

Certified Mail No.: 7007 0710 0005 3965 5162



DATE: September 10, 2008

TO: Interested Parties / Applicant

RE: Quikrete - Indianapolis / R097-26936-00099

FROM: Richard Wise, Administrator
Office of Environmental Services

Notice of Decision: Approval - Registration

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 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 501, 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 Indianapolis Office of Environmental Services, Air Permits at (317) 327-2234.

Enclosures



Air Quality Hotline: 317-327-4AIR | knozone.com

Department of Public Works
Office of Environmental Services

2700 Belmont Avenue
Indianapolis, IN 46221

317-327-2234
Fax 327-2274
TDD 327-5186
indygov.org/dpw



REGISTRATION

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY and CITY OF INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES

**Quikrete - Indianapolis
3000 East 56th Street
Indianapolis, Indiana 46220**

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 097-26936-00099	
Issued by: ORIGINAL SIGNED BY Richard Wise, Administrator Office of Environmental Services	Issuance Date: 9/10/08



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**Department of Public Works
Office of Environmental Services**

2700 Belmont Avenue
Indianapolis, IN 46221

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Fax 327-2274
TDD 327-5186
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SECTION A

SOURCE SUMMARY

This registration is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ), and Indianapolis Office of Environmental Services (OES). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Registrant 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 Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary dry concrete mix plant.

Source Address:	3000 East 56 th Street, Indianapolis, Indiana, 46220
Mailing Address:	3000 East 56 th Street, Indianapolis, Indiana, 46220
General Source Phone Number:	(317) 251-2281
SIC Code:	3272
County Location:	Marion County
Source Location Status:	Nonattainment for PM 2.5 standard Attainment for all other criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

- (a) Aggregate receiving operations, as follows:
 - (1) One (1) gravel receiving hopper, identified as EU H-1, with a maximum capacity of 30 tons per hour of aggregate transferred, with emissions uncontrolled.
 - (2) One (1) concrete sand receiving hopper, identified as EU H-2, with a maximum capacity of 30 tons per hour of sand transferred, with emissions uncontrolled.
 - (3) One (1) mason sand receiving hopper, identified as EU H-3, with a maximum capacity of 30 tons per hour of sand transferred, with emissions uncontrolled.
- (b) Aggregate drying operations, as follows:
 - (1) One (1) dryer feed conveyor, identified as EU C-1, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
 - (2) One (1) aggregate dryer, identified as EU D-1, with a maximum capacity of 30 tons per hour of material dried, using an integral baghouse (BH-1) as control, and venting to stack S-1. The aggregate dryer is equipped with a natural gas-fired burner with a maximum heat input capacity of 6.0 MMBtu/hr.
 - (3) One (1) dryer discharge conveyor, identified as EU C-2, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
 - (4) One (1) dryer discharge hot elevator, identified as EU C-3, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
- (c) One (1) play sand (product) packaging operation, as follows:
 - (1) One (1) play sand (product) storage silo, identified as EU S-1, with a maximum capacity of 25 tons and a throughput capacity of 12 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-1.
 - (2) One (1) weigh hopper, identified as EU WH-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.

- (3) One (1) surge hopper, identified as EU SH-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
 - (4) One (1) bagger, identified as EU B-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
- (d) Aggregate storage silos, as follows:
- (1) Mason sand storage silo, identified as EU S-2, with a maximum capacity of 30 tons and a throughput capacity of 40 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-2.
 - (2) Concrete sand storage silo, identified as EU S-3, with a maximum capacity of 30 tons and a throughput capacity of 40 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-3.
 - (3) Concrete gravel storage silo, identified as EU S-4, with a maximum capacity of 25 tons and a throughput capacity of 40 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-4.
 - (4) Portland cement storage silo, identified as EU S-5, with a maximum capacity of 25 tons and a throughput capacity of 40 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-5.
 - (5) Masonry cement storage silo, identified as EU S-6, with a maximum capacity of 25 tons and a throughput capacity of 40 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-6.
- (e) One (1) Q-line (product) packaging operation, as follows:
- (1) One (1) weigh hopper, identified as EU WH-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.
 - (2) One (1) surge hopper, identified as EU SH-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.
 - (3) One (1) bagger, identified as EU B-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

Terms in this registration 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.2 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration 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.

