

STATE OF MISSOURI



DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

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

Permit Number: **07 2 0 1 4 - 0 0 6** Project Number: 2014-02-054
Installation Number: 099-0175

Parent Company: Riverview Commerce Park
Parent Company Address: 2320 Creve Coeur Mill Road, Maryland Heights, MO 63043
Installation Name: Riverview Commerce Park
Installation Address: 1 School Street, Herculaneum, MO 63048
Location Information: Jefferson County, S20, T41N, R6E

Application for Authority to Construct was made for: a loading facility for sand, copper concentrate, and zinc concentrate. The facility has three distinct operations: Dock 1 barge loading, railcar loading, and Dock 2 barge loading. The Dock 1 barge loading and railcar loading parts of this air contaminant source were constructed prior to receipt of a permit from the Missouri Department of Natural Resources. 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.

JUL 15 2014

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "Kyrina L. Moore".

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES

STANDARD CONDITIONS:

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

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

You must notify the Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

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

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

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

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

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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."

Riverview Commerce Park
Jefferson County, S20, T41N, R6E

1. Best Management Practices (BMPs) Requirement
Riverview Commerce Park 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. Riverview Commerce Park shall emit less than 10.0 tons of PM_{2.5} in any consecutive 12-month period from the entire installation as shown in Table 1.

Table 1: Emission Points

ID	Description
Dock 1	
EP1	Truck unloading to Masaba C1 and auxiliary conveyors
EP2	Masaba C1 conveyor drop to C2 conveyor
EP3	C2 conveyor drop to 20-ton surge hopper
EP4	20-ton surge hopper drop to C3 conveyor
EP5	C3 conveyor drop to C4 conveyor
EP6	C4 conveyor drop to C5 conveyor
EP7	No longer exists
EP8	C5 conveyor drop to barge
EP9	Auxiliary conveyor drop to Masaba C1 conveyor
EP10	Dock 1 haul road
Rail	
EP11	Truck unloading to Wilson conveyor
EP12	Wilson conveyor drop to barge
EP13	Rail haul road
EP14	Stockpile
Dock 2	
EP15	Truck unloading to second Masaba conveyor
EP16	Second Masaba conveyor drop to barge
EP17	Dock 2 haul road

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SPECIAL CONDITIONS:

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

- B. Riverview Commerce Park 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. Ambient Air Impact Limitation
- A. Riverview Commerce Park shall not cause an exceedance of the NAAQS for PM₁₀ of 150.0 µg/m³ 24-hour average in ambient air.
 - B. Riverview Commerce Park shall demonstrate compliance with Special Condition 3.A using Attachment B or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.
4. Moisture Content Testing Requirement
- A. Riverview Commerce Park shall verify that the moisture content of the zinc and copper concentrate is greater than 4.0 percent by weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
 - C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from zinc or copper concentrate that has been processed by the plant or from each source of concentrate (e.g. quarry).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Riverview Commerce Park main office within 30 days of completion of the required test.
 - F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 4.A, another test may be performed within 15 days of the noncompliant test. If the results of that test also exceed the limit, Riverview Commerce Park shall either:
 - 1) Apply for a new permit to account for the revised information, or
 - 2) Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices

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SPECIAL CONDITIONS:

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

shall be installed and operational within 40 days of the second noncompliant test.

- G. In lieu of testing, Riverview Commerce Park may obtain test results that demonstrate compliance with the moisture content in Special Condition 4.A from the supplier of the concentrate.

5. Control Device Requirement-Baghouse

- A. Riverview Commerce Park shall control particulate emissions from the following equipment at Dock 1 as specified in the permit application by enclosing and venting each particulate emission source listed below to a baghouse. The enclosures of the emissions units shall be constructed and maintained such that no visible emissions are allowed to occur from these sources except through the gases exiting from the baghouse.
- 1) Masaba conveyor C1 drop to conveyor C2 (EP2)
 - 2) Conveyor C2 drop to 20-ton surge hopper (EP3)
 - 3) 20-ton surge hopper drop to conveyor C3 (EP4)
 - 4) Conveyor C3 drop to conveyor C4 (EP5)
 - 5) Conveyor C4 drop to conveyor C5 (EP6)
- B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
- C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
- D. Riverview Commerce Park shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
- E. Riverview Commerce Park shall maintain a copy of the baghouse manufacturer's performance warranty on site.
- F. Riverview Commerce Park shall maintain an operating and maintenance log for the baghouses which shall include the following:

