

**CONSTRUCTION PERMIT  
OFFICE OF AIR MANAGEMENT**

**G-P Gypsum Corporation  
County Road 1400 North  
Wheatfield, IN 46392**

is hereby authorized to construct

The Office of Air Management (OAM) has reviewed an application from G-P Gypsum Corporation relating to the construction and operation of a gypsum wallboard (drywall) manufacturing plant, consisting of the following equipment:

the equipment listed on Pages 2 and 3 of this permit.

This permit is issued to the above mentioned company (herein known as the Permittee) under the provisions of 326 IAC 2-1 and 40 CFR 52.780, with conditions listed on the attached pages.

Construction Permit No.: CP-073-9573-00031	
Issued by:  Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

- (a) 300 ton FGD Storage Bin (0301),
- (b) 100 ton Reclaim Wallboard Storage Bin (0302) with Baghouse (BSR1),
- (c) 30,000 lb/hr Recycle Crusher (0303) with Baghouse (BRC1),
- (d) 144,000 lb/hr Cage Mill Cyclone and Drying System (0401) with Baghouse (BCM1),
- (e) 40 MM Btu/hr natural gas (NG) fired Cage Mill Flash Dryer Heater (0402),
- (f) 100 ton Landplaster Kettle Feed Bin #1 (0501) with Baghouse (BLB1),
- (g) 100 ton Landplaster Kettle Feed Bin #2 (0502) with Baghouse (BLB2),
- (h) 5 ton Landplaster Bin with Feeder (0601) enclosed system with Baghouses (BLB1 and BLB2),
- (i) 5 ft<sup>3</sup> Volumetric Feeder Lignosulfate (0602) enclosed system,
- (j) 300 lb/hr Ball Mill #1 (0603) enclosed system,
- (k) 300 lb/hr Ball Mill #2 (0604) enclosed system,
- (l) 300 lb/hr Ball Mill #3 (0605) enclosed system,
- (m) 300 lb/hr Ball Mill #4 (0606) enclosed system,
- (n) 20 MM Btu/hr Calcining Kettle Heater #1 (0701),
- (o) 20 MM Btu/hr Calcining Kettle Heater #2 (0702),
- (p) 10,000 acfm Kettle/Hot Pit #1 (0703) with Baghouse (BCS1),
- (q) 10,000 acfm Kettle/Hot Pit #2 (0704) with Baghouse (BCS2),
- (r) 50 ton/hr (TPH) Stucco Bucket Elevator (0801) with Baghouse (BSH1),
- (s) 50 TPH Stucco Cooling Airveyor (0802) with Baghouse (BSC1),
- (t) 5 ton Stucco Reject Storage Bin (0803) with Baghouse (BSR1),
- (u) 300 ton Stucco Storage Bin #1 (0804) with Baghouse (BSB1),
- (v) 300 ton Stucco Storage Bin #2 (0805) with Baghouse (BSB2),
- (w) 50 TPH Entoleter (0806) with Baghouse (BSH1),
- (x) 200,00 lb/hr Rotary Screen (0807) with Baghouse (BSH1),
- (y) 50,000 lb/hr Pneumatic Transfer of Reject Stucco (0808) with Baghouse (BSP1),
- (z) 100,000 lb/hr 18" Screw Conveyor, Hot Pit Collection (0809) with Baghouse (BSH1),
- (aa) 110,000 lb/hr 18" Screw Conveyor, Weigh Belt Scraping (0810) with Baghouse (BSH1),
- (bb) (2) 200,000 lb/hr 24" Screw Conveyors, Stucco Collection (0811) with Baghouse (BSH1),
- (cc) (2) 200,000 lb/hr 24" Screw Conveyors, Stucco Transport (0812) with Baghouse (BSH1),
- (dd) 15,000 lb/hr 12" Screw Conveyor, Reject Stucco & Paper (0813) with Baghouse (BSH1),
- (ee) 100,000 lb/hr 9" Screw Conveyor, Reject Stucco & Paper (0814) with Baghouse (BSH1),
- (ff) 100,000 lb/hr Bucket Elevator, Reject Stucco (0815) with Baghouse (BSH1),
- (gg) 100,000 lb/hr Weigh Belt Feeder, Stucco Supply (0816) with Baghouse (BSH1),
- (hh) 120,000 lb/hr Pin Mixer (0817) with Baghouse (BSH1),
- (ii) 1,400 lb/hr Dry Additive Bin #1 (0901),
- (jj) 1,400 lb/hr Dry Additive Bin #2 (0902),
- (kk) 1,400 lb/hr Dry Additive Bin #3 (0903),
- (ll) 1,400 lb/hr Dry Additive Bin #4 (0904),
- (mm) 1,400 lb/hr Dry Additive Bin #5 (0905),
- (nn) 1,400 lb/hr Dry Additive Bin #6 (0906),
- (oo) 1,400 lb/hr Dry Additive Bin #7 (0907),
- (pp) 5,000 lb/hr Pneumatic Transfer from Truck (0908) with Baghouse (BAS1),
- (qq) 20,000 TPY Starch Storage Bin (0909) with Baghouse (BAS1),
- (rr) Additives Collecting Belt (0910) with Baghouse (BAS2),
- (ss) 8,000 gallon (gal) Additive Tank #1 (0911),

- (tt) 8,000 gal Additive Tank #2 (0912),
- (uu) 8,000 gal Additive Tank #3 (0913),
- (vv) 200 gal Additive Tank #4 (0914),
- (ww) 200 gal Additive Tank #5 (0915),
- (xx) 200 gal Additive Tank #6 (0916),
- (yy) (8) 0.275 MM Btu/hr Edge Heater (1001),
- (zz) 2,000 lb/hr End Trim (1002) with Baghouse (BST1),
- (aaa) 15,000 acfm Wet End Seal (1003),
- (bbb) 50 MM Btu/hr NG fired 100,000 acfm Heater - Dryer Zone 1 (1004),
- (ccc) 40 MM Btu/hr NG fired 100,000 acfm Heater - Dryer Zone 2 (1005),
- (ddd) 30 MM Btu/hr NG fired 100,000 acfm Heater - Dryer Zone 3 (1006),
- (eee) 15,000 acfm Dry End Seal (1007), and
- (fff) <200 gal/yr Cold Cleaner (1101).

