



STATEMENT OF BASIS
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 BAQ Air Permitting Division

Company Name:	Heidelberg Materials Southeast Agg LLC -	Permit Writer:	Nick Hoehn
Agency Air Number:	Manning Quarry	Date:	DRAFT
Permit Number:	1900-0356		
	CP-50000372 v1.0		

DATE APPLICATION RECEIVED: October 21, 2025

PROJECT DESCRIPTION

The facility requested a synthetic minor construction permit for the installation of a 1400 tons per hour processing plant and associated equipment in Columbia, South Carolina. The processing plant will consist of crushers, screens, conveyors, bins, and a wash plant that will process granite into storage piles.

FACILITY DESCRIPTION

SIC CODE: 1423, Crushed and Broken Granite
 NAICS CODE: 212313, Crushed and Broken Granite Mining and Quarrying
 Granite mine and processing plant.

OPERATING PERMIT INCORPORATION

The facility will request coverage under the General Conditional Major Operating Permit for Nonmetallic Mineral Processing Plants within 15 days of the start of operation.

EMISSIONS

To calculate emissions from stockpiles, the facility used Equation. 4-9 from "Control of Open Fugitive Dust Sources" (EPA-450/3-88-008, September 1988) for the emission factor:

$$E = 1.7 \left(\frac{s}{1.5} \right) \left(\frac{365 - p}{235} \right) \left(\frac{f}{15} \right)$$

Where:

- E = wind erosion emission factor (lbs/day/acre)
- s = silt content of aggregate (%)
- p = number of days with > or = 0.01 inches of precipitation per year
- f = % of the time that the unobstructed wind speed exceeds 12 mph at the mean pile height

The remaining emissions for the processing plant were calculated using emission factors from the 1995 AP-42 Chapter 11.19.2, *Crushed Stone Processing and Pulverized Mineral Processing*.

AP-42 EMISSION FACTORS FROM PROCESSING PLANT										
Equipment	AP-42 Source Name	Controlled Emission Factors (lb/ton)			Uncontrolled Emission Factors (lb/ton)			Calculated % controlled based on AP-42 Factors		
		PM	PM₁₀	PM_{2.5}	PM	PM₁₀	PM_{2.5}	PM	PM₁₀	PM_{2.5}
Crushers	Tertiary Crushing	1.20E-03	5.40E-04	1.00E-04	5.40E-03	2.40E-03	4.44E-04	77.8%	77.5%	77.5%
Screens	Screening	2.20E-03	7.40E-04	5.00E-05	2.50E-02	8.70E-03	5.88E-04	91.2%	91.5%	91.5%
Conveyors and Bins	Conveyor Transfer Point	1.40E-04	4.60E-05	1.30E-05	3.00E-03	1.10E-03	3.17E-04	95.3%	95.8%	95.8%



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Grizzly & Truck Unloading	Grizzly Feeder and Truck Unloading ^a	2.82E-06	1.34E-06	9.09E-08	3.36E-05	1.60E-05	1.08E-06	91.6%	91.6%	91.6%
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^a The uncontrolled PM₁₀ emission factor for the Grizzly Feeder and Truck Unloading is from the 1995 AP-42 Table 11.19.2-2. Uncontrolled TSP for the Grizzly Feeder is estimated to be 2.1 x PM₁₀. Controlled Grizzly Feeder emission factors are calculated assuming the same control efficiency as a screen. PM_{2.5} uncontrolled emissions factor is calculated assuming it is proportional to PM_{2.5}/PM₁₀ screen factor, for example- 0.000001344 * (0.000050/0.00074) = 9.09E-08

^b PM_{2.5} uncontrolled factors were calculated assuming the same control efficiency as the PM₁₀. For example, Crushers = 0.00010 * (100-77.5%) = 0.0004444

PROJECT EMISSIONS WITH FUGITIVES*						
Pollutant	Uncontrolled		Controlled		PTE	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	258.177	1130.827	21.189	92.789	258.177	<250.0
PM ₁₀	94.708	414.829	7.770	34.055	94.708	<100.0
PM _{2.5}	19.268	84.389	1.690	7.385	19.268	<100.0

* The table lists the potential to emit from the processing plant as well as the fugitive emissions. Fugitive emissions include only emissions from the 11 calculated stockpiles in the application.