B.3 Registration Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation), this registration to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (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 registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM and OES, the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. 097-26936-00099 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (a) An annual notification shall be submitted by an authorized individual 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 registration.
- (b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

and

Indianapolis Office of Environmental Services
Air Compliance
2700 South Belmont Avenue
Indianapolis, IN 46221

- (c) 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, and OES on or before the date it is due.

B.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) and OES if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

SECTION C

SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 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 registration:

- (a) 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.
- (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.

C.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant 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).

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) Aggregate receiving operations, as follows:
 - (1) One (1) gravel receiving hopper, identified as EU H-1, with a maximum capacity of 30 tons per hour of aggregate transferred, with emissions uncontrolled.
 - (2) One (1) concrete sand receiving hopper, identified as EU H-2, with a maximum capacity of 30 tons per hour of sand transferred, with emissions uncontrolled.
 - (3) One (1) mason sand receiving hopper, identified as EU H-3, with a maximum capacity of 30 tons per hour of sand transferred, with emissions uncontrolled.
- (b) Aggregate drying operations, as follows:
 - (1) One (1) dryer feed conveyor, identified as EU C-1, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
 - (2) One (1) aggregate dryer, identified as EU D-1, with a maximum capacity of 30 tons per hour of material dried, using an integral baghouse, identified as BH-1, as control, and venting to stack S-1. The aggregate dryer is equipped with a natural gas-fired burner with a maximum heat input capacity of 6.0 MMBtu/hr.
 - (3) One (1) dryer discharge conveyor, identified as EU C-2, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
 - (4) One (1) dryer discharge hot elevator, identified as EU C-3, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
- (c) One (1) play sand (product) packaging operation, as follows:
 - (1) One (1) play sand (product) storage silo, identified as EU S-1, with a maximum capacity of 25 tons and a throughput capacity of 12 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-1.
 - (2) One (1) weigh hopper, identified as EU WH-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
 - (3) One (1) surge hopper, identified as EU SH-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
 - (4) One (1) bagger, identified as EU B-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
- (d) Aggregate storage silos, as follows:
 - (1) Mason sand storage silo, identified as EU S-2, with a maximum capacity of 30 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-2.
 - (2) Concrete sand storage silo, identified as EU S-3, with a maximum capacity of 30 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-3.
 - (3) Concrete gravel storage silo, identified as EU S-4, with a maximum capacity of 25 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-4.
 - (4) Portland cement storage silo, identified as EU S-5, with a maximum capacity of 25 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-5.
 - (5) Masonry cement storage silo, identified as EU S-6, with a maximum capacity of 25 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-6.
- (e) One (1) Q-line (product) packaging operation, as follows:
 - (1) One (1) weigh hopper, identified as EU WH-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.
 - (2) One (1) surge hopper, identified as EU SH-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.
 - (3) One (1) bagger, identified as EU B-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.

