

**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: **042018-011**

Project Number: 2018-02-023  
Installation ID: PORT-0765

Parent Company: Midwest Heavy Construction, LLC

Parent Company Address: 17001 S. 291 Hwy, Pleasant Hill, MO 64080

Installation Name: Midwest Heavy Construction Portable Concrete Plant

Installation Address: 17001 S. 291 Hwy, Lee's Summit, MO 64064

Location Information: Jackson County, S20 T48N R31W

Application for Authority to Construct was made for:  
Construction of a new portable central mix 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.

  
Prepared by  
Kathy Kolb  
New Source Review Unit

  
Director or Designee  
Department of Natural Resources

APR 13 2018  
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/>

**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**  
Midwest Heavy Construction Portable Concrete Plant 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 concrete plant.
2. **Relocation of Portable Concrete Plant**
  - A. Midwest Heavy Construction Portable Concrete Plant shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0765, 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 concrete plant.
    - 1) If the portable concrete 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 concrete 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**  
Midwest Heavy Construction Portable Concrete Plant 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**  
Midwest Heavy Construction Portable Concrete Plant shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedances of the limitations imposed by this permit.

**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-0765

Site Name: Lee's Summit Airport

Site Address: 2751 NE Douglas Street, Lee's Summit, MO 64064

Site County: Jackson S20 T48N R31W

1. Annual Emission Limit
  - A. Midwest Heavy Construction Portable Concrete Plant shall emit less than 15.0 tons of PM<sub>10</sub> in any 12-month period from the entire installation which consists of the equipment listed in Table 1. The 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* shall be included in the limit.
  - B. Midwest Heavy Construction Portable Concrete Plant 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  
Midwest Heavy Construction Portable Concrete Plant 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. Control Device Requirement-Baghouses
  - A. Midwest Heavy Construction Portable Concrete Plant shall control emissions from the mixer and mixer charging area using two Johnson-Ross 6CP500 silo dust collectors (baghouses) and Johnson-Ross CP 1000 mobile dust collector (baghouse) as specified in the permit application.
    - 1) Cement Silo (EU-03) Johnson-Ross 6CP500 silo dust collector
    - 2) Supplement Silo (EU-04) Johnson-Ross 6CP500 silo dust collector
    - 3) Truck Mix Loadout (shroud vented to baghouse) (EU-06) Johnson-Ross CP 1000 mobile dust collector
  - B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouses 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.

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

Project Number: 2018-02-023

Installation ID Number: PORT-0765

Permit Number: 042018-011

Midwest Heavy Construction Portable Concrete Plant: Complete: February 16, 2018  
2751 NE Douglas Street  
Lee's Summit, MO 64064

Parent Company:  
Midwest Heavy Construction, LLC  
17001 S. 291 Hwy  
Pleasant Hill, MO 64080

Jackson County, S20 T48N R31W

PROJECT DESCRIPTION

Midwest Heavy Construction, LLC (MHC) submitted an Application for Authority to Construct for a portable concrete plant that was recently purchased by MHC from Cecil Perry Construction in Louisiana. The portable concrete plant will be initially located at the Lee's Summit Airport at 2751 NE Douglas Street in Lee's Summit, Missouri, Jackson County. The portable concrete plant (PORT-0765) is a Johnson-Ross 1248 Unirover Central Mix Plant and is rated at 390 cubic yards or 780 tons per hour. The plant uses a Johnson-Ross CP 1000 mobile dust collector to control dust from the mixer and mixer charging area. Emissions from the two compartment storage cement are controlled by two Johnson Ross 6CP500 silo dust collectors. There is no hot water heater associated with this portable concrete plant. The applicant is using undocumented watering to control emissions from haul roads and vehicular activity areas.

A generator will be used at this location. The generator will consist of a Caterpillar engine that is rated to produce 500 kilowatts. The plant is currently scheduled to operate at this location for approximately six months so the engine is considered a non-road engine and its emissions are not included with this project.

This installation is located in Jackson County, a nonattainment area for the 2010 Sulfur Dioxide standard, and an attainment/unclassified area for all other criteria pollutants.

This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

No permits have been issued to Midwest Heavy Construction Portable Concrete Plant from the Air Pollution Control Program.

