



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: December 20, 2012

RE: CGM Precast Concrete / 097 - 32405 - 00707

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

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, Suite N 501E, 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
FN-REGIS.dot 1/2/08



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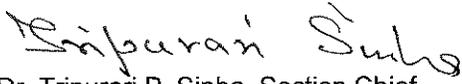
100 North Senate Avenue
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REGISTRATION OFFICE OF AIR QUALITY

CGM Precast Concrete

5402 Massachusetts Avenue
Indianapolis, IN 46218

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. R097-32405-00707	
Issued by:  Dr. Tripurari P. Sinha, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 20, 2012

SECTION A

SOURCE SUMMARY

This registration 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 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 precast concrete production plant.

Source Address:	5402 Massachusetts Ave., Indianapolis, IN 46218
General Source Phone Number:	317-545-6557
SIC Code:	3272
County Location:	Marion
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) Two (2) covered outdoor storage piles for wet sand receiving, constructed in 1999, with a storage capacity of 24 tons each;
- (b) Two (2) covered outdoor storage piles for wet aggregate receiving, constructed in 1999, with a storage capacity of 24 tons each;
- (c) One (1) outside cement silo, constructed in 2000, with a capacity of 1,080 cubic feet, with emissions controlled by fabric filter;
- (d) One inside sand hopper, constructed in 2000;
- (e) One inside aggregate hopper, constructed in 2000;
- (f) One (1) sand/aggregate conveyor, constructed in 2000, with capacity of 5.45 tons per hour;
- (g) One (1) enclosed cement screw conveyor, constructed 2000, with a capacity of 31.5 tons per hour;
- (h) One (1) 1/2 yard mixer with batch weigh-out, constructed in 2000;
- (i) Thirteen (13) natural gas-fired radiant heaters, constructed in 1999, with a combined total maximum heat input of 1.1 MMBtu per hour.
- (j) One (1) 40 gallon natural gas-fired water heater, constructed in 1999, with a maximum heat input of 40,000 Btu per hour.

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 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. R097-32405-00707 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 and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251

- (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 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) 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.

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:
- (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.

If, due to circumstances beyond the Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

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

The Registrant shall implement the PMPs.

- (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 Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

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) Two (2) covered outdoor storage piles for wet sand receiving, constructed in 1999, with a storage capacity of 24 tons each;
- (b) Two (2) covered outdoor storage piles for aggregate receiving, constructed in 1999, with a storage capacity of 24 tons each;
- (c) One (1) outside cement silo, constructed in 2000, with a capacity of 1,080 cubic feet, with emissions controlled by fabric filter;
- (d) One inside sand hopper, constructed in 2000;
- (e) One inside gravel hopper, constructed in 2000;
- (f) One (1) aggregate conveyor, constructed in 2000, with capacity of 5.45 tons per hour.
- (g) One (1) enclosed cement screw conveyor, constructed 2000, with a capacity of 31.5 tons per hour;
- (h) One (1) 1/2 yard mixer with batch weigh-out, constructed in 2000;
- (i) Thirteen (13) natural gas-fired radiant heaters, constructed in 1999, with a combined total maximum heat input of 1.1 MMBtu per hour.
- (j) One (1) 40 gallon natural gas-fired water heater, constructed in 1999, with a maximum heat input of 40,000 Btu per hour

(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 Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 40,000 Btu/hr water heater shall be limited to 0.6 pounds per MMBtu heat input.

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the conveyor facilities shall be limited by the following:

Emission Unit	Maximum Process Weight Rate (ton/hr)	PM Emission Limitation (lb/hr)
Cement Silo; Pneumatic Filling Operation	3.0	8.5
Cement Screw; Weigh-Out / Mixer Loading	31.5	40.3

The pounds per hour limitation was calculated with the following equation:

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

$$E = 4.10 P^{0.67}$$

Where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

and

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:

$$E = 55.0 P^{0.11} - 40$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

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

**REGISTRATION
ANNUAL NOTIFICATION**

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:	CGM Precast Concrete
Address:	5402 Massachusetts Ave.
City:	Indianapolis, IN 46218
Phone Number:	317-545-6557
Registration No.:	R097-32405-00707

I hereby certify that CGM Precast Concrete is :

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No. R097-32405-00707.
- not in compliance with the requirements of Registration No. R097-32405-00707.

I hereby certify that CGM Precast Concrete is :

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**

Technical Support Document (TSD) for Registration

Source Description and Location

Source Name: CGM Precast Concrete
Source Location: 5402 Massachusetts Ave., Indianapolis, IN 46218
County: Marion
SIC Code: 3272
Registration No.: R097-32405-00707
Permit Reviewer: James Mackenzie

On October 10, 2012 the Office of Air Quality (OAQ) received an application from CGM Precast Concrete related to the operation of an existing precast concrete production plant.

Existing Approvals

There have been no previous approvals issued to this source.

County Attainment Status

The source is located in Marion County.

Sec. 50. The following attainment status designations are applicable to 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 designation effective federally April 5, 2005, for PM2.5.	

(Air Pollution Control Board; 326 IAC 1-4-50; filed Dec 26, 2007, 1:43 p.m.: 20080123-IR-326070308FRA)

- (a) **Ozone Standards**
 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 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) **PM_{2.5}**
Marion County has been classified as nonattainment for PM_{2.5} in 70 FR 943 dated January 5, 2005. On May 8, 2008, U.S. EPA promulgated specific New Source Review rules for PM_{2.5} emissions. These rules became effective on July 15, 2008. Therefore, direct PM_{2.5}, NO_x 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, hazardous air pollutants, and greenhouse gases 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 Office of Air Quality (OAQ) has reviewed an application, submitted by CGM Precast Concrete on October 10, 2012 relating to the operation of a precast concrete production plant. The source has been in operation since 1999, when it commenced under the name CGM Manufacturing.

The permittee did not have any type of air permit previously. Awareness of a need for registration with the Department of Environmental Management was established during a spontaneous visit by a representative of the Compliance and Technical Assistance Program.

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

- (a) Two (2) covered outdoor storage piles for wet sand receiving, constructed in 1999, with a storage capacity of 24 tons each;
- (b) Two (2) covered outdoor storage piles for wet aggregate receiving, constructed in 1999, with a storage capacity of 24 tons each;
- (c) One (1) outside cement silo, constructed in 2000, with a capacity of 1,080 cubic feet, with emissions controlled by fabric filter;
- (d) One inside sand hopper, constructed in 2000;
- (e) One inside aggregate hopper, constructed in 2000;
- (f) One (1) sand/aggregate conveyor, constructed in 2000, with capacity of 5.45 tons per hour;
- (g) One (1) enclosed cement screw conveyor, constructed 2000, with a capacity of 31.5 tons per hour;
- (h) One (1) 1/2 yard mixer with batch weigh-out, constructed in 2000;

- (i) Thirteen (13) natural gas-fired radiant heaters, constructed in 1999, with a combined total maximum heat input of 1.1 MMBtu per hour.
- (j) One (1) 40 gallon natural gas-fired water heater, constructed in 1999, with a maximum heat input of 40,000 Btu per hour.

Unpermitted Emission Units and Pollution Control Equipment

The source has operated without knowledge of a requirement for notification. All units listed in the above section have been in operation prior to issuance of this registration permit.

Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

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.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM ₁₀ *	PM _{2.5}	SO ₂	NO _x	VOC	CO	GHG's as CO ₂ e**	Total HAP's	Worst Single HAP
Receive, Transfer & Mix	5.6	2.7	2.7	0.0	0.0	0.0	0.0	0.0	0.07	< 0.07
Combustion: Natural Gas	0.009	0.04	0.04	0.0	0.0	0.0	0.0	560	0.009	0.008
Fugitive Emissions: Paved Road Emissions	0.01	0.003	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total PTE of Entire Source	5.6	2.7	2.7	0.0	0.0	0.0	0.0	560	0.02	0.02
Registration Levels**	5 - 25	5 - 25	5 - 25	10 - 25	10 - 25	5 - 25	100	100,000	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". **The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) of PM are within the ranges listed in 326 IAC 2-5.5-1(b)(1). The PTE of all other regulated criteria pollutants are less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source is subject to the provisions of 326 IAC 2-5.5 (Registrations). A Registration will be issued.
- (b) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) 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.
- (c) The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1) greenhouse gases (GHGs) is less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

There are no 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)

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)

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 state rules are applicable to the source:

- (a) 326 IAC 2-5.5 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.
- (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 (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.
- (e) 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
 Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from the 40,000 Btu/hr water heater shall be limited to 0.6 pounds per MMBtu heat input.
- (f) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 Pursuant to 326 IAC 6-3-2, the allowable particulate emission rate from the conveyance operations shall not exceed the following:

Emission Unit	Maximum Process Weight Rate (ton/hr)	PM Emission Limitation (lb/hr)
Cement Silo; Pneumatic Filling Operation	3.0	8.5
Cement Screw; Weigh-Out / Mixer Loading	31.5	40.3

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:

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

and

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, no control devices are needed to comply with this limit.

The processes of transferring, conveying and loading of sand and aggregates each have a potential to emit particulate of less than 0.551 pounds per hour. Pursuant to 326 IAC 6-3-1(b), these manufacturing processes are exempt from the rule.

- (g) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
 The source is subject to the requirements of 326 IAC 6-4, because the paved road truck traffic 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.

- (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 VOC potential emissions from each emission unit is less than twenty-five (25) tons per year.

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 October 10, 2012.

