

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: **022018-001**

Project Number: 2017-09-051
Installation ID: PORT-0762

Parent Company: Kaw Valley Companies

Parent Company Address: PO Box 6249, Kansas City, KS 66106

Installation Name: Kaw Valley Companies PORT-0762

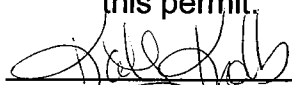
Installation Address: 1607 Anaconda Road, Harrisonville, MO 64701

Location Information: Cass County, S44 T31N R5E

Application for Authority to Construct was made for:
New portable rock crushing 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

FEB 05 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**
Kaw Valley Companies PORT-0762 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.
2. **Relocation of Portable Rock Crushing Plant**
 - A. Kaw Valley Companies PORT-0762 shall not be operated at any location longer than 24 consecutive months except if the Site Specific Special Conditions of this portable plant, PORT-0762, contain a nonroad engine requirement limiting the portable plant at the site specific location to 12 consecutive months.
 - B. A complete "Portable Source Relocation Request" application must be submitted to the Air Pollution Control Program prior to any relocation of this portable rock crushing plant.
 - 1) If the portable rock crushing plant is moving to a site previously permitted, and if the circumstances at the site have not changed, then the application must be received by the Air Pollution Control Program at least seven days prior to the relocation.
 - 2) If the portable rock crushing plant is moving to a new site, or if circumstances at the site have changed, 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**
Kaw Valley Companies PORT-0762 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**
Kaw Valley Companies PORT-0762 shall report to the Air Pollution Control Program Enforcement Section P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after any exceedances of the limitations imposed by this permit.

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-0762

Site ID Number: 037-0054

Site Name: Dwight and Church

Site Address: 1607 Anaconda Road, Harrisonville, MO 64701

Site County: Cass S44 T31N R5E

1. Annual Emission Limit
 - A. Kaw Valley Companies PORT-0762 shall emit less than 15.0 tons of PM₁₀ in any 12-month period from the entire installation which consists of the equipment listed in Table 1. 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. Kaw Valley Companies PORT-0762 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. Primary Equipment Requirement
Kaw Valley Companies PORT-0762 shall process all rock through the primary crusher (EP-2). Bypassing the primary crusher is prohibited.
3. Wet Suppression Control System Requirement
 - A. Kaw Valley Companies PORT-0762 shall install and operate wet spray devices on crusher EP-2.
 - B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Kaw Valley Companies PORT-0762 shall adjust the production rate to control emissions from these units. Kaw Valley Companies PORT-0762 shall record a brief description of such events.
4. Undocumented Watering Requirement
Kaw Valley Companies PORT-0762 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.

SITE SPECIFIC SPECIAL CONDITIONS:

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

5. **Record Keeping Requirement**
Kaw Valley Companies PORT-0762 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**
Kaw Valley Companies PORT-0762 shall report to the Air Pollution Control Program, Compliance / Enforcement Section by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at AirComplianceReporting@dnr.mo.gov, no later than 10 days after any exceedances of the limitations imposed by this permit.

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

Project Number: 2017-09-051

Installation ID Number: PORT-0762

Permit Number: 022018-001

Kaw Valley Companies PORT-0762
1607 Anaconda Road
Harrisonville, MO 64701

Complete: December 6, 2017

Parent Company:
Kaw Valley Companies
PO Box 6249
Kansas City, KS 66106

Cass County, S44 T31N R5E

PROJECT DESCRIPTION

Kaw Valley Company is locating their portable rock crusher (PORT-0762) to the property of Church and Dwight to crush discarded concrete material. The portable rock crusher is a track mounted KTP mobile crusher with a MHDR of 600 tph. Water spray devices will be located on the crusher (EP-2). Haul road and vehicular activity emissions will be controlled by undocumented watering.

The engine that is used to provide power to the track mounted KTP crusher serves a dual purpose by both propelling itself and provide power to the crusher, screen, and conveyors. Therefore it meets the definition of a nonroad engine as stated in 40 CFR 89.2 (1)(i) and the engine emissions were not included in the calculations.

This installation is located in Cass County, an attainment area for all 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 Kaw Valley Companies PORT-0762 from the Air Pollution Control Program.