## **Construction Conditions**

### General Construction Conditions

1. That the data and information supplied with the application shall be considered part of this permit. Prior to any proposed change in construction which may affect allowable emissions, the change must be approved by the Office of Air Management (OAM).
2. That this permit to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

### Effective Date of the Permit

3. Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.
4. Pursuant to 326 IAC 2-1-9(b)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. That notwithstanding Construction Condition No. 6, all requirements and conditions of this construction permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

### First Time Operation Permit

6. That this document shall also become a first-time operation permit pursuant to 326 IAC 2-1-4 (Operating Permits) when, prior to start of operation, the following requirements are met:
  - (a) The attached affidavit of construction shall be submitted to the Office of Air Management (OAM), Permit Administration & Development Section, verifying that the facilities were constructed as proposed in the application. The facilities covered in the Construction Permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.

- (b) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (c) Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.
- (d) The operation permit will be subject to annual operating permit fees pursuant to 326 IAC 2-7-19 (Fees).
- (e) Pursuant to 326 IAC 2-7-4, the Permittee shall apply for a Title V operating permit within twelve (12) months after the source becomes subject to Title V. This 12-month period starts at the postmarked submission date of the Affidavit of Construction. If the construction is completed in phases, the 12-month period starts at the postmarked submission date of the Affidavit of Construction that triggers the Title V applicability. The operation permit issued shall contain as a minimum the conditions in the Operation Conditions section of this permit.

NSPS Reporting Requirement

7. Pursuant to the New Source Performance Standards (NSPS), Part 60.672, Subpart OOO, and Part 60.730 Subpart UUU the source owner/operator is hereby advised of the requirement to report the following at the appropriate times:

- (a) Commencement of construction date (no later than 30 days after such date);
- (b) Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
- (c) Actual start-up date (within 15 days after such date); and
- (d) Date of performance testing (at least 30 days prior to such date), when required by a condition elsewhere in this permit.

Reports are to be sent to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, IN 46206-6015

The application and enforcement of these standards have been delegated to the IDEM-OAM. The requirements of 40 CFR Part 60 are also federally enforceable.

8. That when the facility is constructed and placed into operation the following operation conditions shall be met:

## Operation Conditions

### General Operation Conditions

1. That the data and information supplied in the application shall be considered part of this permit. Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).
2. That the permittee shall comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder.

### Preventive Maintenance Plan

3. Pursuant to 326 IAC 1-6-3 (Preventive Maintenance Plans), the Permittee shall prepare and maintain a preventive maintenance plan, including the following information:
  - (a) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices.
  - (b) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions.
  - (c) Identification of the replacement parts which will be maintained in inventory for quick replacement.

The preventive maintenance plan shall be submitted to IDEM, OAM upon request and shall be subject to review and approval.

### Transfer of Permit

4. Pursuant to 326 IAC 2-1-6 (Transfer of Permits):
  - (a) In the event that ownership of this gypsum wallboard (drywall) manufacturing plant is changed, the Permittee shall notify OAM, Permit Branch, within thirty (30) days of the change. Notification shall include the date or proposed date of said change.
  - (b) The written notification shall be sufficient to transfer the permit from the current owner to the new owner.
  - (c) The OAM shall reserve the right to issue a new permit.

### Permit Revocation

5. Pursuant to 326 IAC 2-1-9(a)(Revocation of Permits), this permit to construct and operate may be revoked for any of the following causes:
  - (a) Violation of any conditions of this permit.
  - (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of 326 IAC 2-1 (Permit Review Rules).

Availability of Permit

6. Pursuant to 326 IAC 2-1-3(l), the Permittee shall maintain the applicable permit on the premises of this source and shall make this permit available for inspection by the IDEM, or other public official having jurisdiction.

Performance Testing

7. Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for baghouse stacks BCM1, BCS1, and BCS2 exhausting to the atmosphere for particulate matter (PM) and opacity, for baghouse stacks BSC1 and BSH1 exhausting to the atmosphere for opacity and the gypsum wallboard dryer for VOC within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC 3-6 (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.
- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
  - (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
  - (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
  - (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
  - (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.

Malfunction Condition

8. Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAM, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

Annual Emission Reporting

9. Pursuant to 326 IAC 2-6 (Emission Reporting), the Permittee must annually submit an emission statement for the source. This statement must be received by July 1 of each year and must comply with the minimum requirements specified in 326 IAC 2-6-4. The annual statement must be submitted to:

Indiana Department of Environmental Management  
Technical Support and Modeling, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The annual emission statement covers the twelve (12) consecutive month time period starting January 1 and ending December 31.

Opacity Limitations

10. Pursuant to 326 IAC 5-1-2 (Visible Emission Limitations) except as provided in 326 IAC 5-1-3 (Temporary Exemptions) and those emission units covered by NSPS or NESHAP, the visible emissions shall meet the following:

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.
- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

Baghouse Operating Condition

11. That the baghouse shall be operated at all times when the corresponding processes are in operation.
- (a) The Permittee shall take readings of the total static pressure drop across the baghouses, at least once per week. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within a range in accordance with manufacturer's specifications. The Preventive Maintenance Plan for these baghouses shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.
  - (b) The instrument used for determining the pressure shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every twelve (12) months.
  - (c) The gauge employed to take the pressure drop across the baghouses or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within  $\pm 2\%$  of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.
  - (d) An inspection shall be performed each calendar quarter of all the baghouses. Defective bags shall be replaced. A record shall be kept of the results of the inspection and the number of bags replaced.
  - (e) In the event that a bag's failure has been observed:
    - (i) The affected compartments will be shut down immediately until the failed units have been replaced.
    - (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

Visible Emission Notations

12. That visible emission notations of all exhaust to the atmosphere from the baghouses shall be performed once per working shift. A trained employee will record whether emissions are normal or abnormal.
- (a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80% of the time, the process is in operation, not counting start up or shut down time.
  - (b) In the case of batch or discontinuous operation, readings shall be taken during part of the operation specified in the facility's specific condition prescribing visible emissions.
  - (c) A trained employee is an employee who has worked at the plant for at least one (1) month or has been trained in the appearance and characteristics of normal and abnormal visible emissions for that specific process.

- (d) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

Fugitive Dust Emissions

- 13. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) through (4) are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)].

Open Burning

- 14. That the permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

Emergency Reduction Plans

- 15. Pursuant to 326 IAC 1-5-2 (Emergency Reduction Plans; Submission):

- (a) The Permittee shall prepare written emergency reduction plans (ERPs) consistent with safe operating procedures.

