



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

TO: Interested Parties / Applicant
DATE: January 20, 2006
RE: Hanson Aggregates Midwest / 133-20603-00037
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

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 IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require 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 of 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.dot 1/10/05



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Indianapolis, Indiana 46204-2251
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MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**Hanson Aggregates Midwest
70 Veterans Memorial Highway
Greencastle, Indiana 46135**

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

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Operation Permit No.: MSOP 133-20603-00037	
Issued by: Origin signed by Paul Dubenetzky, Assistant Commissioner Office of Air Quality	Issuance Date: January 20, 2006 Expiration Date: January 20, 2011

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)] [326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary limestone processing plant.

Authorized Individual: Assistant Secretary
Source Address: 70 Veterans Memorial Highway, Greencastle, Indiana 46135
Mailing Address: P.O. Box 466329, Louisville, Kentucky, 40253-6329
General Source Phone: (502) 244-7550
SIC Code: 1422
County Location: Putnam
Source Location Status: Attainment for all criteria pollutants
Source Status: Minor Source Operating Permit
Minor Source, under PSD;
Minor Source, Section 112 of the Clean Air Act

A.2 Emissions Units and Pollution Control Equipment Summary

This stationary source is approved to operate the following emissions units and pollution control devices:

- (a) one (1) receiving hopper (ID# RH1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (b) one (1) Pioneer 42 x 48 jaw crusher (ID# CR1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (c) one (1) Stedman 6460 impact crusher (ID# CR2) with a maximum rated capacity of 383 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (d) one (1) Deister 7 x 20 triple deck screen (ID# SCR1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (e) one (1) Deister 7 x 20 triple deck screen (ID# SCR2) with a maximum rated capacity of 453 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control; and
- (f) ten (10) conveyors, installed in 1999, identified as C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, C-9 and C-10, with maximum capacities of 600, 600, 159, 159, 453, 12, 54, 54, 387 and 387 tons per hour, respectively, equipped with a wet suppression system for particulate control.
- (g) aggregate storage piles with a maximum capacity of 500,000 tons; and
- (h) paved and unpaved roads.

SECTION B GENERAL CONDITIONS

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

B.1 Permit No Defense [IC 13]

This permit to operate 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.

B.2 Definitions

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

B.3 Effective Date of the Permit [IC13-15-5-3]

Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

B.4 Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]

This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

B.5 Modification to Permit [326 IAC 2]

All requirements and conditions of this operating 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).

B.6 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, IN 46204-2251

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.7 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) The Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.
- (b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMP does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation, Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.8 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1.
- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]
- (d) No permit amendment or modification is required for the addition, operation or removal of a non-road engine, as defined in 40 CFR 89.2.

**B.9 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)] [IC 13-14-2-2]
[IC13-17-3-2][IC 13-30-3-1]**

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.10 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)]:

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ shall issue a revised permit.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

B.11 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.12 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to 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 this article.

C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.5 Fugitive Particulate Matter Emission Limitations [326 IAC 6-5]

Pursuant to 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations), fugitive particulate matter emissions shall be controlled according to the plan submitted on May 15, 2000. The plan consists of:

- (a) Visible emissions from storage piles shall not exceed twenty percent (20%) in twenty four (24) consecutive readings in a six (6) minute period. This limitation may not apply during periods when application of control measures are ineffective or unreasonable due to sustained very high wind speeds. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.
- (b) Visible emissions from unpaved roadways shall not exceed an average instantaneous opacity of twenty percent (20%). The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:
- (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.
 - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.
- The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the unpaved roadway.
- (c) Visible emissions from paved roadways shall not exceed an average instantaneous opacity of twenty percent (20%). The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:
- (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.
 - (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.
- The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the paved roadway.
- (d) Visible emissions from the material loading and unloading operation shall not exceed an average instantaneous opacity of twenty percent (20%). The average instantaneous opacity shall be the average of three (3) opacity readings taken (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) material loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.

Compliance with these opacity limitations shall also meet the requirements of 326 IAC 5-1.

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
 - (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
 - (2) If there is a change in the following:
 - (A) Asbestos removal or demolition start date;
 - (B) Removal or demolition contractor; or
 - (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Asbestos Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-7-1(34).

