



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

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(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

TO: Interested Parties / Applicant

DATE: February 21, 2014

RE: Essroc Cement Corp. / 097 - 34098 - 00358

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.dot 6/13/2013



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Brian Purkhiser
Essroc Cement Corporation
1051 South Emerson Avenue
Indianapolis, Indiana 46203

February 21, 2014

Re: 097-34098-00358
First Administrative Amendment to
R097-15472-00358

Dear Mr. Purkhiser,

Kosmos Cement Company was issued a Registration No. R097-15472-00358 on June 4, 2003, and a Registration Revision No. R097-24448-00358 on June 25, 2007, for a stationary cement distribution terminal located at 1051 South Emerson Avenue, Indianapolis, Indiana 46203. On January 21, 2014, the Office of Air Quality (OAQ) received an application from the source requesting to transfer the registration to a new owner/operator, Essroc Cement Corporation. Pursuant to 326 IAC 2-5.5-6(d)(3), this change to the registration is considered an administrative amendment because the registration is amended to indicate a change in ownership, company name or operational control of the source.

The company name has been revised throughout the registration as follows:

Company Name: ~~Kosmos Cement Company~~
Essroc Cement Corporation

Additional Changes

Upon further review, IDEM, OAQ has decided to make additional amendments to the registration as described below. The registration has been amended as follows with deleted language as strikeouts and new language **bolded**:

1. The registration has been updated from the letter style format to the permit style format, as is now standard IDEM procedure. In addition, IDEM has begun implementing a new procedure and will no longer list the name or title of the Authorized Individual (AI) in registrations.
2. Several of IDEM's branches and sections have been renamed. Therefore, IDEM has updated the addresses listed in the registration. References to "Compliance Data Section" and "Compliance Branch" have been changed to "Compliance and Enforcement Branch". The registration has been revised as follows:

~~Compliance Data Section~~ **Compliance and Enforcement Branch**
~~Compliance Branch~~ **Compliance and Enforcement Branch**

3. Local agencies no longer have effective authority to implement state and federal requirements for IDEM. Therefore, IDEM has removed all references to local agencies from the registration. The revised registration specifies that all reports, notices, applications, and any other required submittals shall be submitted to IDEM. The Permittee should note that the local agency could have its own requirements beyond the state and federal requirements contained in the registration. Please contact the local agency for further information.
4. Pursuant to 326 IAC 2-7-1(39), starting July 1, 2011, greenhouse gases (GHGs) emissions are subject to regulation at a source with a potential to emit (PTE) 100,000 tons per year or more of



A State that Works

CO2 equivalent emissions (CO2e). Therefore, CO2e emissions have been calculated for this source. Based on the calculations, the unlimited PTE GHGs from the entire source is less than 100,000 tons of CO2e per year. See Appendix A of the Technical Support Document (TSD) for the calculations. This did not require any changes to the registration.

5. The particulate matter emissions calculations in Appendix A of the TSD were updated to include the most recently published emission factors for silo loading and truck loading found in AP-42 Table 11.12-2, which was updated in August 2011.
6. The PTE calculations in Appendix A of the TSD were updated to include hazardous air pollutants (HAPs) and lead (Pb), based on the emission factors in AP-42 Table 11.12-8.
7. IDEM OAQ has removed the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), since this source is subject to the requirements of 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County).

Additional information and discussion is provided in the attached Technical Support Document (TSD).

The source shall continue to operate according to 326 IAC 2-5.5 (Registrations). Please find enclosed the amended registration and Appendix A. A copy of the registration 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

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Jenny Liljegren, at (800) 451-6027, press 0 and ask for Jenny Liljegren or extension 3-0870, or dial (317) 233-0870.

Sincerely,



Nathan C. Bell, Section Chief
Permits Branch
Office of Air Quality

NB/JL

Attachment: Revised Registration and Technical Support Document (TSD)

cc: File - Marion County
Marion County Health Department
Compliance and Enforcement Branch



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REGISTRATION OFFICE OF AIR QUALITY

Essroc Cement Corporation
1051 South Emerson Avenue
Indianapolis, Indiana 46203

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. R097-15472-00358	
Original Signed by: John B. Chavez, Administrator Office of Environmental Services Department of Public Works, City of Indianapolis	Issuance Date: June 4, 2003

Registration Revision No. 097-24448-00358, issued on June 25, 2007

Administrative Amendment No. 097-34098-00358	
Issued by:  Nathan C. Bell, Section Chief Permits Branch Office of Air Quality	Issuance Date: February 21, 2014

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 cement distribution terminal.

