



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: 072020-010 Project Number: 2020-06-008
Installation ID: 055-0031

Parent Company: Eastern Missouri Concrete

Parent Company Address: PO Box 440187, St. Louis, MO 63144

Installation Name: Eastern Missouri Concrete - Sullivan 99

Installation Address: 11023 North Service Road West, Bourbon, MO 65441

Location Information: Crawford County, S24 T40N R3W

Application for Authority to Construct was made for:
New stationary concrete plant. This review was conducted in accordance with Section (5), 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.



Director or Designee
Department of Natural Resources

July 21, 2020
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/>

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 (3)(E). "Conditions required by permitting authority."

1. **Best Management Practices Requirement**
Eastern Missouri Concrete - Sullivan 99 shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing BMPs as defined in Attachment AA.
2. **Annual Emission Limit**
 - A. Eastern Missouri Concrete - Sullivan 99 shall emit less than 15.0 tons of PM₁₀ in any 12-month period from the entire installation which consists of the equipment listed in Table 1 in the Table Section of this permit. Installation shall include all actual emissions in the limit including SSM emissions as well as any excess SSM emissions as reported to the Air Pollution Control Program's Compliance/Enforcement Section in accordance with the requirements of 10 CSR 10-6.050 Start-Up, Shutdown, and Malfunction Conditions.
 - B. Eastern Missouri Concrete - Sullivan 99 shall demonstrate compliance with Special Condition 2.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
3. **Control Device Requirement-Baghouse**
 - A. Eastern Missouri Concrete - Sullivan 99 shall control emissions from the equipment listed below using a baghouse as specified in the permit application.
 - 1) Cement Silo (EP-03)
 - 2) Supplement Silo (EP04)
 - B. The baghouse 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 baghouse 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. Eastern Missouri Concrete - Sullivan 99 shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours when the associated equipment is in operation. The operating pressure drop shall be

SPECIAL CONDITIONS:

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

maintained within the design conditions specified by the manufacturer's performance warranty.

- E. Eastern Missouri Concrete - Sullivan 99 shall maintain a copy of the baghouse manufacturer's performance warranty on site.
 - F. Eastern Missouri Concrete - Sullivan 99 shall maintain an operating and maintenance log for the baghouse 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.
4. Record Keeping Requirement
Eastern Missouri Concrete - Sullivan 99 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.
5. Reporting Requirement
Eastern Missouri Concrete - Sullivan 99 shall report to the Air Pollution Control Program, Compliance / Enforcement Section by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at AirComplianceReporting@dnr.mo.gov, 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 (5) REVIEW

Project Number: 2020-06-008
Installation ID Number: 055-0031
Permit Number: 072020-010

Eastern Missouri Concrete - Sullivan 99:
11023 North Service Road West
Bourbon, MO 65441

Complete: June 8, 2020

Parent Company:
Eastern Missouri Concrete
PO Box 440187
St. Louis, MO 63144

Crawford County, S24 T40N R3W

PROJECT DESCRIPTION

The proposed ready mix concrete batch plant is a stationary truck-mix plant. The previous plant at this location was completely lost during a major fire at the facility. The new plant will have a MHDR of 160 tons per hour. Aggregate and sand will be delivered to the site via end dump trailers and stored in two storage piles approximately 75 feet from the plant. The storage piles are 0.1 acres each or less in size. The plant is equipped with a single split silo (cement and fly ash), which is connected to a baghouse mounted on top of the silo. The weigh hopper and load points are not equipped with baghouses or dust collection systems. The plant is powered by three-phase public utilities. There is no generator present at this site.

The applicant is using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas.

This installation is located in Crawford County, an attainment/unclassifiable 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 following permits have been issued to Eastern Missouri Concrete - Sullivan 99 from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0889-011	Concrete Plant
0990-010	Portable Concrete Plant
0990-010A	Co-locate asphalt plant
0990-010B	Permit Amendment
062006-018	Increase production/add controls
102007-007	Clarify Conditions

The table below summarizes the emissions of this project. The potential emissions of the process equipment excludes emissions from haul roads and wind erosion. The existing actual emissions were taken from the previous year's EIQ which were from the plant that burnt down. 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 voluntary annual PM₁₀ de minimis emission limit to avoid dispersion modeling requirements found in 10 CSR 10-6.060 Section (5).

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Potential Emissions of Process Equipment	Existing Actual Emissions (2019 EIQ)	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	107.30	N/D	136.70	47.37
PM ₁₀	15.0	32.35	0.50	43.29	<15.00
PM _{2.5}	10.0	25.44	0.22	27.35	9.48
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
Total HAPs	25.0	N/A	N/A	N/A	N/A

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

^aExcludes haul road and storage pile emissions

^bIncludes haul road and storage pile emissions

EMISSIONS CALCULATIONS

Emissions for the project were calculated as described below and 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:

- 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 and truck loading:

- Calculated using AP-42 Section 13.2.4, “Aggregate Handling and Storage Piles,” November 2006, Equation (1).
- The weigh hopper emissions are uncontrolled, so the uncontrolled emission factor was used.
- Emissions from mixer loading/mix truck loading are uncontrolled, so the uncontrolled emission factor was used.