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

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 Particulate Emission Limitation for Manufacturing Processes [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the aggregate receiving operations, the aggregate drying operations, the play sand (product) packaging operations, and the aggregate storage silos shall be limited, as follows:
- (1) The gravel receiving hopper (EU H-1), the concrete sand receiving hopper (EU H-2) and the mason sand receiving hopper (EU H-3) shall each not exceed 40.04 pounds per hour when operating at a process weight rate of 30 tons per hour.
 - (2) The dryer feed conveyor (EU C-1), the aggregate dryer (EU D-1), the dryer discharge conveyor (EU C-2) and the dryer discharge hot elevator (EU C-3) shall each not exceed 40.04 pounds per hour when operating at a process weight rate of 30 tons per hour.
 - (3) The play sand (product) storage silo (EU S-1), the weigh hopper (EU WH-1), the surge hopper (EU SH-1) and the bagger (EU B-1) shall each not exceed 21.67 pounds per hour when operating at a process weight rate of 12 tons per hour.
 - (4) The mason sand storage silo (EU S-2), the concrete sand storage silo (EU S-3), the concrete gravel storage silo (EU S-4), the cement storage silo (EU S-5) and the masonry cement storage silo (EU S-6) shall each not exceed 14.07 pounds per hour when operating at a process weight rate of 6.3 tons per hour.

These pound per hour limitations were calculated with 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:

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

- (b) Pursuant to 326 IAC 6-3-2, particulate matter (PM) from the Q-line (product) packaging operation shall be limited as follows:
- (1) The weigh hopper (EU WH-2), the surge hopper (EU SH-2) and the bagger (EU B-2) shall each not exceed 42.75 pounds per hour when operating at a process weight rate of 42 tons per hour.

These pound per hour limitations were calculated with the following equation:

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

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

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required.

Compliance Determination Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.3 Particulate Limitation

- (a) The baghouse (BH-1) shall be in operation at all times the aggregate dryer (EU D-1) is in operation.
- (b) The bin vents (BV-2, BV-3, BV-4, BV-5 and BV-6) shall be in operation at all times that the aggregate storage silos (S-2, S-3, S-4, S-5 and S-6) are in operation.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
and
INDIANAPOLIS OFFICE OF ENVIRONMENTAL SERVICES
AIR COMPLIANCE**

**REGISTRATION
ANNUAL NOTIFICATION**

Year: _____

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Quikrete – Indianapolis
Address:	3000 East 56th Street
City:	Indianapolis, Indiana, 46220
Phone Number:	317-251-2281
Registration No.:	097-26936-00099

I hereby certify that Quikrete - Indianapolis is :

still in operation.

I hereby certify that Quikrete - Indianapolis is :

no longer in operation.

in compliance with the requirements of Registration No. 097-26936-00099.

not in compliance with the requirements of Registration No. 097-26936-00099.

Authorized Individual (typed):
Title:
Signature:
Phone Number:
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:

**Indiana Department of Environmental Management
Office of Air Quality
and
City of Indianapolis
Office of Environmental Services**

Technical Support Document (TSD) for a Minor Source Operating Permit
(MSOP) Transitioning to a Registration

Source Description and Location

Source Name: Quikrete – Indianapolis
Source Location: 3000 East 56th Street, Indianapolis, Indiana, 46220
County: Marion
SIC Code: 3272
Registration No.: R097-26936-00099
Permit Reviewer: Jeffrey Hege

On August 28, 2008, the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) and the Indianapolis Office of Environmental Services (OES) received an application from Quikrete – Indianapolis related to the transition of a Minor Source Operating Permit (MSOP) to a Registration.

Existing Approvals

The source has been operating under Minor Source Operating Permit No. 097-16643-00099, issued on February 13, 2003. Due to this application, the source is transitioning from a Minor Source Operating Permit to a Registration.

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.
¹ Attainment 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 effective April 5, 2005 for PM-2.5.	

(a) Ozone Standards

- (1) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (2) On November 9, 2007, the Indiana Air Pollution Control Board finalized a temporary emergency rule to re-designate Boone, Clark, Elkhart, Floyd, LaPorte, Hamilton, Hancock, Hendricks, Johnson, Madison, Marion, Morgan, Shelby, and St. Joseph as attainment for the 8-hour ozone standard.
- (3) Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) 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 NOx 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 NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) PM-2.5