- (b) These ERPs shall be submitted for approval to:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within 180 calendar days from the date on which this source commences operation.

- (c) If the ERP is disapproved by IDEM, OAM, the Permittee shall have an additional thirty (30) days to resolve the differences and submit an approvable ERP. If after this time, the Permittee does not submit an approvable ERP, IDEM, OAM, shall supply such a plan.
- (d) These ERPs shall state those actions that will be taken, when each episode level is declared, to reduce or eliminate emissions of the appropriate air pollutants.
- (e) Said ERPs shall also identify the sources of air pollutants, the approximate amount of reduction of the pollutants, and a brief description of the manner in which the reduction will be achieved.
- (f) Upon direct notification by IDEM, OAM, that a specific air pollution episode level is in effect, the Permittee shall immediately put into effect the actions stipulated in the approved ERP for the appropriate level. [326 IAC 1-5-3]

NSPS 000 (Standards of Performance for Nonmetallic Mineral Processing Plants)

- 16. That whenever this plant is processing nonmetallic minerals, it shall comply with the New Source Performance Standards, 326 IAC 12 (40 CFR 60.670 through 60.676, Subpart 000) "Standards of Performance for Nonmetallic Mineral Processing Plants". This rule requires particulate emissions from the following:

- (a) reclaim grinder and all crushing operations to be limited to 15 percent opacity or less,
- (b) screening and conveying operations (rotary screen assembly, stucco bucket elevator, 2 dry additive belt conveyors transfer points, belt conveyor with 2 scales transfer points, 2 stucco recirculation bucket elevators, reclaim belt conveyor transfer points, FGD feed high angle belt conveyor transfer points, and 8 FGD conveyors transfer points) to be limited to 10 percent or less,
- (c) emissions vents enclosed in buildings (FGD Storage Bin, Reclaim Wallboard Storage Bin, 2 kettle feed bins, 2 stucco storage silos, reject stucco bin, landplaster bin, 4 ball mills) and the stucco handling baghouse (BSH1) shall be limited to 7% opacity and 0.02 grains/dscf.

Compliance with these opacity limits shall also satisfy the requirements of 326 IAC 5-1.

17. NSPS UUU (Standards of Performance for Calciners and Dryers in Mineral Industries)  
That whenever this plant is calcining or drying nonmetallic minerals, it shall comply with the New Source Performance Standards, 326 IAC 12 (40 CFR 60.730 through 60.737, Subpart UUU) "Standards of Performance for Calciners and Dryers in Mineral Industries". This rule requires particulate emissions from the calcining kettles, and the cage mill flash dryer system to be limited as follows:

- (a) 10 percent opacity or less and
- (b) 0.040 grains per dry standard cubic foot (gr/dscf).

Compliance with these opacity limits shall also satisfy the requirements of 326 IAC 5-1.

18. VOC Emission Limitation  
That pursuant to 326 IAC 8-1-6 (New Facilities General Reduction Requirements) volatile organic compound (VOC) emissions from the wallboard dryer shall have the following limitations;

- (a) when producing non-DENS wallboard, VOC emissions shall not exceed 0.19 lbs VOC per 1000 ft<sup>2</sup> board,
- (b) when producing DENS wallboard, production is limited to 168,000 MSF (1000 ft<sup>2</sup>) per year and VOC emissions shall not exceed 0.35 lbs VOC per 1000 ft<sup>2</sup> board,
- (c) The emission limits specified in (a) and (b) above shall be determined from material balance calculations based on the quantity and composition of the additives used in the wallboard production process rolled on a 12 month average.

These emission limitations shall also represent the input VOC to the wallboard dryer.

Reporting Requirements

19. That a log of information necessary to document compliance with Operation Condition 18 shall be maintained. These records shall be kept for at least the past 36 month period and made available upon request to the Office of Air Management (OAM). These records shall include material balance calculations based on the quantity and composition of the additives used in the wallboard production process.

- (a) A quarterly summary shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

within 30 days after the end of the quarter being reported in the format attached. The report shall include the quantity of non-DENS and DENS wallboard produced and calculated pounds of VOC per 1000 ft<sup>2</sup> board.

**Indiana Department of Environmental Management  
 Office of Air Management  
 Compliance Data Section**

**Quarterly Report**

Company Name: G-P Gypsum Corporation  
 Location: County Road 1400 North, Wheatfield, IN  
 Permit No.: 073-9573  
 Source: 073-00031  
 Pollutant: VOC  
 Limit: Non-DENS Wallboard Production, 0.19 lbs VOC / 1000 ft<sup>2</sup> board  
 DENS Wallboard Production, 0.35 lbs VOC / 1000 ft<sup>2</sup> board and maximum  
 production of 168,000 MSF (1000 ft<sup>2</sup>)

Year \_\_\_\_\_

Month	Production MSF (lbs VOC/ 1000 ft <sup>2</sup> )		Calculated Emission Rate (lbs VOC/1000 ft <sup>2</sup> )		Prior 11-Month Rolling Average Production (MSF) (lbs VOC/1000 ft <sup>2</sup> )			
	Non-DENS	DENS	Non-DENS	DENS	Non-DENS	DENS	Non-DENS	DENS

Submitted by: \_\_\_\_\_

Title/Position: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**MALFUNCTION REPORT**

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR MANAGEMENT  
FAX NUMBER - 317 233-5967

**This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6  
and to qualify for the exemption under 326 IAC 1-6-4.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE: IT HAS POTENTIAL TO EMIT 25 LBS/HR PARTICULATES ? \_\_\_\_\_, 100 LBS/HR VOC ? \_\_\_\_\_, 100 LBS/HR SULFUR DIOXIDE ? \_\_\_\_\_ OR 2000 LBS/HR OF ANY OTHER POLLUTANT ? \_\_\_\_\_ EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION \_\_\_\_\_.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC \_\_\_\_\_ OR, PERMIT CONDITION # \_\_\_\_\_ AND/OR PERMIT LIMIT OF \_\_\_\_\_

THIS INCIDENT MEETS THE DEFINITION OF 'MALFUNCTION' AS LISTED ON REVERSE SIDE ?    Y    N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ?    Y    N

