15 MMBtu per hour, and exhausting through one (1) stack, identified as M-6.

(i) One (1) hot pit, known as hot pit #3, with a maximum throughput of 30 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-1, and exhausting through one (1) stack, identified as M-1.

(j) Miscellaneous stucco handling equipment, including one (1) #4 stucco elevator, one (1) #17 screw, and one (1) #17A screw, with a maximum throughput of 70 tons per hour, with particulate matter emissions controlled by partial or total enclosure, and exhausting to associated processes or directly to the atmosphere. Some portions of the stucco handling system are controlled by one (1) baghouse, identified as MBH-2, and exhausting through one (1) stack, identified as M-2.

(k) Stucco storage equipment, including one (1) #49 screw, and one (1) #47 screw, with a maximum capacity of seventy (70) tons per hour, and three stucco storage bins, known as #1, #2 and #3, each with a capacity of 175 tons, with particulate emissions controlled by one (1) baghouse, identified as MBH-24, and exhausting through one (1) stack, identified as M-23.

(l) Stucco storage equipment, including one (1) #1 elevator and one (1) #27 screw, with a maximum capacity of seventy (70) tons per hour, and three (3) stucco storage bins, known as #4, #5 and #6, each with a capacity of 175 tons, with particulate emissions controlled by one (1) baghouse, identified as MBH-23, and exhausting through one (1) stack, identified as M-23.

(m) One (1) stucco storage bin, with a maximum capacity of 50 tons, with particulate matter controlled by one (1) baghouse, identified as MBH-2, and exhausting through one (1) stack, identified as M-2.

A gypsum wallboard manufacturing line, consisting of the following equipment:

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

A stucco production process, consisting of the following equipment::

(a) Two (2) kettle feed bins, known as kettle feed bin #1 and kettle feed bin #2, each with a maximum capacity of 60 tons, with particulate matter emissions controlled by two (2) baghouses. Emissions from kettle feed bin #1 will be controlled by one (1) baghouse, known as MBH-25, and exhausting through one (1) stack, identified as M-25. Emissions from kettle feed bin #2 will be controlled by one (1) baghouse, known as MBH-27, and exhausting through one (1) stack, identified as M-27.

(b) One (1) calcining kettle, known as calcining kettle #1, with a maximum throughput of 11.5 tons per hour, with particulate emissions controlled by one (1) baghouse, identified as MBH-22, and exhausting through one (1) stack, identified as M-22**.**

(c) One (1) calcining kettle, known as calcining kettle #2, with a maximum throughput of 45 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-16, and exhausting through one (1) stack, identified as M-16.

(d) One (1) natural gas-fired burner for calcining kettle #1, with a heat input capacity of 7.5 MMBtu per hour, and exhausting through one (1) stack, identified as M-22.

(e) Six (6) natural gas-fired burners for the calcining kettle #2, each with a heat input capacity of 5 MMBtu per hour, and exhausting through one (1) stack, identified as M-14.

(f) One (1) kettle feed bin, known as kettle feed bin #3, with a maximum capacity of 60 tons, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-28, and exhausting through one (1) stack, identified as M-28.

(g) One (1) calcining kettle, known as calcining kettle #3, with a maximum throughput of 30 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-1, and exhausting through one (1) stack, identified as M-1.

(h) One (1) natural-gas fired burner for the calcining kettle #3, with a heat input capacity of 15 MMBtu per hour, and exhausting through one (1) stack, identified as M-6.

(i) One (1) hot pit, known as hot pit #3, with a maximum throughput of 30 tons per hour, with particulate matter emissions controlled by one (1) baghouse, identified as MBH-1, and exhausting through one (1) stack, identified as M-1.

(j) Miscellaneous stucco handling equipment, including one (1) #4 stucco elevator, one (1) #17 screw, and one (1) #17A screw, with a maximum throughput of 70 tons per hour, with particulate matter emissions controlled by partial or total enclosure, and exhausting to associated processes or directly to the atmosphere. Some portions of the stucco handling system are controlled by one (1) baghouse, identified as MBH-2, and exhausting through one (1) stack, identified as M-2.