TABLES

Table 1: PORT-0762 Equipment

Emission No.	Equipment Description	MHDR
EP-1	Load-in/grizzly	600 tph
EP-2	KTP mobile crusher	600 tph
EP-3	Underconveyor from crusher	600 tph
EP-4	Screen	600 tph
EP-5	Conveyor	600 tph
EP-6	Conveyor	600 tph
EP-7a	Storage pile load-in	60 tph
EP-7b	Storage pile load-out	600 tph
EP-7c	Vehicular Activity	2.84 VMT
EP-7d	Wind Erosion	1 acre
EP-8	Haul road (0.25 miles)	8.57 VMT

The Table 2 below summarizes the emissions of this project. The potential emissions of the process equipment, which exclude 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 because this is a new portable 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 the voluntary PM₁₀ annual emission limit to avoid dispersion modeling requirements found in 10 CSR-6.060 Section (6).

Table 2: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Potential Emissions from Process Equipment	Existing Actual Emissions	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	10.04	N/A	486.72	43.55
PM ₁₀	15.0	3.73	N/A	167.66	<15.0
PM _{2.5}	10.0	0.50	N/A	21.96	1.96
SO _x	40.0	N/A	N/A	N/A	N/A
NO _x	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	N/A	N/A
CO	100.0	N/A	N/A	N/A	N/A
GHG (CO ₂ 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

^aExcludes site specific haul road and storage pile emissions

^bIncludes 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 rock-crushing equipment:

- Calculated using emission factors from AP-42 Section 11.19.2 "Crushed Stone Processing and Pulverized Mineral Processing," August 2004.
- The controlled emission factors were used because the equipment is control by water spray devices.

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.

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 PM₁₀ and a 41% control efficiency for PM_{2.5} were applied to the emission calculations for the use of undocumented watering on haul roads and vehicular activity.

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 PM₁₀ emission limit of 15.0 tons per year for stationary plants in order to avoid refined modeling required by 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

Kaw Valley Companies PORT-0762 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.
- Operating Permit is not needed because this is a portable plant.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment.
- 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 October 2, 2017, received September 29, 2017, designating Kaw Valley Companies as the owner and operator of the installation.

Attachment A: PM₁₀ 12-Month Rolling Total Emissions Tracking Sheet

Kaw Valley Companies PORT-0762

Project Number: 2017-09-051

Permit Number: **022018-001**

Site Name: Dwight and Church/Kaw Valley Companies PORT-0762

Site Address: 1607 Anaconda Road, Harrisonville, MO 64701

Site County: Cass

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

Month	Production (tons)	PM ₁₀ Composite Emission Factor (lb/ton)	Monthly PM ₁₀ Emissions ¹ (lbs)	Startup, Shutdown and Malfunction PM ₁₀ Emissions ² (lbs)	Monthly PM ₁₀ Emissions ³ (tons)	12-Month Rolling Total Emissions ⁴ (tons)
<i>Example</i>	<i>50,000</i>	<i>0.0638</i>	<i>3,190</i>	<i>0.0</i>	<i>1.6</i>	<i>1.6+11 previous months</i>
		0.0638				
		0.0638				
		0.0638				
		0.0638				
		0.0638				
		0.0638				
		0.0638				
		0.0638				
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		0.0638				
		0.0638				

¹Multiply the monthly production by the PM₁₀ composite emission factor.

²As reported to the Air Pollution Control Program's Compliance/Enforcement Section according to the provisions of 10 CSR 10-6.050 for the month.

³Add the monthly PM₁₀ emissions plus the SSM emissions from the same time period and divide by 2000 and

⁴Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months. A total of less than 15.0 tons of PM₁₀ per consecutive 12 months is necessary for compliance.

APPENDIX A

Abbreviations and Acronyms

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

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General Plant Information
 Primary Unit Size (tons per hour) It is important that you read all the comments (cells marked with a red triangle in the upper right corner) because they may direct you to make changes to the data entry cells.