Marion County has been classified as nonattainment for PM-2.5 in 70 FR 943 dated January 5, 2005. On May 8th, 2008, U.S. EPA promulgated specific New Source Review rules for PM-2.5 emissions, and the effective date of these rules was July 15th, 2008. Therefore, direct PM-2.5 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 SO₂, NOx, CO and Lead. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(d) Fugitive emissions

Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The source was issued a Minor Source Operating Permit (097-16643-00099) on February 13, 2003. The source submitted a renewal application for this Minor Source Operating Permit on October 30, 2007. During review of this application, it was discovered that the source fits into the category of a Registration. PTE of all criteria pollutants are less than 25 tons per 12 consecutive month period and PM/PM-10/PM-2.5 is greater than 5 tons per 12 consecutive month period. This includes the integral determination for the aggregate dryer (EU D-1). An application to transition to a Registration was received on August 28, 2008.

The source consists of the following existing emission unit(s):

(a) Aggregate receiving operations, as follows:

- (1) One (1) gravel receiving hopper, identified as EU H-1, with a maximum capacity of 30 tons per hour of aggregate transferred, with emissions uncontrolled.

- (2) One (1) concrete sand receiving hopper, identified as EU H-2, with a maximum capacity of 30 tons per hour of sand transferred, with emissions uncontrolled.
 - (3) One (1) mason sand receiving hopper, identified as EU H-3, with a maximum capacity of 30 tons per hour of sand transferred, with emissions uncontrolled.
- (b) Aggregate drying operations, as follows:
- (1) One (1) dryer feed conveyor, identified as EU C-1, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
 - (2) One (1) aggregate dryer, identified as EU D-1, with a maximum capacity of 30 tons per hour of material dried, using an integral baghouse, identified as BH-1, as control, and venting to stack S-1. The aggregate dryer is equipped with a natural gas-fired burner with a maximum heat input capacity of 6.0 MMBtu/hr.
 - (3) One (1) dryer discharge conveyor, identified as EU C-2, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
 - (4) One (1) dryer discharge hot elevator, identified as EU C-3, with a maximum capacity of 30 tons per hour of material transferred, with emissions uncontrolled.
- (c) One (1) play sand (product) packaging operation, as follows:
- (1) One (1) play sand (product) storage silo, identified as EU S-1, with a maximum capacity of 25 tons and a throughput capacity of 12 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-1.
 - (2) One (1) weigh hopper, identified as EU WH-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
 - (3) One (1) surge hopper, identified as EU SH-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
 - (4) One (1) bagger, identified as EU B-1, with a maximum capacity of 12 tons per hour of material transferred, with emissions uncontrolled.
- (d) Aggregate storage silos, as follows:
- (1) Mason sand storage silo, identified as EU S-2, with a maximum capacity of 30 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-2.
 - (2) Concrete sand storage silo, identified as EU S-3, with a maximum capacity of 30 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-3.
 - (3) Concrete gravel storage silo, identified as EU S-4, with a maximum capacity of 25 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-4.
 - (4) Portland cement storage silo, identified as EU S-5, with a maximum capacity of 25 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-5.
 - (5) Masonry cement storage silo, identified as EU S-6, with a maximum capacity of 25 tons and a throughput capacity of 6.3 tons per hour of material transferred, using a bin vent as control, and venting to stack BV-6.

- (e) One (1) Q-line (product) packaging operation, as follows:
- (1) One (1) weigh hopper, identified as EU WH-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.
 - (2) One (1) surge hopper, identified as EU SH-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.
 - (3) One (1) bagger, identified as EU B-2, with a maximum capacity of 42 tons per hour of material transferred, with emissions uncontrolled.

Unpermitted Emission Units and Pollution Control Equipment

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

“Integral Part of the Process” Determination

The Permittee has submitted the following information to justify why the aggregate dryer baghouse, identified as BH-1, should be considered an integral part of the aggregate dryer, identified as EU D-1:

A fan is needed on the aggregate dryer to remove the moisture from the system. The exhaust from the dryer contains particulate that would result in excess wear on the fan and ultimately fan failure. A baghouse is in place between the dryer and the fan to remove the particulate and protect the fan.