A stucco production process, consisting of the following equipment:: (continued)

(k) Stucco storage equipment, including one (1) #49 screw, and one (1) #47 screw, with a maximum capacity of seventy (70) tons per hour, and three stucco storage bins, known as #1, #2 and #3, each with a capacity of 175 tons, with particulate emissions controlled by one (1) baghouse, identified as MBH-24, and exhausting through one (1) stack, identified as M-23.

(l) Stucco storage equipment, including one (1) #1 elevator and one (1) #27 screw, with a maximum capacity of seventy (70) tons per hour, and three (3) stucco storage bins, known as #4, #5 and #6, each with a capacity of 175 tons, with particulate emissions controlled by one (1) baghouse, identified as MBH-23, and exhausting through one (1) stack, identified as M-23.

(m) One (1) stucco storage bin, with a maximum capacity of 50 tons, with particulate matter controlled by one (1) baghouse, identified as MBH-2, and exhausting through one (1) stack, identified as M-2.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 Nonattainment Area Particulate Limitation [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations), the PM emissions from the stucco production process shall be limited as follows:

(a) PM emissions from kettle feed bins #1, #2 and #3 exhausting to stacks M-25, M-27 and M-28 shall each not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(b) PM emissions from calcining kettle #1 exhausting to stack M-22 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(c) PM emissions from calcining kettle #2 exhausting to stack M-16 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(d) PM emissions from the natural gas-fired burner for kettle #1 exhausting to stack M-22 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(e) PM emissions from the natural gas-fired burners for kettle #2 exhausting to stack M-14 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(f) PM emissions from the natural gas-fired burner for kettle #3 exhausting to stack M-6 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(g) PM emissions from hot pit #3 exhausting to stack M-1 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(h) PM emissions from the stucco storage bin exhausting to stack M-2 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(i) PM emissions from the stucco storage bins #1 through #6, exhausting to stack M-23, shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

D.3.2 County PM_{10} Emission Requirements [326 IAC 6-1-10.1]

Pursuant to 326 IAC 6-1-10.1 (Lake County PM_{10} Emission Requirements), the PM_{10} emissions shall be limited as follows:

(a) The PM_{10} emissions from kettle #3 exhausting to stack M-1 shall not exceed 0.012 grains per dry standard cubic foot and 3.210 pounds per hour.

(b) The PM_{10} emissions from the stucco handling system exhausting to stack M-2 shall not exceed 0.015 grains per dry standard cubic foot and 2.210 pounds per hour.

D.3.3 Emission Offset Minor PM Limit [326 IAC 2-3]

Pursuant to CP 089-8657-00333, issued on January 8, 1998, the PM emissions shall be limited as follows:

(a) PM emissions from kettle #2 exhausting to stack M-16 shall not exceed 0.010 grains per dry standard cubic foot.

(b) PM emissions from kettle feed bin #2 exhausting to stack M-27 shall not exceed 0.008 grains per dry standard cubic foot.

Compliance with these limits make 326 IAC 2-3 (Emission Offset) not applicable. Compliance with these limits also will satisfy the requirements of 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations) for these facilities.

D.3.4 Emission Offset Minor NO_X Limit [326 IAC 2-3]

Pursuant to CP-089-8657-00333, issued on January 8, 1998, natural gas throughput to the six (6) natural gas fired burners for calcining kettle #2 shall not exceed 338.4 million cubic feet per consecutive twelve (12) month period, including natural gas throughput to the wet and dry end seal natural gas burners, and the gauging water heater, which are found in Section D.4.

Compliance with this limit will assure that the NO_X emissions from the facilities permitted under CP-089-8657-00333, issued on January 8, 1998 shall remain less than twenty-five (25) tons per year and that the requirements of 326 IAC 2-3 (Emission Offset) are not applicable.