Emission Point	Stack Height (feet)	Stack Inside Diameter (feet)	Stack Gas Flow Rate (ACFM)	Stack Gas Exit Temp (°F)

Storage Pile ID No.	Pile #1	Pile #2	Pile #3	Pile #4
Maximum Area of Storage Pile (Acres)	1			
Type of Material Stored	Crushed limestone			
Moisture Content %	0.7			
ASH Content %	1.0			
Method of Load In to Storage Pile	Conveyor/Stacker			
Method of Load Out from Storage Pile	Loader			
Distance Loader Travels (feet)	50			
Unloaded Loader Weight (tons)	21.38			
Loaded Loader Weight (tons)	25.38			
Rate (tons/hour)	600.00			
max VMT per hour	2,8409			
Surface Treatment	Unpaved			
Vehicular Area Control	Watering			

Haul Road ID No.	Road #1	Road #2	Road #3	Road #4	Road #5	Road #6
Length of Haul Road (feet) Enter the length of each roadway in feet. The plant layout diagram (drawn to scale) should document and support the values entered. Note: Twice this distance is used, one trip in and one out.	1320					
Unloaded Truck Weight (tons)	31					
Loaded Truck Weight (tons)	66					
Rate Hauled (ton/hour)	600					
max VMT per hour	8,5714					
Surface Treatment	Unpaved					
Haul Road Control	Watering					

Engine Set Information	#1	#2	#3
Type of Fuel:			
Brake Horsepower (bhp):			
Engine kilowatt rating (kW):			
gallons per hour:			
Engine MTR (mmBtu per hour, input):			
Is this a generator-set engine?:			
Model Year (yyyy):			
Fuel Sulfur Content (% weight sulfur):			

Combustion Sources	Combustion #1	Combustion #2	Combustion #3	Desc #2	Combustion #3	Desc #3
Hest Rate	mmBtu/hour	mmBtu/hour	mmBtu/hour	mmBtu/hour	mmBtu/hour	mmBtu/hour
	mgal/hour	mgal/hour	mgal/hour	mgal/hour	mgal/hour	mgal/hour
	mmscf/hour	mmscf/hour	mmscf/hour	mmscf/hour	mmscf/hour	mmscf/hour
	In regards to AP-42 Chapter 1	In regards to 40 CFR Part 68	In regards to AP-42 Chapter 1	In regards to 40 CFR Part 68	In regards to AP-42 Chapter 1	In regards to 40 CFR Part 68
Fuel Type	% weight sulfur	% weight sulfur	% weight sulfur	% weight sulfur	% weight sulfur	% weight sulfur

Liquid Storage Tanks	Tank #1	Tank #2	Tank #3	Tank #4	Tank #5	Tank #6
Annual VOC (pounds)						
Annual VOC (tons)						



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For Single Plant Operation

Hours per Day	8.0
Days per Year	98.0
Hours per Year	783.7

For Multiple Plant Operation

Hours per Day	8.0
Days per Year	98.0
Hours per Year	783.7

Pollutant Justification for Limit

PM10	De Minimis
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Pollutant	Potential Emissions of Process Equipment (tons/yr)	Potential Emissions Including fugitives (tons/yr)	Allowable Emissions for 784 hours per year (tons/yr)	De Minimis Thresholds	Plant-wide Composite Emission Factor (lb/ton)
PM	10.04	486.72	43.55	25	0.1852
PM ₁₀	3.73	167.66	15.00	15	0.0638
PM _{2.5}	0.50	21.96	1.96	10	0.0084
SO ₂	-	-	-	40	0.0000
NO ₂	-	-	-	40	0.0000
VOC	-	-	-	40	0.0000
CO	-	-	-	100	0.0000
CH ₂ O	-	-	-	2.00	0.0000
Pb	-	-	-	0.01	0.0000
HAPs	-	-	-	10	0.0000
CO ₂	-	-	-	100	0.0000
N ₂ O	-	-	-	100	0.0000
CH ₄	-	-	-	100	0.0000
GHG _{mass}	-	-	-	100	0.0000
CO ₂ eq	-	-	-	100,000	0.0000

Limit Hours per Year

Limit Hours per Year w/ 24 hr day

Maximum hourly design rate (tons/hr)	600
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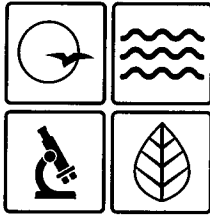
Tons of product per day	4,800.0
Tons of product per year	470,249.7