Emissions from haul roads and vehicular activity areas:

- Calculated using the predictive equation from AP-42 Section 13.2.1 “Paved Roads,” January 2011.
- Calculated using the predictive equation from AP-42 Section 13.2.2 “Unpaved Roads,” November 2006.
- A 90% control efficiency for PM and PM₁₀ and a 74% control efficiency for PM_{2.5} were applied to the emission calculations for the use of BMPs.

Emissions from storage piles:

- Load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4 “Aggregate Handling and Storage Piles,” November 2006.
- The moisture content of the aggregate 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.”

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are above/ conditioned to de minimis levels. Potential emissions of PM are above de minimis levels, but below major levels.

APPLICABLE REQUIREMENTS

Eastern Missouri Concrete - Sullivan 99 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

- 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.
- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400. The aggregate weigh hopper's potential emission rate of 0.63 pounds per hour of PM and the truck loading potential emission rate of 21.8 pounds per hour of PM are individually below the process weight of 56.12 pounds per hour and therefore complies with this regulation.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), 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 May 29, 2020, received June 8, 2020, designating Eastern Missouri Concrete as the owner and operator of the installation.

Attachment AA: Best Management Practices

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the plant is operating.

1. Pavement
 - A. The operator shall pave the area with materials such as asphalt, concrete or other materials approved by the Air Pollution Control Program. The pavement will be applied in accordance with industry standards to achieve control of fugitive emissions while the plant is operating.
 - B. Maintenance and repair of the road surface will be conducted as necessary to ensure that the physical integrity of the pavement is adequate to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall periodically wash or otherwise clean all of the paved portions of the haul roads as necessary to achieve control of fugitive emissions from these areas while the plant is operating.

2. Application of Chemical Dust Suppressants
 - A. The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
 - B. The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the plant is operating.
 - C. The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources' personnel upon request.

3. Application of Water-Documented Daily
 - A. The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
 - B. Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
 - C. Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
 - D. The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).
 - E. The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.

APPENDIX A

Abbreviations and Acronyms

% percent	MMBtu Million British thermal units
°F degrees Fahrenheit	MMCF million cubic feet
acfm actual cubic feet per minute	MSDS Material Safety Data Sheet
BACT Best Available Control Technology	NAAQS National Ambient Air Quality Standards
BMPs Best Management Practices	NESHAPs .. National Emissions Standards for Hazardous Air Pollutants
Btu British thermal unit	NO_x nitrogen oxides
CAM Compliance Assurance Monitoring	NSPS New Source Performance Standards
CAS Chemical Abstracts Service	NSR New Source Review
CEMS Continuous Emission Monitor System	PM particulate matter
CFR Code of Federal Regulations	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
CO carbon monoxide	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
CO₂ carbon dioxide	ppm parts per million
CO₂e carbon dioxide equivalent	PSD Prevention of Significant Deterioration
COMS Continuous Opacity Monitoring System	PTE potential to emit
CSR Code of State Regulations	RACT Reasonable Available Control Technology
dscf dry standard cubic feet	RAL Risk Assessment Level
EQ Emission Inventory Questionnaire	SCC Source Classification Code
EP Emission Point	scfm standard cubic feet per minute
EPA Environmental Protection Agency	SDS Safety Data Sheet
EU Emission Unit	SIC Standard Industrial Classification
fps feet per second	SIP State Implementation Plan
ft feet	SMAL Screening Model Action Levels
GACT Generally Available Control Technology	SO_x sulfur oxides
GHG Greenhouse Gas	SO₂ sulfur dioxide
gpm gallons per minute	SSM startup, shutdown, & malfunction
gr grains	tph tons per hour
GWP Global Warming Potential	tpy tons per year
HAP Hazardous Air Pollutant	VMT vehicle miles traveled
hr hour	VOC Volatile Organic Compound
hp horsepower	
lb pound	
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³ micrograms per cubic meter	
m/s meters per second	
Mgal 1,000 gallons	
MW megawatt	
MHDR maximum hourly design rate	



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

July 21, 2020

Willie Rose
President
Eastern Missouri Concrete - Sullivan 99
PO Box 440187
St. Louis, MO 63144

RE: New Source Review Permit - Project Number: 2020-06-008

Dear Willie Rose:

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 are necessary for continued compliance. In addition, please note that Eastern Missouri Concrete - Sullivan 99 cannot operate with any other plants that have ambient impact limits based on the Air Pollution Control Program's nomographs. Please refer to the permits of any plant that you are operating with to see if their respective permits contain an ambient impact limit. 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,



Willie Rose
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whose contact information 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.aa.mo.gov/ahc.

If you have any questions regarding this permit, 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:kka

Enclosures

c: Southeast Regional Office
PAMS File: 2020-06-008

Permit Number: 072020-010