COMPANY: \_\_\_\_\_ PHONE NO. (    ) \_\_\_\_\_

LOCATION: (CITY AND COUNTY) \_\_\_\_\_

PERMIT NO. \_\_\_\_\_ AFS PLANT ID: \_\_\_\_\_ AFS POINT ID: \_\_\_\_\_ INSP: \_\_\_\_\_

CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: \_\_\_\_\_

DATE/TIME MALFUNCTION STARTED: \_\_\_\_/\_\_\_\_/19\_\_\_\_    \_\_\_\_\_ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: \_\_\_\_\_

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE \_\_\_\_/\_\_\_\_/19\_\_\_\_    \_\_\_\_\_ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO<sub>2</sub>, VOC, OTHER: \_\_\_\_\_

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: \_\_\_\_\_

MEASURES TAKEN TO MINIMIZE EMISSIONS: \_\_\_\_\_

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL\* SERVICES: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: \_\_\_\_\_

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: \_\_\_\_\_

INTERIM CONTROL MEASURES: (IF APPLICABLE) \_\_\_\_\_

MALFUNCTION REPORTED BY: \_\_\_\_\_ TITLE: \_\_\_\_\_  
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

**Please note - This form should only be used to report malfunctions  
applicable to Rule 326 IAC 1-6 and to qualify for  
the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1            Applicability of rule**

Sec. 1. The requirements of this rule (326 IAC 1-6) shall apply to the owner or operator of any facility which has the potential to emit twenty-five (25) pounds per hour of particulates, one hundred (100) pounds per hour of volatile organic compounds or SO<sub>2</sub>, or two thousand (2,000) pounds per hour of any other pollutant; or to the owner or operator of any facility with emission control equipment which suffers a malfunction that causes emissions in excess of the applicable limitation.

**326 IAC 1-2-39            “Malfunction” definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. (Air Pollution Control Board; 326 IAC 1-2-39; filed Mar 10, 1988, 1:20 p.m. : 11 IR 2373)

\***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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**Indiana Department of Environmental Management  
Office of Air Management**

Technical Support Document (TSD) for New Construction and Operation

**Source Background and Description**

Source Name:	G-P Gypsum Corporation
Source Location:	County Road 1400 North, Wheatfield, IN
County:	Jasper
Construction Permit No.:	CP-073-9573-00031
SIC Code:	3275
Permit Reviewer:	George Kunstek / Mack E. Sims

The Office of Air Management (OAM) has reviewed an application from G-P Gypsum Corporation relating to the construction and operation of a gypsum wallboard (drywall) manufacturing plant, consisting of the following equipment:

- (a) 300 ton FGD Storage Bin (0301),
- (b) 100 ton Reclaim Wallboard Storage Bin (0302) with Baghouse (BSR1),
- (c) 30,000 lb/hr Recycle Crusher (0303) with Baghouse (BRC1),
- (d) 144,000 lb/hr Cage Mill Cyclone and Drying System (0401) with Baghouse (BCM1),
- (e) 40 MM Btu/hr natural gas (NG) fired Cage Mill Flash Dryer Heater (0402),
- (f) 100 ton Landplaster Kettle Feed Bin #1 (0501) with Baghouse (BLB1),
- (g) 100 ton Landplaster Kettle Feed Bin #2 (0502) with Baghouse (BLB2),
- (h) 5 ton Landplaster Bin with Feeder (0601) enclosed system with Baghouses (BLB1 and BLB2),
- (i) 5 ft<sup>3</sup> Volumetric Feeder Lignosulfate (0602) enclosed system,
- (j) 300 lb/hr Ball Mill #1 (0603) enclosed system,
- (k) 300 lb/hr Ball Mill #2 (0604) enclosed system,
- (l) 300 lb/hr Ball Mill #3 (0605) enclosed system,
- (m) 300 lb/hr Ball Mill #4 (0606) enclosed system,
- (n) 20 MM Btu/hr Calcining Kettle Heater #1 (0701),
- (o) 20 MM Btu/hr Calcining Kettle Heater #2 (0702),
- (p) 10,000 acfm Kettle/Hot Pit #1 (0703) with Baghouse (BCS1),
- (q) 10,000 acfm Kettle/Hot Pit #2 (0704) with Baghouse (BCS2),
- (r) 50 ton/hr (TPH) Stucco Bucket Elevator (0801) with Baghouse (BSH1),
- (s) 50 TPH Stucco Cooling Airveyor (0802) with Baghouse (BSC1),
- (t) 5 ton Stucco Reject Storage Bin (0803) with Baghouse (BSR1),
- (u) 300 ton Stucco Storage Bin #1 (0804) with Baghouse (BSB1),
- (v) 300 ton Stucco Storage Bin #2 (0805) with Baghouse (BSB2),
- (w) 50 TPH Entoleter (0806) with Baghouse (BSH1),
- (x) 200,00 lb/hr Rotary Screen (0807) with Baghouse (BSH1),
- (y) 50,000 lb/hr Pneumatic Transfer of Reject Stucco (0808) with Baghouse (BSP1),
- (z) 100,000 lb/hr 18" Screw Conveyor, Hot Pit Collection (0809) with Baghouse (BSH1),
- (aa) 110,000 lb/hr 18" Screw Conveyor, Weigh Belt Scraping (0810) with Baghouse (BSH1),
- (bb) (2) 200,000 lb/hr 24" Screw Conveyors, Stucco Collection (0811) with Baghouse (BSH1),
- (cc) (2) 200,000 lb/hr 24" Screw Conveyors, Stucco Transport (0812) with Baghouse (BSH1),
- (dd) 15,000 lb/hr 12" Screw Conveyor, Reject Stucco & Paper (0813) with Baghouse (BSH1),