Source Address:	1051 South Emerson Avenue, Indianapolis, IN 46203
General Source Phone Number:	317-351-9910
SIC Code:	5032 (Brick, Stone, and Related Construction Materials)
County Location:	Marion County (Warren Township)
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

This stationary cement distribution terminal consists of the following emission units and pollution control devices:

- (a) One (1) silo loading operation, including one (1) silo, installed in 1968, with a maximum storage capacity of 1,000 tons, and two (2) portable storage bins each constructed in 2007, each with a maximum storage capacity of 190 tons. The combined maximum silo loading rate and portable storage bin loading rate of dry cement product is 180 tons per hour. The silo loading operation utilizes one (1) cartridge filter baghouse referred to as the silo dust collector which exhausts to Stack/Vent SV-01. The silo dust collector is integral to the transfer of dry cement product.
- (b) One (1) truck loading operation, commencing in 1968, using paved concrete driveways, with a maximum throughput capacity of 320 tons per hour. The truck loading operation utilizes one (1) cartridge filter baghouse referred to as the truck loading dust collector which exhausts to Stack/Vent SV-02. The truck loading dust collector is integral to the transfer of dry cement product.

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. R097-15472-00358 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) One (1) silo loading operation, including one (1) silo, installed in 1968, with a maximum storage capacity of 1,000 tons, and two (2) portable storage bins each constructed in 2007, each with a maximum storage capacity of 190 tons. The combined maximum silo loading rate and portable storage bin loading rate of dry cement product is 180 tons per hour. The silo loading operation utilizes one (1) cartridge filter baghouse referred to as the silo dust collector which exhausts to Stack/Vent SV-01. The silo dust collector is integral to the transfer of dry cement product.
- (b) One (1) truck loading operation, commencing in 1968, using paved concrete driveways, with a maximum throughput capacity of 320 tons per hour. The truck loading operation utilizes one (1) cartridge filter baghouse referred to as the truck loading dust collector which exhausts to Stack/Vent SV-02. The truck loading dust collector is integral to the transfer of dry cement product.

(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 [326 IAC 6.5]

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the silo and truck loading operations shall each be limited to 0.03 grains per dry standard cubic foot (gr/dscf).

The silo loading dust collector and the truck loading dust collector shall be in operation at all times the silo loading and truck loading are in operation, in order to comply with this limit.

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

A Preventive Maintenance Plan is required for these facilities and associated control devices. Section B - Preventive Maintenance Plan contains the Registrant's obligation with regard to the preventive maintenance plan required by this condition.

**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:	Essroc Cement Corporation
Address:	1051 South Emerson Avenue
City:	Indianapolis, Indiana 46203
Phone Number:	317-351-9910
Registration No.:	R097-15472-00358

- I hereby certify that Essroc Cement Corporation is : still in operation.
 no longer in operation.
- I hereby certify that Essroc Cement Corporation is : in compliance with the requirements of Registration No. R097-15472-00358.
 not in compliance with the requirements of Registration No. R097-15472-00358.

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 an
Administrative Amendment (AA) to a Registration

Source Description and Location

Source Name: Essroc Cement Corporation
Source Location: 1051 South Emerson Avenue, Indianapolis, IN 46203
County: Marion County (Warren Township)
SIC Code: 5032 (Brick, Stone, and Related Construction Materials)
Registration No.: R097-15472-00358
Administrative Amendment No.: 097-34098-00358
Permit Reviewer: Jenny Liljegren

On January 21, 2014, the Office of Air Quality (OAQ) received an application from Kosmos Cement Company related to the transfer of registration R097-15472-00358 to a new owner/operator, Essroc Cement Corporation, for an existing cement distribution terminal.

Existing Approvals

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

- (a) Registration No. R097-15472-00358, issued on June 4, 2003.
- (b) Registration Revision No. 097-24448-00358, issued on June 25, 2007.

County Attainment Status

The source is located in Marion County (Warren Township).

Pollutant	Designation
SO ₂	Non-attainment effective October 4, 2013, for the Center Township, Perry Township, and Wayne Township. Better than national standards for the remainder of the of the county.
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	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard. ¹
PM _{2.5}	Attainment effective July 11, 2013, for the annual PM2.5 standard.
PM _{2.5}	Unclassifiable or attainment effective December 13, 2009, for the 24-hour PM2.5 standard.
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

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.