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SPECIAL CONDITIONS:

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

- 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. Riverview Commerce Park 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. Riverview Commerce Park shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

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

Project Number: 2014-02-054
Installation ID Number: 099-0175
Permit Number:

Riverview Commerce Park
1 School Street
Herculaneum, MO 63048

Complete: April 3, 2014

Parent Company:
Riverview Commerce Park
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

Jefferson County, S20, T41N, R6E

REVIEW SUMMARY

- Riverview Commerce Park has applied for authority to construct a loading facility for sand, copper concentrate, and zinc concentrate. The facility has three distinct operations: Dock 1 barge loading, railcar loading, and Dock 2 barge loading.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation. 40 CFR 60 Subpart LL, *Standards of Performance for Metallic Mineral Processing Plants* does not apply because this installation does not produce metallic mineral concentrate; it only loads it. 40 CFR 60 Subpart OOO, *Standards of Performance for Nonmetallic Mineral Processing Plants* does not apply because there are no crushers or grinders at this installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Best Management Practices on the haul roads and vehicle activity areas and fabric filters on five of the Dock 1 conveyors are being used to control the PM, PM₁₀, and PM_{2.5} emissions from the equipment in this permit.
- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. PM emissions are above de minimis levels, but below major source levels.
- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone standard and an attainment area for all other criteria air pollutants except lead and sulfur dioxide. Part of Jefferson County is a nonattainment area for lead and

sulfur dioxide. The installation is located in both those nonattainment areas. Jefferson County was also a nonattainment area for the 1997 PM_{2.5} standard, but is an attainment area for the 2006 PM_{2.5} standard.

- 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.
- Ambient air quality modeling was performed to determine the ambient impact of PM₁₀.
- Emissions testing is not required for the equipment.
- No Operating Permit is required for this installation. No NSPS, NESHAP or MACT regulations apply to it. All air pollutants from the installation except PM are directly or indirectly conditioned below de minimis. Although conditioned PM emissions are at minor source levels, PM emissions are not used for operating permit applicability.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Riverview Commerce Park is a barge and rail-loading facility located in Herculaneum, Missouri. Operations at the site can be broken down into 3 distinct parts:

- Dock 1 barge loading of sand,
- Railcar loading of sand, and
- Dock 2 barge loading of sand, copper concentrate, or zinc concentrate.

The Dock 1 barge loading and railcar loading parts of this air contaminant source were constructed prior to receipt of a permit from the Missouri Department of Natural Resources. The installation realized the oversight when calculating potential emissions for Dock 2, which has not yet been constructed, and submitted a permit application for all 3 parts of the operation. No NOEE/NOV's have been issued to the installation.

PROJECT DESCRIPTION

The facility consists of 3 separate operations. Each operation starts when sand, copper concentrate, or zinc concentrate is delivered to the site by truck. All equipment at the facility is powered from the grid.

The Dock 1 barge loading part of the facility conveys sand to barge via a series of conveyors. Trucks unload sand to either Masaba conveyor C1 at an MHDR of 200 tons per hour (tph), or to the auxiliary conveyor at an MHDR of 100 tph, or to both at once. The auxiliary conveyor feeds sand into Masaba conveyor C1. From there, the sand is transferred to conveyor C2, to a 20-ton surge hopper, to conveyor C3, to conveyor C4, to conveyor C5, then onto barge. Emissions from the point where Masaba conveyor C1

drops sand onto conveyor C2 to the point where conveyor C4 drops sand onto conveyor C5 are controlled by a completely enclosed baghouse with 100% capture efficiency. The MHDR for this part of the process is 300 tph.

The railcar loading part of the facility either loads sand directly to a Wilson conveyor which discharges into a railcar, or loads sand onto a surge stockpile and transfers it from there to the Wilson conveyor by loader. The MHDR for this part of the process is 100 tph.

The Dock 2 barge loading part of the facility loads sand, copper concentrate, or zinc concentrate to a second Masaba conveyor, which discharges onto a barge. The MHDR for this part of the process is 300 tph.