- (e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) Demolition and renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

- (g) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Accredited Asbestos inspector is not federally enforceable.

Testing Requirements

C.7 Performance Testing [326 IAC 3-6]

- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ (and local agency) not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, (and local agency), if the Permittee submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.

Compliance Monitoring Requirements

C.9 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.10 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

Record Keeping and Reporting Requirements

C.11 Malfunctions Report [326 IAC 1-6-2]

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 Quality (OAQ) 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 OAQ, 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]

C.12 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented when operation begins.

C.13 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

- (c) Unless otherwise specified in this permit, any quarterly or semi-annual report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1

EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

- (a) one (1) receiving hopper (ID# RH1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (b) one (1) Pioneer 42 x 48 jaw crusher (ID# CR1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (c) one (1) Stedman 6460 impact crusher (ID# CR2) with a maximum rated capacity of 383 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (d) one (1) Deister 7 x 20 triple deck screen (ID# SCR1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (e) one (1) Deister 7 x 20 triple deck screen (ID# SCR2) with a maximum rated capacity of 453 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control; and
- (f) ten (10) conveyors, installed in 1999, identified as C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, C-9 and C-10, with maximum capacities of 600, 600, 159, 159, 453, 12, 54, 54, 387 and 387 tons per hour, respectively, equipped with a wet suppression system for particulate control.
- (g) aggregate storage piles with a maximum capacity of 500,000 tons; and
- (h) paved and unpaved roads.

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

Emission Limitations and Standards

D.1.1 Particulate [40 CFR Part 60, Subpart OOO]

Pursuant to the New Source Performance Standards, 326 IAC 12 and 40 CFR 60.670 through 60.676, Subpart OOO Standards of Performance for Nonmetallic Mineral Processing Plants):

- (a) the crushing operations to be limited to fifteen percent (15%) opacity or less, and
- (b) the screening and conveying operations to be limited to ten percent (10%) or less.

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

D.1.2 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the crushing, screening and conveying operations shall be limited as follows:

Process Description	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Allowable (lb/hr)
jaw crusher (ID# CR1)	600	71.16
impact crusher (ID# SCR2)	383	65.81
triple deck screen (ID# SCR1)	600	71.16
triple deck screen (ID# SCR2)	453	67.78
two (2) conveyors (C-1 and C-2)	600 each	71.16 each
two (2) conveyors (C-3 and C-4)	159 each	56.05 each
one (1) conveyor(C-5)	453	67.78
two (2) conveyors (C-7 and C-8)	54 each	45.29 each
two (2) conveyors (C-9 and C-10)	387 each	65.93 each

Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

- (b) Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the one (1) conveyor C-6 shall not exceed 21.66 pounds per hour when operating at a process weight rate of 24,000 pounds per hour. The pound per hour limitation was calculated using the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

Compliance Determination Requirements

D.1.3 Testing Requirements [326 IAC 3-6][40 CFR 60.675(c), Subpart OOO]

Between September 2009 and March 2009, pursuant to 40 CFR 60.675 (c) and 40 CFR 60.11, the Permittee shall perform opacity testing to determine compliance with Condition D.1.1, utilizing Method 9 (40 CFR 60, Appendix A), or other methods as approved by the commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing. In addition to these requirements, IDEM may require compliance testing when necessary to determine if the emissions unit is in compliance.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.4 Continuous Wet Suppression

Pursuant to MSOP133-11544-00037, issued on May 15, 2000, and in order to comply with Conditions D.1.1 and D.1.2, the continuous wet suppression system for particulate control shall be in operation and control emissions from the crushing, screening and conveying operations at all times that the units are in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH**

**MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Hanson Aggregates Midwest, Inc.
Address:	70 Veterans Memorial Highway
City:	Greencastle
Phone #:	(502) 244-7550
MSOP #:	133-20603-00037

I hereby certify that Hanson Aggregates Midwest, Inc. is still in operation.
 no longer in operation.

I hereby certify that Hanson Aggregates Midwest, Inc. is
 in compliance with the requirements of MSOP 133-20603-00037.
 not in compliance with the requirements of MSOP 133-20603-00037.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
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 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____,
25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR
REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR
ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR
LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____.
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, SO2, 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: _____

*SEE PAGE 2

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. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

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.

***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:

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

Technical Support Document (TSD) for a MSOP Renewal

Source Background and Description

Source Name:	Hanson Aggregates Midwest, Inc.
Source Location:	70 Veterans Memorial Highway, Greencastle, IN 46135
County:	Putnam
SIC Code:	1422
Operation Permit No.:	133-11544-00037
Operation Permit Issuance Date:	May 15, 2000
Permit Renewal No.:	133-20603
Permit Reviewer:	Alic Bent/EVP

The Office of Air Quality (OAQ) has reviewed an application from Hanson Aggregates Midwest, Inc. relating to the operation of a stationary limestone processing plant.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) one (1) receiving hopper (ID# RH1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (b) one (1) Pioneer 42 x 48 jaw crusher (ID# CR1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (c) one (1) Stedman 6460 impact crusher (ID# CR2) with a maximum rated capacity of 383 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (d) one (1) Deister 7 x 20 triple deck screen (ID# SCR1) with a maximum rated capacity of 600 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (e) one (1) Deister 7 x 20 triple deck screen (ID# SCR2) with a maximum rated capacity of 453 tons per hour, installed in 1999, equipped with a wet suppression system for particulate control;
- (f) ten (10) conveyors, installed in 1999, identified as C-1, C-2, C-3, C-4, C-5, C-6, C-7, C-8, C-9 and C-10, with maximum capacities of 600, 600, 159, 159, 453, 12, 54, 54, 387 and 387 tons per hour, respectively, equipped with a wet suppression system for particulate control;
- (g) aggregate storage piles with a maximum capacity of 500,000 tons; and
- (h) paved and unpaved roads.

Permitted Emission Units and Pollution Control Equipment Removed from the Source

The source also consists of the following previously permitted emission units and pollution control devices that have been removed from service and are not included in this renewal review:

- (a) three (3) conveyors, identified as C-11, C-12 and C-13, utilizing spray bars to control emissions (Note: these emission units were approved under MSOP No. 133-11544-00037, issued May 15, 2000 but were never installed at this source. The source has indicated that it will not construct these units and they are therefore not included in this approval).

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted emission units operating at this source during this review process.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) MSOP 133-11544-00037 issued on May 15, 2000.

All conditions from previous approvals were incorporated into this permit.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the operation 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.

A complete application for the purposes of this review was received on January 27, 2005.

Emission Calculations

See Appendix A: pages 1 through 4 of this document for detailed emission calculations.

Potential to Emit of the Source Before Controls

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential to Emit (tons/yr)
PM	2757.18*
PM-10	1262.66**
SO ₂	0.00
VOC	0.00
CO	0.00
NO _x	0.00

*Nonfugitive emissions = 185.18 tons/yr and fugitive emissions = 2572.00 tons/yr

**Nonfugitive emissions = 88.16 tons/yr and fugitive emissions = 1174.50 tons/yr

- (a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of all regulated pollutants (excluding fugitive PM-10 emissions) are less than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.
- (b) Fugitive Emissions
 Since this type of operation is not one of the twenty-eight (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 and PM-10 emissions are not counted toward determination of PSD applicability. Fugitive PM and PM-10 emissions are not counted toward Part 70 determination due to the same reasons mentioned.

County Attainment Status

The source is located in Putnam County.

Pollutant	Status
PM-10	Attainment
PM-2.5	Attainment
SO ₂	Attainment
NO ₂	Attainment
1-hour Ozone	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) and NO_x are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Putnam County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (b) Putnam County has been classified as attainment or unclassifiable in Indiana for PM-10, SO₂, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (c) Putnam County has been classified as unclassifiable or attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM 2.5 emissions. Therefore, until the U.S.EPA adopts specific provisions for PSD review for PM_{2.5} emissions, it has directed states to regulate PM₁₀ emissions as surrogate for PM_{2.5} emissions.

Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	18.52
PM-10	8.82
SO ₂	0.00
VOC	0.00
CO	0.00
NO _x	0.00
Single HAP	0.00
Combination HAPs	0.00

- (a) This existing source is not a major stationary source because no attainment regulated 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.
- (b) These emissions were based on MSOP 133-11544-00037, issued May 15, 2000.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit MSOP Renewal 133-20603-00037, is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,
- (b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
- (c) any combination of HAPs is less than 25 tons per year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAQ inspector assigned to the source.