- (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) **PM_{2.5}**
Marion County has been classified as attainment for PM_{2.5}. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011, the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective June 28, 2011. Therefore, direct PM_{2.5}, SO₂, and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (e) **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 2-5.5 (Registrations) applicability.

Background and Description of Emission Units and Pollution Control Equipment

The Office of Air Quality (OAQ) has reviewed an application, submitted by Kosmos Cement Company on January 21, 2014, related to the transfer of registration R097-15472-00358 to a new owner/operator, Essroc Cement Corporation, for an existing cement distribution terminal.

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

- (a) One (1) silo loading operation, including one (1) silo, installed in 1968, with a maximum storage capacity of 1,000 tons, and two (2) portable storage bins each constructed in 2007, each with a maximum storage capacity of 190 tons. The combined maximum silo loading rate and portable storage bin loading rate of dry cement product is 180 tons per hour. The silo loading operation utilizes one (1) cartridge filter baghouse referred to as the silo dust collector which exhausts to Stack/Vent SV-01. The silo dust collector is integral to the transfer of dry cement product.
- (b) One (1) truck loading operation, commencing in 1968, using paved concrete driveways, with a maximum throughput capacity of 320 tons per hour. The truck loading operation utilizes one (1) cartridge filter baghouse referred to as the truck loading dust collector which exhausts to Stack/Vent SV-02. The truck loading dust collector is integral to the transfer of dry cement product.

“Integral Part of the Process” Determination

As part of Registration Revision No. 097-24448-00358, issued on June 25, 2007, IDEM, OAQ previously reviewed the following justification submitted by the applicant to justify why the silo loading dust collector and the truck loading dust collector should be considered an integral part of the silo loading and truck loading processes, respectively:

- (a) The silo loading process includes two (2) portable storage bins and utilizes pneumatic conveying of product in order to transfer the cement product to storage. Therefore, control

equipment is necessary for air/product separation. As a result, the pneumatic transfer of product cannot operate without the air/product separation silo loading dust collector.

- (b) Operation of the truck loading dust collector serves a primary purpose other than pollution control and provides an overwhelming net economic benefit to operate the controls.

The dust collector, installed on the truck load out spout, filters the displaced air created by the truck loading process, and when the pulse jet cleaning system cleans the cartridge filters, the product falls down through the loading spout into the truck. This process reclaims product from the air that would otherwise be emitted into the atmosphere and deposits it into the customer's truck, as product available for sale. There is no hopper or storage of pulse jet cleaned cement product. Therefore, the truck loading dust collector serves a primary purpose other than pollution control.

The installation cost of the truck loading dust collector was, approximately \$30,000. The annual operating and maintenance cost for the truck loading dust collector is, approximately, \$2500. At the retail price of \$100 per ton of cement supplied and at a truck loading emission factor of 0.24 pounds of PM per ton of cement truck loaded (see Appendix A page 1 of 1), the annual cost benefit of recovering cement from the truck loading operation and depositing it into the customer's truck for sale is estimated as follows:

$$0.24 \text{ pounds PM/ton cement truck loaded} \times 110 \text{ tons cement loaded/hour} \times 8760 \text{ hours/year} \\ \times \text{ton/2000 pounds} \times \$100/\text{ton cement} - \$2500 \text{ operating cost/year} = \$9,063/\text{year}$$

As part of Registration Revision No. 097-24448-00358, issued on June 25, 2007, IDEM, OAQ evaluated the information submitted and agreed that the silo loading dust collector and the truck loading dust collector were considered an integral part of the silo loading and truck loading processes, respectively. Therefore, the permitting level will continue to be determined using the potential to emit after the silo loading dust collector and after the truck loading dust collector. Operating conditions in the proposed registration will continue to specify that the silo loading dust collector and the truck loading dust collector shall operate at all times when the silo loading and truck loading processes, respectively, are in operation.

For each of the operations discussed above, the permitting level and applicability of 326 IAC 6.5 (Particulate Matter Limitations Except Lake County) are determined using the potential to emit after controls. However, for purposes of determining the applicability of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)), potential particulate matter emissions from the above operations are calculated before consideration of the controls.

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.