EMISSIONS/CONTROLS EVALUATION

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

Values of 4.8% for silt content of the unpaved haul roads (plant roads) and 7.1% for silt content of the vehicular activity areas (material storage area) were taken from AP-42 Table 13.2.2-1. Values of 2.6% for silt content and 7.4% for moisture content for the sand were taken from AP-42 Table 13.2.4-1. PM, PM₁₀, and PM_{2.5} emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42, Section 13.2.2 "Unpaved Roads," November 2006. A 90% control efficiency for PM and PM₁₀ and a 40% control efficiency for PM_{2.5} are applied to the emission calculations for the use of BMPs.

PM, PM₁₀, and PM_{2.5} emissions from the facility for sand were calculated using emission factors from AP-42, Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004. Controlled emission factors were used for the parts of the facility controlled with a baghouse, and uncontrolled emission factors were used for the rest of the facility.

PM, PM₁₀, and PM_{2.5} emissions from the facility for copper or zinc concentrate were calculated using emission factors from AP-42, Section 11.24. "Metallic Minerals Processing," August 1982. Since that section does not provide emission factors for PM_{2.5}, its emission factor was conservatively estimated to be the same as for PM₁₀. Emission factors for "Material handling and transfer – all minerals except bauxite" were used. The installation will have moisture content of the concentrate tested to ensure that it is greater than 4%, so emission factors based on high moisture ore were used.

PM, PM₁₀, and PM_{2.5} emissions from 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. PM, PM₁₀, and PM_{2.5} 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."

The following table provides an emissions summary for this project. Since this is a new facility, there are no existing actual emissions. 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 limit on PM_{2.5} to avoid dispersion modeling requirements found in 10 CSR 10-6.060 Section (6). This indirectly limits PM₁₀ below de minimis.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	^a Potential Emissions of the Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	^c Conditioned Emissions of the Application
PM	25.0	27.32	N/A	63.20	N/A
PM ₁₀	15.0	11.27	N/A	20.76	<15.0
PM _{2.5}	10.0	10.66	N/A	16.04	<10.0
SOx	40.0	0.00	N/A	0.00	0.00
NOx	40.0	0.00	N/A	0.00	0.00
VOC	40.0	0.00	N/A	0.00	0.00
CO	100.0	0.00	N/A	0.00	0.00
GHG (CO ₂ e)	100,000	0.00	N/A	0.00	0.00
GHG (mass)	250.0	0.00	N/A	0.00	0.00
HAPs	10.0/25.0	0.00	N/A	0.00	0.00

N/A = Not Applicable

^aExcludes site-specific haul road and storage pile emissions.

^bIncludes site specific haul road and storage pile emissions.

^cAccounts for a voluntary limit of 10.0 tpy of PM_{2.5}.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM_{2.5} are limited to de minimis levels. This indirectly limits PM₁₀ below de minimis. PM emissions are at minor source levels.

APPLICABLE REQUIREMENTS

Riverview Commerce Park 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
- *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 applies to this facility, but calculations show that it is always in compliance.

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was performed to determine the ambient impact of PM₁₀. Table 3 summarizes the ambient air quality impact analysis. The modeled impact is the impact of each pollutant when all three parts of the installation are operating continuously.

Table 3: Ambient Air Quality Impact Analysis

Pollutant	¹ NAAQS (µg/m ³)	Averaging Time	² Maximum Modeled Impact (µg/m ³)	Limited Impact (µg/m ³)	³ Background (µg/m ³)
PM ₁₀	150.0	24-hour	277.80	130.00	20.00

¹National Ambient Air Quality Standards (NAAQS)

²Modeled impact at maximum capacity with controls

³Background of 20 µg/m³ for haul roads and vehicular activity with BMPs

STAFF RECOMMENDATION

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

Cheryl Steffan
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated February 11, 2014, received February 14, 2014, designating Riverview Commerce Park as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Attachment A: PM_{2.5} Compliance Worksheet

Riverview Commerce Park 099-0175

Project Number: 2014-02-054

Permit Number:

