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: 102018-008

Project Number: 2018-07-020
Installation ID: 097-0120

Parent Company: Anchor Stone Company

Parent Company Address: 4124 S. Rockford Avenue, Suite 201, Tulsa, OK 74105

Installation Name: Jasper County Quarry

Installation Address: 7791 East Newman Road, Joplin, MO 64801

Location Information: Jasper County, S34 T28N R32W

Application for Authority to Construct was made for:
Construction of a new primary crusher and associated equipment. 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 sources(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 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 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. Superseding Condition
   The conditions of this permit supersede all special conditions found in the previously issued construction permit 012007-009 from the Air Pollution Control Program.

2. Best Management Practices Requirement
   Jasper County Quarry 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.

3. Annual Emission Limit
   A. Jasper County Quarry shall emit less than 25.73 tons of PM_{10} in any 12-month period from the entire installation which consists of the equipment listed in Table 2. 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. Jasper County Quarry shall demonstrate compliance with Special Condition 3.A using Attachment A or another equivalent form that has been approved by the Air Pollution Control Program, including an electronic form.

4. Wet Suppression Control System Requirement
   A. Jasper County Quarry shall install and operate wet spray devices on all crushers and screens.

   B. Watering may be suspended during periods of freezing condition, when use of the wet spray devices may damage the equipment. During these conditions, Jasper County Quarry shall adjust the production rate to control emissions from these units. Jasper County Quarry shall record a brief description of such events.

5. Primary Equipment Requirement
   Jasper County Quarry shall process all rock through the grizzly (EP-02). Bypassing the grizzly is prohibited.

6. Record Keeping Requirement
   Jasper County Quarry 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.

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

7. Reporting Requirement
Jasper County Quarry 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: 2018-07-020
Installation ID Number: 097-0120
Permit Number: 102018-008

Jasper County Quarry:
7791 East Newman Road
Joplin, MO 64801

Complete: July 27, 2018

Parent Company:
Anchor Stone Company
4124 S. Rockford Avenue, Suite 201
Tulsa, OK 64105

Jasper County, S34 T28N R32W

PROJECT DESCRIPTION

Anchor Stone (Jasper County Quarry) submitted a permit application to (1) increase the permitted maximum hourly throughput of the plant, (2) reconcile the equipment at the plant with the equipment that was originally permitted, and (3) add new processing units to the plant. The maximum hourly throughput, which includes material that bypasses the primary crusher (via the grizzly feeder) is 350 tons per hour, which is an increase from 300 tons per hour in the current permit (012007-009). Not all of the conveyors were permitted in the current permit, therefore this permit will reflect the corrected amount from 14 conveyors/stackers to 25 conveyors and six (6) stackers which has no effect on previous permits. Also added is a TCI 2-Deck Screen, a Cedarapids 3-Deck Screen and a Cemco 80 VSI (crusher). The storage pile acreage is being increased to 8 acres. Maximum throughputs for both the pit haul road and the plant (finished product) haul road are being increased to 350 tons per hour as well as adjusting the weights to reflect the current fleet of trucks used in hauling. Processing equipment is powered with electrical power.

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.

This installation is located in Jasper 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].

TABLES

The following permits have been issued to Jasper County Quarry from the Air Pollution Control Program.

Table 1: Permit History

Permit Number	Description
0296-013	Section 5 permit issued
0798-016	Adding crusher and conveyor
1298-017	Adding new crusher
012007-009	Modification of existing plant to increase annual production

Table 2: Updated Equipment List

Emission Unit	Equipment Description	Max Hourly Design Rate (MHDR)
EP-01	Hopper Loading H1	350
EP-02	Grizzly Feeder F1	350
EP-03	Baxter Crusher CR1	350
EP-04	Conveyor C1	350
EP-05	Conveyor C2	350
EP-06	Conveyor C3	350
EP-07	Simplicity 2-Deck Screen S1	87.5
EP-08	Conveyor C4	87.5
EP-09	Stacker ST1	262.5
EP-10	Conveyor C5	262.5
EP-11	Conveyor C6	262.5
EP-12	Cedarapids Cone CR2	262.5
EP-13	Conveyor C7	262.5
EP-14	Conveyor C8	362.5
EP-15	Cedarapids 3-Deck Screen S2	362.5
EP-16	Conveyor C9	100
EP-17	Conveyor C10	100
EP-18	Raptor Cone CR-3	100
EP-19	Conveyor C11	100
EP-20	Conveyor C12	100
EP-21	Conveyor C13	70
EP-22	Conveyor C14	100
EP-23	Stacker ST2	100
EP-24	Conveyor C15 TCI, 2012)	100
EP-25	TCI 2-Deck Screen S3 (recently added)	100
EP-26	Conveyor C16	50
EP-27	Conveyor C17	50
EP-28	Conveyor C18	35
EP-29	Stacker ST3	35
EP-30	Stacker ST4	157.5
EP-31	Cedarapids 3-Deck Screen S4 (recently added)	236.25
EP-32	Conveyor C19 (PEC, 2008)	78.75
EP-33	Conveyor C20 (PEC, 2008)	78.75

EP-34	Stacker ST5	78.75
EP-35	Stacker ST6	78.75
EP-36	Conveyor C21 (Masaba, 2008)	78.75
EP-37	Cemco 80 VSI CR4 (recently added)	78.75
EP-38	Conveyor C22 (Cemco, 2012)	78.75
EP-39	Conveyor C23 (Shopbuilt, 2000)	78.75
EP-40	Conveyor C24 (Excel, 2000)	78.75
EP-41	Backfeed Hopper Loading BH1	30
EP-42	Bin Conveyor	30
EP-43a	Storage Piles Load in	350
EP-43b	Storage Pile Load out	350
EP-43c	Vehicular Activity	2.21 VMT/hr
EP-43d	Wind Erosion	8 Acres
EP-44	Pit Haul Road	4.18 VMT/hr
EP-45	Finished Product Haul Road	6.84 VMT/hr

The past actual emissions for the plant were obtained from the Monthly PM_{10} Emissions Tracking Record for the plant that was required by the existing permit (012007-009). The tracking sheet for the most recent five years was provided by Anchor Stone Company in this permit application. The 24-month period from January 2013 to December 2014 was chosen for the determination of past actual emissions because it represents the highest production period. The total PM_{10} emissions from the chosen time period were 21.45 tons. The average one-year emission rate for this time period is 10.73 tons per year. Only the past actual emission rate for PM_{10} was determined.

The table below summarizes the emissions of this project. The potential emissions of the process equipment exclude emissions from haul roads and wind erosion. The existing actual emissions were taken 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 a voluntary annual PM_{10} emission limit of 25.73 tons per year. The project was limited to a 15 tpy increase over baseline actual emissions (10.73 tpy) in order to avoid refined modeling.

Table 3: Emissions Summary (tons per year)

Air Pollutant	De Minimis Level/SMAL	[a]Potential Emissions of Process Equipment	Existing Actual Emissions (2017 EIQ)	[b]Potential Emissions of the Application	[c]Conditioned Potential Emissions
PM	25.0	17.98	N/D	182.41	66.47
PM_{10}	15.0	7.50	6.95	70.61	<25.73
$PM_{2.5}$	10.0	0.79	1.18	12.88	4.69
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; N/D = Not Determined
[a]Excludes haul road and storage pile emissions
[b]Includes haul road and storage pile emissions
[c]The existing actual average over a two period from January 2013 to December 2014 is 10.73 tons per year of PM_{10}. The conditioned PTE will be 10.73+15.0=25.73 tpy for PM_{10}.

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 the equipment is controlled 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 controlled emission factors were used because the equipment is controlled by water spray devices.

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 PM_{10} 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 less than 1.5% by weight.
- Emissions from wind erosion of storage piles were calculated using an equation found in the Air Pollution Control Program's Emissions Inventory Questionnaire Form 2.8 "Storage Pile Worksheet."

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. The conditioned potential emissions include emissions from sources that will limit their production to ensure compliance with the annual PM_{10} emission limit of 15.0 tons per year for plants in order to avoid refined

modeling according to 10 CSR 10-6.060 (6)(B)3. Potential emissions of PM are above de minimis but below major source levels. There are no modeling requirements for PM. PM_{10} and all other pollutants are conditioned under de minimis.

APPLICABLE REQUIREMENTS

Jasper County Quarry 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.

- *Submission of Emission Data, Emission Fees and Process Information,* 10 CSR 10-6.110.
- An Operating Permit is not required because all emissions from the facility are fugitive and therefore not counted toward Operating Permit applicability.
- *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 July 5, 2018, received July 11, 2018, designating Anchor Stone Company as the owner and operator of the installation.

Attachment A: PM_{10} Compliance Tracking Sheet

Jasper County Quarry 097-0120
Project Number: 2018-07-020
Permit Number: 102018-008

Site Name: Jasper County Quarry-Anchor Stone
Site Address: 7791 East Newman Road, Joplin, MO 64801
Site County: Jasper
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 Total Emissions[4] (tons)
Example	*75,000*	*0.0461*	*3,457.5*		*1.7*	*1.7+ 11 previous months*
		0.0461				
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[1]Multiply the monthly production by the PM_{10} composite emission factor.
[2]As reported to the Air Pollution Control Program's Compliance/Enforcement Section according to the provisions of 10 CSR 10-6.050 for the month.
[3]Add the monthly PM_{10} emissions plus the SSM emissions from the same time period and divide by 2000 and
[4]Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months. A total of less than 25.73 tons of PM_{10} per consecutive 12 months is necessary for compliance

Attachment AA: Best Management Practices

Haul roads and vehicular activity areas shall be maintained in accordance with at least one of the following options when the 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 rational for not watering (e.g. freezing conditions or not operating).
   - E. The operator shall keep these records with the plant for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.

APPENDIX A

Abbreviations and Acronyms

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

OCT 1 0 2018

Mr. Bobby Beams
Environmental and Safety Manager
Jasper County Quarry
4124 S. Rockford Avenue, Suite 201
Tulsa, OK 74105

RE: New Source Review Permit Number:
Project Number: 2018-07-020; Installation Number: 097-0120

Dear Mr. Beams:

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 Jasper County Quarry 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 Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions, 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: Southwest Regional Office
PAMS File: 2018-07-020

Permit Number: 102018-008

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	12.0
Days per year	266.0
Hours per year	3192.0

For Multiple Plant Operation

Hours per day	12.0
Days per year	266.0
Hours per year	3192.0

Pollutant	Justification for Limit
PM10	De Minimis

Pollutant	Potential Emissions of Process Equipment (tons/yr)	Potential Emissions including fugitives (tons/yr)	Allowable Emissions for 3192 hours per year (tons/yr)	Deminimis Thresholds	Plant-wide Composite Emission Factor (lb/ton)
PM	17.98	182.41	66.47	25	0.1190
PM_{10}	7.50	70.61	25.73	15	0.0461
$PM_{2.5}$	0.79	12.88	4.69	10	0.0084
SO_2	-	-	-	40	0.0000
NO_2	-	-	-	40	0.0000
VOC	-	-	-	40	0.0000
CO	-	-	-	100	0.0000
CH_2O	-	-	-	2.00	0.0000
Pb	-	-	-	0.01	0.0000
HAPs	-	-	-	10	0.0000
CO_2	-	-	-	100	0.0000
N_2O	-	-	-	100	0.0000
CH_4	-	-	-	100	0.0000
GHG_{mass}	-	-	-	100	0.0000
CO_2eq	-	-	-	100,000	0.0000

Maximum hourly design rate (tons/hr)	350

Tons of product per day	4,200.0
Tons of product per year	1,117,200.0

Limit Hours per Year

Limit Hours per Year w/ 24 hr day

General Plant Information

Primary Unit Size (tons per hour)	350

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 Information

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

Storage Pile Information

Storage Pile ID No.	Pile #1	Pile #2	Pile #3	Pile #4
Maximum Area of Storage Pile (Acres)	8			
Type of Material Stored:	Crushed limestone			
Moisture Content %:	0.7			
Silt Content %:	1.6			
Method of Load In to Storage Pile	Truck			
Method of Load Out from Storage Pile	Loader			
Distance Loader Travels (feet)	150			
Unloaded Loader Weight (tons)	35.00			
Loaded Loader Weight (tons)	44.00			
Rate (tons/hour)	350.00			
max VMT per hour	2.2096			
Surface Treatment	Unpaved			
Vehicular Area Control	Documented Watering			

Haul Road Information

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 value entered. *Note:* Twice this distance is used, one trip in and one out.	1575	825				
Unloaded Truck Weight (tons)	109.5	12				
Loaded Truck Weight (tons)	159.5	28				
Rate Hauled (tons/hour)	350	350				
max VMT per hour	4.1761	6.8359				
Surface Treatment	Unpaved	Unpaved				
Haul Road Control	Documented Watering	Documented Watering				

Engine Set Information

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

Combustion Sources

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

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

Enter Emission Unit information Below

Equipment Operational Status	Emission Unit Number	Description of Unit	Equipment/SCC Description	Equip Type	Max Hourly ThroughPut (MHTP)	MHTP Units	Control Type	"OOO" Applicable
E	EP-01	Hopper Loading H1	Truck Unloading - Fragmented Stone EF 30502031	Fugitive	350.0000	Tons		
E	EP-02	Grizzly Feeder F1	Grizzly Feeder 30502031	Fugitive	350.0000	Tons		
E	EP-03	Baxter Jaw Crusher CR1	Crusher-Primary, (Diameter 3-12") 30502001	Process	300.0000	Tons	Wet Spray Devices	
E	EP-04	Conveyor C1	Conveyor 30502006	Process	350.0000	Tons	Wet Spray Devices	
E	EP-05	Conveyor C2	Conveyor 30502006	Process	350.0000	Tons	Wet Spray Devices	
E	EP-06	Conveyor C3	Conveyor 30502006	Process	350.0000	Tons	Wet Spray Devices	
E	EP-07	Simplicity 2-Deck Screen S1	Screens, (3/16" or Greater) 30502002	Process	350.0000	Tons	Wet Spray Devices	
E	EP-08	Conveyor C4	Conveyor 30502006	Process	87.5000	Tons	Wet Spray Devices	
N	EP-09	Stacker ST1	Conveyor 30502006	Process	87.5000	Tons	Wet Spray Devices	
E	EP-10	Conveyor C5	Conveyor 30502006	Process	262.5000	Tons	Wet Spray Devices	
E	EP-11	Conveyor C6	Conveyor 30502006	Process	262.5000	Tons	Wet Spray Devices	
E	EP-12	Cedarapids Cone CR2	Crusher-Secondary, (Diameter 1-4") 30502002	Process	262.5000	Tons	Wet Spray Devices	
E	EP-13	Conveyor C7	Conveyor 30502006	Process	262.5000	Tons	Wet Spray Devices	
E	EP-14	Conveyor C8	Conveyor 30502006	Process	362.5000	Tons	Wet Spray Devices	
E	EP-15	Cedarapids 3-Deck Screen S2	Screens, (3/16" or Greater) 30502002	Process	362.5000	Tons	Wet Spray Devices	
E	EP-16	Conveyor C9	Conveyor 30502006	Process	100.0000	Tons	Wet Spray Devices	
E	EP-17	Conveyor C10	Conveyor 30502006	Process	100.0000	Tons	Wet Spray Devices	
E	EP-18	Raptor Cone CR3	Crusher-Secondary, (Diameter 1-4") 30502002	Process	100.0000	Tons	Wet Spray Devices	
E	EP-19	Conveyor C11	Conveyor 30502006	Process	100.0000	Tons	Wet Spray Devices	
E	EP-20	Conveyor C12	Conveyor 30502006	Process	100.0000	Tons	Wet Spray Devices	
E	EP-21	Conveyor C13	Conveyor 30502006	Process	70.0000	Tons	Wet Spray Devices	
E	EP-22	Conveyor C14	Conveyor 30502006	Process	100.0000	Tons	Wet Spray Devices	
N	EP-23	Stacker ST2	Conveyor 30502006	Process	100.0000	Tons	Wet Spray Devices	
N	EP-24	Conveyor C15 (TCI, 2012)	Conveyor 30502006	Process	100.0000	Tons	Wet Spray Devices	
N	EP-25	TCI 2-Deck Screen S3	Screens, (3/16" or Greater) 30502002	Process	100.0000	Tons	Wet Spray Devices	
N	EP-26	Conveyor C16	Conveyor 30502006	Process	50.0000	Tons	Wet Spray Devices	
N	EP-27	Conveyor C17	Conveyor 30502006	Process	50.0000	Tons	Wet Spray Devices	
N	EP-28	Conveyor C18	Conveyor 30502006	Process	35.0000	Tons	Wet Spray Devices	
N	EP-29	Stacker ST3	Conveyor 30502006	Process	35.0000	Tons	Wet Spray Devices	
N	EP-30	Stacker ST4	Conveyor 30502006	Process	157.5000	Tons	Wet Spray Devices	
N	EP-31	Cedarapids 3-Deck Screen S4	Screens-Fines, (< 3/16") 30502021	Process	236.2500	Tons	Wet Spray Devices	
N	EP-32	Conveyor C19 (PEC, 2008)	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
N	EP-33	Conveyor C20 (PEC, 2008)	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
N	EP-34	Stacker ST5	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
N	EP-35	Stacker ST6	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
N	EP-36	Conveyor C21 (Masaba, 2008)	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
N	EP-37	Cemco 80 VSI CR4	Crusher-Tertiary, (Diameter 3/16-1") 30502003	Process	78.7500	Tons	Wet Spray Devices	
N	EP-38	Conveyor C22 (Cemco, 2012)	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
N	EP-39	Conveyor C23 (Shopbuilt, 2000)	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
N	EP-40	Conveyor C24 (Excel, 2000)	Conveyor 30502006	Process	78.7500	Tons	Wet Spray Devices	
E	EP-41	Backfeed Hopper Loading BH1	Truck Unloading - Fragmented Stone EF 30502031	Fugitive	30.0000	Tons	Wet Spray Devices	
E	EP-42	Bin Conveyor	Conveyor 30502006	Process	30.0000	Tons	Wet Spray Devices	

