

STATE OF 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: 092014-008

Project Number: 2014-05-082

Installation ID: PORT-0702

Parent Company: Consolidated Ready Mix, LLC

Parent Company Address: PO Box 349, Rushville, IL 62681

Installation Name: Consolidated Ready Mix, LLC

Installation Address: 27567 East State Hwy UU, Blythedale, MO 64426

Location Information: Harrison County, S12 T66N R27W

Application for Authority to Construct was made for:
New portable 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.

SEP 25 2014

EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

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 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 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 of Natural Resources 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 this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' 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 at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

Page No.	3
Permit No.	
Project No.	2014-05-082

GENERAL 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. **Equipment Identification Requirement**
Consolidated Ready Mix, LLC shall maintain easily read permanent markings on each component of the plant. These markings shall be the equipment's serial number or a company assigned identification number that uniquely identifies the individual component. These identification numbers must be submitted to the Air Pollution Control Program no later than 15 days after start-up of the portable rock crushing plant
2. **Relocation of Portable Rock Crushing Plant**
 - A. Consolidated Ready Mix, LLC shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0702, contain a nonroad engine requirement limiting the portable plant at the site specific location to 12 consecutive months.
 - B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable rock crushing plant.
 - 1) If the portable rock crushing plant is moving to a site previously permitted, and if the circumstances at the site have not changed, then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.
 - 2) If the portable rock crushing plant is moving to a new site, or if circumstances at the site have changed (e.g. the site was only permitted for solitary operation and now another plant is located at the site), then the application must be received by the Air Pollution Control Program at least 21 days prior to the relocation. The application must include written notification of any concurrently operating plants.
3. **Record Keeping Requirement**
Consolidated Ready Mix, LLC shall maintain all records required by this permit for not less than five years and shall make them available to any Missouri Department of Natural Resources' personnel upon request.
4. **Reporting Requirement**
Consolidated Ready Mix, LLC 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.

Page No.	4
Permit No.	
Project No.	2014-05-082

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."

PORT ID Number: PORT-0702

Site ID Number: PORT-0702

Site Name: Walnut Grove, LLC

Site Address: 27567 East State Hwy UU, Blythedale, MO 64426

Site County: Harrison, S12 T66N R27W

1. Ambient Air Impact Limitation
 - A. Consolidated Ready Mix, LLC shall not cause an exceedance of the NAAQS for PM₁₀ of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Consolidated Ready Mix, LLC shall demonstrate compliance with Special Condition 1.A using Attachment A or other equivalent forms that have been approved by the Air Pollution Control Program, including electronic forms.
2. Annual Emission Limit
 - A. Consolidated Ready Mix, LLC shall emit less than 50.0 tons of PM₁₀ in any 12-month period from the entire installation.
 - B. Consolidated Ready Mix, LLC shall demonstrate compliance with Special Condition 2.A using Attachment B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
3. Undocumented Watering Requirement
Consolidated Ready Mix, LLC 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.
4. Control Device Requirement-Baghouse
 - A. Consolidated Ready Mix, LLC shall control emissions from the equipment listed below using baghouses as specified in the permit application.
 - 1) Cement Silo (EP-3)
 - 2) Supplement Silo (EP-4)
 - 3) Mixer Loadout (EP-6)

Page No.	5
Permit No.	
Project No.	2014-05-082

SITE SPECIFIC SPECIAL CONDITIONS:

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

- B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
- 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).
- D. Consolidated Ready Mix, LLC shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours when the plant is operating. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
- E. Consolidated Ready Mix, LLC shall maintain a copy of the baghouse manufacturer's performance warranty on site.
- F. Consolidated Ready Mix, LLC 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. **Minimum Distance to Property Boundary Requirement**
The primary emission point shall be located at least 1,200 feet from the nearest property boundary.
- 6. **Concurrent Operation Restriction**
Consolidated Ready Mix, LLC is prohibited from operating whenever other plants are located at the site.
- 7. **Record Keeping Requirement**
Consolidated Ready Mix, LLC 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.
- 8. **Reporting Requirement**
Consolidated Ready Mix, LLC 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: 2014-05-082

Installation ID Number: PORT-0702

Permit Number:

Consolidated Ready Mix, LLC
27567 East State Hwy UU
Blythedale, MO 64426

Complete: June 30, 2014

Parent Company:
Consolidated Ready Mix, LLC
PO Box 349
Rushville, IL 62681

Harrison County, S12 T66N R27W

PROJECT DESCRIPTION

Consolidated Ready Mix has purchased a 1976 concrete transit mix Ross Super 100 portable batch plant. The plant will initially be located in Blythedale, Missouri where they will produce 6,000 cubic yards of concrete for over a 60-90 day time period. They have been contracted by Agritech enterprises to provide concrete for a new hog confinement building owned by Walnut Grove, LLC and operated by Mike Cronin. The plant is rated at 192 tons per hour and will be located at least 1200 feet from the property line. The plant will be powered off the grid. Emissions from the haul roads will be controlled using the undocumented watering method.

This installation is located in Harrison 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.