- (ee) 100,000 lb/hr 9" Screw Conveyor, Reject Stucco & Paper (0814) with Baghouse (BSH1),
- (ff) 100,000 lb/hr Bucket Elevator, Reject Stucco (0815) with Baghouse (BSH1),
- (gg) 100,000 lb/hr Weigh Belt Feeder, Stucco Supply (0816) with Baghouse (BSH1),
- (hh) 120,000 lb/hr Pin Mixer (0817) with Baghouse (BSH1),
- (ii) 1,400 lb/hr Dry Additive Bin #1 (0901),
- (jj) 1,400 lb/hr Dry Additive Bin #2 (0902),
- (kk) 1,400 lb/hr Dry Additive Bin #3 (0903),
- (ll) 1,400 lb/hr Dry Additive Bin #4 (0904),
- (mm) 1,400 lb/hr Dry Additive Bin #5 (0905),
- (nn) 1,400 lb/hr Dry Additive Bin #6 (0906),
- (oo) 1,400 lb/hr Dry Additive Bin #7 (0907),
- (pp) 5,000 lb/hr Pneumatic Transfer from Truck (0908) with Baghouse (BAS1),
- (qq) 20,000 TPY Starch Storage Bin (0909) with Baghouse (BAS1),
- (rr) Additives Collecting Belt (0910) with Baghouse (BAS2),
- (ss) 8,000 gallon (gal) Additive Tank #1 (0911),
- (tt) 8,000 gal Additive Tank #2 (0912),
- (uu) 8,000 gal Additive Tank #3 (0913),
- (vv) 200 gal Additive Tank #4 (0914),
- (ww) 200 gal Additive Tank #5 (0915),
- (xx) 200 gal Additive Tank #6 (0916),
- (yy) (8) 0.275 MM Btu/hr Edge Heater (1001),
- (zz) 2,000 lb/hr End Trim (1002) with Baghouse (BST1),
- (aaa) 15,000 acfm Wet End Seal (1003),
- (bbb) 50 MM Btu/hr NG fired 100,000 acfm Heater - Dryer Zone 1 (1004),
- (ccc) 40 MM Btu/hr NG fired 100,000 acfm Heater - Dryer Zone 2 (1005),
- (ddd) 30 MM Btu/hr NG fired 100,000 acfm Heater - Dryer Zone 3 (1006),
- (eee) 15,000 acfm Dry End Seal (1007), and
- (fff) <200 gal/yr Cold Cleaner (1101).

**Stack Summary**

Stacks Exhausting Outside of Building

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
SCM1	Cage Mill	135	3.0	26,500	240
SCS1	Kettle Heater #1	135	1.67	8,450	650
SCS2	Kettle Heater #2	135	1.67	8,450	650
SCS3	Kettle / Hot Pit #1	135	2.0	10,000	225
SCS4	Kettle / Hot Pit #2	135	2.0	10,000	225
SSC1	Stucco Cooling	135	2.5	30,000	195
SSH1	Stucco Handling	135	2.0	10,000	200
SBF1	Dryer Zone 1	35	4.0	Purge	250
SBF2	Dryer Zone 2	35	4.0	Purge	250
SBF3	Total Dryer	35	4.33 x 7.50	100,000	250
SBF4	Dry End Seal	35	3.5	15,000	130
SBF5	Wet End Seal	35	2.0	15,000	180

Stacks Exhausting Inside of Building (Baghouse Outlets)

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
BLB1	#1 Kettle Feed Bin	87	0.5	1,000	190
BLB2	#2 Kettle Feed Bin	87	0.5	1,000	190
BSB1	#1 Storage Bin	76	0.7	2,000	200
BSB2	#2 Storage Bin	76	0.7	2,000	200
BSR1	Reclaim Bin	87	0.7	2,000	200
BSP1	Stucco Rejects	29	0.6 x 0.3	802	70
BAS1	Bulk Starch Airveyor	35	0.6 x 0.3 & 0.5 x 0.5	1,620	70
BAS2	Dry Additive Belt	23	0.25	57	70
BST1	Endtrim	37	2.3	17,000	70
BBM1	Ball Mill Accelerator Pneumatic System	na	na	120	70
BRC1	Recycle	37	2.0	10,000	70

## Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Information, unless otherwise stated, 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 March 16, 1998, with additional information received on April 27, 1998, July 7, 1998 and July 31, 1998.

## Emissions Calculations

The source submitted detailed emission calculations with their construction permit application. These emission calculations were reviewed by IDEM and found to be acceptable.

## Total Potential and Allowable Emissions

Indiana Permit Allowable Emissions Definition (after compliance with applicable rules, based on 8,760 hours of operation per year at rated capacity):

Pollutant	Allowable Emissions (tons/year)	Potential Emissions (tons/year)
Particulate Matter (PM)	7017.62	7017.62
Particulate Matter (PM10)	7017.62	7017.62
Sulfur Dioxide (SO <sub>2</sub> )	0.53	0.53
Volatile Organic Compounds (VOC)	88.27	88.27
Carbon Monoxide (CO)	31.00	31.00
Nitrogen Oxides (NO <sub>x</sub> )	127.59	127.59
Single Hazardous Air Pollutant (HAP)	9.72	9.72
Combination of HAPs	10.70	10.70

- (a) The potential emissions before controls are equal to the allowable emissions, therefore, the allowable emissions are used for the permitting determination.
- (b) Allowable emissions (as defined in the Indiana Rule) of particulate matter (PM), volatile organic compounds (VOC), oxides of nitrogen (NO<sub>x</sub>) and carbon monoxide (CO) are greater than 25 tons per year. Therefore, pursuant to 326 IAC 2-1, Sections 1 and 3, a construction permit is required.

## County Attainment Status

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO<sub>x</sub>) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Jasper County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO<sub>x</sub> emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Jasper County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions  
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive PM emissions are not counted toward determination of PSD and Emission Offset applicability.

### Source Status

New Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	163.85
PM10	163.85
SO <sub>2</sub>	0.53
VOC	88.27
CO	31.00
NO <sub>x</sub>	127.59
Single HAP	9.72
Combination HAPs	10.70

This new source is **not** a major stationary source because no attainment pollutant is emitted at a rate of 250 tons per year or greater and it is not in one of the 28 listed source categories. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

### Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This new source is subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) at least one of the criteria pollutant is greater than or equal to 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is greater than or equal to 10 tons per year, or
- (c) any combination of HAPs is greater than or equal to 25 tons/year.

This new source shall apply for a Part 70 (Title V) operating permit within twelve (12) months after this source becomes subject to Title V.

### **Federal Rule Applicability**

#### 40 CFR Part 60, Subpart OOO

The following equipment at this gypsum wallboard (drywall) manufacturing plant is subject to the New Source Performance Standard 326 IAC 12 and 40 CFR 60.670 through 60.676, Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants".

