



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: July 6, 2009

RE: Laticrete International / 097 - 27115 - 00652

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision – Approval

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

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days from the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

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

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

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

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

Enclosures
FNPER-AM.dot12/3/07



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Ron Roach
Laticrete International, Inc.
4620 West 84th Street, Building II, Suite 200
Indianapolis, Indiana 46231

July 6, 2009

Re: Exempt Construction and Operation Status,
097-27115-00652

Dear Ron Roach:

The application from Laticrete International, Inc., received on November 3, 2008, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following stationary adhesive and sealant manufacturing plant, serving the construction industry located at 4620 West 84th Street, Indianapolis, Indiana is classified as exempt from air pollution permit requirements:

This facility consists of a single production process that is used to manufacture several products, and is identified as The Powder Room Process, consisting of the following existing emission units and pollution control devices:

- (a) Emission Point #1, identified as EP-01, consisting of the following:
 - (1) Eight (8) raw material storage silos, identified as Silos #1 through #8, having a maximum combined throughput capacity of all silos of 37.5 tons per hour. Filling of each silo by pneumatic truck is with a negative pressure system, using dry cartridge dust collectors known as Baghouse #1 through #8, integral with pulse-jet cleaning, exhausting indoors. Filtered dust drops to a hopper that is 100% recycled back into the system.
- (b) Emission Point #2, identified as EP-02 and as Central Dust Collector, consisting of the following:
 - (1) Five (5) weight hoppers, having a maximum combined throughput capacity of all hoppers of 37.5 tons per hour, gravity fed through a closed system from a combination of the eight raw material silos, controlled by an integral suction-vent system and delivered to the Central Dust Collector, exhausting indoors.
 - (2) Two (2) mixers, having a maximum combined throughput capacity of all mixers of 37.5 tons per hour, gravity fed through a closed system from a combination of the five (5) weigh hoppers, controlled by an integral suction-vent system and delivered to the Central Dust Collector, exhausting indoors.
 - (3) One (1) bagger, with a maximum throughput capacity of 37.5 tons per hour, gravity fed through a closed system from a combination of the two (2) mixers, controlled by an integral suction-vent system and delivered to the Central Dust collector, exhausting indoors.
- (c) The source has paved roads, on which incoming deliveries and outgoing shipments are made, which are capable of producing fugitive dust.

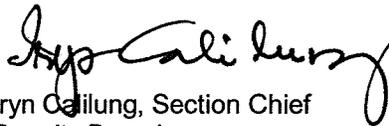
The following conditions shall be applicable to this source:

- (a) 326 IAC 2-1.1-3 (Exemptions)
Exemption applicability is discussed under the Permit Level Determination – Exemption section above. However, in order to comply with the emission levels pursuant to 326 IAC 2-1.1-3, the air filter system, baghouses, and Central Dust Collector, shall be in operation at all times that the Powder Room Process facilities are in operation.
- (b) 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 this permit:
- (1) Opacity shall not exceed an average of thirty percent (30%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) 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.
- (c) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the adhesive and sealant manufacturing process has the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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. However, in order to comply with the emission levels pursuant to 326 IAC 6-4, the air filter system, baghouses, and Central Dust Collector, shall be in operation at all times that the Powder Room Process facilities are in operation.

This exemption is the first air approval issued to this source. A copy of the Exemption is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source. If you have any questions on this matter, please contact Jack Harmon, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, at 317-233-4228 or at 1-800-451-6027 (ext 3-4228).

Sincerely,



Iryn Caillung, Section Chief
Permits Branch
Office of Air Quality

IC /jh

cc: File - Marion County
Marion County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for an Exemption

Source Description and Location

Source Name:	Laticrete International, Inc.
Source Location:	4620 West 84 th Street, Suite 200, Indianapolis, IN 46231
County:	Marion
SIC Code:	2821
Exemption No.:	097-27115-00652
Permit Reviewer:	Jack Harmon

On November 3, 2008, the Office of Air Quality (OAQ) received an application from Laticrete International, Inc., related to the operation of an existing stationary adhesive and sealant manufacturing plant, serving the construction industry. The application was in response to an inquiry sent on behalf of the OAQ on August 27, 2008, to determine if Laticrete International, Inc. should be operating under an air permit issued by OAQ.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Marion County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Attainment effective February 18, 2000, for the part of the city of Indianapolis bounded by 11 th Street on the north; Capitol Avenue on the west; Georgia Street on the south; and Delaware Street on the east. Unclassifiable or attainment effective November 15, 1990, for the remainder of Indianapolis and Marion County.
O ₃	Attainment effective November 8, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Attainment effective July 10, 2000, for the part of Franklin Township bounded by Thompson Road on the south; Emerson Avenue on the west; Five Points Road on the east; and Troy Avenue on the north. Attainment effective July 10, 2000, for the part of Wayne Township bounded by Rockville Road on the north; Girls School Road on the east; Washington Street on the south; and Bridgeport Road on the west. The remainder of the county is not designated.