Federal Rule Applicability

- (a) This limestone processing plant is subject to the New Source Performance Standard 326 IAC 12, 40 CFR 60.670 through 60.676, Subpart OOO. This rule requires the particulate emissions from:
 - (1) the crushing operations to be limited to fifteen percent (15%) opacity or less, and
 - (2) the screening and conveying operations to be limited to ten percent (10%) or less.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP)(326 IAC 14, 20 and 40 CFR Part 61, 63) applicable to this source.

State Rule Applicability – Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration, PSD)

Pursuant to 326 IAC 2-2 (PSD), this existing minor source, originally constructed in 1999 after the August 7, 1977 rule applicability date, is still not considered a major source. This source is not one of the 28 listed source categories, it does not have the potential to emit of 250 tons per year (tpy) or more of any criteria non-fugitive pollutant and the fugitive PM and PM-10 emissions are not counted toward determination of PSD applicability since there are no applicable New Source Performance Standards that were in effect on August 7, 1980. Therefore, 326 IAC 2-2 does not apply.

326 IAC 2-6 (Emission Reporting)

This source is not required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program. Therefore, pursuant to 326 IAC 2-6-1, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in the permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 6-4 (Fugitive Dust Emissions)

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

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

This source is subject to 326 IAC 6-5 for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new source which has not received all the necessary preconstruction approvals before December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved. The fugitive dust control plan for this source includes the following:

- (a) Visible emissions from storage piles shall not exceed twenty percent (20%) in twenty four (24) consecutive readings in a six (6) minute period. This limitation may not apply during periods when application of control measures are ineffective or unreasonable due to sustained very high wind speeds. The opacity shall be determined using 40 CFR 60, Appendix A, Method 9, except that the opacity shall be observed at approximately four (4) feet from the surface at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.
- (b) Visible emissions from unpaved roadways shall not exceed an average instantaneous opacity of twenty percent (20%). The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:
 - (1) The first will be taken at the time of emission generation.
 - (2) The second will be taken five (5) seconds later.

(3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the unpaved roadway.

(c) Visible emissions from paved roadways shall not exceed an average instantaneous opacity of twenty percent (20%). The average instantaneous opacity shall be the average of twelve (12) instantaneous opacity readings, taken for four (4) vehicle passes, consisting of three (3) opacity readings for each vehicle pass. The three (3) opacity readings for each vehicle pass shall be taken as follows:

- (1) The first will be taken at the time of emission generation.
- (2) The second will be taken five (5) seconds later.
- (3) The third will be taken five (5) seconds later or ten (10) seconds after the first.

The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume. Each reading shall be taken approximately four (4) feet above the surface of the paved roadway.

(d) Visible emissions from the material loading and unloading operation shall not exceed an average instantaneous opacity of twenty percent (20%). The average instantaneous opacity shall be the average of three (3) opacity readings taken (5) seconds, ten (10) seconds, and fifteen (15) seconds after the end of one (1) material loading or unloading operation. The three (3) readings shall be taken at the point of maximum opacity. The observer shall stand at least fifteen (15) feet, but no more than one-fourth (1/4) mile, from the plume and at approximately right angles to the plume.

Compliance with these opacity limitations shall also meet the requirements of 326 IAC 5-1.

State Rule Applicability – Individual Facilities

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the particulate from facilities at the source shall be limited as follows:

Process Description	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Allowable (lb/hr)	Controlled Emissions (lb/hr)	Compliance (Y/N)
jaw crusher (ID# CR1)	600	71.16	0.04	Y
impact crusher (ID# SCR2)	383	65.81	0.03	Y
triple deck screen (ID# SCR1)	600	71.16	1.89	Y
triple deck screen (ID# SCR2)	453	67.78	1.43	Y
two (2) conveyors (C-1 and C-2)	600 each	71.16 each	0.18 each	Y
two (2) conveyors (C-3 and C-4)	159 each	56.05 each	0.05 each	Y
one (1) conveyor(C-5)	453	67.78	0.13	Y
two (2) conveyors (C-7 and C-8)	54 each	45.29 each	0.02 each	Y
two (2) conveyors (C-9 and C-10)	387 each	65.93 each	0.11 each	Y