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)
		EngSet #1			bhp			N/A	N/A	PM		mmBtu			
					gallons per hour			N/A	N/A	PM_{10}		mmBtu			
		Model Year			MMBtu/hour			N/A	N/A	$PM_{2.5}$		mmBtu			
					kW-hr			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_2O		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO_2		mmBtu			
								N/A	N/A	N_2O		mmBtu			
								N/A	N/A	GHG_{mass}		mmBtu			
								N/A	N/A	CH_4		mmBtu			
		EngSet #2			bhp			N/A	N/A	PM		mmBtu			
					gallons per hour			N/A	N/A	PM_{10}		mmBtu			
		Model Year			MMBtu/hour			N/A	N/A	$PM_{2.5}$		mmBtu			
					kW-hr			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_2O		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO_2		mmBtu			
								N/A	N/A	N_2O		mmBtu			
								N/A	N/A	GHG_{mass}		mmBtu			
								N/A	N/A	CH_4		mmBtu			
		EngSet #3			bhp			N/A	N/A	PM		mmBtu			
					gallons per hour			N/A	N/A	PM_{10}		mmBtu			
		Model Year			MMBtu/hour			N/A	N/A	$PM_{2.5}$		mmBtu			
					kW-hr			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_2O		mmBtu			
								N/A	N/A	HAPs		mmBtu			
								N/A	N/A	CO_2		mmBtu			
								N/A	N/A	N_2O		mmBtu			
								N/A	N/A	GHG_{mass}		mmBtu			
								N/A	N/A	CH_4		mmBtu			
		Pile #1													
	EP-43a	Load in		350.00	tons per hour			N/A	N/A	PM	0.0254	ton	8.87E+00	38.87	14.16
								N/A	N/A	PM_{10}	0.0120	ton	4.20E+00	18.38	6.70
								N/A	N/A	$PM_{2.5}$	0.0018	ton	6.36E-01	2.78	1.01
	EP-43b	Load out		350.00	tons per hour			N/A	N/A	PM	0.0254	ton	8.87E+00	38.87	14.16
								N/A	N/A	PM_{10}	0.0120	ton	4.20E+00	18.38	6.70
								N/A	N/A	$PM_{2.5}$	0.0018	ton	6.36E-01	2.78	1.01
	EP-43c	Vehicular Activity		2.21	VMT per hour		Unpaved, Documented Watering	N/A	90%	PM	12.0760	VMT	2.67E+00	11.69	4.26
								N/A	90%	PM_{10}	3.4337	VMT	7.59E-01	3.32	1.21
								N/A	74%	$PM_{2.5}$	0.3434	VMT	1.97E-01	0.86	0.31
	EP-43d	Wind Erosion		8.00	acres			N/A	N/A	PM	0.1783	acre-hr	1.43E+00	6.25	2.28
								N/A	N/A	PM_{10}	0.0892	acre-hr	7.13E-01	3.12	1.14
								N/A	N/A	$PM_{2.5}$	0.0134	acre-hr	1.07E-01	0.47	0.17
		Pile #2													
		Load in			tons per hour			N/A	N/A	PM		ton			
								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													
		Load in			tons per hour			N/A	N/A	PM		ton			
								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													
		Load in			tons per hour			N/A	N/A	PM		ton			
								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 (lbs/UoM)	Emission Rate (lb/hr)	Potential Emissions (tons/yr)	Allowable Emissions (tons/yr)
	EP-44	Road #1		4.18	VMT per hour		Unpaved, Documented Watering	N/A	90%	PM	20.9577	VMT	8.75E+00	38.33	13.97
								N/A	90%	PM_{10}	5.9596	VMT	2.49E+00	10.90	3.97
								N/A	74%	$PM_{2.5}$	0.5950	VMT	6.47E-01	2.83	1.03
	EP-45	Road #2		6.84	VMT per hour		Unpaved, Documented Watering	N/A	90%	PM	10.1281	VMT	6.92E+00	30.32	11.05
								N/A	90%	PM_{10}	2.9894	VMT	2.04E+00	8.95	3.26
								N/A	74%	$PM_{2.5}$	0.2989	VMT	5.31E-01	2.33	0.85
		Road #3			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Road #4			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Road #5			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			
		Road #6			VMT per hour			N/A	N/A	PM		VMT			
								N/A	N/A	PM_{10}		VMT			
								N/A	N/A	$PM_{2.5}$		VMT			

Equipment	Unit ID	Description of Unit	Equipment Description/SCC	Heat Rate	UoM per hour						Emission Factor (lbs/UoM)			
		Combustion #1		mmBtu				100%	N/A	PM		mgal		
				mgal				100%	N/A	PM_{10}		mgal		
				mmscf				100%	N/A	$PM_{2.5}$		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_2O		mgal		
								100%	N/A	Pb		mgal		
								100%	N/A	HAPs		mgal		
								100%	N/A	CO_2		mgal		
								100%	N/A	N_2O		mgal		
								100%	N/A	GHG_{mass}		mgal		
								100%	N/A	CH_4		mgal		
		Combustion #2		mmBtu				100%	N/A	PM		mgal		
				mgal				100%	N/A	PM_{10}		mgal		
				mmscf				100%	N/A	$PM_{2.5}$		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_2O		mgal		
								100%	N/A	Pb		mgal		
								100%	N/A	HAPs		mgal		
								100%	N/A	CO_2		mgal		
								100%	N/A	N_2O		mgal		
								100%	N/A	GHG_{mass}		mgal		
								100%	N/A	CH_4		mgal		
		Combustion #3		mmBtu				100%	N/A	PM		mgal		
				mgal				100%	N/A	PM_{10}		mgal		
				mmscf				100%	N/A	$PM_{2.5}$		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_2O		mgal		
								100%	N/A	Pb		mgal		
								100%	N/A	HAPs		mgal		
								100%	N/A	CO_2		mgal		
								100%	N/A	N_2O		mgal		
								100%	N/A	GHG_{mass}		mgal		
								100%	N/A	CH_4		mgal		

Equipment Operational Status	Emission Unit Number	Description of Unit	Equipment/SCC Description	MHTP	Units	Equip Type	Control Type					Emission Factor (lbs/UoM)			
E	EP-01	Hopper Loading H1	Truck Unloading - Fragmented Stone EF 30502031	350.00	Tons	Fugitive		100%	0.00%	PM	0.000032	Tons	1.12E-02	4.91E-02	1.79E-02
						Fugitive		100%	0.00%	PM_{10}	0.000016	Tons	5.60E-03	2.45E-02	8.94E-03
						Fugitive		100%	0.00%	$PM_{2.5}$	0.000008	Tons	2.80E-03	1.23E-02	4.47E-03
E	EP-02	Grizzly Feeder F1	Grizzly Feeder 30502031	350.00	Tons	Fugitive		100%	0.00%	PM	0.000032	Tons	1.12E-02	4.91E-02	1.79E-02
						Fugitive		100%	0.00%	PM_{10}	0.000016	Tons	5.60E-03	2.45E-02	8.94E-03
						Fugitive		100%	0.00%	$PM_{2.5}$	0.000008	Tons	2.80E-03	1.23E-02	4.47E-03
E	EP-03	Baxter Jaw Crusher CR1	Crusher-Primary, (Diameter 3-12") 30502001	300.00	Tons	Process	Wet Spray Devices	100%	77.78%	PM	0.0054	Tons	3.60E-01	1.58E+00	5.75E-01
						Process		100%	77.50%	PM_{10}	0.0024	Tons	1.62E-01	7.10E-01	2.59E-01
						Process		100%	77.50%	$PM_{2.5}$	0.000444444	Tons	3.00E-02	1.31E-01	4.79E-02
E	EP-04	Conveyor C1	Conveyor 30502006	350.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	4.90E-02	2.15E-01	7.82E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.81E-02	7.05E-02	2.57E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	4.55E-03	1.99E-02	7.26E-03
E	EP-05	Conveyor C2	Conveyor 30502006	350.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	4.90E-02	2.15E-01	7.82E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.81E-02	7.05E-02	2.57E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	4.55E-03	1.99E-02	7.26E-03
E	EP-06	Conveyor C3	Conveyor 30502006	350.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	4.90E-02	2.15E-01	7.82E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.81E-02	7.05E-02	2.57E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	4.55E-03	1.99E-02	7.26E-03
E	EP-07	Simplicity 2-Deck Screen S1	Screens, (3/16" or Greater) 30502002	350.00	Tons	Process	Wet Spray Devices	100%	91.20%	PM	0.025	Tons	7.70E-01	3.37E+00	1.23E+00
						Process		100%	91.49%	PM_{10}	0.0087	Tons	2.69E-01	1.13E+00	4.13E-01
						Process		100%	91.49%	$PM_{2.5}$	0.000587838	Tons	1.75E-02	7.67E-02	2.79E-02
E	EP-08	Conveyor C4	Conveyor 30502006	87.50	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.23E-02	5.37E-02	1.96E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.03E-03	1.76E-02	6.42E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.14E-03	4.98E-03	1.82E-03

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)
N	EP-09	Stacker ST1	Conveyor 30502006	87.50	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.23E-02	5.37E-02	1.98E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.03E-03	1.76E-02	6.42E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.14E-03	4.98E-03	1.82E-03
E	EP-10	Conveyor C5	Conveyor 30502006	262.50	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	3.68E-02	1.61E-01	5.87E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.21E-02	5.29E-02	1.93E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	3.41E-03	1.49E-02	5.45E-03
E	EP-11	Conveyor C6	Conveyor 30502006	262.50	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	3.68E-02	1.61E-01	5.87E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.21E-02	5.29E-02	1.93E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	3.41E-03	1.49E-02	5.45E-03
E	EP-12	Cedarapids Cone CR2	Crusher-Secondary, (Diameter 1-4") 30502002	262.50	Tons	Process	Wet Spray Devices	100%	77.78%	PM	0.0054	Tons	3.15E-01	1.38E+00	5.03E-01
						Process		100%	77.50%	PM_{10}	0.0024	Tons	1.42E-01	6.21E-01	2.26E-01
						Process		100%	77.50%	$PM_{2.5}$	0.000444444	Tons	2.63E-02	1.15E-01	4.19E-02
E	EP-13	Conveyor C7	Conveyor 30502006	262.50	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	3.68E-02	1.61E-01	5.87E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.21E-02	5.29E-02	1.93E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	3.41E-03	1.49E-02	5.45E-03
E	EP-14	Conveyor C8	Conveyor 30502006	362.50	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	5.08E-02	2.22E-01	8.10E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.67E-02	7.30E-02	2.66E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	4.71E-03	2.06E-02	7.52E-03
E	EP-15	Cedarapids 3-Deck Screen S2	Screens, (3/16" or Greater) 30502002	362.50	Tons	Process	Wet Spray Devices	100%	91.20%	PM	0.025	Tons	7.58E-01	3.49E+00	1.27E+00
						Process		100%	91.49%	PM_{10}	0.0087	Tons	2.68E-01	1.17E+00	4.28E-01
						Process		100%	91.49%	$PM_{2.5}$	0.000587838	Tons	1.81E-02	7.94E-02	2.89E-02
E	EP-16	Conveyor C9	Conveyor 30502006	100.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.40E-02	6.13E-02	2.23E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.60E-03	2.01E-02	7.34E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.30E-03	5.69E-03	2.07E-03
E	EP-17	Conveyor C10	Conveyor 30502006	100.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.40E-02	6.13E-02	2.23E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.60E-03	2.01E-02	7.34E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.30E-03	5.69E-03	2.07E-03
E	EP-18	Raptor Cone CR3	Crusher-Secondary, (Diameter 1-4") 30502002	100.00	Tons	Process	Wet Spray Devices	100%	77.78%	PM	0.0054	Tons	1.20E-01	5.26E-01	1.92E-01
						Process		100%	77.50%	PM_{10}	0.0024	Tons	5.40E-02	2.37E-01	8.62E-02
						Process		100%	77.50%	$PM_{2.5}$	0.000444444	Tons	1.00E-02	4.38E-02	1.60E-02
E	EP-19	Conveyor C11	Conveyor 30502006	100.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.40E-02	6.13E-02	2.23E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.60E-03	2.01E-02	7.34E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.30E-03	5.69E-03	2.07E-03
E	EP-20	Conveyor C12	Conveyor 30502006	100.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.40E-02	6.13E-02	2.23E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.60E-03	2.01E-02	7.34E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.30E-03	5.69E-03	2.07E-03
E	EP-21	Conveyor C13	Conveyor 30502006	70.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	9.80E-03	4.29E-02	1.56E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.22E-03	1.41E-02	5.14E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	9.10E-04	3.99E-03	1.45E-03
E	EP-22	Conveyor C14	Conveyor 30502006	100.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.40E-02	6.13E-02	2.23E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.60E-03	2.01E-02	7.34E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.30E-03	5.69E-03	2.07E-03
N	EP-23	Stacker ST2	Conveyor 30502006	100.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.40E-02	6.13E-02	2.23E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.60E-03	2.01E-02	7.34E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.30E-03	5.69E-03	2.07E-03
N	EP-24	Conveyor C15 (TCI, 2012)	Conveyor 30502006	100.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.40E-02	6.13E-02	2.23E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	4.60E-03	2.01E-02	7.34E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.30E-03	5.69E-03	2.07E-03
N	EP-25	TCI 2-Deck Screen S3	Screens, (3/16" or Greater) 30502002	100.00	Tons	Process	Wet Spray Devices	100%	91.20%	PM	0.025	Tons	2.20E-01	9.64E-01	3.51E-01
						Process		100%	91.49%	PM_{10}	0.0087	Tons	7.40E-02	3.24E-01	1.18E-01
						Process		100%	91.49%	$PM_{2.5}$	0.000587838	Tons	5.00E-03	2.19E-02	7.98E-03
N	EP-26	Conveyor C16	Conveyor 30502006	50.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	7.00E-03	3.07E-02	1.12E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	2.30E-03	1.01E-02	3.67E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	6.50E-04	2.85E-03	1.04E-03
N	EP-27	Conveyor C17	Conveyor 30502006	50.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	7.00E-03	3.07E-02	1.12E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	2.30E-03	1.01E-02	3.67E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	6.50E-04	2.85E-03	1.04E-03
N	EP-28	Conveyor C18	Conveyor 30502006	35.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	4.90E-03	2.15E-02	7.82E-03
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.61E-03	7.05E-03	2.57E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	4.55E-04	1.99E-03	7.26E-04
N	EP-29	Stacker ST3	Conveyor 30502006	35.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	4.90E-03	2.15E-02	7.82E-03
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.61E-03	7.05E-03	2.57E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	4.55E-04	1.99E-03	7.26E-04
N	EP-30	Stacker ST4	Conveyor 30502006	157.50	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	2.21E-02	9.68E-02	3.52E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	7.25E-03	3.17E-02	1.16E-02
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	2.05E-03	8.97E-03	3.27E-03
N	EP-31	Cedarapids 3-Deck Screen S4	Screens-Fines, (< 3/16") 30502021	236.25	Tons	Process	Wet Spray Devices	100%	98.80%	PM	0.3	Tons	8.51E-01	3.73E+00	1.36E+00
						Process		100%	98.94%	PM_{10}	0.072	Tons	5.20E-01	2.28E+00	8.30E-01
						Process		100%	98.94%	$PM_{2.5}$	0.001636364	Tons	1.18E-02	5.17E-02	1.89E-02
N	EP-32	Conveyor C19 (PEC, 2008)	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03
N	EP-33	Conveyor C20 (PEC, 2008)	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03
N	EP-34	Stacker ST5	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03
N	EP-35	Stacker ST6	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03
N	EP-36	Conveyor C21 (Masaba, 2008)	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03
N	EP-37	Conveyor C23 (Shopbuilt, 2000)	Crusher-Tertiary, (Diameter 3/16-1") 30502003	78.75	Tons	Process	Wet Spray Devices	100%	77.78%	PM	0.0054	Tons	9.45E-02	4.14E-01	1.51E-01
						Process		100%	77.50%	PM_{10}	0.0024	Tons	4.25E-02	1.86E-01	6.79E-02
						Process		100%	77.50%	$PM_{2.5}$	0.000444444	Tons	7.88E-03	3.45E-02	1.26E-02
N	EP-38	Conveyor C22 (Cemco, 2012)	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03