The operation of this source shall be subject to the conditions of the attached proposed Registration No. R097-32405-00707. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to James Mackenzie 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) 233-2641 or toll free at 1-800-451-6027 extension 3-2641.
- (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.in.gov/idem

Appendix A of TSD: Emissions Calculations
 Source: CGM Precast Concrete
 Address: 5402 Massachestts Ave., Indianapolis, IN
 Registration Permit: R097-32405-00707
 Permit Writer: James Mackenzie
 Date : 11/29/12

SUMMARY

Potential to Emit (tons per year)

Units / Operation	Pollutant							GHG's (CO ₂ e)	HAP (single)	HAP's (comb'd)
	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO			
Receive, Transfer, Batch	5.6	2.7	2.7	0.0	0.0	0.0	0.0	0.0	< 0.01	0.01
Nat. Gas Heaters	0.009	0.04	0.04	0.003	0.5	0.03	0.4	581	0.009	0.009
Paved Roads	0.01	0.003	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Totals	5.6	2.7	2.7	0.003	0.5	0.0	0.4	581	0.02	0.02

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Receiving, Transfer & Mixer Loading

Process / Emission Unit	Material Usage		Emission Factor (lb/ton)				Emissions (ton/yr)			
	Max. Rate	Units	PM	PM ₁₀	PM _{2.5}	HAP's	PM	PM ₁₀	PM _{2.5}	* HAP's
Cement Silo; ave. pneu. filling (unload from truck)	0.9	ton/hr	0.73	0.47	0.47	0.00017	3.0	1.9	1.9	0.0007
Sand Hopper; transfer to conveyor	2.4		0.0021	0.00099	0.00099	-	0.022	0.010	0.010	0.0
Gravel Hopper; transfer to conveyor	3.1		0.0069	0.0033	0.0033	-	0.071	0.034	0.034	0.0
Sand; conveyor to weigh out	2.4		0.0021	0.00099	0.00099	-	0.022	0.010	0.010	0.0
Gravel; conveyor to weigh out	3.1		0.0069	0.0033	0.0033	-	0.071	0.034	0.034	0.0
Sand; weigh batch / load to mixer	2.4		0.0048	0.0028	0.0028	-	0.050	0.029	0.029	0.0
Gravel; weigh batch / load to mixer	3.1		0.0048	0.0028	0.0028	-	0.050	0.029	0.029	0.0
Cement Screw; Weigh-Out / Mixer Loading	0.9		0.572	0.156	0.156	0.003	2.3	0.6	0.6	0.01
							5.6	2.7	2.7	0.01

AP42 11.12-2 EF reference
Cement unloading
Sand transfer
Aggregate transfer
Sand transfer
Aggregate transfer
Weigh hopper loading
Weigh hopper loading
Mixer loading

Methodology

Potential emissions (ton/yr) = (rate)(ton/hr) x (Ef)(lb/ton) x (8760 hr/yr) x (1/2000)(ton/lb).

Sand and aggregates are received wet to outside storage bins, and transferred via front end loader to inside hopper: negligible emission.

Belt conveyer serves both sand and aggregate.

Cement conveyor to mixer is enclosed screw type - negligible emission.

* HAP's emission factor is combined value for (8) individual HAP's.

Cement silo; average pneumatic loading rate shown above. Maximum possible rate =	3.0	ton/hr
Cement screw, (6" diam.); average rate shown above. Maximum transfer rate =	31.5	ton/hr
Belt conveyor (sand & gravel); maximum transfer rate (given in permit application) =	5.45	ton/hr
Silo; maximum pneumatic load rate from vendor truck (source confirmation, 12/11/12) =	8.0	ton/hr

Assumptions

Cement screw auger rate value is typical (example: 6" dia.; WAM, Inc.)

1/2 cubic yard Mark III Mixer

Manufacturer specification: 32 y/hr for 4.5y mixer.

Concrete: 4,024 lb/y, per AP-42 11.12-7 (6/06)

Capacity of 1/2y mixer = (32)(y/hr) x (1/4.5)(batch/y) x (1/2)(y/batch) = **3.6** y/hr

Mixer-constrained potential concrete production capacity = (3.6)(y/hr) x (4,024)(lb/y) x (1/2,000)(ton/lb) = **7.2** ton/hr

Constituent	% Wt.	Potential Process Weight Rate (ton/hr)	
		Mixer-Constrained	Belt Conveyor-Constrained
Cement =	14.0%	1.0	0.9
Sand =	35.5%	2.5	2.4
Agg. =	46.3%	3.3	3.1
Water =	4.2%	0.3	-
	100.0%	7.2	6.7

Assumptions

Concrete constituent composition as per AP-42 11.12-7 (6/06).