¹Attainment effective October 18, 2000, for the 1-hour ozone standard for the Indianapolis area, including Marion County, and is a maintenance area for the 1-hour ozone National Ambient Air Quality Standards (NAAQS) for purposes of 40 CFR 51, Subpart X*. The 1-hour designation was revoked effective June 15, 2005. Basic nonattainment designation effective federally April 5, 2005, for PM2.5.

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (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. Marion 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) PM2.5

Marion County has been classified as nonattainment for PM2.5 in 70 FR 943 dated January 5, 2005. On May 8th, 2008, U.S. EPA promulgated specific New Source Review rules for PM2.5 emissions, and the effective date of these rules was July 15th, 2008. Therefore, direct PM2.5 and SO2 emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants

Marion County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-1.1-3 (Exemptions) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Laticrete International, Inc. on November 3, 2008, relating to an existing stationary adhesive and sealant manufacturing plant, serving the construction industry. The application was in response to an inquiry sent on behalf of the OAQ on August 27, 2008, to determine if Laticrete International, Inc. should be operating under an air permit issued by OAQ. The source has submitted documentation that has been reviewed by OAQ regarding the air filters on the material handling systems that it is considered integral to the process. After consideration of the documents submitted, OAQ has determined that the air filter system on the material handling systems is to be considered integral to the process. The emissions levels, with consideration of integral to the process, are below those levels requiring an operating permit. Therefore, OAQ is issuing an Exemption to this source.

This facility consists of a single production process that is used to manufacture several products, and is identified as The Powder Room Process, consisting of the following existing emission units and pollution control devices:

(a) Emission Point #1, identified as EP-01, consisting of the following:

- (1) Eight (8) raw material storage silos, identified as Silos #1 through #8, having a maximum combined throughput capacity of all silos of 37.5 tons per hour. Filling of each silo by pneumatic truck is with a negative pressure system, using dry cartridge dust collectors known as Baghouse #1 through #8, integral with pulse-jet cleaning, exhausting indoors. Filtered dust drops to a hopper that is 100% recycled back into the system.

(b) Emission Point #2, identified as EP-02 and as Central Dust Collector, consisting of the following:

- (1) Five (5) weight hoppers, having a maximum combined throughput capacity of all hoppers of 37.5 tons per hour, gravity fed through a closed system from a combination of the eight raw material silos, controlled by an integral suction-vent system and delivered to the Central Dust Collector, exhausting indoors.
- (2) Two (2) mixers, having a maximum combined throughput capacity of all mixers of 37.5 tons per hour, gravity fed through a closed system from a combination of the five (5) weigh hoppers, controlled by an integral suction-vent system and delivered to the Central Dust Collector, exhausting indoors.
- (3) One (1) bagger, with a maximum throughput capacity of 37.5 tons per hour, gravity fed

through a closed system from a combination of the two (2) mixers, controlled by an integral suction-vent system and delivered to the Central Dust collector, exhausting indoors.

- (c) The source has paved roads, on which incoming deliveries and outgoing shipments are made, which are capable of producing fugitive dust.

“Integral Part of the Process” Determination

The applicant has submitted the following information to justify why the air filters servicing the material handling systems should be considered an integral part of the adhesive and sealant manufacturing process.