Emission Point Number	Emission Unit Number	Description	SCC	Maximum Hourly	Units of Measure	Control Device Number	Control Type	Capture Efficiency (%)	Control Efficiency (%)	Pollutant	Emission Factor	Emission Factor (batUoM)	Emission Rate (lb/hr)	Potential Emissions (ton/yr)	Allowable Emissions (ton/yr)
		EngSet #1			bhp			N/A	N/A	PM		mmBtu			
		Model Year			gallons per hour			N/A	N/A	PM ₁₀		mmBtu			
					MMBtu/hour			N/A	N/A	PM _{2.5}		mmBtu			
					kWhr			N/A	N/A	SO ₂		Gallon			
								N/A	N/A	NO ₂		mmBtu			
								N/A	N/A	CO		mmBtu			
								N/A	N/A	VOC		mmBtu			
								N/A	N/A	CH ₄		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO ₂		mmBtu			
								N/A	N/A	N ₂ O		mmBtu			
								N/A	N/A	GHG _{sum}		mmBtu			
								N/A	N/A	CH ₄		mmBtu			
		EngSet #2			bhp			N/A	N/A	PM		mmBtu			
		Model Year			gallons per hour			N/A	N/A	PM ₁₀		mmBtu			
					MMBtu/hour			N/A	N/A	PM _{2.5}		mmBtu			
					kWhr			N/A	N/A	SO ₂		Gallon			
								N/A	N/A	NO ₂		mmBtu			
								N/A	N/A	CO		mmBtu			
								N/A	N/A	VOC		mmBtu			
								N/A	N/A	CH ₄		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO ₂		mmBtu			
								N/A	N/A	N ₂ O		mmBtu			
								N/A	N/A	GHG _{sum}		mmBtu			
								N/A	N/A	CH ₄		mmBtu			
		EngSet #3			bhp			N/A	N/A	PM		mmBtu			
		Model Year			gallons per hour			N/A	N/A	PM ₁₀		mmBtu			
					MMBtu/hour			N/A	N/A	PM _{2.5}		mmBtu			
					kWhr			N/A	N/A	SO ₂		Gallon			
								N/A	N/A	NO ₂		mmBtu			
								N/A	N/A	CO		mmBtu			
								N/A	N/A	VOC		mmBtu			
								N/A	N/A	CH ₄		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO ₂		mmBtu			
								N/A	N/A	N ₂ O		mmBtu			
								N/A	N/A	GHG _{sum}		mmBtu			
								N/A	N/A	CH ₄		mmBtu			
		Pile #1						N/A	N/A	PM		ton			
		Load In		600.00	tons per hour			N/A	N/A	PM ₁₀		0.0254 ton	1.52E+01	66.93	5.96
								N/A	N/A	PM _{2.5}		0.0120 ton	7.16E+00	31.51	2.82
		7a						N/A	N/A	PM ₁₀		0.0018 ton	1.06E+00	4.77	0.43
		7b		600.00	tons per hour			N/A	N/A	PM		0.0254 ton	1.52E+01	66.93	5.96
								N/A	N/A	PM _{2.5}		0.0120 ton	7.16E+00	31.51	2.82
								N/A	N/A	PM ₁₀		0.0018 ton	1.06E+00	4.77	0.43
		7c		2.84	VMT per hour	Unpaved, Watering		N/A	50%	PM		6.2561 VMT	1.35E+01	59.23	6.31
								N/A	50%	PM ₁₀		2.7117 VMT	3.85E+00	16.87	1.51
								N/A	41%	PM _{2.5}		0.2712 VMT	4.54E-01	1.99	0.19
		7d		1.00	acres			N/A	N/A	PM		0.1765 acre-hr	1.76E-01	0.78	0.07
								N/A	N/A	PM ₁₀		0.0060 acre-hr	6.60E-02	0.36	0.03
								N/A	N/A	PM _{2.5}		0.0134 acre-hr	1.34E-02	0.06	0.01
		Pile #2						N/A	N/A	PM		ton			
		Load In			tons per hour			N/A	N/A	PM ₁₀		ton			
								N/A	N/A	PM _{2.5}		ton			
		Load out			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM ₁₀		ton			
								N/A	N/A	PM _{2.5}		ton			
		Vehicular Activity			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM ₁₀		VMT			
								N/A	N/A	PM _{2.5}		VMT			
		Wind Erosion			acres			N/A	N/A	PM		acre-hr			
								N/A	N/A	PM ₁₀		acre-hr			
								N/A	N/A	PM _{2.5}		acre-hr			
		Pile #3						N/A	N/A	PM		ton			
		Load In			tons per hour			N/A	N/A	PM ₁₀		ton			
								N/A	N/A	PM _{2.5}		ton			
		Load out			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM ₁₀		ton			
								N/A	N/A	PM _{2.5}		ton			
		Vehicular Activity			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM ₁₀		VMT			
								N/A	N/A	PM _{2.5}		VMT			
		Wind Erosion			acres			N/A	N/A	PM		acre-hr			
								N/A	N/A	PM ₁₀		acre-hr			
								N/A	N/A	PM _{2.5}		acre-hr			
		Pile #4						N/A	N/A	PM		ton			
		Load In			tons per hour			N/A	N/A	PM ₁₀		ton			
								N/A	N/A	PM _{2.5}		ton			
		Load out			tons per hour			N/A	N/A	PM		ton			
								N/A	N/A	PM ₁₀		ton			
								N/A	N/A	PM _{2.5}		ton			
		Vehicular Activity			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM ₁₀		VMT			
								N/A	N/A	PM _{2.5}		VMT			
		Wind Erosion			acres			N/A	N/A	PM		acre-hr			
								N/A	N/A	PM ₁₀		acre-hr			
								N/A	N/A	PM _{2.5}		acre-hr			