The above limitations are based on the following equation:
Interpolation and extrapolation of the data for the process weight rate in excess of 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 55.0 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

The wet suppression system shall be in operation at all times the crushing, screening and conveying processes are in operation, in order to comply with this limit.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

Pursuant to 326 IAC 6-3-2(e) (Particulate Emission Limitations for Manufacturing Processes), the particulate from the one (1) conveyor C-6 shall be limited by the following:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

$$E = 4.10 (12)^{0.67} = 21.66 \text{ lbs PM/hr}$$

The wet suppression system shall be in operation at all times the one (1) conveyor C-6 is in operation, in order to comply with this limit.

Conclusion

The operation of this limestone processing plant shall be subject to the conditions of the Minor Source Operating Permit 133-20603-00037.

**Appendix A: Emission Calculations
Limestone Processing Calculations**

Company Name: Hanson Aggregates Midwest, Inc.
Address City IN Zip: 70 Veterans Memorial Highway, Greencastle, IN 46135
MSOP Renewal #: 133-20603-00037
Permit Reviewer: Alic Bent/EVP

PM emissions before controls

Storage				** see page 2 **					31.04	tons/yr	AP-42 Ch.11.2.3
Transporting				** see page 3 **					2535.18	tons/yr	AP-42 Ch.11.2.1
Loading & Unloading	600	tons/hr x	8760	hrs/yr x	0.0022	lb/ton /	2000	lb/ton =	5.78	tons/yr	AP-42 Ch.11.2.3
Primary Crusher (1)	600	tons/hr x	8760	hrs/yr x	0.0007	lb/ton /	2000	lb/ton =	1.84	tons/yr	AP-42 Ch.11.19.2
Secondary Crusher (1)	383	tons/hr x	8760	hrs/yr x	0.0007	lb/ton /	2000	lb/ton =	1.17	tons/yr	AP-42 Ch.11.19.2
Screening (2)	1053	tons/hr x	8760	hrs/yr x	0.0315	lb/ton /	2000	lb/ton =	145.28	tons/yr	AP-42 Ch.11.19.2
Conveying transfer pts. (10)	2865	tons/hr x	8760	hrs/yr x	0.00294	lb/ton /	2000	lb/ton =	36.89	tons/yr	AP-42 Ch.11.19.2
Total emissions before controls:									2757.18	tons/yr	

PM emissions after control

Storage	31.04	tons/hr x	50% emitted after controls =	15.52	tons/yr
Transporting	2535.18	tons/hr x	50% emitted after controls =	1267.59	tons/yr
Loading & Unloading	5.78	tons/hr x	50% emitted after controls =	2.89	tons/yr
Primary Crusher (1)	1.84	tons/hr x	10% emitted after controls =	0.18	tons/yr
Secondary Crusher (1)	1.17	tons/hr x	10% emitted after controls =	0.12	tons/yr
Screening (2)	145.28	tons/hr x	10% emitted after controls =	14.53	tons/yr
Conveying transfer pts. (10)	36.89	tons/hr x	10% emitted after controls =	3.69	tons/yr
Total emissions after controls:				1304.51	tons/yr

Since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, fugitive emissions are not counted toward determination of PSD applicability.

Crushing, screening, and conveying operations are considered nonfugitive. All other emissions are considered fugitive. Pursuant to PSD rules, 326 IAC 2-2, emissions are as follows:

**** fugitive vs. nonfugitive ****

Storage	31.04	tons/hr x	50% emitted after controls =	15.52	tons/yr
Transporting	2535.18	tons/hr x	50% emitted after controls =	1267.59	tons/yr
Loading & Unloading	5.78	tons/hr x	50% emitted after controls =	2.89	tons/yr
Total fugitive emissions				1286.00	tons/yr
Primary Crusher (1)	1.84	tons/hr x	10% emitted after controls =	0.18	tons/yr
Secondary Crusher (1)	1.17	tons/hr x	10% emitted after controls =	0.12	tons/yr
Screening (2)	145.28	tons/hr x	10% emitted after controls =	14.53	tons/yr
Conveying transfer pts. (10)	36.89	tons/hr x	10% emitted after controls =	3.69	tons/yr
Total nonfugitive emissions				18.52	tons/yr