- (a) FGD Storage Bin,
- (b) Reclaim Wallboard Storage Bin,
- (c) Belt Conveyor with 2 scales transfer points,
- (d) 2 kettle feed bins,
- (e) stucco bucket elevator,
- (f) rotary screen assembly,
- (g) 2 stucco storage silos,
- (h) reject stucco bin,
- (i) entoleter,
- (j) 2 stucco recirculation bucket elevators,
- (k) landplaster bin,
- (l) 4 ball mills,
- (m) 2 dry additive belt conveyors transfer points,
- (n) reclaim grinder,
- (o) reclaim belt conveyor transfer points,
- (p) FGD feed high angle belt conveyor transfer points, and
- (q) 6 FGD conveyors transfer points.

This rule requires the following limits:

- (a) particulate matter emissions shall not exceed 0.022 gr/dscf (the baghouses installed on these emission units have outlet emissions of 0.02 gr/dscf),
- (b) crushing operations to be limited to 15 percent opacity or less, and
- (c) screening and conveying operations to be limited to 10 percent opacity or less.

(enclosed is a copy of this federal rule)

#### 40 CFR Part 60, Subpart UUU

The following dryers are subject to the New Source Performance Standard 326 IAC 12 and 40 CFR 60.730 through 60.737, Subpart UUU, "Standards of Performance for Calciners and Dryers in Mineral Industries".

- (a) 2 calcining kettles, and
- (b) cage mill flash dryer system.

This rule requires the following limits:

- (a) particulate matter emissions shall not exceed 0.040 gr/dscf (the baghouses installed on these emission units have outlet emissions of 0.02 gr/dscf), and
- (b) opacity shall be limited to 15 percent or less.

(enclosed is a copy of this federal rule)

40 CFR Part 63 (National Emission Standards for Hazardous Air Pollutants (NESHAPs))  
There are no NESHAP rules (40 CFR Part 63) applicable to this facility.

### **State Rule Applicability**

326 IAC 1-5-2 (Episode alert levels: submission of emergency reduction plans)

This facility is subject to 326 IAC 1-5-2 (Episode alert levels: submission of emergency reduction plans), because this is required for all major air pollution sources that have a potential to emit of 100 tons per year or more of any pollutant.

326 IAC 1-6 (Malfunction)

This facility is subject to 326 IAC 1-6 (Malfunction), because this is required for all facilities obtaining a permit under 326 IAC 2-1-2 and 326 IAC 2-1-4.

326 IAC 1-6-3 (Preventative Maintenance Plan)

This facility is subject to 326 IAC 1-6-3 (Preventative Maintenance Plan), because this facility is receiving a construction permit.

326 IAC 2-1-3.4 (New Source Toxics Control)

This source is not subject to the requirements 326 IAC 2-1-3.4 (New Source Toxics Control) because it is not a major source of hazardous air pollutants (HAPs). No single HAP is emitted at a rate of 10 tons per year or more and the combination of HAPs emitted does not exceed 25 tons per year.

326 IAC 2-2-1 (Prevention of Significant Deterioration)

This facility is not subject to the requirements of 326 IAC 2-2 Prevention of Significant Deterioration because the potential to emit of all criteria pollutants are less than the levels required to trigger applicability.

326 IAC 2-6 (Emission Reporting)

This facility is subject to 326 IAC 2-6 (Emission Reporting), because the source emits more than 10 tons/yr (for specific counties) or 100 tons/yr of VOC. Pursuant to this rule, the owner/operator of this facility must annually submit an emission statement of the facility. The annual statement must be received by July 1 of each year and must contain the minimum requirements as specified in 326 IAC 2-6-4.

326 IAC 4-1 (Open burning)

This facility is subject to 326 IAC 4-1 (Open burning), because this facility is receiving a construction and operating permit.

326 IAC 5-1-2 (Opacity limitations: visible emission limitations)

Particulate matter emission units not covered by NSPS or NESHAP are subject to the requirements of 326 IAC 5-1-2 (Opacity limitations: visible emission limitations). Except as provided in 326 IAC 5-1-3 (Temporary Exemptions), the visible emissions shall meet the following:

- (a) visible emissions shall not exceed an average of 40% opacity in 24 consecutive readings.

- (b) visible emissions shall not exceed 60% opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

Pursuant to this rule the Permittee shall be in violation of 326 IAC 6-4-2(1) through (4) if any of the criteria specified are violated. Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM. [326 IAC 6-4-5(c)]

326 IAC 6-5 (Fugitive Particulate Matter Emissions Limitations)

Pursuant to this rule, fugitive particulate matter emissions shall be controlled according to the following methods:

- (a) Vehicle speeds over unpaved roads shall be limited to 25 miles per hour and
- (b) water shall be applied to unpaved roads on an as needed basis.

326 IAC 8-1-6 (General reduction of VOC rules)

The gypsum wallboard dryer is subject to 326 IAC 8-1-6 (General reduction of VOC rules), because potential emissions of volatile organic compounds exceed 25 tons per year. Pursuant to this rule best available control technology (BACT) must be applied to this unit.

A top-down BACT analysis for the wallboard dryer was conducted by G-P Gypsum and reviewed by OAM. Control options evaluated as BACT include the following:

- (a) process modifications;
- (b) condensation and carbon adsorption recovery techniques;
- (c) regenerable thermal oxidation (RTO);
- (d) catalytic oxidation; and
- (e) biofiltration.

Recovery technologies (condensation and carbon adsorption) are generally used where the recovered solvents are of high value or can be readily reused in the process. This is not the case with the VOC emitted by the board dryer. This VOC is a mixture of several additives and cannot be reused requiring the disposal as a hazardous waste and adding to the cost and complexity of the control system. Recovery technologies (condensation and carbon adsorption) were not considered as a viable control option.

Destruction technologies (RTO, catalytic oxidation and biofiltration) oxidize VOC to carbon dioxide and water. These technologies can also produce secondary pollutants. RTO and catalytic oxidation while technically feasible were ruled out for economic reasons having a cost per ton of VOC removed of \$23,911 and \$31,801 respectively. Biofiltration systems were ruled out as technical options because there is no instance of this technology being used as BACT on any type of source.

A search of the RACT/BACT/LAER clearinghouse database shows no determinations for VOC from gypsum wallboard dryers. BACT for G-P Gypsum's wallboard dryer shall be a limit on VOC's in the additives that are used in the dryer. In addition to a VOC limit there will be a production limit on the quantity of DENS wallboard produced (this is a higher VOC emitting wallboard) at 168,000 MSF (1000 ft<sup>2</sup>) per year. The following limits shall be observed:

Product	BACT (Lbs VOC/1000 ft <sup>2</sup> board)
non-DENS wallboard	0.19
DENS wallboard	0.35

Since it is estimated that all VOC's are emitted from the dryer these limits also represent the input VOC amounts. These limit shall be based on 12-month rolling averages.

