April 24, 2020

Jennifer Breuer
Vice President Quality & Materials
Superior Bowen Asphalt Co., LLC
520 W. Pennway Street
Kansas City, MO 64108

RE: New Source Review Permit - Project Number: 2020-01-034

Dear Jennifer Breuer:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions and your new source review permit application are necessary for continued compliance. In addition, please note that Superior Bowen Asphalt Co., LLC 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.

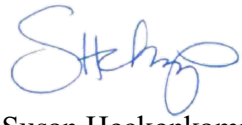
If you were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date 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 regarding this permit, please do not hesitate to contact Rick 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:kka

Enclosures

c: Kansas City Regional Office
PAMS File: 2020-01-034

Permit Number: 042020-009

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: 042020-009

Project Number: 2020-01-034
Installation ID: 095-0089

Parent Company: Superior Bowen Asphalt Co., LLC

Parent Company Address: 520 W. Pennway Street, Kansas City, MO 64108

Installation Name: Superior Bowen Asphalt Co., LLC

Installation Address: 2250 Quarry Park Road, Lee's Summit, MO 64081

Location Information: Jackson County, S35 T483N R32W

Application for Authority to Construct was made for:
New Stationary Asphalt Plant. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

☐ Standard Conditions (on reverse) are applicable to this permit.

☐ Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

Randall B. Hale

Director or Designee
Department of Natural Resources

April 24, 2020
Effective Date

STANDARD CONDITIONS:

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

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

You must notify the Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant 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 (3)(E). "Conditions required by permitting authority."

1. Best Management Practices Requirement
   Superior Bowen Asphalt Co., LLC 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. Superior Bowen Asphalt Co., LLC shall emit less than 15.0 tons of PM_{10} in any 12-month period from the entire installation which consists of the equipment listed in Table 1 in the Table Section of this permit. Superior Bowen Asphalt Co., LLC shall include all SSM emissions in the record keeping for compliance with this emission limit.

   B. Superior Bowen Asphalt Co., LLC 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. Superior Bowen Asphalt Co., LLC 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 Superior Bowen Asphalt Co., LLC 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, Superior Bowen Asphalt Co., LLC 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.

G. In lieu of testing, Superior Bowen Asphalt Co., LLC may obtain test results that demonstrate compliance with the moisture content in Special Condition 3.A from the supplier of the aggregate.

4. Control Device Requirement-Baghouse

A. Superior Bowen Asphalt Co., LLC shall control emissions from the drum dryer (EP-4) using a baghouse as specified in the permit application.

B. The baghouse shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.

C. Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

D. Superior Bowen Asphalt Co., LLC shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours when the associated equipment is in operation. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

E. Superior Bowen Asphalt Co., LLC shall maintain a copy of the baghouse manufacturer's performance warranty on site.

F. Superior Bowen Asphalt Co., LLC shall maintain an operating and maintenance log for the baghouse which shall include the following:

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

1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

5. Fuel Requirement-Drum Dryer
   A. Superior Bowen Asphalt Co., LLC shall burn exclusively natural gas in their drum dryer (EP-4).
   B. Superior Bowen Asphalt Co., LLC shall burn exclusively natural gas in their asphalt heater (EP-7).
   C. Superior Bowen Asphalt Co., LLC shall keep the records from the natural gas provider verifying it's usage with the unit and make them available for Department of Natural Resources' employees upon request.

6. Record Keeping Requirement
   Superior Bowen Asphalt Co., LLC 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.

7. Reporting Requirement
   Superior Bowen Asphalt Co., LLC 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 (5) REVIEW
Project Number: 2020-01-034
Installation ID Number: 095-0089
Permit Number: 042020-009

Superior Bowen Asphalt Co., LLC:
2250 Quarry Park Road
Lee's Summit, MO 64081

Complete: March 10, 2020

Parent Company:
Superior Bowen Asphalt Co., LLC
520 W. Pennway Street
Kansas City, MO 64108

Jackson County, S35 T483N R32W

PROJECT DESCRIPTION

Superior Bowen Asphalt Co., LLC is replacing its permitted asphalt plant that was rated at 350 tons per hour with a Cedarapids, Model E500SL, manufactured in 2001. The MHDR is rated at 500 tons per hour. The drum burner is rated at 126.6 MMBTU/hr. The baghouse is a Magnum 33 manufactured in 2001. The asphalt cementer heater is rated at 2.82 MMBTU/hr. Both the burner and heater use natural gas as their fuel. A portable RAP crusher will also be present at this site (Permit # 072011-006/Project #2010-12-032).