**SITE SPECIFIC SPECIAL CONDITIONS:**

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

- 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. Midwest Heavy Construction Portable Concrete Plant shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours when the associated equipment is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - E. Midwest Heavy Construction Portable Concrete Plant shall maintain a copy of the baghouses manufacturer's performance warranty on site.
  - F. Midwest Heavy Construction Portable Concrete Plant 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.
4. **Nonroad Engine Requirement**  
Midwest Heavy Construction Portable Concrete Plant's engine shall not remain at one location within this site longer than 12 consecutive months in order for the engine (genset Caterpillar 500 kw) to meet the definition of a nonroad engine as stated in 40 CFR 89.2. These engines shall be moved with its associated equipment at least once every 12 consecutive months at this site.
5. **Record Keeping Requirement**  
Midwest Heavy Construction Portable Concrete Plant 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**  
Midwest Heavy Construction Portable Concrete Plant 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.

## TABLES

**Table 1: Concrete Plant Equipment List**

Emission Point	Description	MHDR
EU-1	Aggregate Transfer	361.51 tph
EU-2	Sand Transfer	276.80 tph
EU-3	Cement Unloading to Silo	95.17 tph
EU-4	Supplement Unloading	14.15 tph
EU-5	Weigh Hopper	638.31 tph
EU-6	Truck Loading (Cement and Supplement loading per AP-42)	109.32 tph
EU-7a	Aggregate Storage Pile-Load in	361.51 tph
EU-7b	Aggregate Storage Pile-Load out	361.51 tph
EU-7c	Aggregate Storage Pile-Vehicular Activity	1.71 VMT/hr
EU-7d	Aggregate Storage Pile-Wind Erosion	0.5 acre
EU-8a	Sand Storage Pile-Load in	276.80 tph
EU-8b	Sand Storage Pile-Load out	276.80 tph
EU-8c	Sand Storage Pile-Vehicular Activity	1.31 VMT/hr
EU-8d	Sand Storage Pile-Wind Erosion	0.5 acres
EU-9	Material Haul Road	12.35 VMT/hr
EU-10	Finished Product Haul Road	5.89 VMT/hr

The Table 2 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. There are no existing actual emissions since this is a new plant. The potential emissions of the application represent the emissions of all equipment and activities assuming continuous operation (8760 hours per year). Conditioned potential emissions account for a voluntary annual PM<sub>10</sub> emission limit of 15.0 tons per year in order to avoid refined modeling according to 10 CSR 10-6.060 (6)(B)3.

**Table 2: Emissions Summary (tons per year)**

Air Pollutant	De Minimis Level/SMAL	<sup>a</sup> Potential Emissions of Process Equipment	Existing Actual Emissions	<sup>b</sup> Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	59.66	N/A	622.74	44.29
PM <sub>10</sub>	15.0	30.19	N/A	210.92	<15.0
PM <sub>2.5</sub>	10.0	9.26	N/A	31.92	2.27
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	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
GHG (CO <sub>2</sub> e)	N/A	N/A	N/A	N/A	N/A
GHG (mass)	N/A	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

<sup>a</sup>Excludes haul roads and storage pile emissions

<sup>b</sup>Includes site specific 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:

- Calculated using AP-42 Section 13.2.4, Equation (1).
- These emissions are uncontrolled.
- Emissions from mix truck loading are controlled by a shroud vented to a baghouse, so the controlled emission factor was used.

Emissions from aggregate handling:

- Calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004.
- The uncontrolled emission factors were used because the inherent moisture content of the crushed rock is less than 1.5% by weight.

Emissions from haul roads and vehicular activity areas:

- Calculated using the predictive equation from AP-42 Section 13.2.2 "Unpaved Roads," November 2006.
- A 50% control efficiency for PM and PM<sub>10</sub> and a 41% control efficiency for PM<sub>2.5</sub> were applied to the emission calculations for the use of undocumented watering.

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.
- The moisture content of the aggregate is less than 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*. The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual PM<sub>10</sub> emission limit of 15.0 tons per year for stationary plants in order to avoid refined modeling according to 10 CSR 10-6.060 (6)(B)3. Potential emissions of PM are above de minimis but below major source levels. There are no modeling requirements for PM.