PROJECT EMISSIONS*						
Pollutant	Uncontrolled		Controlled		PTE	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	253.62	1110.87	20.05	87.8	253.62	<250.0
PM ₁₀	92.43	404.85	7.20	31.56	92.43	<100.0
PM _{2.5}	16.99	74.41	1.12	4.89	16.99	<100.0

*Facility-Wide project emissions do not include emissions from the fugitive sources since the facility is not one of the 28 source categories required to include fugitive emissions in its potential to emit.

SOURCE TEST REQUIREMENTS

All sources subject to 40 CFR 60 Subpart OOO shall meet the fugitive emission limits within 180 days of initial operation. The wash plant meets the definition of wet material processing operations (§ 60.670(a)(2)) and is not subject to source testing requirements.

REGULATIONS

Applicable - Section II(E) (Synthetic Minor) - The facility has uncontrolled PM emissions above the major source threshold of 250.0 tons per year (tpy) for PSD. PM₁₀ uncontrolled emissions are above the Title V major source threshold of 100.0 tpy. The facility is requesting a PSD avoidance limit of less than 250.0 tpy of PM as well as Title V avoidance limits of less than 100.0 tpy of PM₁₀. Although the PM_{2.5} uncontrolled emissions are not above the Title V



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major source threshold of 100.0 tpy, the facility has also requested a limit of less than 100.0 tpy of PM_{2.5} as is consistent with the General Conditional Major Operating Permit for Nonmetallic Mineral Processing Plants.

Synthetic Minor Limits					
Permit ID	Equipment ID	Permit Issue Date	Pollutant	Emission Limit (TPY)	Explanation
CP-50000372	Facility-wide	This Permit	PM	<250.0	PSD Avoidance
CP-50000372	Facility-wide	This Permit	PM ₁₀ , PM _{2.5}	<100.0	Title V Avoidance

ALGORITHMS

The basic algorithm for calculating monthly facility wide PM and PM₁₀ emissions is as follows:

$$PM = P \times EF \times CF$$

Where:

- PM is the PM emissions in tons per month.
- P is the total actual amount of material processed in tons per month.
- EF is the PM controlled emission factor in pounds per tons. The emission factors are provided in the table below.
- CF is the conversion factor of one ton per 2000 pounds.

Values for EF in Algorithm			
Source	PM Emission Factor (lb/Ton)	PM ₁₀ Emission Factor (lb/Ton)	Emission Factor Basis
Crushing	0.0012	0.00054	AP-42 Table 11.19.2-2
Screening	0.0022	0.00074	
Conveying	0.00014	0.000046	

Not Applicable - Standard No. 1 (*Emissions from Fuel Burning Operations*) – This project does not have any fuel burning operations. The generator does not meet the definition of fuel burning operations.

Not Applicable - Standard No. 3 (state only) (*Waste Combustion and Reduction*) – The project does not conduct waste combustion or reduction.

Applicable - Standard No. 4 (*Emissions from Process Industries*) - From June 15, 1999 guidance, a process includes all process emission units and/or group of process units used to make a finished identifiable output. It was determined that this facility is one process defined as aggregate processing consisting of all of the equipment with a finished identifiable output of crushed stone. The PM limit from Section VIII is detailed below in the table. All applicable sources shall not exhibit an opacity greater than 20% per Section IX. The facility is subject to Section X for all non-enclosed operations and is required to develop and implement a BAQ approved fugitive dust control plan.



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Process	Max Process Weight Rate (tons/hr)	PM Allowable at Max (lb/hr)	Uncontrolled Emissions PM (lb/hr)	Controlled Emissions PM (lb/hr)	Monitoring
Aggregate Processing	1400	82.02	7.56	1.68	Operation of the wet suppression systems in accordance with the permit and applicable regulations.

Not Applicable - Standard No. 5 (Volatile Organic Compounds) – This facility was not in existence until after July 1, 1979, and July 1, 1980, and does not have any permitting VOC emissions

Not Applicable - Standard No. 5.2 (Control of Oxides of Nitrogen (NOx)) – This standard applies to any stationary source that emits or has the potential to emit oxides of nitrogen generated from fuel combustion. There are no stationary NO_x sources on site.

Not Applicable - Standard No. 7 (Prevention of Significant Deterioration) – The facility is not one of the 28 specifically listed source categories. Therefore, its major source threshold is 250.0 tpy. The facility has uncontrolled PM emissions above this threshold, but the facility is requesting a PSD avoidance limit of less than 250.0 tpy of PM.

Applicable - 61-62.6 (Control of Fugitive Particulate Matter) – The facility is subject and shall develop and implement a BAQ approved fugitive dust control plan.

40 CFR 60 and 61-62.60 (New Source Performance Standards (NSPS))

Applicable - Subpart 000 – (Standards of Performance for Nonmetallic Mineral Processing Plants) - according to §60.671, nonmetallic mineral processing plant means any combination of equipment that is used to crush or grind any nonmetallic mineral wherever located. Each crusher, screen, feeder, bin and conveyor is subject to the requirements of this Subpart.

Not Applicable - 40 CFR 61 and 61-62.61 (National Emission Standards for Hazardous Air Pollutants (NESHAP)) - This project does not emit the pollutants in a way that is subject to this standard (asbestos, benzene, beryllium, coke oven emissions, arsenic, mercury, radio nuclide, radon, or vinyl chloride).

Not Applicable - 40 CFR 63 and 61-62.63 (National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories) – There are no HAP emission sources for this project.

Not Applicable - 61-62.68 (Chemical Accident Prevention Provisions) – The facility does not store or use chemicals subject to 112(r) above the threshold quantities describe by the regulation

AMBIENT AIR STANDARDS REVIEW



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Applicable - Standard No. 2 (Ambient Air Quality Standards) - Facility-wide PM₁₀ and PM_{2.5} AERMOD modeling has been completed, and the results have been included below. The facility is limited to an operation of 15 hours per day with an operation of 5am to 8pm daily. The facility modeled an operating scenario by using the hour of day (HROFDY) emission rate flag in the model to demonstrate compliance. See modeling summary dated [DRAFT](#)

Not Applicable - Standard No. 8 (state only) (Toxic Air Pollutants) - There are no Std. No. 8 emissions at the facility. See modeling summary dated [DRAFT](#)

PERIODIC MONITORING					
ID	Applicable Requirement	Measured Parameter	Required Monitoring Frequency	Reporting Frequency	Monitoring Basis/ Justification
Facility-Wide	<250.0 TPY PM, <100.0 TPY PM ₁₀ and PM _{2.5} (B.2)	Actual Emissions	Monthly	Annually	Direct comparison to limit
All	PM Limit per PWR Std No. 4, Section VIII (B.3)	Operation and Maintenance Checks	Weekly	On-site	With wet suppression operating correctly, emissions will be below the limit
All	Opacity Std. No. 4 (B.4)	--	--	--	Opacity is not expected
Wet Suppression	PM Limit NSPS Subpart OOO (B.7)	Water Flow to Discharge Nozzle	Weekly	On-site	The weekly inspections required in this condition meets the requirements of monthly inspections in 40 CFR 60.674(b).

PUBLIC NOTICE

This construction permit will undergo a 30-day public notice period, in accordance with SC Regulation 61-62.1, Section II(N) and SC Regulation 61-62.1, Section II(E)), to establish a PSD avoidance limit of less than 250.0 tons per year of PM and a Title V avoidance limit of less than 100.0 tons per year of PM₁₀ and PM_{2.5}, each.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.