



**MISSOURI
DEPARTMENT OF
NATURAL RESOURCES**
MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **07 2016 - 007**

Project Number: 2016-04-048
Installation ID: 001-0031

Parent Company: Central Concrete Company

Parent Company Address: 2000 Dogwood Lane, Columbia, MO 65201

Installation Name: Adair County Concrete

Installation Address: 24887 Dogwood Lane, Kirksville, MO 63501

Location Information: Adair County, S34 T62N R15W

Application for Authority to Construct was made for:
Installation of a new stationary concrete plant. This review was conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Standard Conditions (on reverse) are applicable to this permit.

Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

Daronn A. Williams

Prepared by
Daronn A. Williams
New Source Review Unit

Kyana L. Moore

Director or Designee
Department of Natural Resources

JUL 21 2016

Effective Date

STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Enforcement and Compliance Section of the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's regional office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit using the contact information below.

Contact Information:

Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:

<http://dnr.mo.gov/regions/>

SITE SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."

1. Annual Emission Limit

- A. Adair County Concrete shall emit less than 15.0 tons of PM₁₀ in any 12-month period from the emission sources below.

Table 1: Summary of Emission Sources

Emission Point (EP) Number	Emission Unit Description
1	Aggregate Transfer
2	Sand Transfer
3	Cement unloading to silo
4	Supplement unloading
5	Weigh hopper loading
6	Truck Mixer
7	Storage Pile 1
8	Storage Pile 2
9	Haul Road 1
10	Haul Road 2

- B. Adair County Concrete shall demonstrate compliance with Special Condition 1.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

2. Undocumented Watering Requirement

Adair County Concrete shall apply a water spray on all haul roads and vehicular activity areas whenever conditions exist that would allow visible emissions from these sources to leave the property.

3. Moisture Content Testing Requirement

- A. Adair County Concrete shall verify that the moisture content of the processed rock is greater than or equal to 1.5 percent (%) by weight.

- B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.

SITE SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from rock that has been processed by the plant or from each source of aggregate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Adair County Concrete main office within 30 days of completion of the required test.
 - F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 3.A, another test may be performed within 15 days of the noncompliant test. If the results of that test is less than the moisture content in Special Condition 3.A, Adair County Concrete shall either:
 - 1) Apply for a new permit to account for the revised information, or
 - 2) Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.
 - G. In lieu of testing, Adair County Concrete may obtain test results that demonstrate compliance with the moisture content in Special Condition 3.A from the supplier of the aggregate.
4. Control Device Requirement-Baghouse
- A. Adair County Concrete shall control emissions from the equipment listed below using baghouses as specified in the permit application.
 - 1) Cement Silo
 - 2) Supplement Silo
 - B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications.
 - C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

SITE SPECIFIC SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

- D. Visible emissions will be used as an indicator of the proper operation of the control device. During proper operation no visible emissions are expected from this emission unit. The existence of visible emissions will indicate a decrease in the efficiency of the control device and corrective actions will be implemented.
 - 1) Frequency: Visible emissions from the exhaust shall be monitored on a daily basis when the silos are being filled by a transport truck.
 - 2) Duration: The duration of the observation shall be for a two minute time period.
 - 3) Threshold: The condition of no visible emissions is considered normal for this emission unit. When visible emissions are noted from the emission unit, it shall be documented and corrective actions shall be implemented within a reasonable period.

- E. Adair County Concrete shall maintain a copy of the baghouse manufacturer's performance warranty on site.

- F. Adair County Concrete shall maintain an operating and maintenance log for the baghouses which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

- 5. Record Keeping Requirement
Adair County Concrete shall maintain all records required by this permit for not less than five years and make them available to any Missouri Department of Natural Resources' personnel upon request.

- 6. Reporting Requirement
Adair County Concrete shall report to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2016-04-048
Installation ID Number: 001-0031
Permit Number:

Adair County Concrete
24887 Dogwood Lane
Kirksville, MO 63501

Complete: April 25, 2016

Parent Company:
Central Concrete Company
2000 Dogwood Lane
Columbia, MO 65201

Adair County, S34 T62N R15W

PROJECT DESCRIPTION

Central Concrete Company has submitted an Application for Authority to Construct for the installation of a new stationary truck mix concrete plant that will operate at 24887 Dogwood Lane in Kirksville, Missouri, operating as Adair County Concrete. The plant is rated at 400 tons per hour and will be using electricity from the local utility. It will be using aggregate with a moisture content equal to or greater than 1.5% by weight. Particulate emissions from the aggregate weigh hopper and mix truck loading are not controlled by a baghouse. Particulate emissions from the cement silo and supplement silo will be controlled by a fabric filter. However, there will be no Magnehelic gauge on the dust collection system to show a pressure drop. Visual observations will be made once per day when the silo is filled by a transport truck to determine if the fabric filter is properly working.

This installation is located in Adair County, an attainment area for all criteria pollutants. This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

Adair County Concrete originally operated under construction permits 0497-014 and 0497-014A. However, the plant ceased operation in March 2012 and was partially dismantled. Because Adair County Concrete has reported that this plant was shut down and would be dismantled and the plant is not be able to operate in its current state without adding equipment, a new Application for Authority to Construct was required for this project.

TABLES

The table below summarizes the emissions of this project. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). The conditioned potential emissions are based on a 15.0 ton per year PM₁₀ limit to avoid modeling requirements.

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level	Existing Actual Emissions	Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	N/A	389.90	49.86
PM ₁₀	15.0	N/A	117.30	< 15.00
PM _{2.5}	10.0	N/A	69.27	8.86
SO _x	40.0	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A

N/A = Not Applicable

EMISSIONS CALCULATIONS

Emissions for the project were calculated using emission factors found in the United States EPA document AP-42 *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, Fifth Edition (AP-42).

Emissions from the concrete batch plant were calculated using emission factors from AP-42 Section 11.12 "Concrete Batching," June 2006. This section cites Equation (1) in Section 13.2.4 "Aggregate Handling and Storage Piles," November 2006 for calculating the emissions from aggregate and sand transfer. The cement and supplement silos are controlled with baghouses, so the controlled emission factors were used. Emissions from the aggregate weigh hopper were calculated using AP-42 Section 13.2.4, Equation (1). These emissions are not controlled. Emissions from mix truck loading are uncontrolled, so the uncontrolled emission factor was used.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006. Because undocumented watering will be used to control particulate emissions on the haul roads a 50% control efficiency for PM and PM₁₀ and a 22% control efficiency for PM_{2.5} were applied to the emission calculations. Emissions from load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4. The moisture content of the aggregate is 1.5% by weight. Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 "Storage Pile Worksheet."

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned below the de minimis level and potential emissions of PM are above the de minimis level, but below major source levels.

APPLICABLE REQUIREMENTS

Adair County Concrete shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110.
- No Operating Permit is required for this installation.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) or National Emission Standards for Hazardous Air Pollutants for Source Categories (MACTS) apply to the proposed equipment.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated April 21, 2016, received April 25, 2016, designating Central Concrete Company as the owner and operator of the installation.

Mr. Cooper Snyder
President
Central Concrete Company
2000 Dogwood Lane
Columbia, MO 65201

RE: New Source Review Permit - Project Number: 2016-04-048

Dear Mr. Snyder:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission, whose contact information

Mr. Cooper Snyder
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is: Administrative Hearing Commission, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.ao.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. Williams, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp
New Source Review Unit Chief

SH:dwj

Enclosures

c: Northeast Regional Office
PAMS File: 2016-04-048

Permit Number: