

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: 102018-006

Project Number: 2018-04-015
Installation ID: 099-0113

Parent Company: Simpson Materials Co., LLC

Parent Company Address: PO Box 250, Valley Park, MO 63088

Installation Name: Simpson Materials Co.

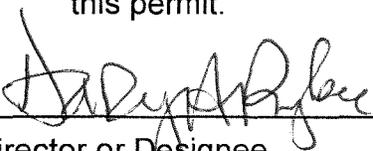
Installation Address: 850 Sulphur Springs Road, Sulphur Springs, MO 63052

Location Information: Jefferson County, S32 T42N R6E

Application for Authority to Construct was made for:
New stationary rock crusher. 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.



Director or Designee
Department of Natural Resources

OCT 10 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/>

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. **Best Management Practices Requirement**
Simpson Materials Co. 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. Simpson Materials Co. 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. Simpson Materials Co. 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. **Moisture Content Testing Requirement**
 - A. Simpson Materials Co. shall verify that the moisture content of the processed rock is greater than or equal to 1.5 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 rock that has been processed by the plant or from each source of aggregate (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 Simpson Materials Co. main office within 30 days of completion of the required test.

SPECIAL CONDITIONS:

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

- F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 3.A, another test may be performed within 15 days of the noncompliant test. If the results of that test is less than the moisture content in Special Condition 3.A, Simpson Materials Co. 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. Plans may be sent by mail to P.O. Box 176, Jefferson City, MO 65102 or by email at aircompliancereporting@dnr.mo.gov. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.
4. Primary Equipment Requirement
Simpson Materials Co. shall process all rock through the Secondary crusher (EP-07). Bypassing the secondary crusher is prohibited because it is the bottleneck and establishes the MHDR.
5. Record Keeping Requirement
Simpson Materials Co. 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
Simpson Materials Co. 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: 2018-04-015
Installation ID Number: 099-0113

Permit Number: 102018-006

Simpson Materials Co.:
850 Sulphur Springs Road
Sulphur Springs, MO 63052

Complete: April 5, 2018

Parent Company:
Simpson Materials Co., LLC
PO Box 250
Valley Park, MO 63088

Jefferson County, S32 T42N R6E

PROJECT DESCRIPTION

Simpson Materials Co., LLC will construct a new rock crushing plant at their Barnhart Quarry (Site ID: 099-0113). The secondary screen will be a bottleneck in the process flow that limits maximum hourly production to 400 tons/hr. The plant will use electric power with stationary diesel engines already permitted for this site only to be used in case of an emergency power outage at the site. Simpson Materials Co., LLC will conduct moisture content testing of the aggregate to verify that the moisture content is at least 1.5% by weight. The applicant is using one of the methods described in Attachment AA, "Best Management Practices," to control emissions from haul roads and vehicular activity areas.

The plant will operate concurrently with a stationary plant already located at this site (099-0113). The stationary plant was last permitted under Permit #072016-001.

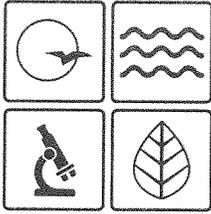
This installation is located in Jefferson County, a marginal nonattainment area for the 2008 8-hour ozone standard, a moderate nonattainment area for the 1997 PM_{2.5} standard, a nonattainment area for 2010 Sulfur Dioxide and an attainment/unclassified area for all other criteria pollutants.

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

TABLES

Table 1: Equipment list for Stationary Plant

Emission Point	Equipment Description	MHDR
EP-01	Truck loading in pit	400 tph
EP-02	Truck unloading to crusher	400 tph
EP-03	Primary Crusher 2004 Metso Nordberg NP1520 S/N 20680024	400 tph
EP-04	Crusher Underconveyor	400 tph
EP-05	Conveyor	400 tph
EP-06	Scalping Screen KPI-JCI 8203 S/N P141761-S072056	400 tph
EP-07	Secondary Screen KPI-JCI 8203 S/N S184571	400 tph
EP-08	Tertiary Screen KPI-JCI 16203	400 tph
EP-09	Conveyor	400 tph
EP-10	Conveyor	400 tph
EP-11	Conveyor	400 tph
EP-12	Conveyor	400 tph
EP-13	Conveyor	400 tph
EP-14	Conveyor	400 tph
EP-15	Conveyor	400 tph
EP-16	Conveyor	400 tph
EP-17	Secondary Crusher 1998 Hazemag APSE 1620K impact crusher S/N HU1707	400 tph
EP-18	Secondary Crusher Underconveyor	400 tph
EP-19	Scalping Screen Feed Conveyor KPI-JCI 2018	400 tph
EP-20	Scalping Screen Underconveyor KPI-JCI 2018	400 tph
EP-21	Scalping Screen Cross Conveyor 1 KPI-JCI 2018	400 tph
EP-22	Scalping Screen Cross Conveyor 2 KPI-JCI 2018	400 tph
EP-23	Scalping Screen Side Conveyor KPI-JCI 2018	400 tph
EP-24	Secondary Screen Feed Conveyor KPI-JCI 2018	400 tph
EP-25	Secondary Screen Cross Conveyor 1 KPI-JCI 2018	400 tph
EP-26	Secondary Screen Cross Conveyor 2 KPI-JCI 2018	400 tph
EP-27	Secondary Screen Side Conveyor KPI-JCI 2018	400 tph
EP-28	Tertiary Screen Side Conveyor 1 KPI-JCI 2018	400 tph
EP-29	Tertiary Screen Side Conveyor 2 KPI-JCI 2018	400 tph
EP-30	Tertiary Screen Side Conveyor 3 KPI-JCI 2018	400 tph
EP-31	Conveyor	400 tph
EP-32	Conveyor Marco 2018	400 tph
EP-33	Conveyor	400 tph
EP-34	Conveyor Marco 2018	400 tph
EP-35a	Load-in storage piles	400 tph
EP-35b	Load-out storage piles	400 tph
EP-35c	Wind erosion	4.4 acres
EP-35d	Vehicular activity	0.5411 VMT/hr
EP-36	Pit Haul Road	6.06 VMT/hr
EP-37	Plant Haul Road	18.18 VMT/hr



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

OCT 10 2018

Mr. Tom Simpson
Sales Manager
Simpson Materials Co.
PO Box 250
Valley Park, MO 63088

RE: New Source Review - Project Number: 2018-04-015
Installation Number: 099-0113

Dear Mr. Simpson:

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 Simpson Materials Co. 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



Recycled paper

Mr. Tom Simpson
Page Two

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.aa.mo.gov/ahc.

If you have any questions, please do not hesitate to contact Kathy Kolb, at the department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM



Susan Heckenkamp
New Source Review Unit Chief

SH:kkj

Enclosures

c: Saint Louis Regional Office
PAMS File: 2018-04-015

Permit Number: 102018-006

The following New Source Review permits have been issued to Simpson Construction Materials, LLC – Barnhart Quarry from the Air Pollution Control Program:

Table 2: Permit History

Permit Number	Description
062012-003	Generic Rock-Crushing Plant
072016-001	Additional screen and conveyors

Table 3 below summarizes the emissions of this project. The potential emissions of the process equipment, which excluded emissions from haul roads and wind erosion, are not site specific and should not vary from site to site. The existing actual emissions are from the 2017 EIQ. 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 3: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	^a Potential Emissions from Process Equipment	Existing Actual Emissions 207 EIQ	^b Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	23.79	N/A	198.66	44.80
PM ₁₀	15.0	8.76	N/A	66.51	<15.0
PM _{2.5}	10.0	1.26	N/A	14.53	3.28
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 _{2e})	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 inherent moisture content of the crushed rock is greater than 1.5 % by weight.

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 controlled emission factors were used because the inherent moisture content of the crushed rock is greater than 1.5% by weight.

Emissions from haul roads and vehicular activity areas:

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

Emissions from storage piles:

- Load-in and load-out of storage piles were calculated using the predictive equation from AP-42 Section 13.2.4.
- The moisture content of the aggregate is at least than 1.5% by weight.
- Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program’s Emissions Inventory Questionnaire Form 2.8 “Storage Pile Worksheet.”

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀ are conditioned below de minimis levels. Potential emissions of PM are above de minimis levels but remain below major levels.

APPLICABLE REQUIREMENTS

Simpson Materials Co. 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.

- Basic Operating Permit (expiration June 4, 2019) for Site ID 099-0113 needs to be amended at the time of renewal (six months prior to expiration).
- *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 April 2, 2018, received April 5, 2018, designating Simpson Materials Co., LLC as the owner and operator of the installation.

Attachment AA: Best Management Practices

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

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

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

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

APPENDIX A

Abbreviations and Acronyms

%percent	MMBtuMillion British thermal units
°Fdegrees Fahrenheit	MMCFmillion cubic feet
acfmactual cubic feet per minute	MSDSMaterial Safety Data Sheet
BACTBest Available Control Technology	NAAQSNational Ambient Air Quality Standards
BMPsBest Management Practices	NESHAPs ..National Emissions Standards for Hazardous Air Pollutants
BtuBritish thermal unit	NO_xnitrogen oxides
CAMCompliance Assurance Monitoring	NSPSNew Source Performance Standards
CASChemical Abstracts Service	NSRNew Source Review
CEMSContinuous Emission Monitor System	PMparticulate matter
CFRCode of Federal Regulations	PM_{2.5}particulate matter less than 2.5 microns in aerodynamic diameter
COcarbon monoxide	PM₁₀particulate matter less than 10 microns in aerodynamic diameter
CO₂carbon dioxide	ppmparts per million
CO_{2e}carbon dioxide equivalent	PSD Prevention of Significant Deterioration
COMSContinuous Opacity Monitoring System	PTEpotential to emit
CSRCode of State Regulations	RACTReasonable Available Control Technology
dscfdry standard cubic feet	RALRisk Assessment Level
EIQEmission Inventory Questionnaire	SCCSource Classification Code
EPEmission Point	scfmstandard cubic feet per minute
EPAEnvironmental Protection Agency	SDSSafety Data Sheet
EUEmission Unit	SICStandard Industrial Classification
fpsfeet per second	SIPState Implementation Plan
ftfeet	SMALScreening Model Action Levels
GACTGenerally Available Control Technology	SO_xsulfur oxides
GHGGreenhouse Gas	SO₂sulfur dioxide
gpmgallons per minute	SSMstartup, shutdown, & malfunction
grgrains	tphtons per hour
GWPGlobal Warming Potential	tpytons per year
HAPHazardous Air Pollutant	VMTvehicle miles traveled
hrhour	VOCVolatile Organic Compound
hphorsepower	
lbpound	
lbs/hrpounds per hour	
MACTMaximum Achievable Control Technology	
µg/m³micrograms per cubic meter	
m/smeters per second	
Mgal1,000 gallons	
MWmegawatt	
MHDRmaximum hourly design rate	

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

For Single Plant Operation

Hours per day	24.0
Days per year	82.3
Hours per year	1975.6

For Multiple Plant Operation

Hours per day	24.0
Days per year	82.3
Hours per year	1975.6

Pollutant	Justification for Limit
PM10	De Minimis

Pollutant	Potential Emissions of Process Equipment (tons/yr)	Potential Emissions including fugitives (tons/yr)	Allowable Emissions for 1976 hours per year (tons/yr)	Deminimis Thresholds	Plant-wide Composite Emission Factor (lb/ton)
PM	23.79	198.66	44.80	25	0.1134
PM ₁₀	8.76	66.51	15.00	15	0.0380
PM _{2.5}	1.26	14.53	3.28	10	0.0083
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
GHC _{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)	400
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Tons of product per day	9,600.0
Tons of product per year	790,257.8

Equipment Operational Status	Emission Unit Number	Description of Unit	Equipment/SCC Description	Equip Type	Max Hourly ThroughPut		Control Type	'OOO' Applicable
					(MHTP)	Units		
N	EP-01	Truck Loading In Pit	Truck Unloading - Fragmented Stone EF 30502031	Fugitive	400.0000	Tons	Moisture => 1.5%	
N	EP-02	Unload to crusher	Truck Unloading - Fragmented Stone EF 30502031	Fugitive	400.0000	Tons	Moisture => 1.5%	
N	EP-03	Primary Crusher	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-04	Crusher Underconveyor Melsco	Crusher-Primary (Diameter 3-12") 30502001	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-05	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-06	Scalping Screen	Screens, (3/16" or Greater) 30502002	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-07	Secondary Screen	Screens, (3/16" or Greater) 30502002	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-08	Tertiary Screen	Crusher-Fines, (< 3/16") 30502005	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-09	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-10	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-11	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-12	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-13	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-14	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-15	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-16	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-17	Secondary Crusher	Crusher-Secondary, (Diameter 1-4") 30502002	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-18	Secondary Crusher Underconveyor Hazemag	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-21	Scalping Screen Cross Conveyor 1	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-22	Scalping Screen Cross Conveyor 2	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-23	Scalping Screen Side Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-24	Secondary Screen Feed Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-25	Secondary Screen Cross Conveyor 1	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-26	Secondary Screen Cross Conveyor 2	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-27	Secondary Screen Side Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-28	Tertiary Screen Side Conveyor 1	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-29	Tertiary Screen Side Conveyor 2	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-30	Tertiary Screen Side Conveyor 3	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-31	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-32	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-33	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-34	Conveyor	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-19	Scalping Screen Feed Conveyor KPI-JCI 2018	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	
N	EP-20	Scalping Screen Underconveyor KPI-JCI 2018	Conveyor 30502006	Process	400.0000	Tons	Moisture => 1.5%	



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 (lbs/UoM)	Emission Rate (lb/hr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
		Road #1		6.06	VMT per hour		Unpaved, Documented Watering	N/A	90%	PM	16.9126/VMT	1.03E+01	44.90	10.13	
								N/A	90%	PM ₁₀	4.9919/VMT	3.03E+00	13.25	2.99	
								N/A	74%	PM _{2.5}	0.4992/VMT	7.87E-01	3.45	0.78	
		Road #2		18.18	VMT per hour		Unpaved, Documented Watering	N/A	90%	PM	11.6887/VMT	2.13E+01	93.09	20.99	
								N/A	90%	PM ₁₀	3.4550/VMT	6.27E+00	27.47	6.20	
								N/A	74%	PM _{2.5}	0.3450/VMT	1.83E+00	7.14	1.81	
		Road #3			VMT per hour			N/A	N/A	PM					
								N/A	N/A	PM ₁₀					
		Road #4			VMT per hour			N/A	N/A	PM					
								N/A	N/A	PM ₁₀					
		Road #5			VMT per hour			N/A	N/A	PM					
								N/A	N/A	PM ₁₀					
		Road #6			VMT per hour			N/A	N/A	PM					
								N/A	N/A	PM ₁₀					
								N/A	N/A	PM _{2.5}					

Equipment	Unit ID	Description of Unit	Equipment Description/SCC	Heat Rate	UoM per hour					Emission Factor (lbs/UoM)					
		Combustion #1						100%	N/A	PM		mgal			
								100%	N/A	PM ₁₀		mgal			
								100%	N/A	PM _{2.5}		mgal			
								100%	N/A	SO ₂		mgal			
								100%	N/A	NO _x		mgal			
								100%	N/A	VOC		mgal			
								100%	N/A	CO		mgal			
								100%	N/A	CH ₂ O		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 _{non-CO2}		mgal			
		100%	N/A	CH ₄		mgal									
		Combustion #2						100%	N/A	PM		mgal			
								100%	N/A	PM ₁₀		mgal			
								100%	N/A	PM _{2.5}		mgal			
								100%	N/A	SO ₂		mgal			
								100%	N/A	NO _x		mgal			
								100%	N/A	VOC		mgal			
								100%	N/A	CO		mgal			
								100%	N/A	CH ₂ O		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 _{non-CO2}		mgal			
		100%	N/A	CH ₄		mgal									
		Combustion #3						100%	N/A	PM		mgal			
								100%	N/A	PM ₁₀		mgal			
								100%	N/A	PM _{2.5}		mgal			
								100%	N/A	SO ₂		mgal			
								100%	N/A	NO _x		mgal			
								100%	N/A	VOC		mgal			
								100%	N/A	CO		mgal			
								100%	N/A	CH ₂ O		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 _{non-CO2}		mgal			
		100%	N/A	CH ₄		mgal									

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 (lbs/LoM)	Emission Rate (t/yr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
N	EP-01	Truck Loading in Pit	Truck Unloading - Fragmented Stone EF 30502031	400.00	Tons	Fugitive	Moisture => 1.5%	100%	0.00%	PM ₁₀	0.000032	Tons	1.28E-02	5.61E-02	1.28E-02
N	EP-02	Unload to crusher	Truck Unloading - Fragmented Stone EF 30502031	400.00	Tons	Fugitive	Moisture => 1.5%	100%	0.00%	PM _{2.5}	0.000008	Tons	3.20E-03	1.40E-02	3.18E-03
N	EP-03	Primary Crusher	Conveyor 30502006	400.00	Tons	Fugitive	Moisture => 1.5%	100%	0.00%	PM ₁₀	0.000032	Tons	1.28E-02	5.61E-02	1.28E-02
N	EP-04	Crusher Underconveyor Matso	Crusher-Primary (Diameter 3-12') 30502001	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM ₁₀	0.000032	Tons	1.28E-02	5.61E-02	1.28E-02
N	EP-05	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM _{2.5}	0.00011	Tons	4.40E-02	1.88E-01	4.38E-02
N	EP-06	Scalping Screen	Screens, (3/16" or Greater) 30502002	400.00	tons	Process	Moisture => 1.5%	100%	91.49%	PM ₁₀	0.000587838	tons	2.35E-01	9.85E-01	2.32E-01
N	EP-07	Secondary Screen	Screens, (3/16" or Greater) 30502002	400.00	tons	Process	Moisture => 1.5%	100%	91.49%	PM _{2.5}	0.00011	tons	4.40E-02	1.88E-01	4.38E-02
N	EP-08	Tertiary Screen	Crusher-Fines, (< 3/16") 30502005	400.00	tons	Process	Moisture => 1.5%	100%	92.31%	PM ₁₀	0.00011	tons	4.40E-02	1.88E-01	4.38E-02
N	EP-09	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM _{2.5}	0.00011	Tons	4.40E-02	1.88E-01	4.38E-02
N	EP-10	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM ₁₀	0.00032	Tons	1.28E-02	5.61E-02	1.28E-02
N	EP-11	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM _{2.5}	0.00011	Tons	4.40E-02	1.88E-01	4.38E-02
N	EP-12	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM ₁₀	0.00032	Tons	1.28E-02	5.61E-02	1.28E-02
N	EP-13	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM _{2.5}	0.00011	Tons	4.40E-02	1.88E-01	4.38E-02
N	EP-14	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM ₁₀	0.00032	Tons	1.28E-02	5.61E-02	1.28E-02
N	EP-15	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM _{2.5}	0.00011	Tons	4.40E-02	1.88E-01	4.38E-02
N	EP-16	Conveyor	Conveyor 30502006	400.00	Tons	Process	Moisture => 1.5%	100%	95.82%	PM ₁₀	0.00032	Tons	1.28E-02	5.61E-02	1.28E-02

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 (lbs/ton)	Emission Rate (t/yr)	Potential Emissions (ton/yr)	Allowable Emissions (ton/yr)
N	EP-17	Secondary Crusher	Crusher-Secondary (Diameter 1.4') 30502002	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	77.78% 77.50% 77.50%	PM ₁₀ PM ₁₀ PM _{2.5}	0.0054 0.0024 0.000444444	Tons Tons Tons	4.80E-01 2.16E-01 4.00E-02	2.10E+00 9.46E-01 1.79E-01	4.74E-01 2.13E-01 3.95E-02
N	EP-18	Secondary Crusher Underconveyor Haze	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-21	Scalping Screen Cross Conveyor 1	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-22	Scalping Screen Cross Conveyor 2	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-23	Scalping Screen Side Conveyor	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-24	Secondary Screen Feed Conveyor	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-25	Secondary Screen Cross Conveyor 1	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-26	Secondary Screen Cross Conveyor 2	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-27	Secondary Screen Side Conveyor	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-28	Tertiary Screen Side Conveyor 1	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-29	Tertiary Screen Side Conveyor 2	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-30	Tertiary Screen Side Conveyor 3	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-31	Conveyor	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-32	Conveyor	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-33	Conveyor	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03
N	EP-34	Conveyor	Conveyor 30502006	400.00	Tons	Process Process Process	Moisture => 1.5%	100% 100% 100%	95.33% 95.82% 95.82%	PM ₁₀ PM ₁₀ PM _{2.5}	0.003 0.0011 0.00031087	Tons Tons Tons	5.60E-02 1.84E-02 1.84E-02	2.45E-01 8.06E-02 8.06E-02	5.53E-02 1.82E-02 5.14E-03