Address: 1 School Street, Herculaneum, MO 63048

County: Jefferson County, S20, T41N, R6E

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

Month	Dock 1			Rail			Dock 2			² Subtotal Monthly Emissions (lbs)	³ Subtotal Monthly Emissions (tons)
	Monthly Production (tons)	Emission Factor (lb/ton)	¹ Emissions (lbs)	Monthly Production (tons)	Emission Factor (lb/ton)	¹ Emissions (lbs)	Monthly Production (tons) C=Conc. S=Sand	Emission Factor (lb/ton)	¹ Emissions (lbs)		
<i>Example</i>	108,504	0.0017	184.5							184.5	0.092
		0.0017									
					0.0021						
							C	0.0098			
							S	0.0018			
(A) Total Monthly Emissions (tons). Calculate by summing all four Subtotal Monthly Emissions (tons)											
(B) 12-month running total emissions (tons) from previous month's Attachment A											
(C) Total Monthly Emissions (tons) from previous year's Attachment A for this month											
⁴ (D) Current 12-month running total emissions (tons). Calculate by adding (A) and (B) and subtracting (C)											

- 1 Calculate "Emissions (lbs)" for each part of the installation (Dock 1, Rail, Dock 2 concentrate, and Dock 2 sand) by multiplying each one's "Monthly Production (tons)" by its "Emissions Factor (lb/ton)."
1. Copy the calculated "Emissions (lbs)" to the "Subtotal Monthly Emissions (lbs)" on the same line.
- 3 Calculate each "Subtotal Monthly Emissions (tons)" by dividing "Subtotal Monthly Emissions (lbs)" by 2,000.
- 4 A 12-month running total of less than **10.0** tons 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 plant is operating.

Pavement

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 emissions¹ while the plant is operating.

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.

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.

Application of Chemical Dust Suppressants

The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.

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.

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.

Application of Water-Documented Daily

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.

Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.

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.

The operator shall record the date and volume of water application or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).

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.

¹For 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.)

APPENDIX A

Abbreviations and Acronyms

%percent	m/s meters per second
°Fdegrees Fahrenheit	Mgal 1,000 gallons
acfmactual cubic feet per minute	MW megawatt
BACT Best Available Control Technology	MHDR maximum hourly design rate
BMPs Best Management Practices	MMBtu Million British thermal units
Btu British thermal unit	MMCF million cubic feet
CAM Compliance Assurance Monitoring	MSDS Material Safety Data Sheet
CAS Chemical Abstracts Service	NAAQS ... National Ambient Air Quality Standards
CEMS Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR Code of Federal Regulations	NO_x nitrogen oxides
CO carbon monoxide	NSPS New Source Performance Standards
CO₂ carbon dioxide	NSR New Source Review
CO_{2e} carbon dioxide equivalent	PM particulate matter
COMS Continuous Opacity Monitoring System	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
CSR Code of State Regulations	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
dscf dry standard cubic feet	ppm parts per million
EQ Emission Inventory Questionnaire	PSD Prevention of Significant Deterioration
EP Emission Point	PTE potential to emit
EPA Environmental Protection Agency	RACT Reasonable Available Control Technology
EU Emission Unit	RAL Risk Assessment Level
fps feet per second	SCC Source Classification Code
ft feet	scfm standard cubic feet per minute
GACT Generally Available Control Technology	SIC Standard Industrial Classification
GHG Greenhouse Gas	SIP State Implementation Plan
gpm gallons per minute	SMAL Screening Model Action Levels
gr grains	SO_x sulfur oxides
GWP Global Warming Potential	SO₂ sulfur dioxide
HAP Hazardous Air Pollutant	tph tons per hour
hr hour	tpy tons per year
hp horsepower	VMT vehicle miles traveled
lb pound	VOC Volatile Organic Compound
lbs/hr pounds per hour	
MACT Maximum Achievable Control Technology	
µg/m³micrograms per cubic meter	

Ms. Lina Klein
Environmental Director, FWI
Riverview Commerce Park
2320 Creve Coeur Mill Road
Maryland Heights, MO 63043

RE: New Source Review Permit - Project Number: 2014-02-054

Dear Ms. 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 and your new source review permit application is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Cheryl Steffan, 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:csl

Enclosures

c: St. Louis Regional Office
PAMS File: 2014-02-054

Permit Number:

*Celebrating 40 years of taking care of Missouri's natural resources.
To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.*