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:	062020-005	Project Number: 2020-04-001 Installation Number: 183-0004
Parent Company:	Fred Weber, Inc.	
Parent Company Address:	2320 Creve Coeur Mill Road, Maryland Heights, MO 63043	
Installation Name:	Fred Weber, Inc. - O'Fallon Asphalt	
Installation Address:	1440 Terra Lane West, O'Fallon, MO 63366	
Location Information:	St. Charles County, U.S. Survey 1780, T47N, R2E	

Application for Authority to Construct was made for:
Addition of trap rock drying and bagging operation at an existing hot mix asphalt 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.

Kendall B. Hale

Director or Designee
Department of Natural Resources

June 4, 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 to 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."

Fred Weber, Inc. - O'Fallon Asphalt
St. Charles County, U.S. Survey 1780, T47N, R2E

1. Superseding Condition
   The conditions of this permit supersede Special Conditions 1 - 3 found in Construction Permit No. 012000-006 previously issued by the Air Pollution Control Program.

2. Best Management Practices (BMPs) Requirement
   Fred Weber, Inc. - O'Fallon Asphalt shall control fugitive emissions from all of the haul roads and vehicular activity areas at this site by performing Best Management Practices as defined in Attachment AA.

3. CO Emission Limit
   A. Fred Weber, Inc. - O'Fallon Asphalt shall emit less than 100.0 tons of CO in any consecutive 12-month period from the entire installation. The only current CO emitting source is the aggregate dryer (EP-2), and the AC heater (EP-3) which combust natural gas.

   B. Fred Weber, Inc. – O'Fallon Asphalt shall demonstrate compliance with Special Condition 3.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

4. Annual PM_{10} Emission Limit
   A. Fred Weber, Inc. – O'Fallon Asphalt shall emit less than 15.0 tons of PM_{10} in any consecutive 12-month period from the equipment listed in Table 2 in the project description section of this permit, stockpiles, and associated haul roads. The installation shall include all actual emissions, including all SSM emissions, in the monthly compliance demonstration calculations for these emission units.

   B. Fred Weber, Inc. – O'Fallon Asphalt shall demonstrate compliance with Special Condition 4.A using Attachment B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

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

5. Control Device Requirement-Baghouse
   A. Fred Weber, Inc. - O'Fallon Asphalt shall control emissions from the dryer, hot elevator, screen, bins, and mixer (EP-2) using a baghouse as specified in the permit application.

   B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications.

   C. 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.

   D. 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).

   E. Fred Weber, Inc. - O'Fallon Asphalt 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.

   F. Fred Weber, Inc. - O'Fallon Asphalt shall maintain a copy of the baghouse manufacturer's performance warranty on site.

   G. Fred Weber, Inc. - O'Fallon Asphalt 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.

6. Record Keeping and Reporting Requirements
   A. Fred Weber, Inc. - O'Fallon Asphalt shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

   B. Fred Weber, Inc. - O'Fallon Asphalt shall report to the Air Pollution Control Program's Compliance/Enforcement Section, by mail at P.O. Box 176, Jefferson City, MO 65102 or by e-mail at AirComplianceReporting@dnr.mo.gov, no later than 10 days after the end of the month during which any record required by this permit shows an exceedance of a limitation imposed by this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2020-04-001
Installation ID Number: 183-0004
Permit Number: 062020-005

Installation Address:	Parent Company:
Fred Weber, Inc. - O'Fallon Asphalt	Fred Weber, Inc.
1440 Terra Lane West	2320 Creve Coeur Mill Road
O'Fallon, MO 63366	Maryland Heights, MO 63043

St. Charles County, U.S. Survey 1780, T47N, R2E

REVIEW SUMMARY

- Fred Weber, Inc. - O'Fallon Asphalt has applied for authority to add a trap rock drying process to the facility.
- Application was deemed complete on April 1, 2020.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are emitted from the burning of natural gas.
- New Source Performance Standards (NSPS) Subpart I "Standards of Performance for Hot Mix Asphalt Facilities" applies to the installation.
- None of the NESHAPs apply to this installation.
- No Maximum Achievable Control Technologies (MACT) apply to the installation.
- A baghouse is being used to control the PM, PM_{10}, and $PM_{2.5}$ emissions from EP-2.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM_{10} are conditioned below de minimis levels. Potential emissions of PM are above de minimis levels, but below major source levels. All other criteria pollutants are below de minimis levels.
- This installation is located in St. Charles County, a nonattainment area for the 8-hour ozone standard and an attainment/unclassifiable area for all other criteria pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2, Item #27 "Any other stationary source category which, as of August 7, 1980, is being regulated under section 111 or 112 of the Act", specifically NSPS I. The installation's major source level is 250 tons per year and fugitive emissions are counted toward major source applicability.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.