The material collected by the baghouse is recovered and has a net cost of \$21 per ton. The recovered value of the product is estimated at \$110,000 per year. The cost of the baghouse was approximately \$75,000. Therefore, the installation of the baghouse provides an overwhelming net economic benefit for particulate control.

The potential to emit from the aggregate dryer (EU D-1) is calculated after baghouse emission control because the baghouse is integral to the process.

IDEM, OAQ and OES has evaluated the information submitted and agrees that the aggregate dryer baghouse should be considered an integral part of the aggregate dryer. This determination is based on the fact that there is an overwhelming net economic benefit for particulate control. Therefore, the permitting level will be determined using the potential to emit after the aggregate dryer baghouse. Operating conditions in the proposed permit will specify that this aggregate dryer baghouse shall operate at all times when the aggregate dryer 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 – Registration

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.

	Potential To Emit of the Entire Source (tons/year)								
	PM	PM-10	PM-2.5 **	SO ₂	NO _x	VOC	CO	Total HAPs	Highest Single HAP
Aggregate Receiving Hoppers (EU H-1, H-2 & H-3)	2.73	1.29	1.29	0	0	0	0	0	0
Aggregate Drying Operations * (EU C-1, D-1, C-2 & C-3)	5.41	3.17	3.17	0.02	2.63	0.14	2.21	0.050	0.047 (hexane)
play sand (product) packaging operations (EU S-1, WH-1, SH-1 & B-1)	0.62	0.30	0.30	0	0	0	0	0	0
Aggregate storage silos (EU S-2, S-3, S-4, S-5 & S-6)	0.30	0.15	0.15	0	0	0	0	0	0
Q-line (product) packaging operations (EU WH-2, SH-2 & B-2)	1.77	0.90	0.90	0	0	0	0	0	0
Fugitive Emissions									
Aggregate Storage Piles	0.57	0.27	0.27	0	0	0	0	0	0
Paved & unpaved roadways	2.4	0.5	0.5	0	0	0	0	0	0
Total PTE of Entire Source	13.80	6.58	6.58	0.02	2.63	0.14	2.21	0.050	0.047 (hexane)
Exemption Levels	5	5	-	10	10	10	25	25	10
Registration Levels	25	25	-	25	25	25	100	25	10

* PTE from the aggregate dryer (EU D-1) is calculated after baghouse emission control because the baghouse (BH-1) is integral to the process.

** PM-10 = PM-2.5

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of PM / PM-10 / PM-2.5 are within the ranges listed in 326 IAC 2-5.1-2(a)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.1-2(a)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.1-2 (Registrations). A Registration will be issued.
- (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 requirements of the New Source Performance Standard for Standards of Performance for Nonmetallic Mineral Processing Plants, 40 CFR 60, Subpart OOO (326 IAC 12), are not included in the permit. This NSPS standard applies to 'fixed or portable nonmetallic mineral processing plants (defined as any combination of equipment that is used to crush or grind any nonmetallic mineral). This facility does not crush or grind any nonmetallic mineral materials, therefore this NSPS does not apply.
- (b) There are no other New Source Performance Standards (NSPS)(40 CFR Part 60) included in the permit.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (b) 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)