- (a) The air filters are not emission controls because they were installed and are operated for purposes other than air pollution controls.
- (i) The air filter systems release internal to the process building rather than to atmosphere;
 - (ii) The air filter systems were designed and installed as energy savings devices to save on the cost of conditioned workspace air;
 - (iii) The air filter system must be operating efficiently to keep the workspace air safe for workers, and in compliance with OSHA standards for respiration of fugitive dust; and
 - (iv) The material handling process cannot operate unless the air filter systems are operating properly, since there is no vent or bypass that allows filtered air to be released to atmosphere.
- (b) The air filter system is not an emission control device, but, rather, to be considered as integral to the process because it has an overwhelming positive net economic effect by allowing a reduction of operating costs in energy consumption costs and material costs.
- (i) Energy savings is based on the amount of air that would be exhausted to the atmosphere and the cost associated with replacing that volume of conditioned air to the workspace. Based on the volume of filtered exhaust air to the workspace of 3,494,400 million cubic feet per year and the cost of \$0.0027 per million cubic foot to condition suitable air, the calculation for conditioned air costs is estimated at \$9,435 per year.
 - (ii) All material captured by the air filter system is returned to the process. Based on the amount of material captured and returned to the process of 54.6 tons per year and an average cost of raw materials of \$139.40 per ton, the annual cost savings for captured materials is estimated at \$7,644 per year.
 - (iii) The total annual savings by the design of the air filter systems to exhaust to the workspace is estimated at \$17,079 per year.

IDEM, OAQ has evaluated the information submitted and agrees that the air filter system servicing the material handling systems should be considered an integral part of the adhesive and sealant manufacturing process. This determination is based on the fact that the process cannot operate without the control equipment; that the control equipment serves as a primary purpose other than pollution control (in this case, it serves as conditioned air for the employees in the workplace), and that the equipment has a positive net economic effect by reducing energy costs and raw material costs. Therefore, the permitting level will be determined using the potential to emit after the air filter systems. Operating conditions in the proposed permit will specify that this air filter system shall operate at all times when the adhesive and sealant manufacturing process is in operation.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – Exemption

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)								
	PM	PM10 *	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Silo Loading/Storage	0.012	0.008	0.008	0	0	0	0	0	0
Weigh Hoppers	0.034	0.016	0.016	0	0	0	0	0	0
Mixers	0.894	0.220	0.220	0	0	0	0	0	0
Bagging/Loading Out/Fugitives	1.634	0.457	0.457	0	0	0	0	0	0
Paved Roads (Fugitive Dust)	1.53	0.300	0.300	0	0	0	0	0	0
Total PTE of Entire Source	4.104	1.001	1.001	0	0	0	0	0	0
Exemptions Levels	5	5	5	10	10	5 or 10	25	25	10
negl. = negligible * Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". PM2.5 is presumed equal to PM10.									

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of all regulated criteria pollutants are less than the levels listed in 326 IAC 2-1.1-3(e)(1). Therefore, the source is subject to the provisions of 326 IAC 2-1.1-3 (Exemptions).
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the PTE of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) The source is not subject to NSPS 40 CFR Part 60, Subpart OOO (Standards of Performance for Nonmetallic Mineral Processing Plants) because it is not located in an underground mine, and it does not contain crushers or grinding mills above ground, and because it does not perform wet material processing operations. Therefore, NSPS 40 CFR Part 60, Subpart OOO does not apply.
- (b) There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (a) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

- (a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The following conditions are applicable to the source:

- (a) 326 IAC 2-1.1-3 (Exemptions)
Exemption applicability is discussed under the Permit Level Determination – Exemption section above. However, in order to comply with the emission levels pursuant to 326 IAC 2-1.1-3, the air filter system, baghouses, and Central Dust Collector, shall be in operation at all times that the Powder Room Process facilities are in operation.
- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-4.1.
- (c) 326 IAC 2-6 (Emission Reporting)
Pursuant to 326 IAC 2-6-1, this source is not subject to this rule, because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, Porter, or LaPorte County, and it does not emit lead into the ambient air at levels equal to or greater than 5 tons per year. Therefore, 326 IAC 2-6 does not apply.
- (d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2(1) (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:
- (1) 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.
 - (2) 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.

The source is located in Marion County; however, it is not located in the area of Washington Township east of Fall Creek or the area of Franklin Township south of Thompson Road and east of Five Points Road. Therefore, the source is not subject to the opacity limitation described in 326 IAC 5-1-2(2).

- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
The source is subject to the requirements of 326 IAC 6-4, because the adhesive and sealant manufacturing process has the potential to emit fugitive particulate emissions. Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

- (f) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions greater than 25 tons per year. Therefore, 326 IAC 6-5 does not apply.
- (g) 326 6.5-6 (Particulate Matter Limitations - Marion County)
This source is not subject to the requirements of 326 IAC 6.5-6 because it is not one of the listed sources in the Rule. Therefore, 326 IAC 6.5-6 does not apply.