- The installation shall update their Intermediate Operating Permit #OP2018-105, no later than 90 days after the effective date of this permit to include the new emission units.

- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Fred Weber currently operates a hot mix asphalt plant in St. Charles County that can operate either in batches or in continuous operation. This plant previously operated in a quarry along with a crushing operation and a concrete batch plant, but there are currently no other plants located there.

The following NSR permit has been issued to Fred Weber, Inc. - O'Fallon Asphalt from the Air Pollution Control Program.

Table 1: NSR Permit History

Permit Number	Description
012000-006	Mixers, Conveyors, rotary drum dryer, burner, and silos

PROJECT DESCRIPTION

Fred Weber, Inc. - O'Fallon Asphalt is applying to use the existing natural gas-fired dryer to dry trap rock aggregate and bag the aggregate for sale. No asphaltic cement (AC) will be added to the process. During the trap rock drying process, no hot-mix asphalt will be produced, as both processes share equipment. New emission units have been added to account for particulate matter emission sources that are specific to the trap rock drying process. This includes cold aggregate and product stockpiles (EP-8 and EP-6), aggregate loadout (EP-5), and hauling (EP-7). The Maximum Hourly Design Rate for the proposed process is 200 tons per hour.

Trap rock aggregate will be introduced into the existing cold aggregate handling system which feeds the natural gas-fired dryer. Upon exiting the dryer, the aggregate will flow through the batch-mix portion of the plant, which is controlled by a baghouse. The dried aggregate will exit the mixer into the bucket of a waiting front-end loader. The mixer will not be turning during the processing of dried trap rock aggregate. The loader will move the dried aggregate to a small stockpile. From the stockpile, a loader will feed the aggregate into 2,000 lb supersacks for later shipment offsite.

The transfer of rock from EP-1 to the rotary dryer of EP-2 will be controlled by a baghouse.

Table 2: Project Emission Points

Emission Number	Description	MHDR	Control	Status
EP-1	Cold Aggregate Handling	200 tons	None	Existing
EP-2	Baghouse Operations (dryer, hot elevator, screen, bins, mixer)	200 tons	Baghouse	Existing
EP-5	Aggregate Loadout	200 tons	None	New
EP-6	Product Stockpile	200 tons, 1.9 VMT	None	New
EP-7	Bagged Trap Rock Haul Road	1.44 VMT	Paved	New
EP-8	Cold Aggregate Stockpile	200 tons, 3.8 VMT	None	New

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Emissions from EP-1 Cold aggregate Handling emissions

- AP-42 Section 11.19.2-2 “Crushed Stone Processing and Pulverized Mineral Processing” (September 1985)
- Due to a moisture content of less than 1.5%, uncontrolled emission factors were used for the bin feeder discharge, collecting belt, conveyors, scalping screen.
- The second conveyor is controlled by a baghouse, and was given a capture efficiency of 25% and a control efficiency of 99.64%. This control efficiency is consistent with the control efficiency allotted to it in previous permit #012000-006.

Emissions from EP-2 Baghouse Operations

- PM emissions contain only filterable emissions, and the PM, NOx, and CO emission factors were derived from a stack test in September 2000.
    - PM, NOx, and CO emission factors for the baghouse operations during times of HMA production will also be changed to the emission factors derived from the September 2000 stack tests as of this permit.
- PM_{10}, $PM_{2.5}$, Sox, VOC, and HAP emissions were derived from AP-42 Section 11.1-1, 11.1-2, 11.1-5, 11.1-6, and 11.1-9 “Hot Mix Asphalt Plants” (April 2004)

Emissions from EP-5 Aggregate Loadout

- PM, PM_{10}, and $PM_{2.5}$ emission factors were derived from AP-42 Section 13.2.4 “Aggregate Handling and Storage Piles” drop equation. (November 2006)

Emissions from EP-6 and EP-8 Storage Piles

- Load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4. (November 2006)
- The moisture content of the aggregate is 0.7% by weight for EP-8 and 0.1% for EP-6. EP-6 was conservatively given a lower moisture content to account for the drying process.
- 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."

Emissions from Haul Road EP-7 & Stockpile Vehicular Activity

- Calculated using the predictive equation from AP-42 Section 13.2.1 "Paved Roads," (November 2006)

The HAP, SOx, VOC, PM, PM_{10}, and $PM_{2.5}$ emissions from EP-2 are calculated using emission factors from AP-42 Section 11 “Hot Mix Asphalt Plants” for this project, despite the project being a trap rock drying process. These emission factors are used instead of the ones from Section 1.4 “Natural Gas Combustion,” in order to be conservative and account for any residue left over in the mixer from when it is used to produce hot mix asphalt.