- (c) 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

- (a) 326 IAC 2-1.1-5 (Air Quality Requirements)
Marion County has been classified as nonattainment for PM-2.5 in 70 FR 943 dated January 5, 2005. On May 8th, 2008, U.S. EPA promulgated specific New Source Review rules for PM-2.5 emissions, and the effective date of these rules was July 15th, 2008. Therefore, direct PM-2.5 and SO₂ emissions were reviewed pursuant to the requirements of Nonattainment New Source Review, 326 IAC 2-1.1-5. PM-2.5 and SO₂ emissions, from this source are less than one hundred (100) tons per twelve (12) consecutive month period. Therefore, this source is not subject to nonattainment new source review requirements for PM-2.5 emissions.
- (b) 326 IAC 2-5.1-2 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (c) 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.
- (d) 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.
- (e) 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 registration:
- (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.
- (f) 326 IAC 6.5 (Particulate Matter Limitations)
This source does not have potential particulate matter emissions greater than 100 tons per year and actual PM emission are less than 10 tons per year (PTE based on 8760 hours is 13.8 tons per year, therefore actual emissions will be less than 10 tons per year since the source operates a maximum of 4,680 hours per year). Therefore, 326 IAC 6.5-1 does not apply.

- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
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.
- (h) 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.
- (i) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)
Each of the emission units at this source is not subject to the requirements of 326 IAC 8-1-6, since the unlimited potential to emit of VOC from each emission unit is less than twenty-five (25) tons per year.

State Rule Applicability - Individual Facilities

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

Since 326 IAC 6.5 does not apply, 326 IAC 6-3 will apply.

- (a) Pursuant to 326 IAC 6-3-2, particulate matter (PM) from the aggregate receiving operations, which includes the gravel receiving hopper (EU H-1), the concrete sand receiving hopper (EU H-2) and the mason sand receiving hopper (EU H-3) shall each not exceed 40.04 pounds per hour when operating at a process weight rate of 30 tons per hour. These pound per hour limitations were calculated with 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:

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

Based on calculations (see Appendix A, page 2), each of these receiving hoppers can comply with the limit without a control device.

- (b) Pursuant to 326 IAC 6-3-2, particulate matter (PM) from the aggregate drying operations, which includes the dryer feed conveyor (EU C-1), the aggregate dryer (EU D-1) controlled by a baghouse (EU BH-1), the dryer discharge conveyor (EU C-2) and the dryer discharge hot elevator (EU C-3) shall each not exceed 40.04 pounds per hour when operating at a process weight rate of 30 tons per hour. These pound per hour limitations were calculated with 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:

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

The baghouse (BH-1) shall be in operation at all times the aggregate dryer is in operation, in order to comply with this limit. Based on calculations (see Appendix A, page 2), the dryer conveyors (EU C-1, C-2 & C-3) can comply with the limit without control devices.

- (c) Pursuant to 326 IAC 6-3-2, particulate matter (PM) from the play sand (product) packaging operations, which includes the play sand (product) storage silo (EU S-1), the weigh hopper (EU WH-1), the surge hopper (EU SH-1) and the bagger (EU B-1) shall each not exceed 21.67 pounds per hour when operating at a process weight rate of 12 tons per hour. These pound per hour limitations were calculated with 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:

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

Based on calculations (see Appendix A, page 2), each of these operations can comply with the limit without a control device.

- (d) Pursuant to 326 IAC 6-3-2, particulate matter (PM) from the aggregate storage silos, which includes the mason sand storage silo (EU S-2), the concrete sand storage silo (EU S-3), the concrete gravel storage silo (EU S-4), the cement storage silo (EU S-5) and the masonry cement storage silo, identified as (EU S-6) shall each not exceed 14.07 pounds per hour when operating at a process weight rate of 6.3 tons per hour. These pound per hour limitations were calculated with 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:

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

Based on calculations (see Appendix A, page 2), each of these operations can comply with the limit without a control device.

- (e) Pursuant to 326 IAC 6-3-2, particulate matter (PM) from the Q-line (product) packaging operations, which includes the weigh hopper (EU WH-2), the surge hopper (EU SH-2) and the bagger (EU B-2) shall each not exceed 42.75 pounds per hour when operating at a process weight rate of 42 tons per hour. These pound per hour limitations were calculated with the following equation:

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

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

Based on calculations (see Appendix A, page 2), each of these operations can comply with the limit without a control device.

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 August 28, 2008.