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 Jackson County but outside of the designated area for the 2010 SO_2 Standard; it is located in the attainment/unclassifiable area for all other criteria pollutants.

This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. Fugitive emissions are counted toward major source applicability. However, Category 27 does not apply to the 100 tons per year major source level thresholds. Therefore, the major source threshold for this asphalt plant is 250 tons per year.

TABLES

Table 1: Project Equipment List

Emission Unit	Equipment Description	MHDR
EP-1	Aggregate/Sand Bins	460 tph
EP-2	Aggregate handling conveyor (4)	1,840 tph
EP-3	Vibrating Screen	460 tph
EP-4	Drum Dryer (natural gas 126.6 MMBTU/hr) Cedarapids Model E500SL	500 tph
EP-5	Plant Loadout	500 tph
EP-6	Silo Loading	500 tph
EP-7	Asphalt Heater (natural gas)	2.82 MMBTU/hr
EP-8a	Storage Pile (Aggregate) Load in	160 tph
EP-8b	Load out	160 tph
EP-8c	Vehicular Activity	0.66 VMT/hr
EP-8d	Wind Erosion	3.0 acres
EP-9a	Storage Pile (Sand) Load in	150 tph
EP-9b	Load out	150 tph
EP-9c	Vehicular Activity	0.62 VMT/hr
EP-9d	Wind Erosion	1.5 acres
EP-10a	Storage Pile (RAP) Load in	150 tph
EP-10b	Load out	150 tph
EP-10c	Vehicular Activity	0.62 VMT/hr
EP-10d	Wind Erosion	0.3 acres
EP-11	Haul Roads (sand and aggregate) 500 feet	3.64 VMT/hr
EP-12	Haul Roads (Shipping/Finished/Sales Product) 800 feet	5.83 VMT/hr
EP-13	Haul Road (Stock Piles/Pit) 250 feet	1.82 VMT/hr

The following permits have been issued to Superior Bowen Asphalt Co., LLC (Site ID: 095-0089) from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
1292-008	Portable Asphalt Plant (Plant #8007)
032009-005	Modification to replace drum dryer
072011-006	Amend for relocation

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 previous year's 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 15.0 tons per year 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 (2019 EIQ)	[b]Potential Emissions of the Application	Conditioned Potential Emissions
PM	25.0	82.96	N/A	179.98	29.53
PM_{10}	15.0	56.90	4.43	91.43	<15.0
$PM_{2.5}$	10.0	52.81	1.10	60.10	9.86
SO_X	40.0	0.42	0.25	0.42	0.07
NO_X	40.0	152.23	2.19	152.23	24.98
VOC	40.0	132.09	3.56	132.09	21.67
CO	100.0	64.95	9.84	64.95	10.66
GHG (CO_2e)	N/A	66,480.43	N/A	66,480.43	10,906.75
GHG (mass)	N/A	66,267.09	N/A	66,267.09	10,871.75
Formaldehyde	10.0/2.0[c]	7.17	N/D	7.17	1.18
2-methylnapthalene[d]	10.0/0.01[c]	0.19	N/D	0.19	0.03
Lead Compounds	10.0/0.01[c]	1.36E-03	N/D	1.36E-03	2.24E-04
Total HAPs	25.0	12.58	N/D	12.58	2.06

N/A = Not Applicable; N/D = Not Determined (HAPs are emitted but EIQ counts them as VOCs)
[a]Excludes haul road and storage pile emissions
[b]Includes haul road and storage pile emissions
[c]SMAL
[d]2-methylnapthalene is a member of the Polycyclic Organic Matter (POM) HAP group.

Table 4 summarizes the ambient air quality impact analysis. The maximum modeled impact is the impact of each pollutant when the plant is operating continuously. The 24-hour limited impacts and daily limit are based on compliance with RAL for 2-methylnapthalene. The annual limited impacts are based on the annual PM_{10} de minimis limit.

Table 4: Ambient Air Quality Impact Analysis

Pollutant	RAL ($\mu g/m^3$)	Averaging Time	[a]Maximum Modeled Impact ($\mu g/m^3$)	Limited Impact ($\mu g/m^3$)	Background ($\mu g/m^3$)	Daily Limit (tons/day)
2-methylnapthalene	23	24-hour	0.13	N/A	N/A	N/A
2-methylnapthalene[b]	2.3	Annual	0.0035	N/A	N/A	N/A

[a]Modeled impact at maximum capacity with controls
[b]2-methylnapthalene is a member of the polycyclic organic matter (POM) HAP group.

The plant's drum dryer (EP-4) was modeled using the AERSCREEN screen modeling software. The stack characteristic entered into the modeled are listed in Table 5.

Table 5: AERSCREEN Input Parameters

Equipment Description	Stack Height (m)	Stack Inside Diameter[a] (m)	Stack Gas Exit Velocity (m/s)	Stack Gas Exit Temperature (K)	Dispersion Coefficient
Drum Dryer	8.64	1.38	22.81	416.48	Rural

[a] Rectangular stack (42" x 59") converted to 54" (4.4 feet) equivalent diameter

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 drum mix asphalt plant:

- Calculated using emission factors from AP-42 Section 11.1 "Hot Mix Asphalt Plants," April 2004.
- SO_X emissions were calculated using the SO_2 and SO_3 emission factors from AP-42 Section 1.4 "Natural Gas Combustion," July 1998 and assuming half of the sulfur up to 0.1 pound per ton of product is absorbed into the product.
- The asphalt plant is controlled by a baghouse, so the fabric filter controlled emission factor was used to calculate PM_{10} emissions.
- Emissions from plant load-out were calculated using predictive equations found in AP-42 Table 11.1-14. Default values were used for asphalt volatility and mix temperature.

Emissions from the asphalt heater:

- Calculated using emission factors from AP-42 Section 1.4.

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 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 "Aggregate Handling and Storage Piles," November 2006.
- The moisture content of the aggregate is greater 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 (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM_{10} are conditioned to de minimis levels. Potential emissions of PM are above de minimis levels, but below major levels. All other criteria pollutants are below de minimis.

APPLICABLE REQUIREMENTS

Superior Bowen Asphalt Co., LLC 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.

- No Operating Permit is required for this installation.

- *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 I, "Standards of Performance for Hot Mix Asphalt Facilities" 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.

- *Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261. The use of natural gas as the fuel meets the exception in this rule and is required to do record keeping with section (4) of the rule.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated January 24, 2020, received January 27, 2020, designating Superior Bowen Asphalt Co., LLC as the owner and operator of the installation.

Attachment A: Annual PM_{10} Emissions Tracking Sheet

Superior Bowen Asphalt Co., LLC

Project Number: 2020-01-034

Permit Number: 042020-009

Site Address: 2250 Quarry Park Road, Lee's Summit, MO 64081
Site County: Jackson
This sheet covers the period from ___________________ to ___________________ (Copy as needed)
(Month, Day Year) (Month, Day Year)

Month	Production (tons)	Emission Factor (lb/ton)	Monthly Emissions[1] (lbs)	Monthly Emissions[2] (tons)	12-Month Total Emissions[3] (tons)
Example	*60,000*	*0.0417*	*2,502*	*1.25*	*1.25 + 11 previous months*
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- [1]Multiply the monthly production by the emission factor.
- [2]Divide the monthly emissions (lbs) by 2000.
- [3]Add the monthly emissions (tons) to the sum of the monthly emissions from the previous eleven months and add SSM emission from the same 12 month period as reported to the Air Pollution Control Program in accordance with 10 CSR 10-6.050. A total of less than 15.0 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
ºF ..... degrees Fahrenheit
acfm ..... actual cubic feet per minute
BACT..... Best Available Control Technology
BMPs ..... Best Management Practices
Btu..... British thermal unit
CAM ..... Compliance Assurance Monitoring
CAS..... Chemical Abstracts Service
CEMS ..... Continuous Emission Monitor System
CFR..... Code of Federal Regulations
CO..... carbon monoxide
CO_2..... carbon dioxide
CO_2e..... carbon dioxide equivalent
COMS..... Continuous Opacity Monitoring System
CSR..... Code of State Regulations
dscf..... dry standard cubic feet
EIQ ..... Emission Inventory Questionnaire
EP..... Emission Point
EPA..... Environmental Protection Agency
EU ..... Emission Unit
fps..... feet per second
ft ..... feet
GACT ..... Generally Available Control Technology
GHG ..... Greenhouse Gas
gpm ..... gallons per minute
gr ..... grains
GWP ..... Global Warming Potential
HAP ..... Hazardous Air Pollutant
hr..... hour
hp ..... horsepower
lb ..... pound
lbs/hr..... pounds per hour
MACT..... Maximum Achievable Control Technology
$\mu g/m^3$..... 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