**** storage ****

Storage emissions, which result from wind erosion, are determined by the following calculations:

$$E_f = 1.7 \cdot (s/1.5)^{365-p} / 235 \cdot (f/15)$$

= 9.26 lb/acre/day

where s = 8 % silt content of material

p = 125 days of rain greater than or equal to 0.01 inches

f = 15 % of wind greater than or equal to 12 mph

$$E_p(\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$$

= 31.04 tons/yr

where sc = 500,000 tons storage capacity

**** unpaved roads ****

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

A. 6 wheelers

15.0 round trips/hr : 0.38 mile/one-way trip x 2 (round trip) x 8760 hr/yr = 99864.0

$$E_f = k \cdot 5.9 \cdot (s/12)^{S/30} \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$$

= 11.47 lb/mile

where k = 0.8 (particle size multiplier)

s = 9 % silt content of unpaved roads

p = 125 days of rain greater than or equal to 0.01 inches

S = 15 miles/hr vehicle speed

W = 59 tons average vehicle weight

w = 6 wheels

$$\frac{11.47 \text{ lb/mi} \times 99864 \text{ mi/yr}}{2000 \text{ lb/ton}} = 572.70 \text{ tons/yr}$$

B. 14 wheelers

30.0 round trips/hr : 0.8 mile/one-way trip x 2 (round trip) x 8760 hr/yr = 420480.0

$$E_f = k \cdot 5.9 \cdot (s/12)^{S/30} \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$$

= 9.33 lb/mile

where k = 0.8 (particle size multiplier)

s = 9 % silt content of unpaved roads

p = 125 days of rain greater than or equal to 0.01 inches

S = 15 miles/hr vehicle speed

W = 24 tons average vehicle weight

w = 14 wheels

$$\frac{9.33 \text{ lb/mi} \times 420480 \text{ mi/yr}}{2000 \text{ lb/ton}} = 1962.47 \text{ tons/yr}$$

C. Total Potential PM Emissions

2535.18 tons/yr

The following calculations determine the amount of emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 11.2.3.

$$E_f = k \cdot (0.0032) \cdot (U/5)^{1.3} \cdot (M/2)^{1.4}$$

= 0.0022 lb/ton

where k = 0.74 (particle size multiplier)

U = 10 mile/hr mean wind speed

M = 4 % material moisture content

**Appendix A: Emission Calculations
Limestone Processing Calculations**

Company Name: Hanson Aggregates Midwest, Inc.
Address City IN Zip: 70 Veterans Memorial Highway, Greencastle, IN 46135
MSOP Renewal #: 133-20603-00037
Permit Reviewer: Alic Bent/EVP

PM10 emissions before controls

Storage			** see page 2 **						31.04	tons/yr	AP-42 Ch.11.2.3
Transporting			** see page 3 **						1140.83	tons/yr	AP-42 Ch.11.2.1
Loading & Unloading	600	tons/hr x	8760	hrs/yr x	0.001	lb/ton /	2000	lb/ton =	2.63	tons/yr	AP-42 Ch.11.2.3
Primary Crusher (1)	600	tons/hr x	8760	hrs/yr x	0.00033	lb/ton /	2000	lb/ton =	0.87	tons/yr	AP-42 Ch.11.19.2
Secondary Crusher (1)	383	tons/hr x	8760	hrs/yr x	0.00033	lb/ton /	2000	lb/ton =	0.55	tons/yr	AP-42 Ch.11.19.2
Screening (2)	1053	tons/hr x	8760	hrs/yr x	0.015	lb/ton /	2000	lb/ton =	69.18	tons/yr	AP-42 Ch.11.19.2
Conveying transfer pts. (10)	2865	tons/hr x	8760	hrs/yr x	0.0014	lb/ton /	2000	lb/ton =	17.57	tons/yr	AP-42 Ch.11.19.2
Total emissions before controls:									1262.66	tons/yr	