326 IAC 8-3-2 (Organic solvent degreasing operations)

This degreaser is not subject to 326 IAC 8-3-2 (Organic solvent degreasing operations), because 326 IAC 8-1-1 (b) exempts units that emit less than 15 pounds per day.

**Air Toxic Emissions**

Indiana presently requests applicants to provide information on emissions of the 187 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

- (a) This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act

**Conclusion**

The construction of this gypsum wallboard (drywall) manufacturing plant will be subject to the conditions of the attached proposed **Construction Permit No. CP-073-9573-00031**.

## Indiana Department of Environmental Management Office of Air Management

### Addendum to the Technical Support Document for New Construction and Operation

Source Name: G-P Gypsum Corporation  
Source Location: County Road 1400 North, Wheatfield, IN  
County: Jasper  
Construction Permit No.: CP-073-9573-00031  
SIC Code: 3275  
Permit Reviewer: Mack E. Sims

On August 22, 1998, the Office of Air Management (OAM) had a notice published in the Rensselaer Republican, Rensselaer, Indiana, stating that G-P Gypsum Corporation had applied for a construction permit to construct and operate a gypsum wallboard manufacturing plant with baghouses for particulate matter (PM) control. The notice also stated that OAM proposed to issue a permit for this installation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On September 10, 1998, G-P Gypsum Corporation submitted comments on the proposed construction permit. In G-P Gypsum Corporation's comments they referred to the conditions as construction conditions. Upon reviewing the permit all of their comments were addressing conditions that appear in the operation condition section of the permit and are therefore correctly identified as operation conditions. The summary of the comments and corresponding responses is as follows (the bold-face characters represent language that has been added to the proposed permit conditions and strikeout characters represent language that has been removed from the proposed permit conditions):

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#### Comment 1:

Operation Condition 7 - Of the 15 baghouses only 6 are true baghouses with stacks. The remainder are either bin vents or pneumatic receivers. The latter have stacks less than 1 foot high and small fans which can not be practicably sampled.

#### Comment 2:

Operation Condition 7 - 326 IAC 3-2.1 was repealed and replaced by 326 IAC 6-1 et seq.

#### Response to Comments 1 & 2 regarding Operation Condition 7

OAM agrees that the bin vents and pneumatic receivers should not be tested. Only those stacks exhausting to the atmosphere that can be sampled will be required to be tested. Operation Condition 7 will be revised to reflect this decision.

326 IAC 3-2.1 has been deleted, the new citation is now 326 IAC 3-6. Operation Condition 7 will be changed to reference the new citation.

Revised Operation Condition 7

Performance Testing

7. Pursuant to 326 IAC 2-1-3 (Construction and Operating Permit Requirements) compliance stack tests shall be performed for ~~the twelve (12) baghouse stacks~~ **baghouse stacks BCM1, BCS1, and BCS2** exhausting to the atmosphere for particulate matter (PM) and ~~PM<sub>10</sub> opacity, for baghouse stacks BSC1 and BSH1 exhausting to the atmosphere for~~ **opacity** and the gypsum wallboard dryer for VOC within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up. These tests shall be performed according to 326 IAC ~~3-2-1~~ **3-6** (Source Sampling Procedures) using the methods specified in the rule or as approved by the Commissioner.
- (a) A test protocol shall be submitted to the OAM, Compliance Data Section, 35 days in advance of the test.
  - (b) The Compliance Data Section shall be notified of the actual test date at least two (2) weeks prior to the date.
  - (c) All test reports must be received by the Compliance Data Section within 45 days of completion of the testing.
  - (d) Whenever the results of the stack test performed exceed the level specified in this permit, appropriate corrective actions shall be implemented within thirty (30) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.
  - (e) Whenever the results of the stack test performed exceed the level specified in this permit, a second test to demonstrate compliance shall be performed within 120 days. Failure of the second test to demonstrate compliance may be grounds for immediate revocation of this permit to operate the affected facility.
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Comment 3:

Operation Condition 11(a) - The 3-4 inches of water shown on the vendors baghouse list is a design, and not an operating, parameter. Actual operating pressure drop will not be known until equipment is running.

Comment 4:

Operation Condition 11(b) - Prior approval by IDEM OAM of the pressure instrumentation is impractical and redundant, considering the following requirement gives specifications for the instrument.

Comment 5:

Operation Condition 11(b) - Historically pressure drop instrumentation does not need to be calibrated more frequently than annually.

Response to Comments 3, 4, and 5 regarding Operation Condition 11

OAM will remove the range specified in Operation Condition 11(a) and replace it with

manufacturers's specifications.

While Operation Condition 11(c) does appear to give specifications for the pressure drop instrumentation it is not complete. It would be impossible for OAM to list complete specifications in the proposed construction permit. IDEM however, does agree that annual calibration of the pressure drop instrumentation is satisfactory. Operation Condition 11(b) is a standard condition appearing in all proposed construction permits utilizing baghouses as control devices and will not be revised.

Therefore, the revised Operation Condition 11 due to changes resulting from Comments 3 and 5 is as follows:

Baghouse Operating Condition

11. That the baghouse shall be operated at all times when the corresponding processes are in operation.
- (a) The Permittee shall take readings of the total static pressure drop across the baghouses, at least once per week. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouses shall be maintained within ~~the range of 3 and 4 inches of water~~ **a range in accordance with manufacturer's specifications**. The Preventive Maintenance Plan for these baghouses shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of this range for any one reading.
  - (b) The instrument used for determining the pressure shall be subject to approval by IDEM, OAM, and shall be calibrated at least once every ~~six (6)~~ **twelve (12)** months.
  - (c) The gauge employed to take the pressure drop across the baghouses or any part of the facility shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within  $\pm 2\%$  of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.
  - (d) An inspection shall be performed each calendar quarter of all the baghouses. Defective bags shall be replaced. A record shall be kept of the results of the inspection and the number of bags replaced.
  - (e) In the event that a bag's failure has been observed:
    - (i) The affected compartments will be shut down immediately until the failed units have been replaced.
    - (ii) Based upon the findings of the inspection, any additional corrective actions will be devised within eight (8) hours of discovery and will include a timetable for completion.