## APPLICABLE REQUIREMENTS

Midwest Heavy Construction Portable Concrete Plant 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.
- An Operating Permit is not required for portable plants.
- *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 3.06 pounds per hour of PM is below the process weight of 74.42 pounds per hour and complies with this regulation.
- 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 February 14, 2018, received February 16, 2018, designating Midwest Heavy Construction, LLC as the owner and operator of the installation.



## 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 <sub>x</sub> .....	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 <sub>2.5</sub> .....	particulate matter less than 2.5 microns in aerodynamic diameter
CO .....	carbon monoxide	PM <sub>10</sub> .....	particulate matter less than 10 microns in aerodynamic diameter
CO <sub>2</sub> .....	carbon dioxide	ppm .....	parts per million
CO <sub>2e</sub> .....	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
EIQ.....	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 <sub>x</sub> .....	sulfur oxides
GHG.....	Greenhouse Gas	SO <sub>2</sub> .....	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/m <sup>3</sup> .....	micrograms per cubic meter		
m/s .....	meters per second		
Mgal .....	1,000 gallons		
MW .....	megawatt		
MHDR .....	maximum hourly design rate		

NOTICE: This spreadsheet is for your use only and should be used with caution. MoDNR does not guarantee the accuracy of the information it contains. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current, accurate and complete information available. MoDNR is not responsible for errors or omissions in this spreadsheet. Submittal of the information contained in this spreadsheet (workbook) does not relieve the responsible official of the certification statement signed on the first page of the application.

	Pollutant	Justification for Limit	Limit Hours per Year
Hours per day	24.0	PM10	NAAQS
Days per year	26.0	N/A	N/A
Hours per year	623.0	PM10	De Minimis

Pollutant	Potential Emissions of Process Equipment (tons/yr)	Potential Emissions including fugitives (tons/yr)	Allowable Emissions for 623 hours per year (tons/yr)	DeMinimis Thresholds	Plant-wide Composite Emission Factor (lb/ton)
PM	59.66	622.74	44.29	25	0.1823
PM <sub>10</sub>	30.19	210.92	15.00	15	0.0617
PM <sub>2.5</sub>	9.26	31.92	2.27	10	0.0093
SO <sub>2</sub>	0.00	0.00	0.00	40	0.0000
NO <sub>2</sub>	0.00	0.00	0.00	40	0.0000
VOC	0.00	0.00	0.00	40	0.0000
CO	0.00	0.00	0.00	100	0.0000
CH <sub>2</sub> O	0.00	0.00	0.00	2	0.0000
C <sub>1</sub> H <sub>10</sub>	0.00	0.00	0.00	-	0.0000
Pb	0.00	0.00	0.00	0.01	0.0000
HAPs	0.00	0.00	0.00	10	0.0000
CO <sub>2</sub>	0.00	0.00	0.00	100	0.0000
N <sub>2</sub> O	0.00	0.00	0.00	100	0.0000
CH <sub>4</sub>	0.00	0.00	0.00	100	0.0000
GHG <sub>mass</sub>	0.00	0.00	0.00	100	0.0000
CO <sub>2</sub> eq	0.00	0.00	0.00	100,000	0.0000

Maximum hourly design rate (tons/hr)	780
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Tons of product per day	18,720.0
Tons of product per year	485,918.7

E=55.0 P.11 - 40  
 P=Process Rate=MHDR  
 E=  
 74.41766901

Process Rate 780  
 Allowable lb/hr 74.41766901  
 Potential lb/hr 3.06E+00 Weigh hopper EP-5

3.06 lb/hr from the weigh hopper EP-5 is less than 74.42 lb/hr, therefore the aggregate weigh hopper is in compliance with the process rate rule 10 CSR 6.400