Table 3 provides an emissions summary for this project. Existing potential emissions are not available, because the previous permit for this facility, permit #012000-006, did not determine the facility’s updated total potential emissions. However, the maximum possible existing potential emissions for PM (the sum of the existing potential emission from permit #012000-006 and the potential project emissions of permit #012000-006), when added to the project conditioned potential emissions of PM for this project, still totals to a value below major source levels for PM. Existing actual emissions were taken from the installation’s 2019 EIQ. Potential emissions of the application represent the potential of the new emission units and repurposed equipment, assuming continuous operation (8760 hours per year).

Table 3: Emissions Summary (tpy)

Pollutant	Regulatory *De Minimis* Levels	Existing Potential Emissions	Existing Actual Emissions (2019 EIQ)	Potential Emissions of the Project	Project Conditioned Potential
PM	25.0	Minor	N/D	2,081.19	42.57
PM_{10}	15.0	Minor	2.00	733.27	< 15.0
$PM_{2.5}$	10.0	Minor	0.25	144.17	3.02
SOx	40.0	Minor	0.36	4.03	0.08
NOx	40.0	Minor	1.96	20.85	0.43
VOC	40.0	Minor	0.64	7.18	0.15
CO	100.0	100	31.35	271.21	5.55
HAPs	10.0/25.0	Minor	N/A	6.66	0.14

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

The 100.0 ton CO emission limit is being superseded from permit #012000-006 and re-established in order to include the new rock drying process emissions.

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 PM_{10} are conditioned below de minimis levels. Potential emissions of PM are above de minimis levels, but below major source levels. All other criteria pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Fred Weber, Inc. - O'Fallon Asphalt 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Operating Permits*, 10 CSR 10-6.065
- *Start-Up, Shutdown, and Malfunction Conditions,* 10 CSR 10-6.050
- *Submission of Emission Data, Emission Fees and Process Information,* 10 CSR 10-6.110
    - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- *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

- *New Source Performance Regulations*, 10 CSR 10-6.070 (NSPS)

    - Standards of Performance for Hot Mix Asphalt Facilities, 40 CFR Part 60, Subpart I Applies to EP-2 only when the equipment is being used to produce hot mix asphalt. During times when the equipment of EP-2 is being used to dry trap rock, this standard does not apply.

- No *MACT Regulations*, 10 CSR 10-6.075 apply to the permitted equipment

- No *Emission Standards for Hazardous Air Pollutants,* 10 CSR 10-6.080 (NESHAPs) apply to the permitted equipment

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 April 1, 2020, received April 1, 2020, designating Fred Weber, Inc. as the owner and operator of the installation.

Attachment A: Monthly Installation-Wide Carbon Monoxide Emission Tracking Record

Fred Weber, Inc. – O'Fallon Asphalt
St. Charles County, U.S. Survey 1780, T47N, R2E
Project Number: 2020-04-001
Installation ID: 183-0004
Permit Number: 062020-005

This sheet covers the period from _____ to _____.
(month, year) (month, year)

Emission Point	Description	Throughput	Unit	Emission Factor (lb/unit)	CO Emissions (tons)
EP-2	Hot Elevator Screens, Bins, & Mixer including Rotary Dryer - HMA		Tons of asphalt produced	0.3096[a]	
EP-2	Hot Elevator Screens, Bins, & Mixer including Rotary Dryer – Trap Rock		Tons of trap rock dried	0.3096[a]	
EP-3	AC Heater		MMCF	84[b]	
Monthly CO Emissions (tons)[c]					
Startup, Shutdown, and Malfunction CO Emissions (tons)[d]					
12-Month Rolling Total CO Emissions (tons)[e]					

[a]Trap Rock and Hot Mix Asphalt Emission Factor based off of September 2000 stack tests
[b] AC Heater Emission factor obtained from AP-42 Table 1.4-1
[c]Monthly Carbon Monoxide Emissions are equal to the sum of CO Emissions from each Emission Point and process.
[d]Write the startup, shutdown and malfunction emissions (SSM) in tons reported to the Air Pollution Control Program's Enforcement/Compliance Section.
[e]Add the Monthly Carbon Monoxide Emissions (tons) to the sum of the monthly carbon monoxide emissions from the previous eleven months. A total of less than 100 tons of PM_{10} per 12 consecutive months for the entire installation is necessary for compliance