Emission Point Number	Emission Unit Number	Description	SCC	Maximum Hourly	Units of Measure	Control Device Number	Control Type	Capture Efficiency (%)	Control Efficiency (%)	Pollutant	Emission Factor	Emission Factor (lb/tJOM)	Emission Rate (t/yr)	Potential Emissions (ton/yr)	Allowable Emissions (ton/yr)
		Road #1		0.67	VMT per hour		Unpaved, Watering	N/A	50%	PM ₁₀	15.0868	VMT	8.47E+01	283.23	28.34
		Road #2			VMT per hour			N/A	41%	PM _{2.5}	4.4590	VMT	1.91E+01	63.60	7.48
		Road #3			VMT per hour			N/A	41%	PM ₁₀	0.4454	VMT	2.25E+00	9.85	0.88
		Road #4			VMT per hour			N/A	N/A	PM ₁₀		VMT			
		Road #5			VMT per hour			N/A	N/A	PM _{2.5}		VMT			
		Road #6			VMT per hour			N/A	N/A	PM ₁₀		VMT			
		Road #6			VMT per hour			N/A	N/A	PM _{2.5}		VMT			

Equipment	Unit ID	Description of Unit	Equipment Description/SCC	Heat Rate	Unit per hour							Emission Factor (lb/tJOM)					
		Combustion #1		mmBtu	mmacf	100%	N/A	PM			mgal						
						100%	N/A	PM _{2.5}		mgal							
						100%	N/A	PM ₁₀		mgal							
						100%	N/A	SO ₂		mgal							
						100%	N/A	NO ₂		mgal							
						100%	N/A	VOC		mgal							
						100%	N/A	CO		mgal							
						100%	N/A	CH ₄		mgal							
						100%	N/A	Pb		mgal							
						100%	N/A	HAPs		mgal							
						100%	N/A	CO ₂		mgal							
						100%	N/A	N ₂ O		mgal							
						100%	N/A	GHG _{equiv}		mgal							
		Combustion #2		mmBtu	mmacf	100%	N/A	PM			mgal						
						100%	N/A	PM _{2.5}		mgal							
						100%	N/A	PM ₁₀		mgal							
						100%	N/A	SO ₂		mgal							
						100%	N/A	NO ₂		mgal							
						100%	N/A	VOC		mgal							
						100%	N/A	CO		mgal							
						100%	N/A	CH ₄		mgal							
						100%	N/A	Pb		mgal							
						100%	N/A	HAPs		mgal							
						100%	N/A	CO ₂		mgal							
						100%	N/A	N ₂ O		mgal							
						100%	N/A	GHG _{equiv}		mgal							
		Combustion #3		mmBtu	mmacf	100%	N/A	PM			mgal						
						100%	N/A	PM _{2.5}		mgal							
						100%	N/A	PM ₁₀		mgal							
						100%	N/A	SO ₂		mgal							
						100%	N/A	NO ₂		mgal							
						100%	N/A	VOC		mgal							
						100%	N/A	CO		mgal							
						100%	N/A	CH ₄		mgal							
						100%	N/A	Pb		mgal							
						100%	N/A	HAPs		mgal							
						100%	N/A	CO ₂		mgal							
						100%	N/A	N ₂ O		mgal							
						100%	N/A	GHG _{equiv}		mgal							