Emission Point Number	Emission Unit Number	Description	SCC	MHDR	Units	Control Device Number	Control Type	Capture Efficiency (%)	Control Efficiency (%)	Pollutant	Emission Factor	Units (pounds per)	Emission Rate (lb/hr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
1	1	Aggregate transfer Moisture Content (% wt.) = 0.7	3-05-011-04	351.51	tons per hour			N/A	N/A	PM	0.0254	ton	9.17E+00	40.14	2.85
								N/A	N/A	PM <sub>10</sub>	0.0120	ton	4.33E+00	18.99	1.35
								N/A	N/A	PM <sub>2.5</sub>	0.0018	ton	6.56E-01	2.88	0.20
2	2	Sand transfer Moisture Content (% wt.) = 4.17	3-05-011-05	276.80	tons per hour			N/A	N/A	PM	0.0021	ton	5.77E-01	2.53	0.18
								N/A	N/A	PM <sub>10</sub>	0.0010	ton	2.73E-01	1.20	0.08
								N/A	N/A	PM <sub>2.5</sub>	0.0001	ton	4.13E-02	0.18	0.01
3	3	Cement unloading to silo	3-05-011-07	95.17	tons per hour	Fabric filter		100%	N/A	PM	0.0010	ton	9.42E-02	0.41	0.03
								100%	N/A	PM <sub>10</sub>	0.0003	ton	3.24E-02	0.14	0.01
								100%	N/A	PM <sub>2.5</sub>	0.0003	ton	3.24E-02	0.14	0.01
4	4	Supplement unloading (pneumatic)	3-05-011-17	14.15	tons per hour	Fabric filter		100%	N/A	PM	0.0089	ton	1.26E-01	0.55	0.04
								100%	N/A	PM <sub>10</sub>	0.0049	ton	6.93E-02	0.30	0.02
								100%	N/A	PM <sub>2.5</sub>	0.0049	ton	6.93E-02	0.30	0.02
5	5	Weigh hopper loading	3-05-011-08	638.31	tons per hour	Uncontrolled		N/A	N/A	PM	0.0048	ton	3.06E+00	13.42	0.95
								N/A	N/A	PM <sub>10</sub>	0.0028	ton	1.79E+00	7.83	0.56
								N/A	N/A	PM <sub>2.5</sub>	0.0014	ton	9.19E-01	4.03	0.29
6	6	Mixer loading (central mix) Moisture Content (% wt.) = 0.12	3-05-011-09	109.32	tons per hour	Controlled		N/A	N/A	PM	0.0062588	ton	5.96E-01	2.61	0.19
								N/A	N/A	PM <sub>10</sub>	0.004155765	ton	3.96E-01	1.73	0.12
								N/A	N/A	PM <sub>2.5</sub>	0.004155765	ton	3.96E-01	1.73	0.12
7A	Generator	Model Year			bhp gallons per hour mmBtu/hour			N/A	N/A	PM		MMBtu			
								N/A	N/A	PM <sub>10</sub>		MMBtu			
								N/A	N/A	PM <sub>2.5</sub>		MMBtu			
								N/A	N/A	SO <sub>2</sub>		MMBtu			
								N/A	N/A	NO <sub>2</sub>		MMBtu			
								N/A	N/A	CO		MMBtu			
								N/A	N/A	VOC		MMBtu			
								N/A	N/A	CH <sub>2</sub> O		MMBtu			
								N/A	N/A	HAPs		MMBtu			
								N/A	N/A	CO <sub>2</sub>		MMBtu			
7B	Generator	Model Year			bhp gallons per hour mmBtu/hour			N/A	N/A	PM		MMBtu			
								N/A	N/A	PM <sub>10</sub>		MMBtu			
								N/A	N/A	PM <sub>2.5</sub>		MMBtu			
								N/A	N/A	SO <sub>2</sub>		MMBtu			
								N/A	N/A	NO <sub>2</sub>		MMBtu			
								N/A	N/A	CO		MMBtu			
								N/A	N/A	VOC		MMBtu			
								N/A	N/A	CH <sub>2</sub> O		MMBtu			
								N/A	N/A	HAPs		MMBtu			
								N/A	N/A	CO <sub>2</sub>		MMBtu			
7C	Generator	Model Year			bhp gallons per hour mmBtu/hour			N/A	N/A	PM		MMBtu			
								N/A	N/A	PM <sub>10</sub>		MMBtu			
								N/A	N/A	PM <sub>2.5</sub>		MMBtu			
								N/A	N/A	SO <sub>2</sub>		MMBtu			
								N/A	N/A	NO <sub>2</sub>		MMBtu			
								N/A	N/A	CO		MMBtu			
								N/A	N/A	VOC		MMBtu			
								N/A	N/A	CH <sub>2</sub> O		MMBtu			
								N/A	N/A	HAPs		MMBtu			
								N/A	N/A	CO <sub>2</sub>		MMBtu			
								N/A	N/A	N <sub>2</sub> O		MMBtu			
								N/A	N/A	GHG <sub>mass</sub>		MMBtu			
								N/A	N/A	CH <sub>4</sub>		MMBtu			