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)
N	EP-39	Conveyor C23 (Shopbuilt, 2000)	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03
N	EP-40	Conveyor C24 (Excel, 2000)	Conveyor 30502006	78.75	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	1.10E-02	4.83E-02	1.76E-02
						Process		100%	95.82%	PM_{10}	0.0011	Tons	3.62E-03	1.59E-02	5.78E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	1.02E-03	4.48E-03	1.63E-03
E	EP-41	Backfeed Hopper Loading BH1	Truck Unloading - Fragmented Stone EF 30502031	30.00	Tons	Fugitive	Wet Spray Devices	100%	0.00%	PM	0.000032	Tons	9.60E-04	4.20E-03	1.53E-03
						Fugitive		100%	0.00%	PM_{10}	0.000016	Tons	4.80E-04	2.10E-03	7.66E-04
						Fugitive		100%	0.00%	$PM_{2.5}$	0.000008	Tons	2.40E-04	1.05E-03	3.83E-04
E	EP-42	Bin Conveyor	Conveyor 30502006	30.00	Tons	Process	Wet Spray Devices	100%	95.33%	PM	0.003	Tons	4.20E-03	1.84E-02	6.70E-03
						Process		100%	95.82%	PM_{10}	0.0011	Tons	1.38E-03	6.04E-03	2.20E-03
						Process		100%	95.82%	$PM_{2.5}$	0.00031087	Tons	3.90E-04	1.71E-03	6.22E-04