D.3.5 New Source Performance Standard [326 IAC 12] [40 CFR 60, Subpart UUU]

Pursuant to 40 CFR 60, Subpart UUU (Calciners and Dryers in Mineral Industries), PM emissions from kettle #1 exhausting to stack M-22 and kettle #2 exhausting to stack M-16, shall not exceed 0.092 grams per dry standard cubic meter (g/dscm) and ten percent (10%) opacity.

D.3.6 New Source Performance Standard [326 IAC 12] [40 CFR 60, Subpart OOO]

Pursuant to 40 CFR 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), PM emissions from kettle feed bin #1, exhausting through stack M-25, and kettle feed bin #2, exhausting through stack M-27, as well as all stucco storage and handling equipment exhausting through stacks M-2 and M-23, shall not exceed 0.05 grams per dry standard cubic meter (g/dscm) and seven percent (7%) opacity.

D.3.7 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and their control devices.

Compliance Determination Requirements

D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)]

(a) To demonstrate compliance with 40 CFR 60, Subpart UUU (Calciners and Dryers in Mineral Industries), and Condition D.3.5, the Permittee shall perform compliance testing

for PM and opacity from calcining kettle #1 exhausting through stack M-22, and calcining kettle #2, exhausting through stack M-16, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. The tests shall be performed in accordance with Section C - Performance Testing and 40 CFR 60.736.

(b) To demonstrate compliance with 40 CFR 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), and Condition D.3.6, the Permittee shall perform compliance testing for PM and opacity from kettle feed bin #1, exhausting through stack M-25, and kettle feed bin #2, exhausting through stack M-27, and the stucco storage and handling equipment exhausting through stacks M-2 and M-23, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. The tests shall be performed in accordance with Section C - Performance Testing and 40 CFR 60.675.

(c) The Permittee is not required to test the remaining stucco production facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the limits specified in Conditions D.3.1 and D.3.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

D.3.9 Particulate Matter (PM)

The baghouses for PM control shall be in operation at all times when the associated facilities are in operation.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)] [40 CFR Part 64]

D.3.10 Visible Emissions Notations

(a) Visible emission notations of the stack exhausts M-1, M-2, M-16, M-22, M-23, M-25, M-27 and M-28 shall be performed once per shift during normal daylight operations when exhausting directly to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

D.3.11 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the stucco production process, at least once per shift when the associated facilities are in operation when venting directly to the atmosphere.

(a) Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across baghouses MBH-1, MBH-2, MBH-16, MBH-22, MBH-23, MBH-24, MBH-25, M-27 and M-28, shall be maintained within the range of 0.5 and 6.0 inches of water, or a range established during the latest stack test.

(b) Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across baghouse MBH-25 shall be maintained within the range of 2.0 and 8.0 inches of water, or a range established during the latest stack test.

The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.12 Baghouse Inspections

An inspection shall be performed each calender quarter of all bags controlling the stucco production process. All defective bags shall be replaced.

D.3.13 Broken or Failed Bag Detection

In the event that bag failure has been observed.

(a) The affected compartments will be shut down immediately until the failed units have been repaired or replaced. Within eight (8) hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) hours of discovery of the failure and shall include a timetable for completion. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

(b) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

Record Keeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.14 Record Keeping Requirements

(a) To document compliance with Condition D.3.4, the Permittee shall maintain records of natural gas throughput to the six (6) natural gas fired burners for calcining kettle #2.

(b) To document compliance with Condition D.3.10, the Permittee shall maintain records of visible emission notations of the stack exhausts M-1, M-2, M-16, M-22, M-23, M-25, M-27 and M-28, once per shift.

(c) To document compliance with Condition D.3.11, the Permittee shall maintain the following:

(1) Records of the following operational parameters taken once per shift during normal operation when venting directly to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: frequency and differential pressure.

(2) Documentation of all response steps implemented, per event.