Process/ Emission Unit	Potential To Emit of the Entire Source (tons/year)									
	PM	PM10*	PM2.5*	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP (manganese)
Silo Loading	5.76	3.71	3.71	0	0	0	0	0	2.6E-4	9.3E-5
Truck Loading	15.67	4.34	4.34	0	0	0	0	0	0.06	0.03
Total PTE of Entire Source	21.43	8.05	8.05	0	0	0	0	0	0.06	0.03
Exemptions Levels**	< 5	< 5	< 5	< 10	< 10	< 10	< 25	< 100,000	< 25	< 10
Registration Levels**	< 25	< 25	< 25	< 25	< 25	< 25	< 100	< 100,000	< 25	< 10

*Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".
 **The 100,000 CO₂e 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, PM10, and PM2.5 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).
- (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)

- (a) The requirements of the New Source Performance Standard for Standards of Performance for Portland Cement Plants, 40 CFR 60, Subpart F (326 IAC 12), are not included in the registration, since this source is not a portland cement plant. Portland cement plant means any facility manufacturing portland cement by either the wet or dry process as defined by 40 CFR 60.61(a).
- (b) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the registration.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (c) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) From the Portland Cement Manufacturing Industry, 40 CFR 63, Subpart LLL (326 IAC 20-27), are not included in the registration, since this source is not a portland cement plant. Portland cement plant means any facility manufacturing portland cement as defined by 40 CFR 63.1341.
- (d) 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 registration.

Compliance Assurance Monitoring (CAM)

- (e) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the registration, 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 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.
- (e) 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.
- (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 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a) and 326 IAC 6.5-1-2(a), this source is subject to the requirements of 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), because this source is located in Marion County, is not specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10, and has potential particulate matter emissions greater than 10 tons per year.

- (h) 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.
- (i) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.
- (j) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Silo and Truck Loading Operations

- (k) 326 IAC 6.5 (Particulate Matter Limitations Except Lake County)
Pursuant to 326 IAC 6.5-1-1(a) and 326 IAC 6.5-1-2(a), this source is subject to the requirements of 326 IAC 6.5-1-2 (Particulate Matter Limitations Except Lake County), because this source is located in Marion County, is not specifically listed in 326 IAC 6.5-2 through 326 IAC 6.5-10, and has potential particulate matter emissions greater than 10 tons per year.

Pursuant to 326 IAC 6.5-1-2(a) (Particulate Matter Limitations Except Lake County), particulate matter (PM) emissions from the silo and truck loading operations shall each be limited to 0.03 grains per dry standard cubic foot (gr/dscf).

The silo loading dust collector and the truck loading dust collector shall be in operation at all times the silo loading and truck loading are in operation, in order to comply with this limit.

- (l) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(c)(3), this rule does not apply if a particulate limitation established in 326 IAC 6.5 is more stringent than the particulate limitation established in 326 IAC 6-3-2. Since the particulate limitations established by 326 IAC 6.5-1-2 for each facility are more stringent than the particulate limitations that would be established by 326 IAC 6-3-2, the source is not subject to the requirements of 326 IAC 6-3-2.

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 January 21, 2014.

The operation of this source shall be subject to the conditions of the attached proposed Registration Administrative Amendment No. 097-34098-00358. The staff recommends to the Commissioner that this Registration be approved.

IDEM Contact

- (a) Questions regarding this proposed registration can be directed to Jenny Liljegren 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) 233-0870 or toll free at 1-800-451-6027 extension 3-0870.
- (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

**TSD Appendix A: Emission Calculations
Summary**

Company Name: Essroc Cement Corporation
Source Address: 1051 South Emerson Avenue, Indianapolis, IN 46203
Registration Administrative Amendment: 097-34098-00358
Permit Writer: Jenny Liljegren

Uncontrolled/Unlimited Potential to Emit (tons/year) for Prevention of Significant Deterioration (PSD) Applicability Determination*

Emissions Unit	PM	PM10	PM2.5**	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP (manganese)	Lead (Pb)
Silo Loading	576	371	371	0	0	0	0	0	0.18	0.16	5.8E-04
Truck Loading	1567	434	434	0	0	0	0	0	0.20	0.09	5.1E-03
Total	2143	805	805	0	0	0	0	0	0.38	0.25	5.7E-03

*IDEM, OAQ has determined that the silo loading dust collector and the truck loading dust collector are each considered an integral part of the silo loading and truck loading operations, respectively. Therefore, the permitting level and applicability of 326 IAC 6.5 (Particulate Matter Limitations Except Lake County) are determined using the potential to emit after the dust collectors. However, for purposes of determining the applicability of Prevention of Significant Deterioration (PSD), potential particulate matter emissions from the silo loading and truck loading operations were calculated before their respective dust collectors.