Silo Loading/Storage

- (i) 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), this source is exempt from Rule 6 because each of the manufacturing processes of silo loading storage, weight hopper process, mixer process, and bagging process has emission less than 0.551 pounds per hour. Therefore, 326 IAC 6-3 does not apply.

Weigh Hopper Process

- (j) 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), this source is exempt from Rule 6 because each of the manufacturing processes of silo loading storage, weight hopper process, mixer process, and bagging process has emission less than 0.551 pounds per hour. Therefore, 326 IAC 6-3 does not apply.

Mixing Process

- (k) 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), this source is exempt from Rule 6 because each of the manufacturing processes of silo loading storage, weight hopper process, mixer process, and bagging process has emission less than 0.551 pounds per hour. Therefore, 326 IAC 6-3 does not apply.

Bagging Process

- (l) 326 IAC 6-3-2 (Particulate Emission Limitation for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), this source is exempt from Rule 6 because each of the manufacturing processes of silo loading storage, weight hopper process, mixer process, and bagging process has emission less than 0.551 pounds per hour. Therefore, 326 IAC 6-3 does not apply.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on November 3, 2008.

The operation of this source shall be subject to the conditions of the attached proposed Exemption No. 097-27115-00652. The staff recommends to the Commissioner that this Exemption be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Jack Harmon at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate

Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-4228 or toll free at 1-800-451-6027 extension 3-4228.

- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov.

**Appendix A: Emission Calculations
Aggregate Processing Plant**

Company Name: Laticrete International, Inc.
Address City IN Zip: 4620 West 84th Street, Indianapolis, Indiana
Permit Number: 097-27115-00652
Plant ID: 097-00652
Reviewer: Jack Harmon
Date: 06/17/09

PM Emission Calculations						PM	PTE	Control	PM After
Throughput 328,500 t/yr.						Emission Factor	PM	Efficiency	Controls (tons/yr.)
Silo Loading/Storage	37.5	ton/hr x	0.72 lb/ton	/ 2000 lb/ton x	8760 hr/yr =	118.26 tons/yr	99.99%	0.012	
Weigh Hopper	37.5	ton/hr x	0.0204 lb/ton*	/ 2000 lb/ton x	8760 hr/yr =	3.35 tons/yr	99.00%	0.034	
Mixer	37.5	ton/hr x	0.544 lb/ton	/ 2000 lb/ton x	8760 hr/yr =	89.35 tons/yr	99.00%	0.894	
Bagging	37.5	ton/hr x	0.995 lb/ton	/ 2000 lb/ton x	8760 hr/yr =	163.43 tons/yr	99.00%	1.634	
* - There are 4 weigh hoppers feeding the process; therefore the emission factor shown is 4 x 0.0051 lb/ton						374.39 tons/yr		2.573	

PM10, PM2.5 Emission Calculations						PM10, PM2.5	PTE	Control	PM10 After
Throughput 328,500 t/yr.						Emission Factor	PM10	Efficiency	Controls (tons/yr.)
Silo Loading/Storage	37.5	ton/hr x	0.46 lb/ton	/ 2000 lb/ton x	8760 hr/yr =	75.56 tons/yr	99.99%	0.008	
Weigh Hopper	37.5	ton/hr x	0.0096 lb/ton*	/ 2000 lb/ton x	8760 hr/yr =	1.58 tons/yr	99.00%	0.016	
Mixer	37.5	ton/hr x	0.134 lb/ton	/ 2000 lb/ton x	8760 hr/yr =	22.01 tons/yr	99.00%	0.220	
Bagging	37.5	ton/hr x	0.278 lb/ton	/ 2000 lb/ton x	8760 hr/yr =	45.66 tons/yr	99.00%	0.457	
* - There are 4 weigh hoppers feeding the process; therefore the emission factor shown is 4 x 0.0024 lb/ton						144.80 tons/yr		0.700	

- (1) Emission Factors from AP-42 Ch.11.12.2 (Sixth edition, 6/2006), Concrete Batching. There were no specific emission factors for this operation, but this operation is very similar to Concrete Batching.
- (2) There were no emission factors for PM2.5; therefore it is assumed that PM2.5 is equal to PM10.
- (3) Bagging emission factors include truck loading fugitives, per AP-42 11.12.2
- (4) The storage silos, weight hoppers, and mixers each have different storage capacities; however, the process capacity is set by the slowest operation in the process, which is the bagging operation. Therefore, the maximum process rate of the bagger of 37.5 tons per hour was used as the throughput rate of each of the production process components.

**Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads**

Company Name: Laticrete International, Inc.
Address City IN Zip: 4620 West 84th Street, Indianapolis, Indiana 4
Permit Number: 097-27115-00652
PI# ID: 097-00652
Reviewer: Jack Harmon
Date: 06/17/09

Paved Roads at Industrial Site

The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (12/2003).

Vehicle Information (provided by source)

Type	Maximum number of vehicles	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) deliveries	6.0	1.0	6.0	35.0	210.0	3500	0.663	4.0	1451.7
Vehicle (leaving plant) deliveries	6.0	1.0	6.0	0.0	0.0	3500	0.663	4.0	1451.7
Vehicle (entering plant) shipments	6.0	1.0	6.0	0.0	0.0	3500	0.663	4.0	1451.7
Vehicle (leaving plant) shipments	6.0	1.0	6.0	35.0	210.0	3500	0.663	4.0	1451.7
Total		24.0	24.0		420.0			15.9	5806.8

Average Vehicle Weight Per Trip = 17.5 tons/trip
 Average Miles Per Trip = 0.66 miles/trip

Unmitigated Emission Factor, $E_f = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C]$ (Equation 1 from AP-42 13.2.1)

	PM	PM10	
where k =	0.082	0.016	lb/mi = particle size multiplier (AP-42 Table 13.2.1-1)
W =	17.5	17.5	tons = average vehicle weight (provided by source)
C =	0.00047	0.00047	lb/mi = emission factor for vehicle exhaust, brake wear, and tire wear (AP-42 Table 13.2.1-2)
sL =	0.6	0.6	g/m ² = Ubiquitous Baseline Silt Loading Values of paved roads (Table 13.2.1-3 for summer months)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$
 Mitigated Emission Factor, $E_{ext} = E_f * [1 - (p/4N)]$
 where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
 N = 365 days per year

	PM	PM10	
Unmitigated Emission Factor, $E_f =$	0.53	0.10	lb/mile
Mitigated Emission Factor, $E_{ext} =$	0.48	0.09	lb/mile
Dust Control Efficiency =	50%	50%	(pursuant to control measures outlined in fugitive dust control plan)

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)
Vehicle (entering plant) deliveries	0.38	0.07	0.35	0.07	0.18	0.03
Vehicle (leaving plant) deliveries	0.38	0.07	0.35	0.07	0.18	0.03
Vehicle (entering plant) shipments	0.38	0.07	0.35	0.07	0.18	0.03
Vehicle (leaving plant) shipments	0.38	0.07	0.35	0.07	0.18	0.03
Total	1.53	0.30	1.40	0.27	0.70	0.14

Methodology

Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
 Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip)] / [5280 ft/mile]
 Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
 Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
 Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
 Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
 Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Note: no information was received from the source, so assumptions were made on deliveries and shipments based on throughput.

Abbreviations

PM = Particulate Matter
 PM10 = Particulate Matter (<10 um)
 PTE = Potential to Emit



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Ron Roach
Laticrete International
4620 W 84th St, Bldg II, Ste 200
Indianapolis, IN 46268-3816

DATE: July 6, 2009

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Exemption
097 - 27115 - 00652

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Mr. Tom Blachly Blackshare Environmental Solutions
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	LPOGOST 7/6/2009 Laticrete International, Inc. 097 - 27115 - 00652 (final)		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING	
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: CERTIFICATE OF MAILING ONLY	

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1		Ron Roach Laticrete International, Inc. 4620 W 84th St, Bldg II, Ste 200 Indianapolis IN 46268-3816 (Source CAATS) Via confirmed delivery										
2		Marion County Health Department 3838 N, Rural St Indianapolis IN 46205-2930 (Health Department)										
3		Mrs. Sandra Lee Watson 7834 E 100 S Marion IN 46953 (Affected Party)										
4		Larry and Becky Bischoff 10979 North Smokey Row Road Mooresville IN 46158 (Affected Party)										
5		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 (Local Official)										
6		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 (Local Official)										
7		Ms. Janet McCabe Improving Kids Environment 3951 N Meridian Street Suite 160 Indianapolis IN 46208-4062 (Affected Party)										
8		Mr. Tom Blachly Blackshare Environmental Solutions 5121 S. Wheeling Avenue Tulsa OK 74105 (Consultant)										
9		Matt Mosier Office of Sustainability 2700 South Belmont Ave. Administration Bldg. Indianapolis IN 46221 (Local Official)										
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