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(d) To document compliance with Condition D.3.12, the Permittee shall maintain records of the results of the inspections required under Condition D.3.12.

(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.15 Reporting Requirements

A quarterly summary of the information to document compliance with Condition 3.4 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting form located at the end of this permit, or an equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for Part 70 Administrative Amendment

Source Background and Description

Source Name:	**United States Gypsum Company**
Source Location:	**301 Riley Road, East Chicago, Indiana 46312**
County:	**Lake**
SIC Code:	**3275**
Operation Permit No.:	**T 089-7532-00333**
Operation Permit Issuance Date:	**July 6, 1999**
Administrative Amendment No.:	**089-19361-00333**
Permit Reviewer:	**Patrick Brennan/MES**

The Office of Air Quality (OAQ) has reviewed an application from U.S. Gypsum Company, requesting changes to their Part 70 operating permit. The Office of Air Quality has determined that these changes are administrative, and can be processed as an Administrative Amendment. The changes are summarized as follows:

1. Particulate matter emissions from kettle feed bin #2 in the stucco production process, which are currently controlled by baghouse MBH-8, will be redirected to a new baghouse, identified as MBH-27.

2. Particulate matter emissions from kettle feed bin #3 in the stucco production process, which are currently controlled by baghouse MBH-8, will be redirected to a new baghouse, identified as MBH-28.

3. Baghouse MBH-8, which previously controlled sources in both the land plaster and stucco production (kettle feed bins #2 and #3) processes, will remain in service in the landplaster production process only (Section D.2).

Recommendation

The staff recommends to the Commissioner that the Part 70 Administrative Amendment be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on July 6, 2004.

Emission Calculations

The rerouting of the kettle feed bin emissions to baghouses MBH-27 and MBH-28 will not result in an increase in potential PM and PM_{10} emissions. The new baghouses have the same collection efficiency (99.9%) as baghouse MBH-8. The addition of baghouses MBH-27 and MBH-28, with flow rates of 642 and 402 scfm respectively, will result in an increase in allowable emissions of 0.64 tons per year, under the 0.03 grain per dry standard cubic foot limitation of 326 IAC 6-1-2.

Federal Rule Applicability

NSPS Subpart OOO

Kettle feed bin #2 is still subject to the New Source Performance Standard 326 IAC 12, 40 CFR Part 60.670 through 60.676, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants). This rule requires that:

(1) No emissions shall be discharged into the atmosphere from any point on belt conveyors or from any other affected facility stack emissions which:

(a) Contain particulate matter in excess of 0.05 grams per dry standard cubic meter (g/dscm), and

(b) Exhibit greater than 7 percent opacity, unless emissions are discharged from an affected facility using a wet scrubbing control device.

(2) The Part 70 permit currently states that this rule will be met through emission and opacity limitations on the exhaust from stack M-8. The permit has been revised to make this rule applicable to the emissions from stack M-27.

Kettle feed bin #3 was constructed prior to August 31, 1983, and is not an affected facility under this rule.

State Rule Applicability

326 IAC 2-3 (Emission Offset Minor PM Limit)

PM emissions from kettle feed bin #2 were limited to 0.008 grains per dry standard cubic foot in CP 089-8657-00333, issued on January 8, 1998. In the Part 70 permit, this limitation was applied to all emissions from baghouse MBH-8, of which kettle feed bin #2 was a contributor. Because the emissions from kettle feed bin #2 are now exhausted through baghouse MBH-27, this limit applies to stack M-27.

The 0.008 grains per dry standard cubic foot limit only applies to kettle feed bin #2. It does not apply to kettle feed bin #3 (stack M-27), which was not permitted under CP 089-8657-00333, and it does not apply to any of the remaining facilities connected to baghouse MBH-8 (stack M-8)in the landplaster process.

Proposed Changes

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

1. The equipment list in Section A.2 has been revised to include the new baghouses. These changes were also made in the facility description in Section D.3.