**PM2.5 emissions assumed equal to PM10 emissions.

Unlimited Potential to Emit (tons/year) (After Integral Controls) for Permit Level (Registration) Determination*

Emissions Unit	PM	PM10	PM2.5**	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e	Total HAPs	Worst Single HAP (manganese)	Lead (Pb)
Silo Loading	5.76	3.71	3.71	0	0	0	0	0	2.6E-04	9.3E-05	8.6E-06
Truck Loading	15.67	4.34	4.34	0	0	0	0	0	0.06	0.03	2.1E-03
Total	21.43	8.05	8.05	0	0	0	0	0	0.06	0.03	2.2E-03

*IDEM, OAQ has determined that the silo loading dust collector and the truck loading dust collector are each considered an integral part of the silo loading and truck loading operations, respectively. Therefore, the permitting level and applicability of 326 IAC 6.5 (Particulate Matter Limitations Except Lake County) are determined using the potential to emit after the dust collectors. However, for purposes of determining the applicability of Prevention of Significant Deterioration (PSD), potential particulate matter emissions from the silo loading and truck loading operations were calculated before their respective dust collectors.

**PM2.5 emissions assumed equal to PM10 emissions.

**TSD Appendix A: Emission Calculations
Silo and Truck Loading Particulate Matter (PM)**

Company Name: Essroc Cement Corporation
Source Address: 1051 South Emerson Avenue, Indianapolis, IN 46203
Registration Administrative Amendment: 097-34098-00358
Permit Writer: Jenny Liljegren

Silo Loading tons per hour	Potential to Emit											
	PM						PM10					
	PM Emission Factor (lbs/ton)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)	PM10 Emission Factor (lbs/ton)	Uncontrolled Emission Rate (lbs/hr)	Uncontrolled Emission Rate (tons/yr)	Control Efficiency (%)	Controlled Emission Rate (lbs/hr)	Controlled Emission Rate (tons/yr)
180	0.73	131.40	575.53	99.00%	1.31	5.76	0.47	84.60	370.55	99.00%	0.85	3.71
Truck Loading tons per hour												
320	1.118	357.76	1566.99	99.00%	3.58	15.67	0.310	99.20	434.50	99.00%	0.99	4.34
Total			2142.52			21.43			805.04			8.05

Methodology

Silo loading (3-05-011-07) and truck loading (3-05-011-10) emission factors are from AP-42 Table 11.12-2 (June 2006, updated and corrected August 2011)

PTE of PM/PM10 (lbs/hour) = Filling/Loading Rate (tons/hour) x Emission Factor (lbs/ton)

PTE of PM/PM10 (tons/year) = Filling/Loading Rate (tons/hour) x Emission Factor (lbs/ton) x 8760 hours/year x ton/2000 lbs

Controlled PM/PM10 Emission Rate = PTE x (1 - control efficiency)

**TSD Appendix A: Emission Calculations
Silo Loading HAP and Lead (Pb)**

**Company Name: Essroc Cement Corporation
Source Address: 1051 South Emerson Avenue, Indianapolis, IN 46203
Registration Administrative Amendment: 097-34098-00358
Permit Writer: Jenny Liljegren**

Throughput lbs/hour

HAPs - Metals									
Uncontrolled Silo Loading	Arsenic	Beryllium	Cadmium	Total Chromium	Lead	Manganese	Nickel	Total Phosphorus	
Uncontrolled Emission Factor (lb/ton)	1.68E-06	1.79E-08	2.34E-07	2.52E-07	7.36E-07	2.02E-04	1.76E-05	1.18E-05	
Uncontrolled Potential Emissions (tons/yr)	1.3E-03	1.4E-05	1.8E-04	2.0E-04	5.8E-04	1.6E-01	1.4E-02	9.3E-03	
Total HAPs								1.8E-01	
Worst Case HAP								1.6E-01	Manganese

HAPs - Metals									
Controlled Silo Loading	Arsenic	Beryllium	Cadmium	Total Chromium	Lead	Manganese	Nickel	Total Phosphorus	
Controlled Emission Factor (lb/ton)	4.24E-09	4.86E-10	No Data	2.90E-08	1.09E-08	1.17E-07	4.18E-08	No Data	
Controlled Potential Emissions (tons/yr)	3.3E-06	3.8E-07	1.8E-06	2.3E-05	8.6E-06	9.2E-05	3.3E-05	9.3E-05	
Total HAPs								2.6E-04	
Worst Case HAP								9.3E-05	Total Phosphorus

Methodology

Silo loading (SCC 3-05-011-07) emission factors are from AP 42 Table 11.12-8

Controlled emission factors have not been determined (ND) for cadmium and nickel, so 99% dust collector efficiency is assumed relative to uncontrolled emission.