Attachment B – PM_{10} Compliance Worksheet for Trap Rock Drying and Bagging Operation

Fred Weber, Inc. - O'Fallon Asphalt
St. Charles County, 1440 Terra Lane West, O'Fallon, MO 63366
Project Number: 2020-04-001
Installation ID Number: 183-0004
Permit Number: 062020-005

This sheet covers the period from ____________________ to ____________________ (Copy as needed)
(Month, Day Year)(Month, Day Year)

Month	Production (tons)	Emission Factor (lb/ton)	Monthly Emissions[1] (lbs)	SSM Emissions[2] (tons)	Monthly Emissions[3] (tons)	12-Month Total Emissions[4] (tons)
Example	*10,000*	*0.8371*	*8,371*	*0.0*	*4.2*	*4.2 + 11 previous months at this site*
		0.8371				
		0.8371				
		0.8371				
		0.8371				
		0.8371				
		0.8371				
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		0.8371				
		0.8371				

[1] Multiply the monthly production by the emission factor.
[2] Write the startup, shutdown and malfunction emissions (SSM) in tons reported to the Air Pollution Control Program's Enforcement/Compliance Section.
[3] Divide the monthly emissions (lbs) by 2000 and add the SSM Emissions.
[4] Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months. A total of less than <u>15</u> tons of PM_{10} per 12 consecutive months is necessary for compliance.

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 portable 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[1] 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 and volume of water application or the amount of precipitation that day. The operators shall also record the rational 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.

[1] For purposes of this document, Control of Fugitive Emissions means to control particulate matter that is not collected by a capture system and visible emissions to the extent necessary to prevent violations of the air pollution law or regulation. (Note: control of visible emission is not the only factor to consider in protection of ambient air quality.)

Attachment AA: Best Management Practices

APPENDIX A

Abbreviations and Acronyms

% ..... percent
ºF ..... degrees Fahrenheit
acfm ..... actual cubic feet per minute
BACT ..... Best Available Control Technology
BMPs ..... Best Management Practices
Btu ..... British thermal unit
CAM ..... Compliance Assurance Monitoring
CAS ..... Chemical Abstracts Service
CEMS ..... Continuous Emission Monitor System
CFR ..... Code of Federal Regulations
CO ..... carbon monoxide
CO_2 ..... carbon dioxide
CO_2e ..... carbon dioxide equivalent
COMS ..... Continuous Opacity Monitoring System
CSR ..... Code of State Regulations
dscf ..... dry standard cubic feet
EIQ ..... Emission Inventory Questionnaire
EP ..... Emission Point
EPA ..... Environmental Protection Agency
EU ..... Emission Unit
fps ..... feet per second
ft ..... feet
GACT ..... Generally Available Control Technology
GHG ..... Greenhouse Gas
gpm ..... gallons per minute
gr ..... grains
GWP ..... Global Warming Potential
HAP ..... Hazardous Air Pollutant
hr ..... hour
hp ..... horsepower
lb ..... pound
lbs/hr ..... pounds per hour
MACT ..... Maximum Achievable Control Technology
µg/m^3 ..... micrograms per cubic meter
m/s ..... meters per second
Mgal ..... 1,000 gallons
MW ..... megawatt
MHDR ..... maximum hourly design rate
MMBtu ..... Million British thermal units
MMCF ..... million cubic feet
MSDS ..... Material Safety Data Sheet
NAAQS ..... National Ambient Air Quality Standards
NESHAPs National Emissions Standards for Hazardous Air Pollutants
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standards
NSR ..... New Source Review
PM ..... particulate matter
$PM_{2.5}$ ..... particulate matter less than 2.5 microns in aerodynamic diameter
PM_{10} ..... particulate matter less than 10 microns in aerodynamic diameter
ppm ..... parts per million
PSD ..... Prevention of Significant Deterioration
PTE ..... potential to emit
RACT ..... Reasonable Available Control Technology
RAL ..... Risk Assessment Level
SCC ..... Source Classification Code
scfm ..... standard cubic feet per minute
SDS ..... Safety Data Sheet
SIC ..... Standard Industrial Classification
SIP ..... State Implementation Plan
SMAL ..... Screening Model Action Levels
SO_x ..... sulfur oxides
SO_2 ..... sulfur dioxide
SSM ..... Startup, Shutdown & Malfunction
tph ..... tons per hour
tpy ..... tons per year
VMT ..... vehicle miles traveled
VOC ..... Volatile Organic Compound

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Air Pollution Control Program
Table of Hazardous Air Pollutants and Screening Model Action Levels

Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM	Chemical	CAS #	SMAL tons/yr	Group ID	VOC	PM
ACETALDEHYDE	75-07-0	9		Y	N	CHLOROMETHYL METHYL ETHER	107-30-2	0.1		Y	N
ACETAMIDE	60-35-5	1		Y	N	CHLOROPRENE	126-99-8	1		Y	N
ACETONITRILE	75-05-8	4		Y	N	CHROMIUM (VI) COMPOUNDS		0.002	L	N	Y
ACETOPHENONE	98-86-2	1		Y	N	CHROMIUM COMPOUNDS		5	L	N	Y
ACETYLAMINOFLUORINE, [2-]	53-96-3	0.005	V	Y	Y	CHRYSENE	218-01-9	0.01	V	Y	N
ACROLEIN	107-02-8	0.04		Y	N	COBALT COMPOUNDS		0.1	M	N	Y
ACRYLAMIDE	79-06-1	0.02		Y	N	COKE OVEN EMMISIONS	8007-45-2	0.03	N	Y	N
ACRYLIC ACID	79-10-7	0.6		Y	N	CRESOL, [META-]	108-39-4	1	B	Y	N
ACRYLONITRILE	107-13-1	0.3		Y	N	CRESOL, [ORTHO-]	95-48-7	1	B	Y	N
ALLYL CHLORIDE	107-05-1	1		Y	N	CRESOL, [PARA-]	106-44-5	1	B	Y	N
AMINOBIPHENYL, [4-]	92-67-1	1	V	Y	N	CRESOLS (MIXED ISOMERS)	1319-77-3	1	B	Y	N
ANILINE	62-53-3	1		Y	N	CUMENE	98-82-8	10		Y	N
ANISIDINE, [ORTHO-]	90-04-0	1		Y	N	CYANIDE COMPOUNDS		0.1	O	Y	N
ANTHRACENE	120-12-7	0.01	V	Y	N	DDE	72-55-9	0.01	V	Y	Y
ANTIMONY COMPOUNDS		5	H	N	Y	DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)	117-81-7	5		Y	N
ANTIMONY PENTAFLUORIDE	7783-70-2	0.1	H	N	Y	DIAMINOTOLUENE, [2,4-]	95-80-7	0.02		Y	N
ANTIMONY POTASSIUM TARTRATE	28300-74-5	1	H	N	Y	DIAZOMETHANE	334-88-3	1		Y	N
ANTIMONY TRIOXIDE	1309-64-4	1	H	N	Y	DIBENZ(A,H)ANTHRACENE	53-70-3	0.01	V	Y	N
ANTIMONY TRISULFIDE	1345-04-6	0.1	H	N	Y	DIOXINS/FURANS		6E-07	D,V	Y	N
ARSENIC COMPOUNDS		0.005	I	N	Y	DIBENZOFURAN	132-64-9	5	V	Y	N
ASBESTOS	1332-21-4	0	A	N	Y	DIBROMO-3-CHLOROPROPANE, [1,2-]	96-12-8	0.01		Y	N
BENZ(A)ANTHRACENE	56-55-3	0.01	V	Y	N	DIBROMOETHANE, [1,2-]	106-93-4	0.1		Y	N
BENZENE	71-43-2	2		Y	N	DIBUTYL PHTHALATE	84-74-2	10		Y	Y
BENZIDINE	92-87-5	0.0003	V	Y	N	DICHLOROBENZENE, [1,4-]	106-46-7	3		Y	N
BENZO(A)PYRENE	50-32-8	0.01	V	Y	N	DICHLOROBENZIDENE, [3,3-]	91-94-1	0.2	V	Y	Y
BENZO(B)FLUORANTHENE	205-99-2	0.01	V	Y	N	DICHLOROETHANE, [1,1-]	75-34-3	1		Y	N
BENZO(K)FLUORANTHENE	207-08-9	0.01	V	Y	N	DICHLOROETHANE, [1,2-]	107-06-2	0.8		Y	N
BENZOTRICHLORIDE	98-07-7	0.006		Y	N	DICHLOROETHYLENE, [1,1-]	75-35-4	0.4		Y	N
BENZYL CHLORIDE	100-44-7	0.1		Y	N	DICHLOROMETHANE	75-09-2	10		N	N
BERYLLIUM COMPOUNDS		0.008	J	N	Y	DICHLOROPHENOXY ACETIC ACID, [2,4-]	94-75-7	10	C	Y	Y
BERYLLIUM SALTS		2E-05	J	N	Y	DICHLOROPROPANE, [1,2-]	78-87-5	1		Y	N
BIPHENYL, [1,1-]	92-52-4	10	V	Y	N	DICHLOROPROPENE, [1,3-]	542-75-6	1		Y	N
BIS(CHLOROETHYL)ETHER	111-44-4	0.06		Y	N	DICHLORVOS	62-73-7	0.2		Y	N
BIS(CHLOROMETHYL)ETHER	542-88-1	0.0003		Y	N	DIETHANOLAMINE	111-42-2	5		Y	N
BROMOFORM	75-25-2	10		Y	N	DIETHYL SULFATE	64-67-5	1		Y	N
BROMOMETHANE	74-83-9	10		Y	N	DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	5	P	Y	N
BUTADIENE, [1,3-]	106-99-0	0.07		Y	N	DIMETHOXYBENZIDINE, [3,3-]	119-90-4	0.1	V	Y	Y
BUTOXYETHANOL ACETATE, [2-]	112-07-2	5	P	Y	N	DIMETHYL BENZIDINE, [3,3-]	119-93-7	0.008	V	Y	Y
BUTYLENE OXIDE, [1,2-]	106-88-7	1		Y	N	DIMETHYL CARBAMOYL CHLORIDE	79-44-7	0.02		Y	N
CADMIUM COMPOUNDS		0.01	K	N	Y	DIMETHYL FORMAMIDE	68-12-2	1		Y	N
CALCIUM CYANAMIDE	156-62-7	10		Y	Y	DIMETHYL HYDRAZINE, [1,1-]	57-14-7	0.008		Y	N
CAPROLACTAM (Delisted)	105-60-2					DIMETHYL PHTHALATE	131-11-3	10		Y	N
CAPTAN	133-06-2	10		Y	Y	DIMETHYL SULFATE	77-78-1	0.1		Y	N
CARBARYL	63-25-2	10	V	Y	Y	DIMETHYLAMINOAZOBENZENE, [4-]	60-11-7	1		Y	N
CARBON DISULFIDE	75-15-0	1		Y	N	DIMETHYLANILINE, [N-N-]	121-69-7	1		Y	N
CARBON TETRACHLORIDE	56-23-5	1		Y	N	DINITRO-O-CRESOL, [4,6-] (Note 6)	534-52-1	0.1	E	Y	Y
CARBONYL SULFIDE	463-58-1	5		Y	N	DINITROPHENOL, [2,4-]	51-28-5	1		Y	N
CATECHOL	120-80-9	5		Y	N	DINITROTOLUENE, [2,4-]	121-14-2	0.02		Y	N
CHLORAMBEN	133-90-4	1		Y	Y	DIOXANE, [1,4-]	123-91-1	6		Y	N
CHLORDANE	57-74-9	0.01		Y	Y	DIPHENYLHYDRAZINE, [1,2-]	122-66-7	0.09	V	Y	Y
CHLORINE	7782-50-5	0.1		N	N	DIPHENYLMETHANE DIISOCYANATE, [4,4-]	101-68-8	0.1	V	Y	N
CHLOROACETIC ACID	79-11-8	0.1		Y	N	EPICHLOROHYDRIN	106-89-8	2		Y	N
CHLOROACETOPHENONE, [2-]	532-27-4	0.06		Y	N	ETHOXYETHANOL, [2-]	110-80-5	10	P	Y	N
CHLOROBENZENE	108-90-7	10		Y	N	ETHOXYETHYL ACETATE, [2-]	111-15-9	5	P	Y	N
CHLOROBENZILATE	510-15-6	0.4	V	Y	Y	ETHYL ACRYLATE	140-88-5	1		Y	N
CHLOROFORM	67-66-3	0.9		Y	N	ETHYL BENZENE	100-41-4	10		Y	N