A stucco production process, consisting of the following equipment:

(a) Two (2) kettle feed bins, known as kettle feed bin #1 and kettle feed bin #2, each with a maximum capacity of 60 tons, with particulate matter emissions controlled by two (2) baghouses. Emissions from kettle feed bin #1 will be controlled by one (1) baghouse, known as MBH-25, and exhausting through one (1) stack, identified as M-25. Emissions from kettle feed bin #2 will be controlled by one (1) baghouse, known as ~~MBH-8~~ **MBH-27,** and exhausting through one (1) stack, identified as ~~M-8~~ **M-27**.

(f) One (1) kettle feed bin, known as kettle feed bin #3, with a maximum capacity of 60 tons, with particulate matter emissions controlled by one (1) baghouse, identified as ~~MBH-8~~ **MBH-28**, and exhausting through one (1) stack, identified as ~~M-8~~ **M-28.**2.Condition D.3.1 was changed to remove stack M-8 and to include stacks M-27 and M-28. The revised condition is as follows:

D.3.1 Nonattainment Area Particulate Limitation [326 IAC 6-1-2]

Pursuant to 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations), the PM emissions from the stucco production process shall be limited as follows:

(a) PM emissions from kettle feed bins #1, #2 and #3 exhausting to stacks ~~M-8 and~~ M-25, **M-27 and M-28** shall **each** not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(b) PM emissions from calcining kettle #1 exhausting to stack M-22 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(c) PM emissions from calcining kettle #2 exhausting to stack M-16 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(d) PM emissions from the natural gas-fired burner for kettle #1 exhausting to stack M-22 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(e) PM emissions from the natural gas-fired burners for kettle #2 exhausting to stack M-14 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(f) PM emissions from the natural gas-fired burner for kettle #3 exhausting to stack M-6 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(g) PM emissions from hot pit #3 exhausting to stack M-1 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(h) PM emissions from the stucco storage bin exhausting to stack M-2 shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

(i) PM emissions from the stucco storage bins #1 through #6, exhausting to stack M-23, shall not exceed 0.03 grains per dry standard cubic foot (gr/dscf).

3. Condition D.3.3 was changed to enforce the emission offset PM limit on stack M-27. The revised condition is as follows:

D.3.3 Emission Offset Minor PM Limit [326 IAC 2-3]

Pursuant to CP 089-8657-00333, issued on January 8, 1998, the PM emissions shall be limited as follows:

(a) PM emissions from kettle #2 exhausting to stack M-16 shall not exceed 0.010 grains per dry standard cubic foot.

(b) PM emissions from kettle feed bin~~s~~ #2 ~~and #3~~ exhausting to stack ~~M-8~~ **M-27** shall not exceed 0.008 grains per dry standard cubic foot.

Compliance with these limits make 326 IAC 2-3 (Emission Offset) not applicable. Compliance with these limits also will satisfy the requirements of 326 IAC 6-1-2 (Nonattainment Area Particulate Limitations) for these facilities.

4. Condition D.3.6 was changed to require compliance with NSPS Subpart OOO through stack M-27. The revised condition is as follows:

D.3.6 New Source Performance Standard [326 IAC 12] [40 CFR 60, Subpart OOO]

Pursuant to 40 CFR 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), PM emissions from kettle feed bin #1, exhausting through stack M-25, and kettle feed bin #2, exhausting through stack **M-27** ~~M-8~~, as well as all stucco storage and handling equipment exhausting through stacks M-2 and M-23, shall not exceed 0.05 grams per dry standard cubic meter (g/dscm) and seven percent (7%) opacity.

5. Condition D.3.8 was changed to require testing to demonstrate compliance with NSPS Subpart OOO on stack M-27, and to remove the testing requirement for stack M-8. There is no testing requirement for stack M-8 in the landplaster process (Section D.2). The revised condition is as follows:

D.3.8 Testing Requirements [326 IAC 2-7-6(1),(6)]

(a) To demonstrate compliance with 40 CFR 60, Subpart UUU (Calciners and Dryers in Mineral Industries), and Condition D.3.5, the Permittee shall perform compliance testing for PM and opacity from calcining kettle #1 exhausting through stack M-22, and calcining kettle #2, exhausting through stack M-16, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. The tests shall be performed in accordance with Section C - Performance Testing and 40 CFR 60.736.