Equipment	Unit ID	Description of Unit	Equipment Description/SCC	Heat Rate	UoM per hour						Emission Factor (lbs/UoM)					
		Combustion #1							100%	N/A	PM					
									100%	N/A	PM <sub>10</sub>		mgal			
									100%	N/A	PM <sub>2.5</sub>		mgal			
									100%	N/A	SO <sub>2</sub>		mgal			
									100%	N/A	NO <sub>2</sub>		mgal			
									100%	N/A	VOC		mgal			
									100%	N/A	CO		mgal			
									100%	N/A	CH <sub>2</sub> O		mgal			
									100%	N/A	Pb		mgal			
									100%	N/A	HAPs		mgal			
									100%	N/A	CO <sub>2</sub>		mgal			
									100%	N/A	N <sub>2</sub> O		mgal			
									100%	N/A	GHG <sub>mass</sub>		mgal			
								100%	N/A	CH <sub>4</sub>		mgal				
		Combustion #2							100%	N/A	PM					
									100%	N/A	PM <sub>10</sub>		mgal			
									100%	N/A	PM <sub>2.5</sub>		mgal			
									100%	N/A	SO <sub>2</sub>		mgal			
									100%	N/A	NO <sub>2</sub>		mgal			
									100%	N/A	VOC		mgal			
									100%	N/A	CO		mgal			
									100%	N/A	CH <sub>2</sub> O		mgal			
									100%	N/A	Pb		mgal			
									100%	N/A	HAPs		mgal			
									100%	N/A	CO <sub>2</sub>		mgal			
									100%	N/A	N <sub>2</sub> O		mgal			
									100%	N/A	GHG <sub>mass</sub>		mgal			
								100%	N/A	CH <sub>4</sub>		mgal				
		Combustion #3							100%	N/A	PM					
									100%	N/A	PM <sub>10</sub>		mgal			
									100%	N/A	PM <sub>2.5</sub>		mgal			
									100%	N/A	SO <sub>2</sub>		mgal			
									100%	N/A	NO <sub>2</sub>		mgal			
									100%	N/A	VOC		mgal			
									100%	N/A	CO		mgal			
									100%	N/A	CH <sub>2</sub> O		mgal			
									100%	N/A	Pb		mgal			
									100%	N/A	HAPs		mgal			
									100%	N/A	CO <sub>2</sub>		mgal			
									100%	N/A	N <sub>2</sub> O		mgal			
									100%	N/A	GHG <sub>mass</sub>		mgal			
								100%	N/A	CH <sub>4</sub>		mgal				
	7a	Pile #1 (used for Aggregate transfer)							N/A	N/A	PM	0.0254 ton	9.17E+00	40.14	2.85	
		Load in	361.51	tons per hour					N/A	N/A	PM <sub>10</sub>	0.0120 ton	4.33E+00	18.99	1.35	
									N/A	N/A	PM <sub>2.5</sub>	0.0018 ton	6.56E-01	2.88	0.20	
	7b	Load out	361.51	tons per hour					N/A	N/A	PM	0.0254 ton	9.17E+00	40.14	2.85	
									N/A	N/A	PM <sub>10</sub>	0.0120 ton	4.33E+00	18.99	1.35	
									N/A	N/A	PM <sub>2.5</sub>	0.0018 ton	6.56E-01	2.88	0.20	
	7c	Vehicular Activity	1.71	VMT per hour	Unpaved, Undocumented Watering				N/A	50%	PM	11.8665 VMT	1.02E+01	44.48	3.16	
									N/A	50%	PM <sub>10</sub>	3.3744 VMT	2.89E+00	12.65	0.90	
									N/A	41%	PM <sub>2.5</sub>	0.3374 VMT	3.40E-01	1.49	0.11	
	7d	Wind Erosion	0.50	acres					N/A	N/A	PM	0.1783 acre-hr	8.92E-02	0.39	0.03	
									N/A	N/A	PM <sub>10</sub>	0.0892 acre-hr	4.46E-02	0.20	0.01	
									N/A	N/A	PM <sub>2.5</sub>	0.0134 acre-hr	6.69E-03	0.03	0.00	
	8a	Pile #2 (used for Sand transfer)							N/A	N/A	PM	0.0021 ton	5.77E-01	2.53	0.18	
		Load in	276.80	tons per hour					N/A	N/A	PM <sub>10</sub>	0.0010 ton	2.73E-01	1.20	0.08	
									N/A	N/A	PM <sub>2.5</sub>	0.0001 ton	4.13E-02	0.18	0.01	
	8b	Load out	276.80	tons per hour					N/A	N/A	PM	0.0021 ton	5.77E-01	2.53	0.18	
									N/A	N/A	PM <sub>10</sub>	0.0010 ton	2.73E-01	1.20	0.08	
									N/A	N/A	PM <sub>2.5</sub>	0.0001 ton	4.13E-02	0.18	0.01	
	8c	Vehicular Activity	1.31	VMT per hour	Unpaved, Undocumented Watering				N/A	50%	PM	11.8665 VMT	7.78E+00	34.06	2.42	
									N/A	50%	PM <sub>10</sub>	3.3744 VMT	2.21E+00	9.69	0.69	
									N/A	41%	PM <sub>2.5</sub>	0.3374 VMT	2.60E-01	1.14	0.08	
	8d	Wind Erosion	0.50	acres					N/A	N/A	PM	0.2898 acre-hr	1.45E-01	0.63	0.05	
									N/A	N/A	PM <sub>10</sub>	0.1449 acre-hr	7.24E-02	0.32	0.02	
									N/A	N/A	PM <sub>2.5</sub>	0.0217 acre-hr	1.09E-02	0.05	0.00	