Equipment Operational Status	Emission Unit Number	Description of Unit	Equipment/SCC Description	MHTP	Units	Equip Type	Control Type					Emission Factor (lb/tJOM)			
E	EP-01	loading into crusher/grizzly	Truck Unloading - Fragmented Stone EP 30502031	600.00	Tons	Fugitive	No Control	100%	0.00%	PM	0.000032	Tons	1.82E-02	8.41E-02	7.52E-03
						Fugitive		100%	0.00%	PM _{2.5}	0.000016	Tons	9.00E-03	4.20E-02	3.78E-03
						Fugitive		100%	0.00%	PM ₁₀	0.000008	Tons	4.80E-03	2.10E-02	1.89E-03
E	EP-02	primary crusher KTP mobile crusher	Crusher-Primary, (Diameter 3-12') 30502001	600.00	Tons	Process	Wet Spray Devices	100%	77.50%	PM	0.0064	Tons	7.55E-03	3.16E+00	2.85E-01
						Process		100%	77.50%	PM _{2.5}	0.0024	Tons	3.24E-01	1.42E+00	1.27E-01
						Process		100%	77.50%	PM ₁₀	0.000444444	Tons	6.00E-02	2.83E-01	2.55E-02
E	EP-03	conveyor	Conveyor 30502006	600.00	Tons	Process	Wet Spray Devices-Carryover	100%	95.33%	PM	0.003	Tons	8.40E-02	3.88E-01	3.20E-02
						Process		100%	95.82%	PM _{2.5}	0.0011	Tons	2.78E-02	1.21E-01	1.06E-02
						Process		100%	95.82%	PM ₁₀	0.00031087	Tons	7.80E-03	3.42E-02	3.06E-03
E	EP-04	screen	Screens, (3/16" or Greater) 30502002	600.00	Tons	Process	Wet Spray Devices-Carryover	100%	91.20%	PM	0.029	Tons	1.32E+00	5.78E+00	5.17E-01
						Process		100%	91.49%	PM _{2.5}	0.0087	Tons	4.44E-01	1.94E+00	1.74E-01
						Process		100%	91.49%	PM ₁₀	0.00087838	Tons	3.00E-02	1.31E-01	1.18E-02
E	EP-05	conveyor	Conveyor 30502008	600.00	Tons	Process	Wet Spray Devices-Carryover	100%	95.33%	PM	0.003	Tons	8.40E-02	3.88E-01	3.20E-02
						Process		100%	96.82%	PM _{2.5}	0.0011	Tons	2.78E-02	1.21E-01	1.06E-02
						Process		100%	95.82%	PM ₁₀	0.00031087	Tons	7.80E-03	3.42E-02	3.06E-03
E	EP-06	conveyor	Conveyor 30502008	600.00	tons	Process	Wet Spray Devices-Carryover	100%	95.33%	PM	0.003	tons	8.40E-02	3.88E-01	3.20E-02
						Process		100%	95.82%	PM _{2.5}	0.0011	tons	2.78E-02	1.21E-01	1.06E-02
						Process		100%	95.82%	PM ₁₀	0.00031087	tons	7.80E-03	3.42E-02	3.06E-03



Missouri Department of

dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

FEB 05 2018

Mr. Brad George
Project Manager
Kaw Valley Companies PORT-0762
P.O. Box 6249
Kansas City, KS 66106

RE: New Source Review Permit - Project Number: 2017-09-051
Installation Number: PORT-0762

Dear Mr. George:

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 Kaw Valley Companies PORT-0762 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, whose contact information is: Administrative Hearing Commission, United States Post Office



Recycled paper

Mr. Brad George
Page Two

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.oe.mo.gov/ahc.

If you have any questions regarding, 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: 2017-09-051

Permit Number: **022018-001**