ETHYL CHLORIDE	75-00-3	10		Y	N	NITROBENZENE	98-95-3	1		Y	N
ETHYLENE GLYCOL	107-21-1	10		Y	N	NITROBIPHENYL, [4-]	92-93-3	1	V	Y	N
ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted)	111-76-2					NITROPHENOL, [4-]	100-02-7	5		Y	N
ETHYLENE GLYCOL MONOHEXYL ETHER	112-25-4	5	P	Y	N	NITROPROPANE, [2-]	79-46-9	1		Y	N
ETHYLENE IMINE [AZIRIDINE]	151-56-4	0.003		Y	N	NITROSODIMETHYLAMINE, [N-]	62-75-9	0.001		Y	N
ETHYLENE OXIDE	75-21-8	0.1		Y	N	NITROSOMORPHOLINE, [N-]	59-89-2	1		Y	N
ETHYLENE THIOUREA	96-45-7	0.6		Y	Y	NITROSO-N-METHYLUREA, [N-]	684-93-5	0.0002		Y	N
FORMALDEHYDE	50-00-0	2		Y	N	OCTACHLORONAPTHALENE	2234-13-1	0.01	V	Y	N
GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)		5	P	Y	N	PARATHION	56-38-2	0.1		Y	Y
GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)		5	P	Y	N	PCB [POLYCHLORINATED BIPHENYLS]	1336-36-3	0.009	X	Y	Y
HEPTACHLOR	76-44-8	0.02		Y	N	PENTACHLORONITROBENZENE	82-68-8	0.3		Y	N
HEXACHLOROBENZENE	118-74-1	0.01		Y	N	PENTACHLOROPHENOL	87-86-5	0.7		Y	N
HEXACHLOROBUTADIENE	87-68-3	0.9		Y	N	PHENOL	108-95-2	0.1		Y	N
HEXACHLOROCYCLOHEXANE, [ALPHA-]	319-84-6	0.01	F	Y	N	PHENYLENEDIAMINE, [PARA-]	106-50-3	10		Y	N
HEXACHLOROCYCLOHEXANE, [BETA-]	319-85-7	0.01	F	Y	N	PHOSGENE	75-44-5	0.1		Y	N
HEXACHLOROCYCLOHEXANE, [DELTA-]	319-86-8	0.01	F	Y	N	PHOSPHINE	7803-51-2	5		N	N
HEXACHLOROCYCLOHEXANE, [TECHNICAL]	608-73-1	0.01	F	Y	N	PHOSPHOROUS (YELLOW OR WHITE)	7723-14-0	0.1		N	N
HEXACHLOROCYCLOPENTADIENE	77-47-4	0.1		Y	N	PHTHALIC ANHYDRIDE	85-44-9	5		Y	N
HEXACHLOROETHANE	67-72-1	5		Y	N	POLYCYLIC ORGANIC MATTER		0.01	V	Y	N
HEXAMETHYLENE,-1,6-DIISOCYANATE	822-06-0	0.02		Y	N	PROPANE SULTONE, [1,3-]	1120-71-4	0.03		Y	Y
HEXAMETHYLPHOSPHORAMIDE	680-31-9	0.01		Y	N	PROPIOLACTONE, [BETA-]	57-57-8	0.1		Y	N
HEXANE, [N-]	110-54-3	10		Y	N	PROPIONALDEHYDE	123-38-6	5		Y	N
HYDRAZINE	302-01-2	0.004		N	N	PROPOXUR [BAYGON]	114-26-1	10		Y	Y
HYDROGEN CHLORIDE	7647-01-0	10		N	N	PROPYLENE OXIDE	75-56-9	5		Y	N
HYDROGEN FLUORIDE	7664-39-3	0.1		N	N	PROPYLENEIMINE, [1,2-]	75-55-8	0.003		Y	N
HYDROQUINONE	123-31-9	1		Y	N	QUINOLINE	91-22-5	0.006		Y	N
INDENO(1,2,3CD)PYRENE	193-39-5	0.01	V	Y	N	QUINONE	106-51-4	5		Y	N