The operation of this source shall be subject to the conditions of the attached proposed Registration No. 097-26936-00099. The staff recommends to the Administrator that this Registration be approved.

OES Contact

- (a) Questions regarding this proposed permit can be directed to Jeffrey Hege at the Indianapolis Office of Environmental Services, Permits Section, 2700 South Belmont, Indianapolis, Indiana 46221 or by telephone at (317) 327-2234.

- (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: Emissions Calculations
Summary**

Company Name: Quikrete - Indianapolis
Address City IN Zip: 3000 E. 56th Street, Indianapolis, Indiana, 46220
Permit Number: R097-26936-00099
Plt ID: 097-00099
Reviewer: Jeffrey Hege
Date: 9/2/2008

Process Name	Potential Emissions (tons per year)							
	PM	PM-10 / PM-2.5 *	SO2	NOx	VOC	CO	Individual HAP	Combined HAPs
Aggregate (gravel) Receiving (EU H-1)	0.91	0.43						
Aggregate (concrete sand) Receiving (EU H-2)	0.91	0.43						
Aggregate (mason sand) Receiving (EU H-3)	0.91	0.43						
Dryer Feed Conveying (EU C-1)	0.91	0.43						
Aggregate Dryer (EU D-1)	2.63	1.68						
Aggregate Dryer (Combustion) Burner (EU D-C)	0.05	0.20	0.02	2.63	0.14	2.21	0.047 (hexane)	0.050
Dryer Discharge Conveying (EU C-2)	0.91	0.43						
Play Sand (product) Storage Silo (EU S-1)	0.11	0.05						
Play Sand (product) Weigh Hopper (EU WH-1)	0.27	0.13						
Play Sand (product) Surge Hopper (EU SH-1)	0.13	0.06						
Play Sand (product) Bagger (EU B-1)	0.11	0.05						
Dryer Discharge Elevator (EU C-3)	0.91	0.43						
Mason Sand Storage Silo (EU S-2)	0.06	0.03						
Congete Sand & Gravel Storage Silo (EU S-3)	0.06	0.03						
Portland Cement Receiving & Storage Silo (EU S-4)	0.06	0.03						
Masonry Cement Receiving and Storage Silo (EU S-5)	0.06	0.03						
Portland/Masonry Cement Receiving & Storage Silo (EU S-6)	0.06	0.03						
Q-Line Weigh Hopper (EU WH-2)	0.94	0.44						
Q-Line Surge Hopper (EU SH-2)	0.44	0.28						
Q-Line Bagger (EU B-2)	0.39	0.18						
Fugitive Emissions								
Paved and unpaved roadways	2.4	0.5						
Storage piles	0.57	0.27						
TOTAL	13.80	6.58	0.02	2.63	0.14	2.21	0.047 [hexane]	0.05

* For the purposes of this review PM-2.5 was assumed to be equal to PM-10.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

Company Name: Quikrete - Indianapolis
Address City IN Zip: 3000 E. 56th Street, Indianapolis, Indiana, 46220
Permit Number: R097-26936-00099
Reviewer: Jeffrey Hege
Date: 8/11/2008

Heat Input Capacity
MMBtu/hr

6.0

Potential Throughput
MMCF/yr

52.6

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0	5.5	84.0
				**see below		
Potential Emission in tons/yr	0.05	0.20	0.02	2.63	0.14	2.21

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

Company Name: Quikrete - Indianapolis
Address City IN Zip: 3000 E. 56th Street, Indianapolis, Indiana, 46220
Permit Number: 097-26936-00099
Reviewer: Jeffrey Hege
Date: 8/11/2008

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	0.00006	0.00003	0.00197	0.04730	0.00009

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	0.00001	0.00003	0.00004	0.00001	0.00006
					Total HAPs
					0.04960

Methodology is the same as page 3.

The five highest organic and metal HAPs emission factors are provided above.
 Additional HAPs emission factors are available in AP-42, Chapter 1.4.