



STATEMENT OF BASIS
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 BAQ Air Permitting Division

Company Name:	Vulcan Construction Materials, LLC - Orangeburg Quarry	Permit Writer:	Mareesa J Singleton
Agency Air Number:	1860-0165	Date:	August 15, 2024
Permit Number:	CP-50000132 v1.0		

DATE APPLICATION RECEIVED: October 20, 2023

PROJECT DESCRIPTION

New Limestone Quarry and Processing Plant. The processing plant will be a 600 tons per hour (tph) portable plant consisting of crushers, screens, and conveyors. It will be powered by an exempt CAT C9 248kW, 300hp Tier 3/Stage IIIA engine (does not meet the definition of a stationary source).

FACILITY DESCRIPTION (SIC CODE: 1422/NAICS CODE: 212312)

Limestone quarry and processing plant.

OPERATING PERMIT STATUS

This is a new facility without an operating permit. This will be granted coverage under the General State Operating Permit for Nonmetallic Mineral Processing Plants.

EMISSIONS

The facility conservatively estimated uncontrolled emissions as if processing dry material and used the uncontrolled emission factors from AP-42, Section 11.19.2, Table 11.19.2-2. However, limestone is typically mined below the water table and the moisture content is typically within the range where the uncontrolled emissions may be calculated using the controlled emission factors for AP-42 Section 11.19.2, Table 11.19.2-2.

- Material Handling emissions were calculated using AP-42 Section 11.19.2-2, Table 19.2-2.; 1995 5th edition, 2004 update.
 - Assume PM uncontrolled truck loading factor for the Grizzly feeder due to similarity in the operations.
 - Assume PM_{2.5} factor for Grizzly and truck unloading is proportional to PM_{2.5}/PM₁₀ screen factor.
 - For PM_{2.5}, used the control efficiency of AP-42 PM₁₀ and back calculated from PM_{2.5} controlled.
- Controlled Emissions where emission factor is not available:
 - Assume the same efficiency as screen for grizzly and truck loading.
 - PM controlled for Grizzly estimated at 2.1xPM₁₀ for grizzly.
 - Assume PM_{2.5} factor for grizzly and truck unloading is proportional to PM_{2.5}/PM₁₀ screen factor.

PROJECT EMISSIONS						
Pollutant	Uncontrolled		Controlled		PTE	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
PM	32.13	140.71	3.50	15.33	32.13	140.71
PM ₁₀	11.79	51.64	1.32	5.80	11.79	51.64
PM _{2.5}	1.31	5.72	0.17	0.73	1.31	5.72



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FACILITY WIDE EMISSIONS			
Pollutant	Uncontrolled	Controlled	PTE
	TPY	TPY	TPY
PM	140.71	15.33	140.71
PM ₁₀	51.64	5.80	51.64
PM _{2.5}	5.72	0.73	5.72

SOURCE TEST REQUIREMENTS

In accordance with 40 CFR Subpart 000

REGULATIONS

Not Applicable - Section II(E) (Synthetic Minor) – The facility is a true minor source.

Not Applicable - Standard No. 1 (Emissions from Fuel Burning Operations) – The facility does not have any fuel burning operations.

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

Applicable - Standard No. 4 (Emissions from Process Industries)

Section VIII

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	600	71.16	32.13	3.50	Not required because the uncontrolled are less than the allowable

Section IX – The sources are subject to 20% opacity limit.

Section X – The non-enclosed operations at the facility are subject. The facility is required to develop and implement a Department approved facility wide fugitive dust control plan.

Not Applicable - Standard No. 5 (Volatile Organic Compounds) – The facility was not in existence in 1979 or 1980.

Not Applicable - Standard No. 5.2 (Control of Oxides of Nitrogen (NOx)) – The exempt engine is not a stationary source.



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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 does not have uncontrolled emissions for any PSD pollutants above 250.0 tpy. Therefore, this facility is not subject to this standard.

Applicable - 61-62.6 (*Control of Fugitive Particulate Matter*) – The facility is subject, and the facility is required to have a Department approved facility wide Dust Control Plan.

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

Applicable - Subpart OOO – The crushers, screens, conveyors, and feeder are subject to this subpart.

Not Applicable – Subpart JJJJ – The exempt engine is not a stationary source.

40 CFR 61 and 61-62.61 (*National Emission Standards for Hazardous Air Pollutants (NESHAP)*)

Not Applicable - This facility 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).

40 CFR 63 and 61-62.63 (*National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories*)

Not Applicable – Subpart ZZZZ – The exempt engine is not a stationary source.

Not Applicable - 61-62.68 (*Chemical Accident Prevention Provisions*) – The facility does not store or use chemicals subject to 112(r) above their respective threshold quantities.

Not Applicable - 40 CFR 64 (*Compliance Assurance Monitoring*) – This is not a Title V facility.

AMBIENT AIR STANDARDS REVIEW

Applicable - Standard No. 2 (*Ambient Air Quality Standards*) - All of the equipment is exempt from modeling because the controlled PM₁₀/PM_{2.5} emission rate for each emission point is less than 1.14 lb/hr. See modeling summary dated November 14, 2023 for more details.

Not Applicable - Standard No. 8 (state only) (*Toxic Air Pollutants*) -Toxic air pollutants from virgin fuels are not subject. See modeling summary dated November 14, 2023 for more details.

PUBLIC NOTICE

The facility does not have the potential to emit above the major source threshold for any pollutant. However, this construction permit(s) has undergone a 30-day public notice period, pursuant to SC Regulation 61-62.1, Section II(N). The comment period was open from January 3, 2024 to February 23, 2024 and was placed on the BAQ website during that time period. Comments were received during the comment period.

Additionally, a public meeting and hearing took place on February 8, 2024.



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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.