ISOPHORONE	78-59-1	10		Y	N	RADIONUCLIDES		Note 1	Y	N	Y
LEAD COMPOUNDS		0.01	Q	N	Y	SELENIUM COMPOUNDS		0.1	W	N	Y
LINDANE [GAMMA-HEXACHLOROCYCLOHEXANE]	58-89-9	0.01	F	Y	N	STYRENE	100-42-5	1		Y	N
MALEIC ANHYDRIDE	108-31-6	1		Y	N	STYRENE OXIDE	96-09-3	1		Y	N
MANGANESE COMPOUNDS		0.8	R	N	Y	TETRACHLORODIBENZO-P-DIOXIN,[2,3,7,8]	1746-01-6	6E-07	D,V	Y	Y
MERCURY COMPOUNDS		0.01	S	N	N	TETRACHLOROETHANE, [1,1,2,2-]	79-34-5	0.3		Y	N
METHANOL	67-56-1	10		Y	N	TETRACHLOROETHYLENE	127-18-4	10		N	N
METHOXYCHLOR	72-43-5	10	V	Y	Y	TITANIUM TETRACHLORIDE	7550-45-0	0.1		N	N
METHOXYETHANOL, [2-]	109-86-4	10	P	Y	N	TOLUENE	108-88-3	10		Y	N
METHYL CHLORIDE	74-87-3	10		Y	N	TOLUENE DIISOCYANATE, [2,4-]	584-84-9	0.1		Y	N
METHYL ETHYL KETONE (Delisted)	78-93-3					TOLUIDINE, [ORTHO-]	95-53-4	4		Y	N
METHYL HYDRAZINE	60-34-4	0.06		Y	N	TOXAPHENE	8001-35-2	0.01		Y	N
METHYL IODIDE	74-88-4	1		Y	N	TRICHLOROBENZENE, [1,2,4-]	120-82-1	10		Y	N
METHYL ISOBUTYL KETONE	108-10-1	10		Y	N	TRICHLOROETHANE, [1,1,1-]	71-55-6	10		N	N
METHYL ISOCYANATE	624-83-9	0.1		Y	N	TRICHLOROETHANE, [1,1,2-]	79-00-5	1		Y	N
METHYL METHACRYLATE	80-62-6	10		Y	N	TRICHLOROETHYLENE	79-01-6	10		Y	N
METHYL TERT-BUTYL ETHER	1634-04-4	10		Y	N	TRICHLOROPHENOL, [2,4,5-]	95-95-4	1		Y	N
METHYLCYCLCOPENTADIENYL MANGANESE	12108-13-3	0.1	R	N	Y	TRICHLOROPHENOL, [2,4,6-]	88-06-2	6		Y	N
METHYLENE BIS(2-CHLOROANILINE), [4,4-]	101-14-4	0.2	V	Y	Y	TRIETHYLAMINE	121-44-8	10		Y	N
METHYLENEDIANILINE, [4,4-]	101-77-9	1	V	Y	N	TRIFLURALIN	1582-09-8	9		Y	Y
METHYLNAPHTHALENE, [2-]	91-57-6	0.01	V	Y	N	TRIMETHYLPENTANE, [2,2,4-]	540-84-1	5		Y	N
MINERAL FIBERS		0	T	N	Y	URETHANE [ETHYL CARBAMATE]	51-79-6	0.8		Y	N
NAPHTHALENE	91-20-3	10	V	Y	N	VINYL ACETATE	108-05-4	1		Y	N
NAPHTHYLAMINE, [ALPHA-]	134-32-7	0.01	V	Y	N	VINYL BROMIDE	593-60-2	0.6		Y	N
NAPHTHYLAMINE, [BETA-]	91-59-8	0.01	V	Y	N	VINYL CHLORIDE	75-01-4	0.2		Y	N
NICKEL CARBONYL	13463-39-3	0.1	U	N	Y	XYLENE, [META-]	108-38-3	10	G	Y	N
NICKEL COMPOUNDS		1	U	N	Y	XYLENES (MIXED ISOMERS)	1330-20-7	10	G	Y	N
NICKEL REFINERY DUST		0.08	U	N	Y						
NICKEL SUBSULFIDE	12035-72-2	0.04	U	N	Y						

Air Pollution Control Program
Table of Hazardous Air Pollutants and Screening Model Action Levels

Legend	
Group ID	
A	Asbestos
B	Cresols/Cresylic Acid (isomers and mixtures)
C	2,4 - D, Salts and Esters
D	Dibenzofurans, Dibenzodioxins
E	4, 6 Dinitro-o-cresol, and Salts
F	Lindane (all isomers)
G	Xylenes (all isomers and mixtures)
H	Antimony Compounds
I	Arsenic Compounds
J	Beryllium Compounds
K	Cadmium Compounds
L	Chromium Compounds
M	Cobalt Compounds
N	Coke Oven Emissions
O	Cyanide Compounds
P	Glycol Ethers
Q	Lead Compounds (except elemental Lead)
R	Manganese Compounds
S	Mercury Compounds
T	Fine Mineral Fibers
U	Nickel Compounds
V	Polycyclic Organic Matter
W	Selenium Compounds
X	Polychlorinated Biphenyls (Aroclors)
Y	Radionuclides
Notes	The SMAL for radionuclides is defined as the effective dose equivalent to 0.3 millirems per year for 7 years exposure associated with a cancer risk of 1 in 1 million

Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

June 4, 2020

Lina Klein
Environmental Director
Fred Weber, Inc. - O'Fallon Asphalt
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: New Source Review Permit - Project Number: 2020-04-001

Dear Lina Klein:

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 and your amended operating permit are 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.

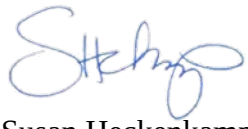
This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request 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 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.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Dakota Fox, at the Department of Natural Resources' 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:dfa

Enclosures

c: St. Louis Regional Office
PAMS File: 2020-04-001

Permit Number: 062020-005