(b) To demonstrate compliance with 40 CFR 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants), and Condition D.3.6, the Permittee shall perform compliance testing for PM and opacity from kettle feed bin #1, exhausting through stack M-25, and kettle feed bin #2, exhausting through stack **M-27** ~~M-8~~, and the stucco storage and handling equipment exhausting through stacks M-2 and M-23, within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. The tests shall be performed in accordance with Section C - Performance Testing and 40 CFR 60.675.

(c) The Permittee is not required to test the remaining stucco production facilities by this permit. However, IDEM may require compliance testing at any specific time when necessary to determine if the facility is in compliance. If testing is required by IDEM, compliance with the limits specified in Conditions D.3.1 and D.3.2 shall be determined by a performance test conducted in accordance with Section C - Performance Testing.

6. Condition D.3.10 was changed to require visible emissions monitoring on stacks M-27 and M-28, and to remove this requirement on stack M-8. Note that visible emissions monitoring is still required on stack M-8 in condition D.2.9. The revised condition is as follows:

D.3.10 Visible Emissions Notations

(a) Visible emission notations of the stack exhausts M-1, M-2, ~~M-8~~, M-16, M-22, M-23, ~~and~~ M-25, **M-27 and M-28** shall be performed once per shift during normal daylight operations when exhausting directly to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and

has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

7. Condition D.3.11 was changed to require parametric monitoring on baghouses MBH-27 and MBH-28, and to remove this requirement on baghouse MBH-8. Note that parametric monitoring is still required on baghouse MBH-8 in Condition D.2.10. The revised condition is as follows:

D.3.11 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouses used in conjunction with the stucco production process, at least once per shift when the associated facilities are in operation when venting directly to the atmosphere.

(a) Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across baghouses MBH-1, MBH-2, MBH-16, MBH-22, MBH-23, MBH-24, ~~and~~ MBH-25, **MBH-27 and MBH-28,** shall be maintained within the range of 0.5 and 6.0 inches of water, or a range established during the latest stack test.

(b) Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across baghouse ~~MBH-8 and~~ MBH-25 shall be maintained within the range of 2.0 and 8.0 inches of water, or a range established during the latest stack test.

The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

8. Condition D.3.14 was changed to require record keeping for visible emission notations on stacks M-27 and M-28, and remove this requirement on stack M-8. The revised condition is as follows:

D.3.14 Record Keeping Requirements

(a) To document compliance with Condition D.3.4, the Permittee shall maintain records of natural gas throughput to the six (6) natural gas fired burners for calcining kettle #2.

(b) To document compliance with Condition D.3.10, the Permittee shall maintain records of visible emission notations of the stack exhausts M-1, M-2, ~~M-8~~, M-16, M-22, M-23, ~~and~~ M-25, **M-27 and M-28,** once per shift.

(c) To document compliance with Condition D.3.11, the Permittee shall maintain the following:

(1) Records of the following operational parameters taken once per shift during normal operation when venting directly to the atmosphere:

(A) Inlet and outlet differential static pressure; and

(B) Cleaning cycle: frequency and differential pressure.

(2) Documentation of all response steps implemented, per event.

(3) Operation and preventive maintenance logs, including work purchases orders, shall be maintained.

(4) Quality Assurance/Quality Control (QA/QC) procedures.

(5) Operator standard operating procedures (SOP).

(6) Manufacturer's specifications or its equivalent.

(7) Equipment "troubleshooting" contingency plan.

(8) Documentation of the dates vents are redirected.

(d) To document compliance with Condition D.3.12, the Permittee shall maintain records of the results of the inspections required under Condition D.3.12.

(e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.