PM10 emissions after control

Storage	31.04	tons/hr x	50% emitted after controls =	15.52	tons/yr
Transporting	1140.83	tons/hr x	50% emitted after controls =	570.41	tons/yr
Loading & Unloading	2.63	tons/hr x	50% emitted after controls =	1.31	tons/yr
Primary Crusher (1)	0.87	tons/hr x	10% emitted after controls =	0.09	tons/yr
Secondary Crusher (1)	0.55	tons/hr x	10% emitted after controls =	0.06	tons/yr
Screening (2)	69.18	tons/hr x	10% emitted after controls =	6.92	tons/yr
Conveying transfer pts. (10)	17.57	tons/hr x	10% emitted after controls =	1.76	tons/yr
Total emissions after controls:				596.06	tons/yr

Since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, fugitive emissions are not counted toward determination of PSD applicability.

Crushing, screening, and conveying operations are considered nonfugitive. All other emissions are considered fugitive. Pursuant to PSD rules, 326 IAC 2-2, emissions are as follows:

**** fugitive vs. nonfugitive ****

Storage	31.04	tons/hr x	50% emitted after controls =	15.52	tons/yr
Transporting	1140.83	tons/hr x	50% emitted after controls =	570.41	tons/yr
Loading & Unloading	2.63	tons/hr x	50% emitted after controls =	1.31	tons/yr
Total fugitive emissions				587.25	tons/yr
Primary Crusher (1)	0.87	tons/hr x	10% emitted after controls =	0.09	tons/yr
Secondary Crusher (1)	0.55	tons/hr x	10% emitted after controls =	0.06	tons/yr
Screening (2)	69.18	tons/hr x	10% emitted after controls =	6.92	tons/yr
Conveying transfer pts. (10)	17.57	tons/hr x	10% emitted after controls =	1.76	tons/yr
Total nonfugitive emissions				8.82	tons/yr

**** storage ****

Storage emissions, which result from wind erosion, are determined by the following calculations:

$$E_f = 1.7 \cdot (s/1.5)^{(365-p)/235} \cdot (f/15)$$

= 9.26 lb/acre/day

where s = 8 % silt content of material

p = 125 days of rain greater than or equal to 0.01 inches

f = 15 % of wind greater than or equal to 12 mph

$$E_p(\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$$

= 31.04 tons/yr

where sc = 500,000 tons storage capacity

**** unpaved roads ****

The following calculations determine the amount of emissions created by unpaved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

A. 6 wheelers

15.0 round trips/ 0.38 mile/one-way trip x 2 (round trip) x 8760 hr/yr = 99864.0

$$E_f = k \cdot 5.9 \cdot (s/12)^{(S/30)} \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$$

= 5.16 lb/mile

where k = 0.36 (particle size multiplier)

s = 9 % silt content of unpaved roads

p = 125 days of rain greater than or equal to 0.01 inches

S = 15 miles/hr vehicle speed

W = 59 tons average vehicle weight

w = 6 wheels

$$\frac{5.16 \text{ lb/mi} \times 99864 \text{ mi/yr}}{2000 \text{ lb/ton}} = 257.72 \text{ tons/yr}$$

B. 14 wheelers

30.0 round trips/ 0.8 mile/one-way trip x 2 (round trip) x 8760 hr/yr = 420480.0

$$E_f = k \cdot 5.9 \cdot (s/12)^{(S/30)} \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365)$$

= 4.20 lb/mile

where k = 0.36 (particle size multiplier)

s = 9 % silt content of unpaved roads

p = 125 days of rain greater than or equal to 0.01 inches

S = 15 miles/hr vehicle speed

W = 24 tons average vehicle weight

w = 14 wheels

$$\frac{4.20 \text{ lb/mi} \times 420480 \text{ mi/yr}}{2000 \text{ lb/ton}} = 883.11 \text{ tons/yr}$$

C. Total Potential PM Emissions

1140.83 tons/yr

The following calculations determine the amount of emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 11.2.3.

$$E_f = k \cdot (0.0032)^U \cdot (U/5)^{1.3} \cdot (M/2)^{1.4}$$

= 0.0010 lb/ton

where k = 0.35 (particle size multiplier)

U = 10 mile/hr mean wind speed

M = 4 % material moisture content