Appendix A of TSD: Emissions Calculations
Source: CGM Precast Concrete
Address: 5402 Massachestts Ave., Indianapolis, IN
Registration Permit: R097-32405-00707
Permit Writer: James Mackenzie
Date : 11/29/2012

Building Heaters: Natural Gas Combustion

Unit	Heat Cap. (kBtu/hr)	No. of Units	Total Heat Cap. (MMBtu/hr)	Heat Input Capacity (10 ⁶ scf/yr)
Raediant Heaters	100.0	4	0.40	3.4
	200.0	1	0.20	1.7
	80.0	6	0.48	4.1
40 gal. H ₂ O	40.0	1	0.04	0.3
			1.12	Total: 9.6

Potential to Emit (tons per year)

Emission Factor (lb/10 ⁶ scf)	Pollutant						
	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	VOC	CO
	1.9	7.6	7.6	0.6	100.0	5.5	84.0
Potential Emissions	0.01	0.04	0.04	0.003	0.5	0.03	0.4

Methodology

MMBtu = 10⁶ Btu

Potential Throughput: 10⁶ scf/yr = Heat Input Capacity (MMBtu/hr) x 10⁶ scf/1020 MMBtu x 8,760 hr/yr

Potential Emissions (ton/yr) = (Heat Input Capacity)(10⁶ scf/yr) x Emission Factor (lb/10⁶ scf) x (1/2,000)(ton/lb)

Greenhouse Gases

Greenhouse Gases	Potential Greenhouse Gas		
	CO ₂	CH ₄	N ₂ O
Emission Factor (lb/MMcf)	120,000	2.3	2.2
Potential Emission (ton/yr)	577	0.01	0.01
Summed Potential Emissions (ton/yr)	577		
CO₂e Total (ton/yr)	581		

Methodology: as above

CO₂e = CO₂ + (21)CH₄ + 310(N₂O), per 40 CFR 98

Hazardous Air Pollutants

HAPs	AP-42 Factor (lb/10 ⁶ scf)	Pot.Emissions (ton/yr)
Benzene	2.10E-03	1.0E-05
Dichlorobenzene	1.20E-03	5.8E-06
Formaldehyde	7.50E-02	3.6E-04
Hexane	1.80E+00	8.7E-03
Toluene	3.40E-03	1.6E-05
Lead	5.00E-04	2.4E-06
Cadmium	1.10E-03	5.3E-06
Chromium	1.40E-03	6.7E-06
Manganese	3.80E-04	1.8E-06
Nickel	2.10E-03	1.0E-05
Total:		9.1E-03

Methodology: as above

The five highest organic and metal HAPs emission factors are provided above.

Additional HAP's emission factors are available in AP-42, Chapter 1.4.

Appendix A of TSD: Emissions Calculations
 Source: CGM Precast Concrete
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 Permit Writer: James Mackenzie
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Paved Road Emissions

Ave. Truck Wt. = ton
 Truck trips per year =
 Tot. distance per trip = mi = mi/yr

Pollutant	Emiss. Fact., E (lb/VMT)	ton/yr
PM	3.9	0.013
PM10	0.8	0.0027
PM2.5	0.2	0.0007

Methodolgy

Calculations per AP-42 13.2.1 (1/11)

$$E = k (sL)^{0.91} \times (W)^{1.02}$$

where: E = particulate emission factor (having units matching the units of k)
 k = particle size multiplier for particle size range and units of interest
 sL = road surface silt loading, (g/m²),
 W = average weight (tons) of the vehicles traveling the road

and

k (PM)	<input type="text" value="0.011"/>	lb/VMT
k (PM ₁₀)	<input type="text" value="0.0022"/>	lb/VMT
k (PM _{2.5})	<input type="text" value="0.00054"/>	lb/VMT
sL	<input type="text" value="12"/>	g/m ² (12 = mean for concrete batching facilities)



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: Frederic Machledt
CGM Precast Concrete
5402 Massachusetts Ave
Indianapolis, IN 46218

DATE: December 20, 2012

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

SUBJECT: Final Decision
Registration
097 - 32405 - 00707

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:
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 12/20/2012 CGM Precast Concrete 097 - 32405 - 00707 final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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1		Frederic Machledt CGM Precast Concrete 5402 Massachusetts Ave Indianapolis IN 46218 (Source CAATS) Via confirmed delivery										
2		Marion County Health Department 3838 N. Rural St Indianapolis IN 46205-2930 (Health Department)										
3		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 (Local Official)										
4		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 (Local Official)										
5		Matt Mosier Office of Sustainability 1200 S Madison Ave #200 Indianapolis IN 46225 (Local Official)										
6		The Grand 5462 Massachusetts Ave Indianapolis IN 46218 (Affected Party)										
7		Martins Wrecker Service 5401 Massachusetts Ave Indianapolis IN 46218 (Affected Party)										
8		Midwest Motors 5461 Massachusetts Ave Indianapolis IN 46218 (Affected Party)										
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