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Comment 6:

Operation Condition 12(c) - During the plant start-up period there will not be any employees who have worked at the plant at least one month.

Response to Comment 6:

OAM feels that this condition is necessary to ensure that the baghouses are operating correctly. OAM will revise the requirement that the employee work at the plant for at least one month and be trained to employee work at the plant for at least one month or be trained.. The revised Operation Condition 12 is as follows:

Visible Emission Notations

12. That visible emission notations of all exhaust to the atmosphere from the baghouses shall be performed once per working shift. A trained employee will record whether emissions are normal or abnormal.
- (a) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80% of the time, the process is in operation, not counting start up or shut down time.
  - (b) In the case of batch or discontinuous operation, readings shall be taken during part of the operation specified in the facility's specific condition prescribing visible emissions.
  - (c) A trained employee is an employee who has worked at the plant at least one (1) month ~~and~~ or has been trained in the appearance and characteristics of normal and abnormal visible emissions for that specific process.
  - (d) The Preventive Maintenance Plan for this facility shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.
- 

Comment 7:

Operation Condition 16(a) - The only crushing operation is the reclaim grinder, the other sources are indoor emissions subject to the 10% opacity limit.

Comment 8:

Operation Condition 16(b) - NSPS OOO affected facilities enclosed in buildings are subject to 40 CFR 60.672(e). As such mechanically induced vents are limited to 7% opacity and 0.02 gr/dscf. All other emissions are limited to 10% opacity as determined by EPA Method 22 and Method 9.

Comment 9:

Operation Condition 16 - The stucco handling baghouse BSH1 is the only NSPS OOO affected facility exhausting through a stack to the outdoors. As such it is subject to the NSPS limitations in 40 CFR 60.672(a) - 7% opacity and 0.02 grains/dscf.

Response to Comments 7, 8, and 9 regarding Operation Condition 16:

Operation Condition 16(a) will be revised to allow 15% opacity for the reclaim grinder. Operation Condition 16(b) will be revised to allow 7% opacity and 0.02 gr/dscf for vents and the other sources listed under Operation Condition 16(a) will be moved to Operation Condition 16(b) requiring 10% opacity. A new Operation Condition 16 (c) will be added requiring the exhaust from baghouse BSH1 be limited to 7% opacity and 0.02 grains /dscf.

The revised Operation Condition 16 is as follows:

- NSPS OOO (Standards of Performance for Nonmetallic Mineral Processing Plants)
16. That whenever this plant is processing nonmetallic minerals, it shall comply with the New Source Performance Standards, 326 IAC 12 (40 CFR 60.670 through 60.676, Subpart OOO) "Standards of Performance for Nonmetallic Mineral Processing Plants". This rule requires particulate emissions from the following:

- (a) ~~FGD Storage Bin, Reclaim Wallboard Storage Bin, 2 kettle feed bins, 2 stucco storage silos, reject stucco bin, entoleter, 2 stucco recirculation bucket elevators, landplaster bin, 4 ball mills, reclaim grinder, reclaim belt conveyor transfer points, FGD feed high angle belt conveyor transfer points, 6 FGD conveyors transfer points,~~ **the and all** crushing operations to be limited to 15 percent opacity or less, ~~and~~
- (b) screening and conveying operations (rotary screen assembly, stucco bucket elevator, 2 dry additive belt conveyors transfer points, belt conveyor with 2 scales transfer points, **2 stucco recirculation bucket elevators, reclaim belt conveyor transfer points, FGD feed high angle belt conveyor transfer points, and 8 FGD conveyors transfer points**) to be limited to 10 percent or less,
- (c) **emissions vents enclosed in buildings (FGD Storage Bin, Reclaim Wallboard Storage Bin, 2 kettle feed bins, 2 stucco storage silos, reject stucco bin, landplaster bin, 4 ball mills) and the stucco handling baghouse (BSH1) shall be limited to 7% opacity and 0.02 grains/dscf.**

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Compliance with these opacity limits shall also satisfy the requirements of 326 IAC 5-1.

Comment 10:

Technical Support Document - The physical arrangement of the conveyors, belts and equipment will require two additional belts else the belts will conflict with other equipment.

Comment 11:

Technical Support Document - The opacity for NSPS UUU sources is incorrectly shown as 15%.

Response to Comments 10 and 11 regarding the Technical Support Document

The Technical Support Document (TSD) reflects the proposed construction permit that was public noticed. All references to "6 FGD conveyors transfer points" will be corrected to "8 FGD conveyors transfer points" where they appear in the proposed construction permit.

The 15% opacity for NSPS Subpart UUU stated in the TSD is a typo. The opacity is correctly stated in the proposed construction permit.

Mail to: Permit Administration & Development Section  
Office Of Air Management  
100 North Senate Avenue  
P. O. Box 6015  
Indianapolis, Indiana 46206-6015

G-P Gypsum Corporation  
P.O. Box 105603  
Atlanta, GA 30348-5603

**Affidavit of Construction**

I, \_\_\_\_\_, being duly sworn upon my oath, depose and say:  
(Name of the Authorized Representative)

1. I live in \_\_\_\_\_ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of \_\_\_\_\_ for \_\_\_\_\_  
(Title) (Company Name)
3. By virtue of my position with \_\_\_\_\_, I have personal  
(Company Name)  
knowledge of the representations contained in this affidavit and am authorized to make  
these representations on behalf of \_\_\_\_\_  
(Company Name)
4. I hereby certify that G-P Gypsum Corporation, County Road 1400 North, Wheatfield, Indiana 46392, has constructed the gypsum wallboard (drywall) manufacturing plant in conformity with the requirements and intent of the construction permit application received by the Office of Air Management on March 16, 1998 and as permitted pursuant to **Construction Permit No. CP-073-9573-00031** issued on \_\_\_\_\_.
5. I hereby certify that G-P Gypsum Corporation is now subject to the Title V program and will submit a Title V (or FESOP) operating permit application within twelve (12) months from the postmarked submission date of this Affidavit of Construction.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

STATE OF INDIANA)  
)SS

COUNTY OF \_\_\_\_\_ )

Subscribed and sworn to me, a notary public in and for \_\_\_\_\_ County and State of  
Indiana on this \_\_\_\_\_ day of \_\_\_\_\_, 19 \_\_\_\_\_.

My Commission expires: \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Name (typed or printed)