Throughput (lbs/year) = 180 lbs/hr (provided by the source)

Uncontrolled Potential Emissions (tons/yr) = [Throughput (tons/hr)]*[Uncontrolled Emission Factor (lb/ton)]*[8760 hrs/yr]*[1 ton/2000 lbs]

Controlled Potential Emissions (tons/yr) = [Uncontrolled Potential Emissions (tons/yr)] * [1 - control efficiency]

**TSD Appendix A: Emission Calculations
Truck Loading HAP and Lead (Pb)**

Company Name: Essroc Cement Corporation
Source Address: 1051 South Emerson Avenue, Indianapolis, IN 46203
Registration Administrative Amendment: 097-34098-00358
Permit Writer: Jenny Liljegren

Throughput 320 lbs/hour

HAPs - Metals										
Uncontrolled Truck Loading	Arsenic	Beryllium	Cadmium	Total Chromium	Lead	Manganese	Nickel	Total Phosphorus	Selenium	
Emission Factor in lb/ton	1.22E-05	2.44E-07	3.42E-08	1.14E-05	3.62E-06	6.12E-05	1.19E-05	3.84E-05	2.62E-06	
Uncontrolled Potential Emissions (tons/yr)	1.7E-02	3.4E-04	4.8E-05	1.6E-02	5.1E-03	8.6E-02	1.7E-02	5.4E-02	3.7E-03	
									Total HAPs	2.0E-01
									Worst Case HAP	8.6E-02 Manganese

HAPs - Metals										
Controlled Truck Loading	Arsenic	Beryllium	Cadmium	Total Chromium	Lead	Manganese	Nickel	Total Phosphorus	Selenium	
Emission Factor in lb/ton	6.02E-07	1.04E-07	9.06E-09	4.10E-06	1.53E-06	2.08E-05	4.78E-06	1.23E-05	1.13E-07	
Controlled Potential Emissions (tons/yr)	8.4E-04	1.5E-04	1.3E-05	5.7E-03	2.1E-03	2.9E-02	6.7E-03	1.7E-02	1.6E-04	
									Total HAPs	6.2E-02
									Worst Case HAP	2.9E-02 Manganese

Methodology

Truck loading (SCC 3-05-011-10) emission factors are from AP 42 Table 11.12-8

Throughput (lbs/year) = 320 lbs/hr (provided by the source)

Uncontrolled Potential Emissions (tons/yr) = [Throughput (tons/hr)]*[Uncontrolled Emission Factor (lbs/ton)]*[8760 hrs/yr]*[1 ton/2000 lbs]

Controlled Potential Emissions (tons/yr) = [Uncontrolled Potential Emissions (tons/yr)] * [1 - control efficiency]



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

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

TO: Brian Purkhiser
Essroc Cement Corp.
1051 S Emerson Ave
Indianapolis, IN 46203

DATE: February 21, 2014

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

SUBJECT: Final Decision
Registration - Administrative Amendment
097 - 34098 - 00358

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:
Brian Costenbader, VP, Logistics
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 6/13/2013

Mail Code 61-53

IDEM Staff	LPOGOST 2/21/2014 Essroc Cement Corp 097 - 34098 - 00358 /final)		Type of Mail: CERTIFICATE OF MAILING ONLY	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		

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2		Brian Costenbader VP, Logistics Essroc Cement Corp 3162 Bath Pike Nazareth PA 18064 (RO CAATS)									
3		Marion County Health Department 3838 N, Rural St Indianapolis IN 46205-2930 (Health Department)									
4		Indianapolis City Council and Mayors Office 200 East Washington Street, Room E Indianapolis IN 46204 (Local Official)									
5		Marion County Commissioners 200 E. Washington St. City County Bldg., Suite 801 Indianapolis IN 46204 (Local Official)									
6		Matt Mosier Office of Sustainability City-County Bldg/200 E Washington St. Rm# 2460 Indianapolis IN 46204 (Local Official)									
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