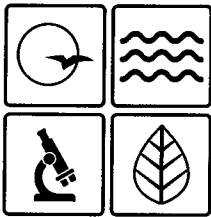






Engine Set Information		7A	7B	7C
Type of Fuel				
Brake Horsepower (bhp)				
Engine kilowatt rating (kW)				
gallons per hour				
Engine MHR (mmBtu per hour, input)				
Is this a generator-set engine?				
Model Year (yyyy)				
Fuel Sulfur Content (% weight sulfur)				

Combustion Sources						
Combustion ID - Description	Combustion #1	Desc #1	Combustion #2	Desc #2	Combustion #3	Desc #3
Heat Rate		mmBtu/hour mgal/hour		mmBtu/hour mgal/hour		mmBtu/hour mgal/hour
		mmBtu/hour		mmBtu/hour		mmBtu/hour
	In regards to AF-42 Chapter 1	In regards to 40 CFR Part 98	In regards to AF-42 Chapter 1	In regards to 40 CFR Part 98	In regards to AF-42 Chapter 1	In regards to 40 CFR Part 98
Fuel Type						
Fuel Sulfur Content (% weight sulfur, for oil; grains of sulfur/100 cuft gas vapor for Butane and Propane; not used for Natural gas)		% weight sulfur		% weight sulfur		% weight sulfur



Missouri Department of dnr.mo.gov

# NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

**APR 13 2018**

Mr. John Mullin  
Plant Manager  
Midwest Heavy Construction Portable Concrete Plant  
17001 S. 291 Hwy  
Pleasant Hill, MO 64080

RE: New Source Review  
Project Number: 2018-02-023; Installation Number: PORT-0765

Dear Mr. Mullin:

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, your new source review permit application is necessary for continued compliance. In addition, please note that Midwest Heavy Construction Portable Concrete Plant 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,



Recycled paper

Mr. John Mullin  
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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.ao.mo.gov/ahc](http://www.ao.mo.gov/ahc).

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:kkj

Enclosures

c: Kansas City Regional Office  
PAMS File: 2018-02-023

Permit Number: **042018-011**