TABLES

The table below summarizes the emissions of this project. The potential emissions of the process equipment, which excluded emissions from haul roads and wind erosion, are not site specific and should not vary from site to site. Since this is a new portable plant, there are no existing actual emissions. 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 include emissions from sources that will limit their production to ensure compliance with the annual PM₁₀ emission limit of 50 tons per year for portable plants in order to avoid refined modeling according to 10 CSR 10-6.060 (6)(B)3.

Table 1: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	Potential Emissions of Process Equipment (tons/yr)	Existing Actual Emissions	^a Potential Emissions of the Application	^b Conditioned Potential Emissions
PM	25.0	30.61	N/A	467.75	161.42
PM ₁₀	15.0	12.42	N/A	144.89	<50.0
PM _{2.5}	10.0	4.04	N/A	25.33	8.40
SO _x	40.0	0.00	N/A	N/D	N/D
NO _x	40.0	0.00	N/A	N/D	N/D
VOC	40.0	0.00	N/A	N/D	N/D
CO	100.0	0.00	N/A	N/D	N/D
GHG (CO ₂ e)	75,000 / 100,000	0.00	N/A	N/D	N/D
GHG (mass)	0.0 / 100.0 / 250.0	0.00	N/A	N/D	N/D
Total HAPs	25.0	0.00	N/A	N/D	N/D

N/A = Not Applicable; N/D = Not Determined

^aIncludes site specific haul road and storage pile emissions

^bConditioned potential emissions of the application represent a voluntary PM₁₀ limit to avoid refined modeling at the time of permitting.

Table 2 summarizes the ambient air quality impact analysis. The maximum modeled impact is the impact of each pollutant when the plant is operating continuously. The 24-hour limited impacts and daily limit are based on compliance with the NAAQS for PM₁₀

Table 2: Ambient Air Quality Impact Analysis

Pollutant	NAAQS/RAL (µg/m ³)	Averaging Time	^a Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	Background (µg/m ³)	^b Daily Limit (tons/day)
^c PM ₁₀ (solitary)	150.0	24-hour	726.66	150.0150	0.0	1,944.3

^aModeled impact at maximum capacity with controls

^bIndirect limit based on compliance with NAAQS.

^cSolitary operation

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 by a baghouse. Emissions from truck loading are controlled by a shroud vented to a baghouse, so the controlled 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. A 50% control efficiency for PM and PM₁₀ and a 22.22% control efficiency for PM_{2.5} were applied to the emission calculations for the use of undocumented watering. 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 by default is 0.7% 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."

AMBIENT AIR QUALITY IMPACT ANALYSIS

An ambient air quality impact analysis (AAQIA) was performed to determine the impact of the pollutants listed in Table 2. The Air Pollution Control Program requires an AAQIA of PM₁₀ for all asphalt, concrete and rock-crushing plants regardless of the level of PM₁₀ emissions if a permit is required. An AAQIA is required for other pollutants if their emissions exceed their respective de minimis or screening model action level (SMAL). The AAQIA was performed using the Air Pollution Control Program's generic nomographs and when appropriate the EPA modeling software AERSCREEN. For each pollutant that was modeled, the maximum concentration that occurs at or beyond the site boundary was compared to the NAAQS or RAL for the pollutant. If during continuous operation the modeled concentration of a pollutant is greater than the applicable NAAQS or RAL, the plant's production is limited to ensure compliance with the standard.

In cases where the plant is providing material for a highway project and not located at an existing quarry, the ambient impact is evaluated in accordance with a memorandum issued by the Air Pollution Control Program titled "Permitting Asphalt/Concrete Plants for Temporary Highway Projects," dated April 10, 2000. This memorandum states that air quality should be analyzed at the nearest residence or location where the public could reasonably be expected to be found instead of all ambient air. This practice generally allows for a less restrictive daily production level while protecting the public.

OPERATING SCENARIOS

The plant is not permitted to operate with other plants located at the site as stated in Site-Specific Special Condition 6.

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 PM are above the de minimis level, but below the major source level. There are no modeling requirements for PM. No refined modeling is required because PM₁₀ emissions are conditioned below the 50 ton per year according to 10 CSR 10-6.060 (6)(B)(3.).

APPLICABLE REQUIREMENTS

Consolidated Ready Mix, LLC 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 because it is a portable plant.
- *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. The aggregate weigh hopper's potential emission rate of 2.32 pounds per hour of PM which is below the process weight of 58.07 lbs/hr and complies with this regulation.
- 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*, I recommend this permit be granted with special conditions.

Kathy Kolb
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 29, 2014, received May 29, 2014, designating Consolidated Ready Mix, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Mr. James M. Curry
Owner
Consolidated Ready Mix, LLC
PO Box 349
Rushville, IL 62681

RE: New Source Review Permit - Project Number: 2014-05-082

Dear Mr. Curry:

Enclosed with this letter is your permit to construct. Please study it carefully. 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, 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.

If you have any questions, please do not hesitate to contact Kathy Kolb, 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:kk1

Enclosures

c: Kansas City Regional Office
PAMS File: 2014-05-082

Permit Number: