MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT

DOCKET #07-24

COMPANY: Bluegrass Materials Company, LLC dba Martin Marietta Materials, Inc

LOCATION: North East Quarry, 233 Stevenson Road, North East, MD 21901

APPLICATION: Modification of the existing 1400 ton per hour crushing and screening plant with the addition of a 250 ton per hour quaternary crusher, a feeder, and three (3) conveyors.

ITEM	DESCRIPTION
1	Notice of Application and Opportunity to Request an Informational Meeting
2	Environmental Justice (EJ) Information - EJ Fact Sheet
3	Permit to Construct Application Forms – Form 5 Application Form, Form 5T Summary for meeting ambient and T-BACT requirements, Form 5EP Emissions Data, process flow diagram, plant diagram, emission calculations, and safety data sheets.
4	Evidence of Zoning Approval.
5	MDE EJ Score and Screening Report

DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF APPLICATION AND
OPPORTUNITY TO REQUEST AN INFORMATIONAL MEETING

The Maryland Department of the Environment, Air and Radiation Administration (ARA) received a permit-to-construct application from Bluegrass Materials Company, LLC dba Martin Marietta Materials, Inc. on July 1, 2024, for the modification of the existing 1400 ton per hour crushing and screening plant with the addition of a 250 ton per hour quaternary crusher, a feeder, and three (3) conveyors. The proposed modification is located at 233 Stevenson Road, North East, Maryland, 21901.

In accordance with HB 1200/Ch. 588 of 2022, the applicant provided an environmental justice (EJ) Score for the census tract in which the project is located using the MDE EJ Screening Tool. The EJ Score, expressed as a statewide percentile, was shown to be 52 which the Department has verified. This score considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15%, to identify underserved communities. Multiple environmental health indicators are used to identify overburdened communities.

Copies of the application, the MDE EJ Screening Tool Report (which includes the score), and other supporting documents are available for public inspection on the Department's website at https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx (click on Docket Number #07-24). Any applicant-provided information regarding a description of the environmental and socioeconomic indicators contributing to that EJ score can also be found at the listed website. Such information has not yet been reviewed by the Department. A review of the submitted information will be conducted when the Department undertakes its technical review of all documents included in the application.

Pursuant to the Environment Article, Section 1-603, Annotated Code of Maryland, the Department will hold an informational meeting to discuss the application and the permit review process if the Department receives a written request for a meeting within 10 working days from the date of the second publication of this notice. A requested informational meeting will be held virtually using teleconference or internet-based conferencing technology unless a specific request for an in-person informational meeting is received. All requests for an informational meeting should be directed to the attention of Ms. Shannon Heafey, Air Quality Permits Program by email to shannon.heafey@maryland.gov or by mail to the Air and Radiation Administration, 1800 Washington Boulevard, Baltimore, Maryland 21230.

Further information may be obtained by calling Ms. Shannon Heafey at 410-537-4433.

Christopher R. Hoagland, Director
Air and Radiation Administration

Maryland
Department of
the Environment

The Applicant's Guide to Environmental Justice and Permitting

What You Need to Know

This fact sheet is designed to provide guidance to applicants on incorporating environmental justice screening requirements pursuant to House Bill 1200, effective October 1, 2022.

What is Environmental Justice?

The concept behind the term environmental justice (EJ) is that regardless of race, color, national origin, or income, all Maryland residents and communities should have an equal opportunity to enjoy an enhanced quality of life. How to assess whether equal protection is being applied is the challenge.

Communities surrounded by a disproportionate number of polluting facilities puts residents at a higher risk for health problems from environmental exposures. It is important that residents who may be adversely affected by a proposed source be aware of the current environmental issues in their community in order to have meaningful involvement in the permitting process. Resources may be available from government and private entities to ensure that community health is not negatively impacted by a new source located in the community.

Extensive research has documented that health disparities exist between demographic groups in the United States, such as differences in mortality and morbidity associated with factors that include race/ethnicity, income, and educational attainment. House Bill 1200 adds to MDE's work incorporating diversity, equity and inclusion into our mission to help overburdened and underserved communities with environmental issues.

What is House Bill 1200 and what does it require?

Effective October 1, 2022, House Bill 1200 requires a person applying for a permit from the Department under §1-601 of the Environment Article of the Annotated Code of Maryland or any permit requiring public notice and participation to include in the application an EJ Score for the census tract where the applicant is seeking the permit; requiring the Department, on receiving a certain permit application to review the EJ Score; and requiring notices to include information related to EJ Scores and generally relating to environmental permits and environmental justice screenings.

What is a "Maryland EJ Tool"?

The term "Maryland EJ Tool" means a publicly available state mapping tool that allows users to: (1) explore layers of environmental justice concern; (2) determine an overall EJ score for census tracts in the state; and (3) view additional context layers relevant to an area. The MDE EJ Screening Tool is considered a Maryland EJ Tool.

What is an "EJ Score"?

The term "EJ Score" means an overall evaluation of an area's environment and environmental justice indicators, as defined by MDE in regulation, including: (1) pollution burden exposure; (2) pollution burden environmental effects; (3) sensitive populations; and (4) socioeconomic factors.

The MDE EJ Screening Tool considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15%, to identify underserved communities, and multiple environmental health indicators to identify overburdened communities. The tool uses these indicators to calculate a

Final EJ Score Percentile, statewide. It is that score, linked to the census tract where the project is to be located, that needs to be reported to MDE as part of your permit application.

What does the application require?

The link for the MDE EJ Screening Tool is located on the Department's website, www.mde.maryland.gov. Click on the Environmental Justice header at the top of the Department's home page, then select EJ Screening Tool from the menu on the left. Click on Launch the EJ Screening Tool. After you open the tool, click okay on the opening screen. At the top right, please click the first button for the MDE Screening Report. Input the address of the proposed installation in the address bar. Click on the Report button. Once the report has been generated select the print icon and save it in a .pdf format.

The applicant needs to include the MDE Screening Report with the EJ Score from the MDE EJ Screening Tool as part of the permit application upon submission. An application will not be considered complete without the report.

The applicant is encouraged to provide the Department with a discussion about the environmental exposures in the community. This will provide pertinent information about how the applicant should proceed with engaging with the community. Residents of a community with a high indicator score and a high degree of environmental exposure should be afforded broader opportunities to participate in the permit process and understand the impacts a project seeking permit approval may have on them.

Questions

For air quality permits, please call 410-537-3230.
For water permits, please call 410-537-4145.
For land permits pertaining to Solid Waste, please call 410-537-3098. For land permits pertaining to Oil Control, please call 410-537-3483.
For land permits pertaining to Animal Feeding Operations, please call 410-537-4423.
For land permits pertaining to Biosolids, please call 410-537-3403.

Whitney D. McGuigan
Environmental Engineer | Environmental Services
East Division

April 2, 2024

Maryland Department of the Environment
Air and Radiation Management Administration, Air Quality Permits Program
1800 Washington Boulevard
Baltimore, MD 21230
Attn: Dennis Borie
Sent via email to Dennis.Borie@maryland.gov

Re: Permit to Construct Application: Plant Modification
North East Quarry, Permit No. 015-0005
Bluegrass Materials Company, LLC (c/o Martin Marietta Materials, Inc.)

Dear Mr. Borie:

Please find enclosed a Permit to Construct Application, in addition to all necessary supporting forms and information, for the addition of one (1) quantinary crusher, one (1) feeder, and associated conveyor belts at Plant 2E at the North East Quarry (ARMA, Registration Number 015-0005-6-0299). Further details regarding the proposed equipment are attached to this application. All Plant 2E equipment will continue to be powered by the electric grid. Overall plant throughput will not increase and will remain at 1,400 tons per hour (see attached "Material Balance Data & Emissions Calculations" for details). The goal of this project is to decrease reprocessing of product that will, overall, decrease total operation hours of the Plant.

The associated permit for this facility includes a flexible 600 tons per hour Portable Plant (ARMA Registration No. 015-0005-6-0364). This plant was very conservatively incorporated into premises emissions calculations by assuming: (1) that all possible permitted portable equipment would operate; (2) that the portable plant would operate at 600 tons per hour simultaneously with Plant 2E, and; (3) that the portable pant would be located east of Plant 2E (closer to the nearest property boundary).

This application package contains the following information:

- Application Checklist
- Form 5
- Form 5T
- Form 5EP
- Process Flow Diagram & Equipment List
- Site Plan Map
- Material Balance Data & Emissions Calculations
- (Material) Safety Data Sheets (for crushed stone)
- Letter of Zoning (no change from 2017 application)
- Certificate of Insurance (workers compensation)
- EJ Report

If you have any questions, please do not hesitate to contact me. Thank you in advance for your assistance with this application.

Sincerely,
Whitney D. Mcguigan
Whitney D. McGuigan

North East Quarry
233 Stevenson Road, North East, MD 21901
m. (443) 877-2535 e. whitney.mcguigan@martinmarietta.com
www.martinmarietta.com

FORM 5

AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST

OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	Bluegrass Materials Company, LLC (c/o Martin Marietta Materials, Inc.)
COMPANY ADDRESS:	Local Mailing Address: 233 Stevenson Road, North East, MD 21901
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	North East Quarry (existing Permit to Operate No. 015-0005)
PREMISES ADDRESS:	233 Stevenson Road, North East, MD 21901
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Whitney McGuigan
JOB TITLE:	Environmental Engineer
PHONE NUMBER:	(443) 877-2535
EMAIL ADDRESS:	whitney.mcguigan@martinmarietta.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
Addition of Quantinary Crusher and three (3) conveyors.	

Application is hereby made to the Department of the Environment for a Permit to Construct for the following equipment or process as required by the State of Maryland Air Quality Regulation, COMAR 26.11.02.09.

Check each item that you have submitted as part of your application package.

☒ Application package cover letter describing the proposed project

☒ Complete application forms (Note the number of forms included or NA if not applicable.)

No. 1 Form 5
No. 1 Form 5T
No. 1 Form 5EP
No. NA Form 6
No. NA Form 10
No. NA Form 11
No. NA Form 41
No. NA Form 42
No. NA Form 44

☐ Vendor/manufacturer specifications/guarantees

☒ Evidence of Workman's Compensation Insurance

☒ Process flow diagrams with emission points

☒ Site plan including the location of the proposed source and property boundary

☒ Material balance data and all emissions calculations

☒ Material Safety Data Sheets (MSDS) or equivalent information for materials processed and manufactured.

☐ Certificate of Public Convenience and Necessity (CPCN) waiver documentation from the Public Service Commission (1)

☒ Documentation that the proposed installation complies with local zoning and land use requirements (2)

(1) Required for emergency and non-emergency generators installed on or after October 1, 2001 and rated at 2001 kW or more.

(2) Required for applications subject to Expanded Public Participation Requirements.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Management Administration ▪ Air Quality Permits Program
1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us

APPLICATION FOR FUEL BURNING EQUIPMENT

Information Regarding Public Outreach

For Air Quality Permit to Construct applications subject to public review, applicants should consider the following information in the initial stages of preparing a permit application.

If you are not sure at the time you are applying for a permit whether public review of your application is required or for information on steps you can take to engage the surrounding community where your planned project will be located, please contact the Air Quality Permits Program at 410-537-3225 and seek their advice.

Communicating and engaging the local community as early as possible in your planning and development process is an important aspect of your project and should be considered a priority. Environmental Justice or "EJ" is a movement to inform, involve, and engage communities impacted by potential and planned environmental projects by affording citizens opportunities to learn about projects and discuss any concerns regarding impacts.

Although some permit applications are subject to a formal public review process prescribed by statute, the Department strongly encourages you to engage neighboring communities separate from and well ahead of the formal permitting process. Sharing your plans by way of community meetings, informational outreach at local gatherings or through local faith-based organizations can initiate a rewarding and productive dialogue that will reduce anxiety and establish a permanent link with your neighbors in the community.

All parties benefit when there is good communication. The Department can assist applicants in developing an outreach plan that fits the needs of both the company and the public.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪1-800-633-6101 ▪ www.mde.state.md.us

Air and Radiation Management Administration ▪ Air Quality Permits Program

APPLICATION FOR PROCESSING/MANUFACTURING EQUIPMENT

Permit to Construct ❑ Registration Update ❑ Initial Registration ❑

1A. Owner of Equipment/Company Name

Mailing Address
233 Stevenson Road
Street Address

North East | MD | 21901
City | State | Zip

Telephone Number
(443) 877-2535

Signature Ronald M. Kopplin

Ronald M. Kopplin, President - East Division | 4/1/2024
Print Name and Title | Date

DO NOT WRITE IN THIS BLOCK
2. REGISTRATION NUMBER

County No. (1-2) | Premises No. (3-6)
Registration Class (7) | Equipment No. (8-11)
Data Year (12-13) | Application Date

1B. Equipment Location and Telephone Number (if different from above)

233 Stevenson Road
Street Number and Street Name

North East | MD | 21901 | (443) 877-2535
City/Town | State | Zip | Telephone Number

North East Quarry
Premises Name (if different from above)

3. Status (A= New, B= Modification to Existing Equipment, C= Existing Equipment)

Status	New Construction Begun (MM/YY)	New Construction Completed (MM/YY)	Existing Initial Operation (MM/YY)
B	1024		
15	16-19	20-23	20-23

4. Describe this Equipment: Make, Model, Features, Manufacturer (include Maximum Hourly Input Rate, etc.)
One (1) Metso HP300 Cone QuantinaryCrusher rated 250 stph, one (1) Syntron MF 200 42x84 Feeder and associated conveyors

5. Workmen's Compensation Coverage See attached COI
Binder/Policy Number | Expiration Date

Company

NOTE: Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of worker's compensation coverage as required under Section 1-202 of the Worker's Compensation Act.

6A. Number of Pieces of Identical Equipment Units to be Registered/Permitted at this Time _____

6B. Number of Stack/Emission Points Associated with this Equipment _____

7. Person Installing this Equipment (if different from Number 1 on Page 1)

Name Same as Number 1 on Page 1 Title

Company

Mailing Address/Street

City/Town State Telephone (_____) _____

8. Major Activity, Product or Service of Company at this Location

Quarrying and processing of stone (primarily trap tock and granite) aggregate for use in the construction industry. Material is produced by the use of crushers, screens, conveyors, and associated ancillary equipment to produce various specifications of aggregate product.

SIC Code 1429 (Crushed and Broken Stone, Note Elsewhere Calssified)

9. Control Devices Associated with this Equipment

None [ ] 24-0

Simple/Multiple Cyclone	Spray/Adsorb Tower	Venturi Scrubber	Carbon Adsorber	Electrostatic Precipitator	Baghouse	Thermal/Catalytic Afterburner	Dry Scrubber
[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
24-1	24-2	24-3	24-4	24-5	24-6	24-7	24-8

Other

[X] Describe Wet suppression (wet dust suppression, carryover, and wet material processing)

24-9

10. Annual Fuel Consumption for this Equipment

OIL-1000 GALLONS	SULFUR %	GRADE	NATURAL GAS-1000 FT^3	LP GAS-100 GALLONS	GRADE
26-31	32-33	34	35-41	42-45	

COAL- TONS	SULFUR %	ASH%	WOOD-TONS	MOISTURE %
46-52	53-55	56-58	59-63	64-65

OTHER FUELS _____ (Specify Type) [ ] 66-1 ANNUAL AMOUNT CONSUMED _____ (Specify Units of Measure)

OTHER FUEL _____ (Specify Type) [ ] 66-2 ANNUAL AMOUNT CONSUMED _____ (Specify Units of Measure)

1= Coke 2= COG 3=BFG 4=Other

11. Operating Schedule (for this Equipment)

Continuous Operation	Batch Process	Hours per Batch	Batch per Week	Hours per Day	Days Per Week	Days per Year
X				12	6	275
67-1	67-2	68-69		70-71	72	73-75

Seasonal Variation in Operation:

No Variation	Winter Percent	Spring Percent	Summer Percent	Fall Percent	(Total Seasons= 100%)
[ ]	20	26	28	26	
76	77-78	79-80	81-82	83-84	

12. Equivalent Stack Innformation- is Exhaust through Doors, Windows, etc. Only? (Y/N) ☐ 85

If not, then	Height Avove Ground (FT)	Inside Diameter at Top	Exit Temperature (ºF)	Exit Velocity (FT/SEC)
	☐☐☐	☐☐☐	☐☐☐☐	☐☐☐
	86-88	89-91	92-95	96-98

NOTE:
Attach a block diagram of process/process line, indicating new equipment as reported on this form and all existing equipment, including control devices and emission points.

13. Input Materials (for this equipment only)
Is any of this data to be considered confidential? ☐ (Y or N)

	NAME	CAS NO. (IF APPLICABLE)	INPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1.	Quarried Stone	NA (mixture)	250 max rated	stph	2,000,000	tons
2.					(varies based on	
3.					market demand)	
4.						
5.						
6.						
7.						
8.						
9.						
TOTAL						

14. Output Materials (for this equipment)
Process/Product Stream

	NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1.	Quarried Stone	NA (mixture)	250 max rated	stph	2,000,000	tons
2.					(varies based on	
3.					market demand)	
4.						
5.						
6.						
7.						
8.						
9.						
TOTAL						

15. Waste Streams- Solid and Liquid

	NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1.	Note: Crushed stone fines (sediment/particulates) captured in water from wet suppression & wash plant system. All process water managed on site in accordance with approved mine plan and NPDES permit. Output rate not applicable.					
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
TOTAL						

16. Total Stack Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
99-104	105-110	111-116

Carbon Monoxide	Volatile Organic Compounds	PM-10
177-122	123-128	129-134

17. Total Fugitive Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
3.83		
135-139	140-144	145-149

Carbon Monoxide	Volatile Organic Compounds	PM-10
		1.72
150-154	155-159	160-164

Method Used to Determine Emissions (1= Estimate 2= Emission Factor 3= Stack Test 4= Other)

TSP	SOX	NOX	CO	VOC	PM10
1					1
165	166	167	168	169	170

AIR AND RADIATION MANAGEMENT ADMINISTRATION USE ONLY

18. Date Rec'd. Local _____ **Date Rec'd. State** _____ **Return to Local Jurisdiction** **Date**_____ **By**_____

Reviewed by Local Jurisdiction Date_____ By_____ **Reviewed by State** Date_____ By_____

19. Inventory Date **Month/Year** (171-174) **Equipment Code** (175-177) **SCC Code** (178-185)

20. Annual Operating Rate (186-192) **Maximum Design Hourly Rate** (193-199) **Permit to Operate Month** (200-201) **Transaction Date (MM/DD/YR)** (202-207)

Staff Code (208-210) **VOC Code** (211 212) **SIP Code** (213 214) **Regulation Code** (215-218) **Confidentiality** (219)

Point Description (220-238) **Action** (239) A: Add C: Change

Form Number: 5
Rev. 9/27/2002
TTY Users 1-800-735-2258

Recycled Paper

FORM 5T

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Management Administration ● Air Quality Permits Program
1800 Washington Boulevard ● Baltimore, Maryland 21230
(410)537-3225 ● 1-800-633-6101● www.mde.maryland.gov

FORM 5T: Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration

Applicant Name: Bluegrass Materials Company, LLC (c/

Step 1: Quantify premises-wide emissions of Toxic Air Pollutants (TAP) from new and existing installations in accordance with COMAR 26.11.15.04. Attach supporting documentation as necessary.

Toxic Air Pollutant (TAP)	CAS Number	Class I or Class II?	Screening Levels (µg/m^3)			Estimated Premises Wide Emissions of TAP			
						Actual Total Existing TAP Emissions	Projected TAP Emissions from Proposed Installation	Premises Wide Total TAP Emissions	
			1-hour	8-hour	Annual	(lb/hr)	(lb/hr)	(lb/hr)	(lb/yr)
ex. ethanol	*64175*	*II*	*18843*	*3769*	*N/A*	*0.60*	*0.15*	*0.75*	*1500*
ex. benzene	*71432*	*I*	*80*	*16*	*0.13*	*0.5*	*0.75*	*1.00*	*400*
Local Mailing Address: 233 Stevensor	North East Qua	233 Stevenson	Whitney McC	Environment	(443) 877-25	whitney.mcgı	Addition of Quanti	✔	31.12
✔	1	1	1	NA	NA	NA	NA	NA	NA
	✔	✔	✔	✔	✔		✔		

(attach additional sheets as necessary.)

Note: Screening levels can be obtained from the Department's website (http://www.mde.maryland.gov) or by calling the Department.

Step 2: Determine which TAPs are exempt from further review. A TAP that meets either of the following Class I or Class II small quantity emitter exemptions is exempt from further TAP compliance demonstration requirements under Step 3 and Step 4.

Class II TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(a))
A Class II TAP is exempt from Step 3 and Step 4 if the Class II TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour, and any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m^3.

Class I TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(b))
A Class I TAP is exempt from Step 3 and Step 4 if the Class I TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour and 350 pounds per year, any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m^3, and any applicable annual screening level for the TAP must be greater than 1 µg/m^3.

If a TAP meets either the Class I or Class II TAP Small Quantity Emitter Exemption Requirements, no further review under Step 3 and Step 4 are required for that specific TAP.

FORM 5T: Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration

Step 3: Best Available Control Technology for Toxics Requirement (T-BACT, COMAR 26.11.15.05)
In the following table, list all TAP emission reduction options considered when determining T-BACT for the proposed installation. The options should be listed in order beginning with the most effective control strategy to the least effective strategy. Attach supporting documentation as necessary.

Target Pollutants	Emission Control Option	% Emission Reduction	Costs		T-BACT Option Selected? (yes/no)
			Capital	Annual Operating	
ex. ethanol and benzene	*Thermal Oxidizer*	*99*	*$50,000*	*$100,000*	*no*
ex. ethanol and benzene	*Low VOC materials*	*80*	*0*	*$100.000*	*yes*
Exempt according to Class I & II					
requirements					

(attach additional sheets as necessary)

Step 4: Demonstrating Compliance with the Ambient Impact Requirement (COMAR 26.11.15.06)
Each TAP not exempt in Step 2 must be individually evaluated to determine that the emissions of the TAP will not adversely impact public health. The evaluation consists of a series of increasingly non-conservative (and increasingly rigorous) tests. Once a TAP passes a test in the evaluation, no further analysis is required for that TAP. "Demonstrating Compliance with the Ambient Impact Requirement under the Toxic Air Pollutant (TAP) Regulations (COMAR 26.11.15.06)" provides guidance on conducting the evaluation. Summarize your results in the following table. Attach supporting documentation as necessary.

Toxic Air Pollutant (TAP)	CAS Number	Screening Levels ($\mu g/m^3$)			Premises Wide Total TAP Emissions		Allowable Emissions Rate (AER) per COMAR 26.11.16.02A		Off-site Concentrations per Screening Analysis ($\mu g/m^3$)			Compliance Method Used?
		1-hour	8-hour	Annual	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	1-hour	8-hour	Annual	AER or Screen
ex. ethanol	*64175*	*18843*	*3769*	*N/A*	*0.75*	*1500*	*0.89*	*N/A*	*N/A*	*N/A*	*N/A*	*AER*
ex. benzene	*71432*	*80*	*16*	*0.13*	*1.00*	*400*	*0.04*	*36.52*	*1.5*	*1.05*	*0.12*	*Screen*
See Step 4												

(attach additional sheets as necessary)

If compliance with the ambient impact requirement cannot be met using the allowable emissions rate method or the screening analysis method, refined dispersion modeling techniques may be required. Please consult with the Department's Air Quality Permit Program prior to conducting dispersion modeling methods to demonstrate compliance.

FORM 5EP

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Management Administration ● Air Quality Permits Program
1800 Washington Boulevard ● Baltimore, Maryland 21230
(410)537-3225 ● 1-800-633-6101● www.mde.maryland.gov

FORM 5EP: Emission Point Data

Complete one (1) Form 5EP for EACH emission point (stack or fugitive emissions) related to the proposed installation.

Applicant Name: Bluegrass Materials Company, LLC (c/o Martin

1. Emission Point Identification Name/Number

List the applicant assigned name/number for this emission point and use this value on the attached required plot plan:
Local Mailing Address: 233 Stevenson Road, North East, MD 21901

2. Emission Point Description

Describe the emission point including all associated equipment and control devices:
North East Quarry (existing Permit to Operate No. 015-0005)

3. Emissions Schedule for the Emission Point

Continuous or Intermittent (C/I)?	233 Stevenson F	**Seasonal Variation** Check box if none: ☒ Otherwise estimate seasonal variation:	
Minutes per hour:	Whitney McGuiga	Winter Percent	✔
Hours per day:	Environmental E	Spring Percent	31.12
Days per week:	(443) 877-2535	Summer Percent	✔
Weeks per year:	whitney.mcguiga	Fall Percent	1

4. Emission Point Information

Height above ground (ft):	1	Length and width dimensions at top of rectangular stack (ft):	Length: NA	Width: NA	
Height above structures (ft):	1				
Exit temperature (ºF):	NA	Inside diameter at top of round stack (ft):		NA	
Exit velocity (ft/min):	NA	Distance from emission point to nearest property line (ft):			
Exhaust gas volumetric flow rate (acfm):	NA	Building dimensions if emission point is located on building (ft)	Height ✔	Length ✔	Width ✔

5. Control Devices Associated with the Emission Point

Identify each control device associated with the emission point and indicate the number of devices. ***A Form 6 is also required for each control device***. If none check none:

- ☒ None
- ☒ Baghouse No. _____
- ☒ Cyclone No. _____
- ☐ Elec. Precipitator (ESP) No. _____
- ☐ Dust Suppression System No. _____
- ☐ Venturi Scrubber No. _____
- ☐ Spray Tower/Packed Bed No. _____
- ☐ Carbon Adsorber No. _____
  - ☐ Cartridge/Canister
  - ☐ Regenerative
- ☐ Thermal Oxidizer No. _____
  - ☐ Regenerative
- ☐ Catalytic Oxidizer No. _____
- ☐ Nitrogen Oxides Reduction No. _____
  - ☐ Selective ☒ Non-Selective
  - ☐ Catalytic ☐ Non-Catalytic
- ☐ Other No. _____
  Specify:
  wet suppression system

FORM 5EP: Emission Point Data

6. Estimated Emissions from the Emission Point

Criteria Pollutants	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Particulate Matter (filterable as PM10)			requirements	
Particulate Matter (filterable as PM2.5)				
Particulate Matter (condensables)				
Volatile Organic Compounds (VOC)				
Oxides of Sulfur (SOx)				
Oxides of Nitrogen (NOx)	See Step 4			
Carbon Monoxide (CO)				
Lead (Pb)				

Greenhouse Gases (GHG)	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Carbon Dioxide (CO_2)				
Methane (CH_4)				
Nitrous Oxide (N_2O)				
Hydrofluorocarbons (HFCs)				
Perfluorocarbons (PFCs)				
Sulfur Hexafluoride (SF6)				
Total GHG (as CO_2e)				

List individual federal Hazardous Air Pollutants (HAP) below:	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)

(Attach additional sheets as necessary.)

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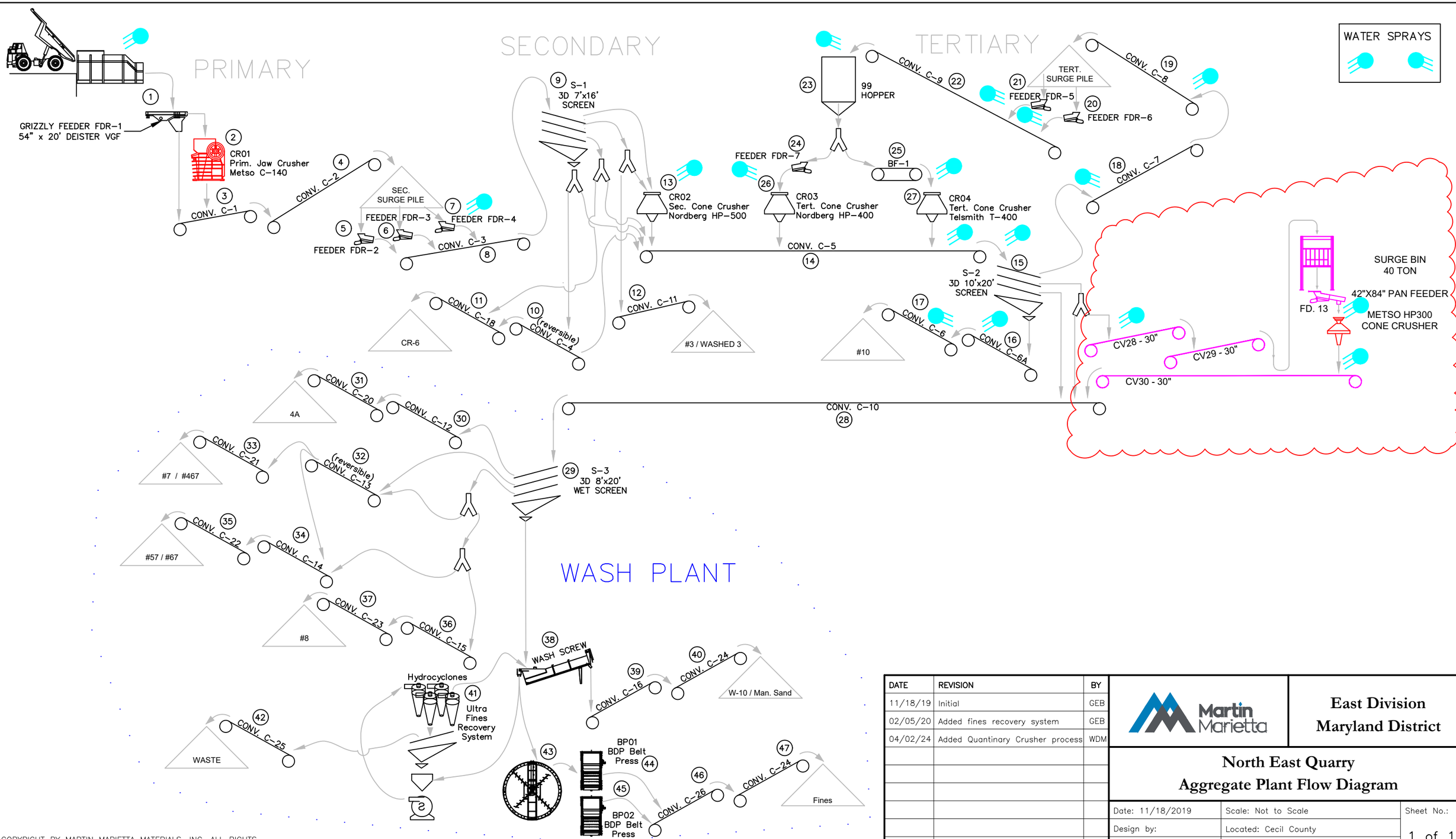
Process Flow Diagram



DATE	REVISION	BY
11/18/19	Initial	GEB
02/05/20	Added fines recovery system	GEB
04/02/24	Added Quantinary Crusher process	WDM

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East Division
Maryland District

North East Quarry
Aggregate Plant Flow Diagram

Date: 11/18/2019	Scale: Not to Scale	Sheet No.:
Design by:	Located: Cecil County	1 of 1
Drawn by: GEB	Business Unit: 31111	

North East Quarry

Business Unit: 31111

Air Permit to Operate No.: 015-0005

Plant 2E (ARMA 015-0005-6-0299)

ID No.	DESCRIPTION	Asset No.	Rated Capacity	Comments
2	CR01 METSO C160 JAW CRUSHER	TBD	1,260	
13	CR02 Metso Nordberg HP 500 S/M	192815	880	Note: Permit is for 750
26	CR03 Metso Nordberg HP 400 SH/M	193092	700	
27	CR04 Telsmith T-400 Crusher	193775	585	
51	CR05 Metso HP300	TBD	250	
9	S1 Metso 7x16 Triple Deck	192459	1500	
15	S2 Diester BHM-31020-O3T	193780	2281	
29	S3 Diester BHM-3820-OT	193766	1750	
3	C-1 CONV 48X60	193216		
4	C-2 CONV 48X323	192547		
8	C-3 CONV 48X360	192791		
10	C-4 CONV 36X27 (reversible)	192471		
14	C-5 CONV 48X360	192546		
17	C-6 CONV 30X164	193223		Stacker, #10
16	C-6A CONV 30X40	214257		
18	C-7 CONV 36X190	192555		
19	C-8 CONV 36X283	192790		
22	C-9 CONV 36X283	192450		
28	C-10 CONV 36x145	192554		
28	C-10 CONV 36x165	TBD	155	Extending length, increasing throughput
12	C-11 CONV, 36X85	212009		Stacker, ASTM #3
30	C-12 CONV 36X50	192563		
32	C-13 CONV 30X43 (reversible)	192799		
34	C-14 CONV 30X65	192449		
36	C-15 CONV 30X85	192562		
39	C-16 CONV 30X55	193231		
11	C-18 CONV 36X150	192530		Stacker, CR-6
31	C-20 CONV 30X120	193217		Stacker, 4A
33	C-21 CONV 30X123	192539		Stacker, #7 / #467
35	C-22 CONV 30X123	192782		Stacker, #57 / #67
37	C-23 CONV 30X123	192472		Stacker, #8
40	C-24 CONV 30X123	192538		Stacker, W-10 / Man. Sand
42	C-25 CONV 24X63	192446		Stacker, Fines

48	C-28 CONV 30x31	TBD	155	
49	C-29 CONV 30x105	TBD	155	
50	C-30 CONV 30x93	TBD	155	
1	FDR-1 METSO 58X24 VL-14 Vibrating Grizzly Feeder	192474		
5	FDR 2 SYNTRON MF200-C 48X84	192453		Inside Surge Tunnel
6	FDR 3 SYNTRON MF200-C 48X84	193239		Inside Surge Tunnel
7	FDR 4 SYNTRON MF200-C 48X84	192462		Inside Surge Tunnel
21	FDR 5 SYNTRON 36X72 MF200-C	192807		Inside Surge Tunnel
20	FDR 6 SYNTRON MF200-C 36X72	192457		Inside Surge Tunnel
24	FDR 7 SYNTRON MF400-2 48X118	192473		
25	BF-1 99 SYNTRON F480A Belt Feeder	193113		
52	Syntron MF 200 42x84	TBD	155	
38	WASHER 44X33 DFMSW	193474		
23	99 HOPPER (FOR BF-1)	192516		
41	WASH ULTRA FINES RECOVERY	193260		
43	TC01 THICKENER / CLARIFIER	**		
44	BP01 BDP BELT PRESS	**		
45	BP02 BDP BELT PRESS	**		
46	C-26 CONV 30x80	**		
47	C-27 CONV 30x80	**		
A-1	R-2 30" Conveyor Belt	**		
A-2	R-3 30" Conveyor Belt	**		
A-3	R-4 48" Conveyor Belt	**		
A-4	R-5 48" Conveyor Belt	**		
A-5	Syntron Feeder	**		
N/A	Truck Unloading	N/A		
N/A	Truck Loading	N/A		
N/A	Storage Piles	N/A		

Portable Plant (up to 600 tons per hour, ARMA 015-0005-6-0364)

PP-CR-1	One (1) Primary Crusher	N/A		
PP-CR-2	One (1) Secondary Crusher	N/A		
PP-CR-3	One (1) Tertiary Crusher	N/A		
PP-VS-1	One (1) Screen	N/A		
PP-VS-2	One (1) Screen			
PP-CONV	Associated Conveyors (approx. 21)	N/A		
PP-GRIZ	Primary Grizzly Feeder	N/A		
PP-GRIZ	Vibrating Grizzly Feeder	N/A		
PP-GRIZ	Vibrating Grizzly Feeder	N/A		
PP-FEED	Apron/Belt Feeder	N/A		
PP-EN540	Up to Four (4) Diesel Fired Engines, <= 540 HP, Tier III o	N/A		
PP-EN174	Up to Two (2) Diesel Fire Engines, <= 174 HP, Tier III or	N/A		
PP-EN51	One (1) Diesel Fired Engine, <=51 HP, Teir III or better	N/A		

General Notes:

1) Portable Plants with capacities of 150 TPH or less are not subject to NSPS

2) "NO (WET)" refers to equipment assoicated with wet material processing operations defined in § 60.671, and are therefore not subject to the provisions of 40 CFR Subpart OOO.

3) "EXEMPT" = no visible emission testing required.

4) ** = Needs Martin Marietta company asset number

5) "Unknown" = No data available

6) "Rated Capacity" is based on vendor or manufacturer provided information, or educated estimates where information is not available.

7) Capacities shown in blue were estimated based on upstream or downstream equipment capacities.

General Notes:

** = Needs Martin Marietta company asset number

"Unknown" = No data available

"Rated Capacity" is based on vendor or manufacturer provided information, or educated estimates where information is not available.

Capacities shown in blue were estimated based on upstream or downstream equipment capacities.

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Site Plan

QUARRY PIT

PRIMARY CRUSHER (UNIT TO BE REPLACED)

TENANT ASPHALT PLANT

EXISTING FIXED CRUSHING AND SCREENING PLANT

PROPERTY LINE

1822

1832

2002

1773

D:\Aerials\Propeller\NES_20210114.jpg

D:\Aerials\Atlantic 201902\MARYLAND CORRECT\North East\Northeast_C

PROPERTY LINE

SCALE: 1"=600'

REVISIONS

REV #	DATE	BY:	DESCRIPTION
1	4/6/2021	BM	Updated aerial photo. Added Quarterboy Crusher process.

DATE: 03/18/2021

DRAWN BY: GEB

REVIEW BY:

BU: 31111

Whitney McGuigan
Environmental Engineer
Senior District
233 Stevenson Road
North East, MD 21901
m: (443) 877-2535
e: whitney.mcguigan@martinmarietta.com
www.martinmarietta.com

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AIR PERMIT EXHIBIT - AREA MAP
NORTH EAST QUARRY
MARYLAND DISTRICT

233 Stevenson Road, North East, MD 21901

Sheet Name
FIGURE 1

Sheet No.
1 of 1

Material Balance Data
&
Emissions Calculations

Bluegrass Materials Company, LLC (C/o Martin Marietta Materials, Inc.)

North East, Permit to Operate 015-0005

Permit to Construct Application

Form 5 / 5EP Calculations

Date: 03/16/2021

							Particulate Matter Emissions (*3)				
				Projected Operations (*2)					At Projected Operations		
Description	Make	Model	Design Capacity (stph) (*1)	Rate (stph)	Daily Op. Hours (hrs/day)	Annual Op. Hours (hrs/yr)	Emissions Factor (lb/Ton)	Design Capacity Hrly Emissions (lb/hr)	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)	Annual Emissions (Tons/yr)
CR05 Metso HP300			250	38	12	2500	0.00120	0.30	0.05	0.54	0.06
C-10 CONV 36x165			155	38	12	2500	0.00120	0.19	0.05	0.54	0.06
C-28 CONV 30x31			155	37	12	2500	0.00120	0.19	0.04	0.53	0.05
C-29 CONV 30x105			155	37	12	2500	0.00120	0.19	0.04	0.53	0.05
C-30 CONV 30x93			155	37	12	2500	0.00120	0.19	0.04	0.53	0.05
Syntron MF 200 42x84			155	38	12	25000	0.00120	0.19	0.05	0.54	0.56
TOTAL								**1.04**	**0.27**	**3.20**	**0.84**

		PM-10 Emissions (*3)					PM-2.5 Emissions (*3)				
				At Projected Operations					At Projected Operations		
Description	Make	Emissions Factor (lb/Ton)	Design Capacity Hrly Emissions (lb/hr)	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)	Annual Emissions (Tons/yr)	Emissions Factor (lb/Ton)	Design Capacity Hrly Emissions (lb/hr)	Hourly Emissions (lb/hr)	Daily Emissions (lb/day)	Annual Emissions (Tons/yr)
CR05 Metso HP300		0.000540	0.14	0.02	0.24	0.03	0.00010	0.03	0.00375	0.045	0.00
C-10 CONV 36x165		0.000540	0.08	0.02	0.24	0.03	0.00010	0.02	0.00375	0.0450	0.00
C-28 CONV 30x31		0.000540	0.08	0.02	0.24	0.02	0.00010	0.02	0.00365	0.0438	0.00
C-29 CONV 30x105		0.000540	0.08	0.02	0.24	0.02	0.00010	0.02	0.00365	0.0438	0.00
C-30 CONV 30x93		0.000540	0.08	0.02	0.24	0.02	0.00010	0.02	0.00365	0.0438	0.00
Syntron MF 200 42x84		0.000540	0.08	0.02	0.24	0.25	0.00010	0.02	0.00375	0.0450	0.05
TOTAL			**0.55**	**0.12**	**1.44**	**0.38**		**0.10**	**0.02**	**0.27**	**0.07**

(*1) "Design Capacity" is based on vendor or manufacturer provided information, or educated estimates where information is not available.

(*2) "Projected Operations" represent conservative estimates based on computer flow modeling, equipment configuration, past operational records, and interviews with knowledgeable personnel.

(*3) PM, PM-10, & PM-2.5 emissions based on 100% equipment availability, and AP-42 emissions factors (AP-42 11.19.2, Table 11.19.1-2 (English Units) revised 08/04).

(*4) WMPO = Wet Material Processing Operations

(*5) Capacity / Rate = Input Rate = Output Rate for all of the above.

Bluegrass Materials Company, LLC (C/o Martin Marietta Materials, Inc.)

North East, Permit to Operate 015-0005

Permit to Construct Application

Form 5T & Crystalline Silica Emissions Calculations

Date: 03/16/2021

Total Stage Throughputs - Current:

Primary	900	tph	
Secondary	750	tph	
Tertiary	700	tph	

Proposed:

Primary	1400	tph
Secondary	1400	tph
Tertiary	1050	tph
Quantinary	250	tph

			Current Equipment				**Proposed Equipment**			
ID No.	**DESCRIPTION**	**PM-10 Emission Factor** *(lb/Ton)*	**Equip. Capacity** *(stph)*	**Projected Operating Rate** *(stph)*	**PM-10 Emissions @ Proj. Operating Rate** *(lbs/hr)*	**Crystaline Silica Emissions** *(lbs/hr)*	**Equip. Capacity** *(stph)*	**Projected Operating Rate** *(stph)*	**PM-10 Emissions @ Proj. Operating Rate** *(lbs/hr)*	**Crystaline Silica Emissions** *(lbs/hr)*
2	CR01 METSO C160 JAW CRUSHER	0.00054					1,260	1,120	0.60	0.00067
13	CR02 Metso Nordberg HP 500 S/M	0.00054	880	469	0.25	0.00028	880	875	0.47	0.00052
26	CR03 Metso Nordberg HP 400 SH/M	0.00054	700	385	0.21	0.00023	700	578	0.31	0.00035
27	CR04 Telsmith T-400 Crusher	0.00054	585	315	0.17	0.00019	585	473	0.26	0.00028
51	CR05 Metso HP300	0.00054					250	38	0.02	0.00002
9	S1 Metso 7x16 Triple Deck	0.00074	1500	750	0.56	0.00061	1500	1,400	1.04	0.00115
15	S2 Diester BHM-31020-O3T	0.00074	2281	1,400	1.04	0.00115	2281	2,100	1.55	0.00172
29	S3 Diester BHM-3820-OT	WMPO	1750	609	0.00	0.00000	1750	914	0.00	0.00000
3	C-1 CONV 48X60	0.000046	-	900	0.04	0.00005	-	1,400	0.06	0.00007
4	C-2 CONV 48X323	0.000046	-	900	0.04	0.00005	-	1,400	0.06	0.00007
8	C-3 CONV 48X360	0.000046	-	750	0.03	0.00004	-	1,400	0.06	0.00007
10	C-4 CONV 36X27 (reversible)	0.000046	-	188	0.01	0.00001	-	350	0.02	0.00002
14	C-5 CONV 48X360	0.000046	-	1,400	0.06	0.00007	-	2,100	0.10	0.00011
17	C-6 CONV 30X164	0.000046	-	91	0.00	0.00000	-	137	0.01	0.00001
16	C-6A CONV 30X40	0.000046	-	91	0.00	0.00000	-	137	0.01	0.00001
18	C-7 CONV 36X190	0.000046	-	700	0.03	0.00004	-	1,050	0.05	0.00005
19	C-8 CONV 36X283	0.000046	-	700	0.03	0.00004	-	1,050	0.05	0.00005
22	C-9 CONV 36X283	0.000046	-	700	0.03	0.00004	-	1,050	0.05	0.00005
28	C-10 CONV 36x145	0.000046	-	609	0.03	0.00003	-	914	0.04	0.00005
28	C-10 CONV 36x165	0.000046	155	0	0.00	0.00000	155	38	0.00	0.00000
12	C-11 CONV, 36X85	0.000046	-	53	0.00	0.00000	-	98	0.00	0.00000
30	C-12 CONV 36X50	WMPO	-	21	0.00	0.00000	-	32	0.00	0.00000
32	C-13 CONV 30X43 (reversible)	WMPO	-	28	0.00	0.00000	-	42	0.00	0.00000
34	C-14 CONV 30X65	WMPO	-	245	0.00	0.00000	-	368	0.00	0.00000
36	C-15 CONV 30X85	WMPO	-	189	0.00	0.00000	-	284	0.00	0.00000
39	C-16 CONV 30X55	WMPO	-	119	0.00	0.00000	-	179	0.00	0.00000
11	C-18 CONV 36X150	0.000046	-	135	0.01	0.00001	-	252	0.01	0.00001
31	C-20 CONV 30X120	WMPO	-	21	0.00	0.00000	-	32	0.00	0.00000
33	C-21 CONV 30X123	WMPO	-	28	0.00	0.00000	-	42	0.00	0.00000
35	C-22 CONV 30X123	WMPO	-	245	0.00	0.00000	-	368	0.00	0.00000
37	C-23 CONV 30X123	WMPO	-	189	0.00	0.00000	-	284	0.00	0.00000
40	C-24 CONV 30X123	WMPO	-	119	0.00	0.00000	-	179	0.00	0.00000
42	C-25 CONV 24X63	WMPO	-	7	0.00	0.00000	-	11	0.00	0.00000
48	C-28 CONV 30x31	WMPO	155	0	0.00	0.00000	155	37	0.00	0.00000
49	C-29 CONV 30x105	WMPO	155	0	0.00	0.00000	155	37	0.00	0.00000
50	C-30 CONV 30x93	WMPO	155	0	0.00	0.00000	155	37	0.00	0.00000
1	FDR-1 METSO 58X24 VL-14 Vibrating Grizzly Feeder	0.000016	-	900	0.01	0.00002	-	1,400	0.02	0.00002
5	FDR 2 SYNTRON MF200-C 48X84	*(8)	-	250	0.00	0.00000	-	467	0.00	0.00000
6	FDR 3 SYNTRON MF200-C 48X84	*(8)	-	250	0.00	0.00000	-	467	0.00	0.00000
7	FDR 4 SYNTRON MF200-C 48X84	0.000046	-	250	0.01	0.00001	-	467	0.02	0.00002
21	FDR 5 SYNTRON 36X72 MF200-C	*(8)	-	700	0.00	0.00000	-	1,050	0.00	0.00000
20	FDR 6 SYNTRON MF200-C 36X72	*(8)	-	350	0.00	0.00000	-	525	0.00	0.00000
24	FDR 7 SYNTRON MF400-2 48X118	0.000046	-	350	0.02	0.00002	-	525	0.02	0.00003
25	BF-1 99 SYNTRON F480A Belt Feeder	0.000046	-	350	0.02	0.00002	-	525	0.02	0.00003
52	Syntron MF 200 42x84	0.000046	155	0	0.00	0.00000	155	38	0.00	0.00000
38	WASHER 44X33 DFMSW	WMPO	-	126	0.00	0.00000	-	189	0.00	0.00000
23	99 HOPPER (FOR BF-1)	N/A	-	700	0.00	0.00000	-	1,050	0.00	0.00000
41	WASH ULTRA FINES RECOVERY	WMPO	-	21	0.00	0.00000	-	32	0.00	0.00000
43	TC01 THICKENER / CLARIFIER	WMPO	-	28	0.00	0.00000		42	0.00	0.00000
44	BP01 BDP BELT PRESS	WMPO	-	28	0.00	0.00000		42	0.00	0.00000
45	BP02 BDP BELT PRESS	WMPO	-	28	0.00	0.00000		42	0.00	0.00000
46	C-26 CONV 30x80	WMPO	-	28	0.00	0.00000		42	0.00	0.00000
47	C-27 CONV 30x80	WMPO	-	28	0.00	0.00000		42	0.00	0.00000
TU	Truck Unloading	0.000016	N/A	#REF!	0.00	0.00000	N/A	1,400	0.02	0.00002
TL	Truck Loading	0.0001	N/A	#REF!	0.00	0.00000	N/A	1,400	0.14	0.00015
SP	Storage Piles	0.00159	N/A	#REF!	0.00	0.00000	N/A	1,400	2.23	0.00246
				PM-10 TOTAL:	**2.61**				**7.26**	

					CRYSTALINE SILICA TOTAL:	**0.0029**			**0.0080**
								PM-10 TOTAL (MODIFICATION EQUIPMENT ONLY):	**0.06**
								CRYSTALINE SILICA (MODIFICATION EQUIPMENT ONLY)	**0.0007**

Portable Plant (up to 600 tons per hour, ARMA 015-0005-6-0364)

PP	Portable Plant, Fugitive Emis. From Processing	VARIOUS	600	600	**2.09**	**0.00231**	600	600	**2.09**	**0.00231**

NOTE: Portable Plant PM-10 emissions from 2017 Air Permit to Construct Application

TOTAL (PROPOSED FIXED EQUIPMENT + PORTABLE PLANT):

	PM-10	**9.35**
	CRSYTALINE SILICA	**0.0103**
(assuming 3000 operating hours)		31.04

Comments:

(1) Crushed Stone Processing equipment emissions factors from AP-42 11.19.2, Table 11.19.1-2 (English Units) revised 08/04.

(2) Storage Pile emissions factors from AP-42, Section 13.2.4 - Assuming a moisture content of 2.1%, a mean wind speed of 6.9 miles per hour, < 10 micrometer particale size multiplier, and the number of tons processed (max design capacity) is equal to the number of tons handled.

(3) WMPO = Wet Material Processing Operation.

(4) Equipment associated with PTC modification is highlighted yellow.

(5) "Equip. Capacity" is based on vendor or manufacturer provided information, or educated estimates where information is not available.

(6) "Projected Operations" represent high-range estimates based on computer flow modeling, equipment configuration, past operational records, and interviews with knowledgeable personnel. Actual throughput may vary based on plant configuration and other factors.

(7) Equipment associated with rail yard facility (A-1 thru A-5) operates only intermittently, and is located approximately 4000 feet from fixed facility. This equipment only conveys finished product into rail cars (no crushing or screening at facility). Therefore, emissions from this equipment was assumed to be negligible for the purposes of this evaluation.

(8) Vibrating feeders, located underneath of surge piles (in surge tunnels).

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Safety Data Sheet (SDS)

SAFETY DATA SHEET (SDS): GRANITE

SECTION I –IDENTIFICATION

PRODUCT IDENTIFIER	TRADE NAME	OTHER SYNONYMS
Granite	Granite, Diorite, Noveculite, Rhyolite	Aggregate, Base, Crushed Stone, Manufactured Sand, Ballast Screenings

RECOMMENDED USE AND RESTRICTION ON USE
Used for construction purposes
This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications.

MANUFACTURER/SUPPLIER INFORMATION
Martin Marietta Materials
2710 Wycliff Road
Raleigh, North Carolina 27607
Phone: 919-781-4550

For additional health, safety or regulatory information and other emergency situations, call 919-781-4550

SECTION II – HAZARD(S) IDENTIFICATION

HAZARD CLASSIFICATION:
Category 1A Carcinogen
Category 1 Specific Target Organ Toxicity (STOT) following repeated exposures
Category 1 Eye Damage
Category 1 Skin Corrosive

SIGNAL WORD: DANGER

HAZARD STATEMENTS:
May cause cancer by inhalation.
Causes damage to lungs, kidneys and autoimmune system through prolonged or repeated exposure by inhalation.
Causes severe skin burns and serious eye damage.

PRECAUTIONARY STATEMENTS
Do not handle until the safety information presented in this SDS has been read and understood.
Do not breathe dusts or mists. Do not eat, drink or smoke while manually handling this product. Wash skin thoroughly after manually handling.
If swallowed: Rinse mouth and do not induce vomiting.
If on skin (or hair): Rinse skin after manually handling and wash contaminated clothing if there is potential for direct skin contact before reuse.
If inhaled excessively: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, and continue rinsing.
If exposed, concerned, unwell or irritation of the eyes, skin, mouth or throat/nasal passage persist: Get medical attention.
Wear eye protection and respiratory protection following this SDS, NIOSH guidelines and other applicable regulations. Use protective gloves if manually handling the product.

Avoid creating dust when handling, using or storing. Use with adequate ventilation to keep exposure below recommended exposure limits.

Dispose of product in accordance with local, regional, national or international regulations.

Please refer to Section XI for details of specific health effects of the components.

SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NO	% by weight (approx)
Silicon Dioxide, SiO_2 (1)	7631-86-9	70-72
Aluminum Oxide, Al_2O_3	1344-28-1	13-15
Ferrous Oxide, FeO	1345-25-1	1-2
Ferric Oxide, Fe_2O_3	1309-37-1	1-2
Magnesium Oxide, MgO	1309-48-4	<1
Calcium Oxide, CaO	1305-78-8	1-2
Sodium Oxide, Na_2O	1313-59-3	3-4
Potassium Oxide, K_2O	12136-45-7	4-5

(1): The composition of SiO_2 may be up to 100% crystalline silica

SECTION IV – FIRST-AID MEASURES

INHALATION: If excessive inhalation occurs, remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or develops later.

EYES: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Remove contact lenses, if present and easy to do, and continue rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or develops later.

SKIN: Rinse skin with soap and water after manually handling and wash contaminated clothing if there is potential for direct skin contact. Contact a physician if irritation persists or develops later.

INGESTION: If swallowed, rinse mouth and do not induce vomiting. If gastrointestinal discomfort occurs, persists or develops later, get medical attention.

SIGNS AND SYMPTOMS OF EXPOSURE: There are generally no signs or symptoms of exposure to respirable crystalline silica. Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as 6 months, are the same as those associated with chronic silicosis; additionally, weight loss and fever may also occur. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

Direct skin and eye contact with dust may cause irritation by mechanical abrasion. Some components of the product are also known to cause corrosive effects to skin, eyes and mucous membranes. Ingestion of large amounts may cause gastrointestinal irritation and blockage. Inhalation of dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion or corrosive action. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits. Repeated excessive exposure may cause pneumoconiosis, such as silicosis and other respiratory effects.

SECTION V – FIRE-FIGHTING MEASURES

EXTINGUISHING AGENT
Not flammable; use extinguishing media compatible with surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARD
Contact with powerful oxidizing agents may cause fire and/or explosions (see Section X of this SDS). While individual components are known to react vigorously with water to produce heat, this is not expected from the granite.

SPECIAL FIRE FIGHTING PROCEDURES	HAZARDOUS COMBUSTION PRODUCTS
None known	None known

SECTION VI – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Persons involved in cleaning should first follow the precautions defined in Section VII of the SDS. Spilled materials, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust and other components that may pose inhalation hazards. Do not dry sweep spilled material. Collect the material using a method that does not produce dust such as a High-Efficiency Particulate Air (HEPA) vacuum or thoroughly wetting down the dust before cleaning up. Wear appropriate personal protective equipment as specified in Section VIII including appropriate respirators during and following clean up or whenever airborne dust is present to ensure worker exposures remain below occupational exposure limits (OELs - Refer to Section VIII).

Place the dust in a covered container appropriate for disposal. Dispose of the dust according to federal, state and local regulations.

This product is not subject to the reporting requirements of SARA Title III Section 313, and 40 CFR 372.

SECTION VII – HANDLING AND STORAGE

This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications. Follow protective controls set forth in Section VIII of this SDS when handling this product. Dust containing respirable crystalline silica and other components that may be corrosive/irritant may be generated during processing, handling and storage. Use good housekeeping procedures to prevent the accumulation of dust in the workplace.

Do not breathe dust. Avoid contact with skin and eyes. Do not store near food or beverages or smoking materials.
Do not stand on piles of materials; it may be unstable.

Use adequate ventilation and dust collection equipment and ensure that the dust collection system is adequate to reduce airborne dust levels to below the appropriate OELs. If the airborne dust levels are above the appropriate OELs, use respiratory protection during the establishment of engineering controls. Refer to Section VIII - Exposure Controls/Personal Protection for further information.

In accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21), state, and/or local right-to-know laws and regulations, familiarize your employees with this SDS and the information contained herein. Warn your employees, your customers and other third parties (in case of resale or distribution to others) of the potential health risks associated with the use of this product and train them in the appropriate use of personal protective equipment and engineering controls, which will reduce their risks of exposure.

See also ASTM International standard practice E 1132-06, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica."

For safe handling and use of this product for Hydraulic Fracturing, please see the OSHA/NIOSH Hazard Alert Worker Exposure to Silica during Hydraulic Fracturing DHHS (NIOSH) Publication No. 2012-166 (2012).
http://www.osha.gov/dts/hazardalerts/hydraulic_frac_hazard_alert.pdf

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne OELs for Components of Granite:

COMPONENT(S) CHEMICAL NAME	MSHA/OSHA PEL	ACGIH TLV-TWA	NIOSH REL
Silicon Dioxide, SiO_2 §	(R) 0.05 mg/m^3 (R) 0.025 mg/m^3 (AL)	(R) 0.025 mg/m^3 #	(R) 0.05 mg/m^3 #
Aluminum Oxide, Al_2O_3	(T) 15 mg/m^3, (R) 5 mg/m^3	(1)(R) 1 mg/m^3	-
Ferrous Oxide, FeO	-	-	-
Ferric Oxide, Fe_2O_3	(2) 10 mg/m^3	(R) 5 mg/m^3	(3) 5 mg/m^3
Magnesium Oxide, MgO	(4) 15 mg/m^3	(I) 10 mg/m^3	-
Calcium Oxide, CaO	5 mg/m^3	2 mg/m^3	2 mg/m^3
Sodium Oxide, Na_2O (5)	2 mg/m^3	(C) 2 mg/m^3	(C) 2 mg/m^3
Potassium Oxide, K_2O	-	(6) (C) 2 mg/m^3	(6)(C) 2 mg/m^3

§ The OSHA OELs for respirable crystalline silica are listed in the table. As of June 28, 2018, the MSHA standard for respirable crystalline silica has not been changed but may be revised in the future. The MSHA PEL for dust containing crystalline silica (quartz) is based on the silica content of the respirable dust sample and is calculated as: 10 mg/m^3/(% SiO_2 +2). The MSHA PEL for crystalline silica as tridymite and cristobalite is one-half the PEL for crystalline silica (quartz).
# The ACGIH and NIOSH limits are for crystalline silica (quartz), independent of the dust concentration. The ACGIH TLV for crystalline silica as cristobalite is equal to the TLV for crystalline silica as quartz. In 2005, ACGIH withdrew the TLV for crystalline silica as tridymite. The NIOSH REL for crystalline silica as cristobalite and tridymite is the same as for quartz. Refer to Section X for thermal stability information for crystalline silica (quartz).
AL: Action Level
(1): Limits based on Aluminum Metal and Insoluble Compounds.
(2): As Iron Oxide Fume.
(3): Dust and fume, as Iron
(4): As Magnesium Oxide Fume Total Particulate.
(5): Based on Sodium Hydroxide.
(6): Based on Potassium Hydroxide.
(R): Respirable Fraction.
(T): Total Dust.
(I): Inhalable Fraction.
(C): Ceiling Limit

Airborne OELs for Inert/Nuisance Dust:

Standard	Respirable Dust	Total Dust
MSHA/OSHA PEL (as Inert or Nuisance Dust)	5 mg/m^3	15 mg/m^3
ACGIH TLV (as Particles Not Otherwise Specified)	3 mg/m^3	*10 mg/m^3
NIOSH REL (Particulates Not Otherwise Regulated)	-	-

Note: The limits for Inert Dust are provided as guidelines. Nuisance dust is limited to particulates not known to cause systemic injury or illness.
* The TLV provided is for inhalable particles not otherwise specified.

ENGINEERING CONTROLS

Ventilation: Use local exhaust, general ventilation or natural ventilation adequate to maintain exposures below appropriate exposure limits.

Other control measures: Respirable dust and crystalline silica levels should be monitored regularly. Dust and crystalline silica levels in excess of appropriate exposure limits should be reduced by implementing feasible engineering controls, including (but not limited to) dust suppression (wetting), ventilation, process enclosure and enclosed employee work stations.

EYE/FACE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated. If irritation persists, get medical attention immediately. There is potential for severe eye irritation if exposed to excessive concentrations of dust for those using contact lenses.

SKIN PROTECTION

Use appropriate protective gloves if manually handling the product.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION, CONTD.

RESPIRATORY PROTECTION
Respirator Recommendations:

For respirable crystalline silica levels that exceed or are likely to exceed appropriate exposure limits, a NIOSH-approved particulate filter respirator must be worn. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements. For additional information contact NIOSH at 1-800-356-4674 or visit website: http://www.cdc.gov/niosh/npg (search for crystalline silica). See also ANSI standard Z88.2 (latest revision) "American National Standard for Respiratory Protection," 29 CFR 1910.134 and 1926.103, and 42 CFR 84.

NIOSH recommendations for respiratory protection include:
Up to 0.5 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Up to 1.25 mg/m^3:
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate (100-series) filter.
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
Up to 2.5 mg/m^3:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
Up to 25 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions (50 mg/m^3 for crystalline silica-quartz): A self-contained breathing apparatus (SCBA) that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode or any supplied-air respirator that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

Escape from unknown or IDLH conditions: An air-purifying, full-face piece respirator with a high-efficiency particulate (100-series) filter or any appropriate escape-type, self-contained breathing apparatus.

If the workplace airborne crystalline silica concentration is unknown for a given task, conduct air monitoring to determine the appropriate level of respiratory protection to be worn. Consult with a certified industrial hygienist, your insurance risk manager or the OSHA Consultative Services group for detailed information. Ensure appropriate respirators are worn, as needed, during and following the task, including clean up or whenever airborne dust is present, to ensure worker exposures remain below OELs.

GENERAL HYGIENE CONSIDERATIONS
There are no known hazards associated with this material when used as recommended. Following the guidelines in this SDS are recognized as good industrial hygiene practices. Avoid breathing dust. Avoid skin and eye contact. Wash dust-exposed skin with soap and water before eating, drinking, smoking and using toilet facilities. Wash work clothes after each use.

SECTION IX— PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE Granite is a mixture of angular particles, color can range from white to red to black and colors in between, ranging in size from pebbles to boulders.	ODOR AND ODOR THRESHOLD Odorless and not applicable
pH AND VISCOSITY Not applicable	MELTING POINT/FREEZING POINT Not applicable
BOILING POINT AND RANGE Not applicable	FLASH POINT AND FLAMMABILITY Not applicable
FLAMMABILITY/EXPLOSIVE LIMITS AND AUTOIGNITION TEMPERATURE Not applicable	EVAPORATION RATE AND DECOMPOSITION TEMPERATURE Not applicable
VAPOR PRESSURE AND VAPOR DENSITY IN AIR Not applicable	SPECIFIC GRAVITY. 2.6-2.8
SOLUBILITY IN WATER Insoluble	PARTITION COEFFICIENT: N-OCTANOL/WATER Not applicable

SECTION X – STABILITY AND REACTIVITY	
STABILITY Stable	CONDITIONS TO AVOID Contact with incompatible materials (see below).
THERMAL STABILITY If crystalline silica (quartz) is heated to more than 870°C (1598°F), it can change to a form of crystalline silica known as tridymite, and if crystalline silica (quartz) is heated to more than 1470°C (2678°F), it can change to a form of crystalline silica known as cristobalite.	
INCOMPATIBILITY (Materials to avoid) Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Some components of granite may react vigorously with water.	
HAZARDOUS DECOMPOSITION PRODUCTS Silica dissolves in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.	
HAZARDOUS POLYMERIZATION Not known to polymerize	

SECTION XI – TOXICOLOGICAL INFORMATION

Health Effects: The information below represents an overview of health effects caused by overexposure to one or more components in granite.

Primary routes(s) of exposure: ■ Inhalation ☐ Skin ■ Ingestion

EYE CONTACT: Direct contact with dust may cause irritation by mechanical abrasion or corrosive action. Conjunctivitis may occur.

SKIN CONTACT: Direct contact may cause irritation by mechanical abrasion. Some components of material are also known to cause corrosive effects to skin and mucous membranes.

SKIN ABSORPTION: Not expected to be a significant route of exposure.

INGESTION: Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

INHALATION: Dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion or corrosive action. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions. Smoking and obstructive/restrictive lung diseases may also exacerbate the effects of excessive exposure to this product.

This product is a mixture of components. The composition percentages are listed in Section III. Toxicological information for each component is listed below:

Silicon Dioxide: It is comprised of amorphous and crystalline forms of silica. In some batches, crystalline silica may represent up to 100% of silicon dioxide.

Exposure route: Eyes, respiratory system.

Target organs: Eyes, skin, respiratory system.

ACGIH, MSHA, and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate exposure limits. Lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions as described under medical conditions aggravated by exposure.

A. SILICOSIS
The major concern is silicosis (lung disease), caused by the inhalation and retention of respirable crystalline silica dust. Silicosis leads to conditions such as lung fibrosis and reduced pulmonary function. The form and severity in which silicosis manifests itself, depends in part on the type and extent of exposure to silica dusts: chronic, accelerated and acute forms are recognized. In later stages the critical condition may become disabling and potentially fatal. Restrictive and/or obstructive changes in lung function may occur due to exposure. A risk associated with silicosis is development of pulmonary tuberculosis (silico-tuberculosis). Respiratory insufficiencies due to massive fibrosis and reduced pulmonary function, possibly with accompanying heart failure, are other potential causes of death due to silicosis.

Chronic or Ordinary Silicosis is the most common form of silicosis and can occur after many years of exposure to levels above the OELs for airborne respirable crystalline silica dust. Not all individuals with silicosis will exhibit symptoms (signs) of the disease. Symptoms of silicosis may include (but are not limited to): Shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; heart enlargement and/or failure. It is further defined as either simple or complicated silicosis.

Simple Silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF).

Complicated Silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease (cor pumonale) secondary to the lung disease.

Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of the initial exposure. The progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that the lung lesions appear earlier and the progression is more rapid.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is a rapidly progressive, incurable lung disease and is typically fatal.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

B. CANCER

IARC - The International Agency for Research on Cancer ("IARC") concluded that there is "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the form of quartz or cristobalite", there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz dust" and that there is "*limited evidence* in experimental animals for the carcinogenicity of tridymite dust and cristobalite dust." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite dust is *carcinogenic to humans* (*Group 1*)." The IARC evaluation noted that not all industrial circumstances studied evidenced carcinogenicity. The monograph also stated that "Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C, "Silica Dust, Crystalline, in the Form of Quartz or Cristobalite" (2012).

NTP - In its Eleventh Annual Report on Carcinogens, concluded that respirable crystalline silica is known to be a human carcinogen, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to respirable crystalline silica and increased lung cancer rates in workers exposed to crystalline silica dust.

OSHA - Crystalline silica is not on the OSHA carcinogen list.

CALIFORNIA PROPOSITION 65 - Crystalline silica in October 1996 was listed on the Safe Drinking Water and Toxic Enforcement ACT of 1986 as a chemical known to the state to cause cancer or reproductive toxicity.

There have been many articles published on the carcinogenicity of crystalline silica, which the reader should consult for additional information; the following are examples of recently published articles: (1) "Dose-Response Meta-Analysis of Silica and Lung Cancer", *Cancer Causes Control*, (20):925-33 (2009); (2) "Occupational Silica Exposure and Lung Cancer Risk: A Review of Epidemiological Studies 1996-2005', *Ann Oncol*, (17) 1039-50 (2006); (3) "Lung Cancer Among Industrial Sand Workers Exposed to Crystalline Silica", *Am J Epidemiol*, (153) 695-703 (2001); (4) "Crystalline Silica and The Risk of Lung Cancer in The Potteries", *Occup Environ Med*, (55) 779-785 (1998); (5) "Is Silicosis Required for Silica-Associated Lung Cancer?", *American Journal of Industrial Medicine*, (37) 252- 259 (2000); (6) " Silica, Silicosis, and Lung Cancer: A Risk Assessment", *American Journal of Industrial Medicine*, (38) 8-18 (2000); (7) "Silica, Silicosis, and Lung Cancer: A Response to a Recent Working Group Report", *Journal of Occupational and Environmental Medicine*, (42) 704-720 (2000).

C. AUTOIMMUNE DISEASES

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. For a review of the subject, the following may be consulted: (1) "Antinuclear Antibody and Rheumatoid Factor in Silica-Exposed Workers", *Arh Hig Rada Toksikol*, (60) 185-90 (2009); (2) "Occupational Exposure to Crystalline Silica and Autoimmune Disease", *Environmental Health Perspectives*, (107) Supplement 5, 793-802 (1999); (3) "Occupational Scleroderma", *Current Opinion in Rheumatology*, (11) 490-494 (1999); (4) "Connective Tissue Disease and Silicosis", *Am J Ind Med*, (35), 375-381 (1999).

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: (1) "Tuberculosis and Silicosis: Epidemiology, Diagnosis and Chemoprophylaxis", *J Bras Pneumol*, (34) 959-66 (2008); (2) *Occupational Lung Disorders*, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994); (3) "Risk of Pulmonary Tuberculosis Relative to Silicosis and Exposure to Silica Dust in South African Gold Miners," *Occup Environ Med*, (55) 496-502 (1998); (4) "Occupational Risk Factors for Developing Tuberculosis", *Am J Ind Med*, (30) 148-154 (1996).

E. KIDNEY DISEASE

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis is associated with the increased incidence of kidney diseases, including end stage renal disease. For additional information on the subject, the following may be consulted: (1) "Mortality from Lung and Kidney Disease in a Cohort of North American Industrial Sand Workers: An Update", *Ann Occup Hyg*, (49) 367-73 (2005); (2) "Kidney Disease and Silicosis", *Nephron*, (85) 14-19 (2000); (3) "End Stage Renal Disease Among Ceramic Workers Exposed to Silica", *Occup Environ Med*, (56) 559-561 (1999); (4) "Kidney Disease and Arthritis in a Cohort Study of Workers Exposed to Silica", *Epidemiology*, (12) 405-412 (2001).

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

F. NON-MALIGNANT RESPIRATORY DISEASES

NIOSH has cited the results of studies that report an association between dusts found in various mining operations and non-malignant respiratory disease, particularly among smokers, including bronchitis, emphysema, and small airways disease. *NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica*, published in April 2002, available from NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226, or at https://www.cdc.gov/niosh/docs/2002-129/default.html.

Respirable dust containing newly broken particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken pieces of silica.

Aluminum Oxide:
Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Inhalation or ingestion of high concentrations of this substance may cause gastrointestinal and/or upper respiratory tract irritation. Eye and skin irritant.

Chronic effect/carcinogenicity: Aluminum oxide is not classifiable as a human carcinogen. On occasion workers chronically exposed to aluminum-containing dusts or fumes have developed severe pulmonary reactions including fibrosis, emphysema and pneumothorax. Long-term exposure may have effects on the central nervous system.

Sodium Oxide:

Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Corrosive – Sodium oxide reacts violently with water to form sodium hydroxide. Causes burns of skin, eyes, respiratory and gastrointestinal tracts, extremely destructive to mucous membranes.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Iron Oxide: (Ferrous and Ferric Oxides)
Exposure route: Inhalation, ingestion, skin

Target organs: Respiratory system, skin, eyes, neurological system

Acute effect: Major findings: stupor, shock, acidosis, hematemesis, bloody diarrhea or coma. Minor findings: vomiting, diarrhea, mild lethargy. Benign pneumoconiosis with X-ray shadows indistinguishable from fibrotic pneumoconiosis. Experimental work in animals exposed by intratracheal injection or by inhalation to iron oxide mixed with less than 5% silica has shown no evidence of fibrosis produced in lung tissue.

Chronic effect/carcinogenicity: Irritability, nausea or vomiting, and normocytic anemia. When exposed to levels greater than 50 to 100 milligram per day, it can result in pathological deposition of iron in the body tissues causing fibrosis of the pancreas, diabetes mellitus, and liver cirrhosis. Workers exposed to iron oxide fume and silica may develop a "mixed dust pneumoconiosis." Not classifiable as human carcinogen.

Potassium Oxide:
Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Corrosive – Potassium oxide reacts violently with water to produce potassium hydroxide. If inhaled, causes sore throat, cough, burning sensation and shortness of breath. Contact with skin produces pain and blisters. Severe deep burns, redness and pain occur with eye contact. Ingestion results in burning sensations, abdominal pain, shock or collapse.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

Calcium Oxide:
Exposure route: Inhalation, ingestion, skin/eye contact.

Target organs: Eyes, skin, respiratory system.

Acute effect: Direct contact with tissues, can result in burns and severe irritation because of its high reactivity and alkalinity. Major complaints of workers exposed to lime consist of irritation of the skin and eyes, although inflammation of the respiratory passages, ulceration and perforation of the nasal septum, and even pneumonia has been attributed to inhalation of the dust.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Magnesium Oxide:
Exposure route: Inhalation, eye/skin contact.

Target organs: Eyes, respiratory system.

Acute effect: Magnesium oxide dust caused slight irritation of the eyes and nose, conjunctivitis, inflammation of the mucous membrane, and coughing up discolored sputum after industrial exposures amongst workers exposed to an unspecified concentration of MgO.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Acute Toxicity Estimates for Granite – Not Available

SECTION XII – ECOLOGICAL INFORMATION

No data available for this product**.**

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Collect and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.
The above information applies to Martin Marietta Materials product only as sold. The product may be contaminated during use and it is the responsibility of the user to assess the appropriate disposal method in that situation.

SECTION XIV – TRANSPORT INFORMATION

DOT HAZARD CLASSIFICATION
None

PLACARD REQUIRED
None

LABEL REQUIRED
Label as required by the OSHA Hazard Communication standard {29 CFR 1910.1200(f)}, and applicable state and local regulations.

SECTION XV – REGULATORY INFORMATION

OSHA: Crystalline Silica is not listed as a carcinogen.
SARA Title III: Section 311 and 312: Immediate health hazard and delayed health hazard.
TSCA.: All components of the product appear on the EPA TSCA chemical substance inventory.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 40 CFR §302.4
EPCRA (Emergency Planning and Community Right to Know Act): Crystalline silica (quartz) is not an extremely hazardous substance under regulations of the Emergency Planning and Community Right to Know Act, 40 CFR Part 355, Appendices A and B and is not a toxic chemical subject to the requirements of Section 313.
Clean Air Act: Crystalline silica (quartz) mined and processed by Martin Marietta Materials was not processed with or does not contain any Class I or Class II ozone depleting substances.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3).(The FDA standard primarily applies to products containing silica used in the coatings of food contact surfaces).
California Proposition 65: Respirable crystalline silica (quartz) is classified as a substance known to the state of California to be a carcinogen.
Massachusetts Toxic Use Reduction Act: Respirable crystalline silica is considered toxic per the Massachusetts Toxic Use Reduction Act when used in abrasive blasting and molding.
Pennsylvania Worker and Community Right to Know Act: Quartz is considered hazardous for purposes of the Act, but it is not a special hazardous substance or an environmental hazardous substance.

SECTION XVI – OTHER INFORMATION

DEFINITIONS OF ACRONYMS/ABBREVIATIONS

ACGIH: American Conference of Governmental Industrial Hygienists
AL: Action Level
ANSI: American National Standards Institute
APF: Assigned Protection Factor
California REL: California Inhalation Reference Exposure Limit
CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act
CFR: US Code of Federal Regulations
DHHS: Department of Health and Human Services
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right to Know Act
FDA: Food and Drug Administration
GHS: Globally Harmonized System
HEPA: High-Efficiency Particulate Air
IARC: International Agency for Research on Cancer
IDLH: Immediately Dangerous to Life and Health
MSHA: Mine Safety and Health Administration
NIOSH: National Institute for Occupational Safety and Health, US Department of Health and Human Services
NIOSH REL: NIOSH Recommended Exposure Limit
NTP: National Toxicology Program
OEL: Occupational Exposure Limit
OSHA: Occupational Safety and Health Administration, US Department of Labor
PEL: Permissible Exposure Limit
PMF: Progressive Massive Fibrosis
RCRA: Resource Conservation and Recovery Act
SARA Title III: Title III of the Superfund Amendments and Reauthorization Act, 1986
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act
TWA: Time-Weighted Average

SECTION XVI – OTHER INFORMATION, CONTD.

User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

Disclaimer: The information contained in this document applies to this specific material as supplied and Martin Marietta Materials believes that the information contained in this SDS is accurate. The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Martin Marietta Materials, assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulation, rules or insurance requirement. However, product must not be used in a manner which could result in harm.

An electronic version of this SDS is available at www.martinmarietta.com . More information on the effects of crystalline silica exposure may be obtained from OSHA (phone number: 1-800-321-OSHA; website: http://www.osha.gov) or from NIOSH (phone number: 1-800-35-NIOSH; website: http://www.cdc.gov/niosh).

DATE OF PREPARATION 6/2018 REPLACES 3/2015

SAFETY DATA SHEET (SDS): BASALT

SECTION I –IDENTIFICATION

PRODUCT IDENTIFIER	TRADE NAME	OTHER SYNONYMS
Basalt	Crushed Stone, Traprock	Aggregate, Ballast Screenings, Dolerite, Manufactured Sand, Gabbro, Volcanic Rock

RECOMMENDED USE AND RESTRICTION ON USE
Used for construction purposes
This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications.

MANUFACTURER/SUPPLIER INFORMATION
Martin Marietta Materials
2710 Wycliff Road
Raleigh, North Carolina 27607
Phone: 919-781-4550

For additional health, safety or regulatory information and other emergency situations, call 919-781-4550

SECTION II – HAZARD(S) IDENTIFICATION

HAZARD CLASSIFICATION:
Category 1A Carcinogen
Category 1 Specific Target Organ Toxicity (STOT) following repeated exposures
Category 1 Eye Damage
Category 1 Skin Corrosive

SIGNAL WORD: DANGER

HAZARD STATEMENTS:
May cause cancer by inhalation.
Causes damage to lungs, kidneys and autoimmune system through prolonged or repeated exposure by inhalation.
Causes severe skin burns and serious eye damage.

PRECAUTIONARY STATEMENTS
Do not handle until the safety information presented in this SDS has been read and understood.
Do not breathe dusts or mists. Do not eat, drink or smoke while manually handling this product. Wash skin thoroughly after manually handling.
If swallowed: Rinse mouth and do not induce vomiting.
If on skin (or hair): Rinse skin after manually handling and wash contaminated clothing if there is potential for direct skin contact before reuse.
If inhaled excessively: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, and continue rinsing.
If exposed, concerned, unwell or irritation of the eyes, skin, mouth or throat/nasal passage persist: Get medical attention.
Wear eye protection and respiratory protection following this SDS, NIOSH guidelines and other applicable regulations. Use protective gloves if manually handling the product.

Avoid creating dust when handling, using or storing. Use with adequate ventilation to keep exposure below recommended exposure limits.

Dispose of product in accordance with local, regional, national or international regulations.

Please refer to Section XI for details of specific health effects of the components.

SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NO	% by weight (approx)
Silicon Dioxide, SiO_2 (1)	7631-86-9	<1
Aluminum Oxide, Al_2O_3	1344-28-1	10-20
Ferrous Oxide/Ferric Oxide, FeO/Fe_2O_3	1345-25-1/1309-37-1	2-20
Magnesium Oxide, MgO	1309-48-4	1-15
Calcium Oxide, CaO	1305-78-8	5-15
Sodium Oxide, Na_2O	1313-59-3	2-15
Potassium Oxide, K_2O	12136-45-7	0-12
Titanium Oxide, TiO_2	13463-67-7	0-3

(1): The composition of SiO_2 may be up to 100% crystalline silica

SECTION IV – FIRST-AID MEASURES

INHALATION: If excessive inhalation occurs, remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or develops later.

EYES: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Remove contact lenses, if present and easy to do, and continue rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or develops later.

SKIN: Rinse skin with soap and water after manually handling and wash contaminated clothing if there is potential for direct skin contact. Contact a physician if irritation persists or develops later.

INGESTION: If swallowed, rinse mouth and do not induce vomiting. If gastrointestinal discomfort occurs, persists or develops later, get medical attention.

SIGNS AND SYMPTOMS OF EXPOSURE: There are generally no signs or symptoms of exposure to respirable crystalline silica. Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as 6 months, are the same as those associated with chronic silicosis; additionally, weight loss and fever may also occur. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

Direct skin and eye contact with dust may cause irritation by mechanical abrasion. Some components of the product are also known to cause corrosive effects to skin, eyes and mucous membranes. Ingestion of large amounts may cause gastrointestinal irritation and blockage. Inhalation of dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits. Repeated excessive exposure may cause pneumoconiosis, such as silicosis and other respiratory effects.

SECTION V – FIRE-FIGHTING MEASURES

EXTINGUISHING AGENT
Not flammable; use extinguishing media compatible with surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARD
Contact with powerful oxidizing agents may cause fire and/or explosions (see Section X of this SDS). While individual components are known to react vigorously with water to produce heat, this is not expected from the basalt.

SPECIAL FIRE FIGHTING PROCEDURES	HAZARDOUS COMBUSTION PRODUCTS
None known	None known

SECTION VI – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Persons involved in cleaning should first follow the precautions defined in Section VII of the SDS. Spilled materials, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust and other components that may pose inhalation hazards. Do not dry sweep spilled material. Collect the material using a method that does not produce dust such as a High-Efficiency Particulate Air (HEPA) vacuum or thoroughly wetting down the dust before cleaning up. Wear appropriate personal protective equipment as specified in Section VIII including appropriate respirators during and following clean up or whenever airborne dust is present to ensure worker exposures remain below occupational exposure limits (OELs - Refer to Section VIII).

Place the dust in a covered container appropriate for disposal. Dispose of the dust according to federal, state and local regulations.

This product is not subject to the reporting requirements of SARA Title III Section 313, and 40 CFR 372.

SECTION VII – HANDLING AND STORAGE

This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications. Follow protective controls set forth in Section VIII of this SDS when handling this product. Dust containing respirable crystalline silica and other components that may be corrosive/irritant may be generated during processing, handling and storage. Use good housekeeping procedures to prevent the accumulation of dust in the workplace.

Do not breathe dust. Avoid contact with skin and eyes. Do not store near food or beverages or smoking materials.
Do not stand on piles of materials; it may be unstable.

Use adequate ventilation and dust collection equipment and ensure that the dust collection system is adequate to reduce airborne dust levels to below the appropriate OELs. If the airborne dust levels are above the appropriate OELs, use respiratory protection during the establishment of engineering controls. Refer to Section VIII - Exposure Controls/Personal Protection for further information.

In accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21), state, and/or local right-to-know laws and regulations, familiarize your employees with this SDS and the information contained herein. Warn your employees, your customers and other third parties (in case of resale or distribution to others) of the potential health risks associated with the use of this product and train them in the appropriate use of personal protective equipment and engineering controls, which will reduce their risks of exposure.

See also ASTM International standard practice E 1132-06, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica."

For safe handling and use of this product for Hydraulic Fracturing, please see the OSHA/NIOSH Hazard Alert Worker Exposure to Silica during Hydraulic Fracturing DHHS (NIOSH) Publication No. 2012-166 (2012).
http://www.osha.gov/dts/hazardalerts/hydraulic_frac_hazard_alert.pdf

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne OELs for Components of Basalt:

COMPONENT(S) CHEMICAL NAME	MSHA/OSHA PEL	ACGIH TLV-TWA	NIOSH REL
Silicon Dioxide, SiO_2 §	(R) 0.05 mg/m^3 (R) 0.025 mg/m^3 (AL)	(R) 0.025 mg/m^3 #	(R) 0.05 mg/m^3 #
Aluminum Oxide, Al_2O_3	(T) 15 mg/m^3 , (R) 5 mg/m^3	(1) (R) 1 mg/m^3	-
Ferrous Oxide, FeO	-	-	-
Ferric Oxide, Fe_2O_3	(2) 10 mg/m^3	(R) 5 mg/m^3	(3) 5 mg/m^3
Magnesium Oxide, MgO	(4) 15 mg/m^3	(I) 10 mg/m^3	-
Calcium Oxide, CaO	5 mg/m^3	2 mg/m^3	2 mg/m^3
Sodium Oxide, Na_2O (5)	2 mg/m^3	(C) 2 mg/m^3	(C) 2 mg/m^3
Potassium Oxide, K_2O	-	(6) (C) 2 mg/m^3	(6) (C) 2 mg/m^3
Titanium Oxide, TiO_2	15 mg/m^3	10 mg/m^3	-

§ The OSHA OELs for respirable crystalline silica are listed in the table. As of June 28, 2018, the MSHA standard for respirable crystalline silica has not been changed but may be revised in the future. The MSHA PEL for dust containing crystalline silica (quartz) is based on the silica content of the respirable dust sample and is calculated as: 10 mg/m^3/(% SiO_2 +2). The MSHA PEL for crystalline silica as tridymite and cristobalite is one-half the PEL for crystalline silica (quartz).
# The ACGIH and NIOSH limits are for crystalline silica (quartz), independent of the dust concentration. The ACGIH TLV for crystalline silica as cristobalite is equal to the TLV for crystalline silica as quartz. In 2005, ACGIH withdrew the TLV for crystalline silica as tridymite. The NIOSH REL for crystalline silica as cristobalite and tridymite is the same as for quartz. Refer to Section X for thermal stability information for crystalline silica (quartz).
AL: Action Level
(1): Limits based on Aluminum Metal and Insoluble Compounds.
(2): As Iron Oxide Fume.
(3): Dust and fume, as Iron
(4): As Magnesium Oxide Fume Total Particulate.
(5): Based on Sodium Hydroxide.
(6): Based on Potassium Hydroxide.
(R): Respirable Fraction.
(T): Total Dust.
(I): Inhalable Fraction.
(C): Ceiling Limit

Airborne OELs for Inert/Nuisance Dust:

Standard	Respirable Dust	Total Dust
MSHA/OSHA PEL (as Inert or Nuisance Dust)	5 mg/m^3	15 mg/m^3
ACGIH TLV (as Particles Not Otherwise Specified)	3 mg/m^3	*10 mg/m^3
NIOSH REL (Particulates Not Otherwise Regulated)	-	-

Note: The limits for Inert Dust are provided as guidelines. Nuisance dust is limited to particulates not known to cause systemic injury or illness.
* The TLV provided is for inhalable particles not otherwise specified.

ENGINEERING CONTROLS

Ventilation: Use local exhaust, general ventilation or natural ventilation adequate to maintain exposures below appropriate exposure limits.

Other control measures: Respirable dust and crystalline silica levels should be monitored regularly. Dust and crystalline silica levels in excess of appropriate exposure limits should be reduced by implementing feasible engineering controls, including (but not limited to) dust suppression (wetting), ventilation, process enclosure and enclosed employee work stations.

EYE/FACE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated. If irritation persists, get medical attention immediately. There is potential for severe eye irritation if exposed to excessive concentrations of dust for those using contact lenses.

SKIN PROTECTION

Use appropriate protective gloves if manually handling the product.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION, CONTD.

RESPIRATORY PROTECTION
Respirator Recommendations:

For respirable crystalline silica levels that exceed or are likely to exceed appropriate exposure limits, a NIOSH-approved particulate filter respirator must be worn. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements. For additional information contact NIOSH at 1-800-356-4674 or visit website: http://www.cdc.gov/niosh/npg (search for crystalline silica). See also ANSI standard Z88.2 (latest revision) "American National Standard for Respiratory Protection," 29 CFR 1910.134 and 1926.103, and 42 CFR 84.

NIOSH recommendations for respiratory protection include:
Up to 0.5 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Up to 1.25 mg/m^3:
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate (100-series) filter.
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
Up to 2.5 mg/m^3:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
Up to 25 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions (50 mg/m^3 for crystalline silica-quartz): A self-contained breathing apparatus (SCBA) that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode or any supplied-air respirator that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

Escape from unknown or IDLH conditions: An air-purifying, full-face piece respirator with a high-efficiency particulate (100-series) filter or any appropriate escape-type, self-contained breathing apparatus.

If the workplace airborne crystalline silica concentration is unknown for a given task, conduct air monitoring to determine the appropriate level of respiratory protection to be worn. Consult with a certified industrial hygienist, your insurance risk manager or the OSHA Consultative Services group for detailed information. Ensure appropriate respirators are worn, as needed, during and following the task, including clean up or whenever airborne dust is present, to ensure worker exposures remain below OELs.

GENERAL HYGIENE CONSIDERATIONS
There are no known hazards associated with this material when used as recommended. Following the guidelines in this SDS are recognized as good industrial hygiene practices. Avoid breathing dust. Avoid skin and eye contact. Wash dust-exposed skin with soap and water before eating, drinking, smoking and using toilet facilities. Wash work clothes after each use.

SECTION IX— PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE Basalt is a mixture of smooth and rounded to angular particles. Its color can range from white to green to gray to black. The size may range from dust to pebbles to boulders.	ODOR AND ODOR THRESHOLD Odorless and not applicable
pH AND VISCOSITY Not applicable	MELTING POINT/FREEZING POINT Not applicable
BOILING POINT AND RANGE Not applicable	FLASH POINT AND FLAMMABILITY Not applicable
FLAMMABILITY/EXPLOSIVE LIMITS AND AUTOIGNITION TEMPERATURE Not applicable	EVAPORATION RATE AND DECOMPOSITION TEMPERATURE Not applicable
VAPOR PRESSURE AND VAPOR DENSITY IN AIR Not applicable	SPECIFIC GRAVITY. 2.6-2.81
SOLUBILITY IN WATER Insoluble	PARTITION COEFFICIENT: N-OCTANOL/WATER Not applicable

SECTION X – STABILITY AND REACTIVITY	
STABILITY Stable	CONDITIONS TO AVOID Contact with incompatible materials (see below).
THERMAL STABILITY If crystalline silica (quartz) is heated to more than 870°C (1598°F), it can change to a form of crystalline silica known as tridymite, and if crystalline silica (quartz) is heated to more than 1470°C (2678°F), it can change to a form of crystalline silica known as cristobalite.	
INCOMPATIBILITY (Materials to avoid) Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Some components of basalt may react vigorously with water.	
HAZARDOUS DECOMPOSITION PRODUCTS Silica dissolves in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.	
HAZARDOUS POLYMERIZATION Not known to polymerize	

SECTION XI – TOXICOLOGICAL INFORMATION

Health Effects: The information below represents an overview of health effects caused by overexposure to one or more components in basalt.

Primary routes(s) of exposure: ■ Inhalation ☐ Skin ■ Ingestion

EYE CONTACT: Direct contact with dust may cause irritation by mechanical abrasion or corrosive action. Conjunctivitis may occur.

SKIN CONTACT: Direct contact may cause irritation by mechanical abrasion. Some components of material are also known to cause corrosive effects to skin and mucous membranes.

SKIN ABSORPTION: Not expected to be a significant route of exposure.

INGESTION: Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

INHALATION: Dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions. Smoking and obstructive/restrictive lung diseases may also exacerbate the effects of excessive exposure to this product.

This product is a mixture of components. The composition percentages are listed in Section III. Toxicological information for each component is listed below:

Silicon Dioxide: It is comprised of amorphous and crystalline forms of silica. In some batches, crystalline silica may represent up to 100% of silicon dioxide.

Exposure route: Eyes, respiratory system.

Target organs: Eyes, skin, respiratory system.

ACGIH, MSHA, and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate exposure limits. Lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions as described under medical conditions aggravated by exposure.

A. SILICOSIS
The major concern is silicosis (lung disease), caused by the inhalation and retention of respirable crystalline silica dust. Silicosis leads to conditions such as lung fibrosis and reduced pulmonary function. The form and severity in which silicosis manifests itself, depends in part on the type and extent of exposure to silica dusts: chronic, accelerated and acute forms are recognized. In later stages the critical condition may become disabling and potentially fatal. Restrictive and/or obstructive changes in lung function may occur due to exposure. A risk associated with silicosis is development of pulmonary tuberculosis (silico-tuberculosis). Respiratory insufficiencies due to massive fibrosis and reduced pulmonary function, possibly with accompanying heart failure, are other potential causes of death due to silicosis.

Chronic or Ordinary Silicosis is the most common form of silicosis and can occur after many years of exposure to levels above the OELs for airborne respirable crystalline silica dust. Not all individuals with silicosis will exhibit symptoms (signs) of the disease. Symptoms of silicosis may include (but are not limited to): Shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; heart enlargement and/or failure. It is further defined as either simple or complicated silicosis.

Simple Silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF).

Complicated Silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease (cor pumonale) secondary to the lung disease.

Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of the initial exposure. The progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that the lung lesions appear earlier and the progression is more rapid.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is a rapidly progressive, incurable lung disease and is typically fatal.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

B. CANCER

IARC - The International Agency for Research on Cancer ("IARC") concluded that there is "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the form of quartz or cristobalite", there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz dust" and that there is "*limited evidence* in experimental animals for the carcinogenicity of tridymite dust and cristobalite dust." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite dust is *carcinogenic to humans* (*Group 1*)." The IARC evaluation noted that not all industrial circumstances studied evidenced carcinogenicity. The monograph also stated that "Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C, "Silica Dust, Crystalline, in the Form of Quartz or Cristobalite" (2012).

NTP - In its Eleventh Annual Report on Carcinogens, concluded that respirable crystalline silica is known to be a human carcinogen, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to respirable crystalline silica and increased lung cancer rates in workers exposed to crystalline silica dust.

OSHA - Crystalline silica is not on the OSHA carcinogen list.

CALIFORNIA PROPOSITION 65 - Crystalline silica in October 1996 was listed on the Safe Drinking Water and Toxic Enforcement ACT of 1986 as a chemical known to the state to cause cancer or reproductive toxicity.

There have been many articles published on the carcinogenicity of crystalline silica, which the reader should consult for additional information; the following are examples of recently published articles: (1) "Dose-Response Meta-Analysis of Silica and Lung Cancer", *Cancer Causes Control*, (20):925-33 (2009); (2) "Occupational Silica Exposure and Lung Cancer Risk: A Review of Epidemiological Studies 1996-2005', *Ann Oncol*, (17) 1039-50 (2006); (3) "Lung Cancer Among Industrial Sand Workers Exposed to Crystalline Silica", *Am J Epidemiol*, (153) 695-703 (2001); (4) "Crystalline Silica and The Risk of Lung Cancer in The Potteries", *Occup Environ Med*, (55) 779-785 (1998); (5) "Is Silicosis Required for Silica-Associated Lung Cancer?", *American Journal of Industrial Medicine*, (37) 252- 259 (2000); (6) " Silica, Silicosis, and Lung Cancer: A Risk Assessment", *American Journal of Industrial Medicine*, (38) 8-18 (2000); (7) "Silica, Silicosis, and Lung Cancer: A Response to a Recent Working Group Report", *Journal of Occupational and Environmental Medicine*, (42) 704-720 (2000).

C. AUTOIMMUNE DISEASES

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. For a review of the subject, the following may be consulted: (1) "Antinuclear Antibody and Rheumatoid Factor in Silica-Exposed Workers", *Arh Hig Rada Toksikol*, (60) 185-90 (2009); (2) "Occupational Exposure to Crystalline Silica and Autoimmune Disease", *Environmental Health Perspectives*, (107) Supplement 5, 793-802 (1999); (3) "Occupational Scleroderma", *Current Opinion in Rheumatology*, (11) 490-494 (1999); (4) "Connective Tissue Disease and Silicosis", *Am J Ind Med*, (35), 375-381 (1999).

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: (1) "Tuberculosis and Silicosis: Epidemiology, Diagnosis and Chemoprophylaxis", *J Bras Pneumol*, (34) 959-66 (2008); (2) *Occupational Lung Disorders*, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994); (3) "Risk of Pulmonary Tuberculosis Relative to Silicosis and Exposure to Silica Dust in South African Gold Miners," *Occup Environ Med*, (55) 496-502 (1998); (4) "Occupational Risk Factors for Developing Tuberculosis", *Am J Ind Med*, (30) 148-154 (1996).

E. KIDNEY DISEASE

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis is associated with the increased incidence of kidney diseases, including end stage renal disease. For additional information on the subject, the following may be consulted: (1) "Mortality from Lung and Kidney Disease in a Cohort of North American Industrial Sand Workers: An Update", *Ann Occup Hyg*, (49) 367-73 (2005); (2) "Kidney Disease and Silicosis", *Nephron*, (85) 14-19 (2000); (3) "End Stage Renal Disease Among Ceramic Workers Exposed to Silica", *Occup Environ Med*, (56) 559-561 (1999); (4) "Kidney Disease and Arthritis in a Cohort Study of Workers Exposed to Silica", *Epidemiology*, (12) 405-412 (2001).

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

F. NON-MALIGNANT RESPIRATORY DISEASES

NIOSH has cited the results of studies that report an association between dusts found in various mining operations and non-malignant respiratory disease, particularly among smokers, including bronchitis, emphysema, and small airways disease. *NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica*, published in April 2002, available from NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226, or at https://www.cdc.gov/niosh/docs/2002-129/default.html.

Respirable dust containing newly broken particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken pieces of silica.

Aluminum Oxide:
Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Inhalation or ingestion of high concentrations of this substance may cause gastrointestinal and/or upper respiratory tract irritation. Eye and skin irritant.

Chronic effect/carcinogenicity: Aluminum oxide is not classifiable as a human carcinogen. On occasion workers chronically exposed to aluminum-containing dusts or fumes have developed severe pulmonary reactions including fibrosis, emphysema and pneumothorax. Long-term exposure may have effects on the central nervous system.

Sodium Oxide:

Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Corrosive – Sodium oxide reacts violently with water to form sodium hydroxide. Causes burns of skin, eyes, respiratory and gastrointestinal tracts, extremely destructive to mucous membranes.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Iron Oxide: (Ferrous and Ferric Oxides)
Exposure route: Inhalation, ingestion, skin

Target organs: Respiratory system, skin, eyes, neurological system

Acute effect: Major findings: stupor, shock, acidosis, hematemesis, bloody diarrhea or coma. Minor findings: vomiting, diarrhea, mild lethargy. Benign pneumoconiosis with X-ray shadows indistinguishable from fibrotic pneumoconiosis. Experimental work in animals exposed by intratracheal injection or by inhalation to iron oxide mixed with less than 5% silica has shown no evidence of fibrosis produced in lung tissue.

Chronic effect/carcinogenicity: Irritability, nausea or vomiting, and normocytic anemia. When exposed to levels greater than 50 to 100 milligram per day, it can result in pathological deposition of iron in the body tissues causing fibrosis of the pancreas, diabetes mellitus, and liver cirrhosis. Workers exposed to iron oxide fume and silica may develop a "mixed dust pneumoconiosis." Not classifiable as human carcinogen.

Potassium Oxide:
Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Corrosive – Potassium oxide reacts violently with water to produce potassium hydroxide. If inhaled, causes sore throat, cough, burning sensation and shortness of breath. Contact with skin produces pain and blisters. Severe deep burns, redness and pain occur with eye contact. Ingestion results in burning sensations, abdominal pain, shock or collapse.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

Calcium Oxide:
Exposure route: Inhalation, ingestion, skin/eye contact.

Target organs: Eyes, skin, respiratory system.

Acute effect: Direct contact with tissues, can result in burns and severe irritation because of its high reactivity and alkalinity. Major complaints of workers exposed to lime consist of irritation of the skin and eyes, although inflammation of the respiratory passages, ulceration and perforation of the nasal septum, and even pneumonia has been attributed to inhalation of the dust.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Magnesium Oxide:
Exposure route: Inhalation, eye/skin contact.

Target organs: Eyes, respiratory system.

Acute effect: Magnesium oxide dust caused slight irritation of the eyes and nose, conjunctivitis, inflammation of the mucous membrane, and coughing up discolored sputum after industrial exposures amongst workers exposed to an unspecified concentration of MgO.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Titanium Oxide:
Exposure route: inhalation.

Target organs: respiratory system.

Acute effect: Toxicological studies have concluded that titanium oxide is inert, not absorbed by the body, and exerts no toxic effect.

Chronic effect/carcinogenicity: Classified as Group 2B-possibly carcinogenic to humans by IARC.

Acute Toxicity Estimates for Basalt– Not Available

SECTION XII – ECOLOGICAL INFORMATION

No data available for this product**.**

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Collect and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.
The above information applies to Martin Marietta Materials product only as sold. The product may be contaminated during use and it is the responsibility of the user to assess the appropriate disposal method in that situation.

SECTION XIV – TRANSPORT INFORMATION

DOT HAZARD CLASSIFICATION
None

PLACARD REQUIRED
None

LABEL REQUIRED
Label as required by the OSHA Hazard Communication standard {29 CFR 1910.1200(f)}, and applicable state and local regulations.

SECTION XV – REGULATORY INFORMATION

OSHA: Crystalline Silica is not listed as a carcinogen.
SARA Title III: Section 311 and 312: Immediate health hazard and delayed health hazard.
TSCA.: All components of the product appear on the EPA TSCA chemical substance inventory.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 40 CFR §302.4
EPCRA (Emergency Planning and Community Right to Know Act): Crystalline silica (quartz) is not an extremely hazardous substance under regulations of the Emergency Planning and Community Right to Know Act, 40 CFR Part 355, Appendices A and B and is not a toxic chemical subject to the requirements of Section 313.
Clean Air Act: Crystalline silica (quartz) mined and processed by Martin Marietta Materials was not processed with or does not contain any Class I or Class II ozone depleting substances.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3).(The FDA standard primarily applies to products containing silica used in the coatings of food contact surfaces).
California Proposition 65: Respirable crystalline silica (quartz) is classified as a substance known to the state of California to be a carcinogen.
Massachusetts Toxic Use Reduction Act: Respirable crystalline silica is considered toxic per the Massachusetts Toxic Use Reduction Act when used in abrasive blasting and molding.
Pennsylvania Worker and Community Right to Know Act: Quartz is considered hazardous for purposes of the Act, but it is not a special hazardous substance or an environmental hazardous substance.

SECTION XVI – OTHER INFORMATION

DEFINITIONS OF ACRONYMS/ABBREVIATIONS

ACGIH: American Conference of Governmental Industrial Hygienists
AL: Action Level
ANSI: American National Standards Institute
APF: Assigned Protection Factor
California REL: California Inhalation Reference Exposure Limit
CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act
CFR: US Code of Federal Regulations
DHHS: Department of Health and Human Services
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right to Know Act
FDA: Food and Drug Administration
GHS: Globally Harmonized System
HEPA: High-Efficiency Particulate Air
IARC: International Agency for Research on Cancer
IDLH: Immediately Dangerous to Life and Health
MSHA: Mine Safety and Health Administration
NIOSH: National Institute for Occupational Safety and Health, US Department of Health and Human Services
NIOSH REL: NIOSH Recommended Exposure Limit
NTP: National Toxicology Program
OEL: Occupational Exposure Limit
OSHA: Occupational Safety and Health Administration, US Department of Labor
PEL: Permissible Exposure Limit
PMF: Progressive Massive Fibrosis
RCRA: Resource Conservation and Recovery Act
SARA Title III: Title III of the Superfund Amendments and Reauthorization Act, 1986
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act
TWA: Time-Weighted Average

SECTION XVI – OTHER INFORMATION, CONTD.

User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

Disclaimer: The information contained in this document applies to this specific material as supplied and Martin Marietta Materials believes that the information contained in this SDS is accurate. The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Martin Marietta Materials, assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulation, rules or insurance requirement. However, product must not be used in a manner which could result in harm.

An electronic version of this SDS is available at www.martinmarietta.com . More information on the effects of crystalline silica exposure may be obtained from OSHA (phone number: 1-800-321-OSHA; website: http://www.osha.gov) or from NIOSH (phone number: 1-800-35-NIOSH; website: http://www.cdc.gov/niosh).

DATE OF PREPARATION 6/2018 REPLACES 3/2015

Martin Marietta

Zoning Documentation

Office of the County Executive

Danielle Hornberger
County Executive

Steve Overbay
Director of Administration

Office: 410.996.5202
Fax: 800.863.0947

Department of Land Use & Development Services

Stephen O'Connor, AICP, Director
Office: 410.996.5220
Fax: 800.430.3829

Aaron Harding, Chief / Zoning Administrator
410.996.5220
800.430.3829

County Information
410.996.5200
410.658.4041

CECIL COUNTY, MARYLAND

Division of Planning and Zoning
200 Chesapeake Boulevard, Elkton, MD 21921

May 31, 2024

Whitney McGuigan
Martin Marietta
233 Stevenson Road
North East, MD 21901

RE: Letter of Zoning – Martin Marietta site; Permit No 015-0005 Plant Modification April 2, 2024

Whitney McGuigan,

This correspondence is in response to your letter received by the Division of Planning and Zoning regarding the assemblage of properties used as a quarry and associated appurtenances. In your submittal, you present that the existing facility proposes the addition of one (1) quantinary crusher, one (1) feeder, and associated conveyor belts at Plant 2E at the North East Quarry (ARMA, Registration Number 015-0005-6-0299). The above referred uses, described more generally as crusher, feeder, and conveyors, are consistent with the Mineral Extraction A (MEA) zoning of which the site is located.

If you are aggrieved by this decision, you may file an appeal within fifteen (15) days of the date of this letter as outlined in Article XVII, Part I, Section 305 of the Ordinance.

Thank you for this opportunity to comment.

Sincerely,

Aaron Harding, CFM
Chief, Division of Planning & Zoning
Department of Land Use and Development Services
410.996.5220

Office of the County Executive

Alan McCarthy
County Executive

Alfred C. Wein, Jr.
Director of Administration

Office: 410.996.5202
Fax: 800.863.0947

Department of Land Use & Development Services

Eric Sennstrom, AICP, Director
Office: 410.996.5220
Fax: 800.430.3829

Tony Di Giacomo, AICP, Chief
Office: 410.996.5220
Fax: 800.430.3829

County Information
410.996.5200
410.658.4041

CECIL COUNTY, MARYLAND

Division of Planning and Zoning
200 Chesapeake Boulevard, Suite 2300, Elkton, MD 21921

July 17, 2017

Gustaf Buttar
Environmental, Health & Safety Manager - Maryland Division
Bluegrass Materials
10000 Beaver Dam Road
Cockeysville, MD 21030

RE: Letter of Zoning - North East Land & Materials Co. Inc. / Maryland Materials, Inc. (Multiple Parcels)

Dear Mr. Buttar:

This letter of zoning verification is for the multiple properties located in North East, MD 21901. Please refer to the table below regarding the zoning of each requested parcel. A written description of each zoning district follows the table.

Tax Account ID	Tax Map	Parcel	Zoning District	Overlay District
0803020568	19	34	**MEA**	
0803067661	25	662	**MEA**	
0803077012	19	517	**MEA**	
0803019837	19	36	**MEA**	
0803015459	25	228	**LDR**	MEB
0803067653	25	663	**MEA**	
0805038537	25	23	**M2**	MEB
0805038545	25	22	**M2**	MEB
0805056144	25	21	**LDR**	
0805038634	25	364	**M2**	MEB
0805018196	25	150	**LDR**	MEB
0805038626	25	51	**M2**	MEB

The purpose of the **Mineral Extraction A (MEA)** zone is to protect economically important mineral resources of the County for current and future use; to prevent incompatible development that may directly or indirectly preclude access to the mineral resources until such time that the resource can be removed; and to protect existing land uses adjacent to the potential mineral lands from undue harm that may result from mineral extraction activity.

The purpose of the **Heavy Industrial (M2)** zone is to provide for industrial uses of a larger scale and more intensive usage, with areas of uncovered storage. It is also to provide for a wide range of business/professional, research and development, manufacturing and processing, and industrial uses, activities and establishments which are compatible with adjacent uses to the extent that any adverse effects on health, safety, welfare, or the environment are avoided.

The purpose of the **Mineral Extraction 'B' (MEB)** overlay district is to identify areas of the County where mineral extraction may occur by special exception. This overlay designation shall only apply to areas designated as Mineral Extraction District on the Land Use Plan of the 2010 Cecil County Comprehensive Plan. It is intended that this overlay designation apply to those portion of the Mineral Extraction District where there is a potential for conflict between adjacent current and future land uses and mineral extraction activity. Permitted uses in the MEB District shall be those for the underlying zone, which in this case is M2.

The purpose of the **Low Density Residential (LDR)** zone is to provide an appropriate development area for low to medium density residential development and to act as a transitional zone between rural and more densely developed areas.

These properties do not have any open zoning violations. You may review the Cecil County Zoning Ordinance on the County's website at http://www.ccgov.org/home/showdocument?id=1288 Please contact Mr. Patrick Conway, Chief of the Division of Permits & Inspections at 410-996-5235 for any requests regarding Certificate(s) of Use and/or Occupancy.

If you have any questions feel free to call or email me at soconnor@ccgov.org.

Sincerely,

Stephen J. O'Connor, AICP
Zoning Administrator
Cecil County MALPF Program Administrator

cc:

Martin Marietta

Certification of Insurance (COI)

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 09/26/2023

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
MARSH USA LLC.
100 North Tryon Street, Suite 3600
Charlotte, NC 28202
Attn: CA NON-RESIDENT NO. OB22889

CN102458548-1.MMM-GAWX-23-24

CONTACT NAME:
PHONE (A/C, No, Ext): **FAX (A/C, No):**
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : American Zurich Insurance Company	40142
INSURER B : American Guarantee and Liability Insurance Company	26247
INSURER C :	
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Bluegrass Materials Company, LLC
c/o Marin Marietta Materials, Inc.
Attn: Mr. Todd Crump
4123 Parklake Avenue
PO Box 30013
Raleigh, NC 27612

COVERAGES **CERTIFICATE NUMBER:** ATL-005493470-03 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	X **COMMERCIAL GENERAL LIABILITY** [ ] CLAIMS-MADE [X] OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: X POLICY [ ] PRO-JECT [ ] LOC [ ] OTHER:			GLO987504402	09/30/2023	09/30/2024	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	$ $ $ $ $ $	3,000,000 50,000 3,000,000 6,000,000 6,000,000
A	**AUTOMOBILE LIABILITY** X ANY AUTO [ ] OWNED AUTOS ONLY [ ] SCHEDULED AUTOS X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY			BAP987504502	09/30/2023	09/30/2024	COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	$ $ $ $	5,000,000
B	X **UMBRELLA LIAB** X OCCUR **EXCESS LIAB** [ ] CLAIMS-MADE [ ] DED [ ] RETENTION $			AUC 3293761-02	09/30/2023	09/30/2024	EACH OCCURRENCE AGGREGATE	$ $	1,000,000 1,000,000
A	**WORKERS COMPENSATION AND EMPLOYERS' LIABILITY** ANYPROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? **(Mandatory in NH)** If yes, describe under DESCRIPTION OF OPERATIONS below	Y / N: N / N A		WC987504702	09/30/2023	09/30/2024	X PER STATUTE [ ] OTH-ER E.L. EACH ACCIDENT E.L. DISEASE - EA EMPLOYEE E.L. DISEASE - POLICY LIMIT	$ $ $	 2,000,000 2,000,000 2,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: Mining License Number 28473

Certificate holder is additional insured (except Workers' Compensation) as their interest may appear, if required by written contract with the named insured, subject to the terms and conditions of the policies. General liability and auto liability insurance apply on a primary and non-contributory basis, if required by written contract, and subject to policy terms and conditions. A waiver of subrogation applies under General Liability, Automobile Liability, and Workers Compensation in favor of the certificate holder, if required by written contract with the named insured, subject to the terms and conditions of the policies.

CERTIFICATE HOLDER

Department of Environmental Protection
Bureau of Mining Programs
P.O. Box 8461
Harrisburg, PA 17105-8461

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Marsh USA LLC

EJ Report

Martin Marietta has reviewed the Environmental Justice Screening Tool, beta version for the communities surrounding the North East Quarry at 233 Stevenson Rd, North East, MD 21901 (the "Facility"). The census identified tracts and their associated Environmental Justice (EJ) Scores are listed in the table shown below.

The Facility is not a major pollutant source. Quarrying and associated activities generally have limited impact on the communities in which they operate. Moreover, those limited impacts diminish rapidly with distance to any receptor. The census designated tracts evaluated below are rural in nature. The closest residence to the Facility is 32 Union Church Road, Elkton, MD and there are twenty-four (24) residents within 1,000 feet of the Facility.

In reviewing the pollutants considered under the MDE's environmental Justice Screening methodology, the Facility generates dust (aka particulate matter or PM) from blasting and equipment traffic. The Facility also maintains a permitted discharge to Little North East Creek and that permit contains limits on total suspended solids ("TSS"). Finally, the Facility could have noise impacts beyond its boundary.

Martin Marietta maintains and complies with the following permits: Surface Mining Permit, Surface Mining License, NPDES Discharge Permit, Water Appropriations Permit, Air Permit, Oil Control Permit, and Scrap Tire General License. These permits have numerous requirements to protect our neighbors and the environment. The Facility uses a number of methods to comply with these permits, including the following:

To control dust emissions from on-site mobile equipment, the Facility operates a 9,000 gallon water truck, even during storm events. High pressure water sprays are utilized at dust producing points on the processing equipment to control any dust emissions. The Facility exit utilizes a wheel wash to prevent dust from being generated and/or tracked out by customer haul trucks. Finally, in accordance with State and Federal air regulations, the Facility operates so as to ensure that there are no visible emissions beyond its fence line.

To control TSS discharges from the Facility, settling pond systems are utilized to treat process and stormwater on site. These ponds are designed to ensure that TSS will settle to the bottom and therefore be removed from any discharge water. Further, this system is designed to minimize discharges. Water utilized in the process and to control dust is generally retained on site. For storm events or in the event there is more process water than can be retained on site, water samples are also collected monthly and reported to MDE quarterly that demonstrate compliance with the TSS and other limits of the NPDES permit.

The Facility recently received the 2023 Platinum Environmental Excellence Award presented by the National Stone, Sand & Gravel Association. Only one Platinum award is presented annually to recognize sites actively contributing to the maintenance of the environment in and around their operations as evidenced by a corporate commitment to the exemplary use of environmental controls and systems.

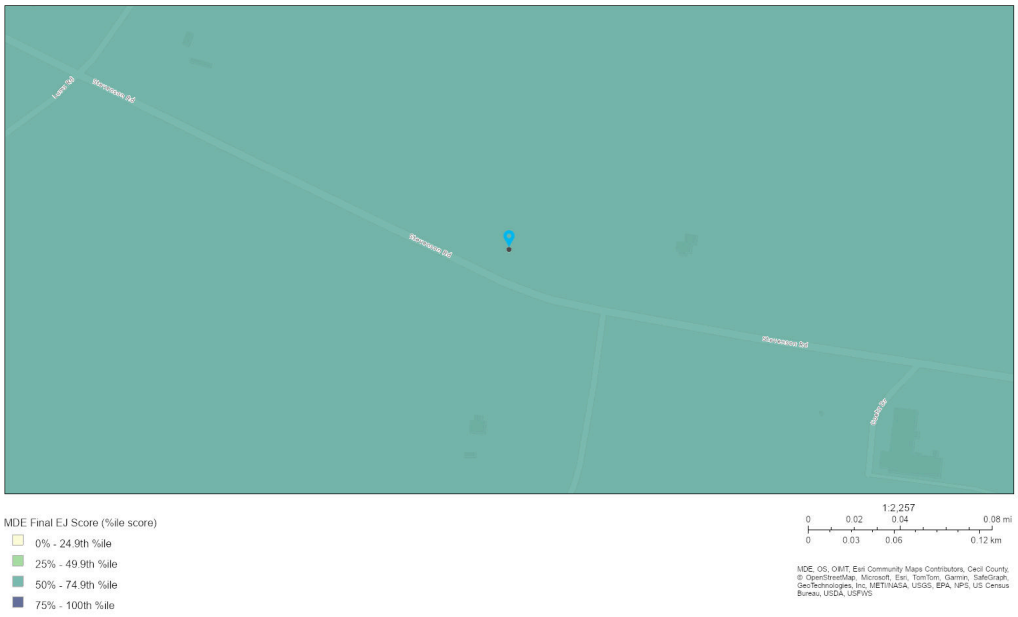
MDE Screening Report

Area of Interest (AOI) Information

Area : 3.14 mi²

May 2 2024 13:38:23 Eastern Daylight Time

Tabloid ANSI B Landscape



Name	Count	Area(mi²)	Length(mi)
MDE Final EJ Score (%ile score)	4	3.14	N/A
Overburdened Communities Combined Score	4	3.14	N/A
Overburdened Pollution Environmental Score (%ile score)	4	3.14	N/A
Overburdened Exposure Score (%ile score)	4	3.14	N/A
Overburdened Sensitive Population (%ile score)	4	3.14	N/A
Socioeconomic/Demographic Score 2020 (Percentile score) (Underserved Community)	4	3.14	N/A
Air Emissions Facilities	1	N/A	N/A
Sulfur Dioxide (2010)	0	0	N/A
Ozone (2015)	1	3.14	N/A
Fine Particles (2012)	1	3.14	N/A
Biosolids FY 2020 and Current Permit Details	0	N/A	N/A
Biosolids FY2010 - 2014 Permit Details	0	N/A	N/A
Biosolids FY2009 Expired Permit Details	0	N/A	N/A
Biosolids FY 2020 and Current Permits Distribution By Acreage	1	3.14	N/A
Biosolids FY2015 - 2019 Permits Distribution By Acreage	1	3.14	N/A
Biosolids FY2010 - 2014 Permits Distribution By Acreage	1	3.14	N/A
Biosolids FY2009 Permits Expired Distribution By Acreage	1	3.14	N/A
Biosolids FY 2020 and Current Permit Distribution By Percent Coverage	1	3.14	N/A
Biosolids FY2015 - 2019 Permit Distribution By Percent Coverage	1	3.14	N/A
Biosolids FY2010 - 2014 Permit Distribution By Percent Coverage	1	3.14	N/A
Biosolids FY2009 Expired Permit Distribution By Percent Coverage	1	3.14	N/A
Concentrated Animal Feeding Operations (CAFOs)	0	N/A	N/A
Composting Facilities	0	N/A	N/A
Food Scrap Acceptors	0	N/A	N/A
Landfills	0	N/A	N/A
Correctional Facilities	0	N/A	N/A
Industrial Food Suppliers	0	N/A	N/A
Residential Colleges	0	N/A	N/A
Non-Residential Colleges	0	N/A	N/A
Hospitals	0	N/A	N/A
High Schools	0	N/A	N/A
Grocery Stores	0	N/A	N/A
10 Miles from Landfill	3	9.42	N/A
10 Miles from Composting Facility	2	6.28	N/A
General Composting Facilities Tier 2 (MD)	0	N/A	N/A
Commercial Anaerobic Digester (MD)	0	N/A	N/A
Out of State Facilities	0	N/A	N/A
30 mile buffer (Maryland)	1	3.14	N/A
30 Mile Buffer (Out of State)	4	12.56	N/A
Land Restoration Facilities	1	N/A	N/A
Determinations (points)	0	N/A	N/A
Determinations (areas)	0	0	N/A
Entities	1	N/A	N/A
Active Coal Mine Sites	0	N/A	N/A
Historic Mine Facilities	0	N/A	N/A

All Permitted Solid Waste Acceptance Facilities	0	N/A	N/A
Municipal Solid Waste Acceptance Facilities	0	N/A	N/A
Maryland Dam Locations	0	N/A	N/A
Maryland Pond Locations	7	N/A	N/A
Surface Water Intakes	0	N/A	N/A
Wastewater Discharge Facilities	1	N/A	N/A
Drinking Water	0	N/A	N/A
Clean Water	0	N/A	N/A

MDE Final EJ Score (%ile score)

#	Census tract identifier	Geographic Area Name	Total Population	Final EJ Score Percent (for this tract)	Final EJ Score Percentile (Distribution across Maryland)	Area(mi²)
1	24015030908	Census Tract 309.08, Cecil County, Maryland	5540	29.83	51.95	2.04
2	24015030503	Census Tract 305.03, Cecil County, Maryland	5154	26.98	33.70	0.81
3	24015030501	Census Tract 305.01, Cecil County, Maryland	4538	18.92	4.72	0.18
4	24015030905	Census Tract 309.05, Cecil County, Maryland	2575	21.53	10.59	0.11

Overburdened Communities Combined Score

#	GEOID20	Geographic_Area_Name	TotalPop	Overburd_Exposure_Percent	Overburd_Exposure_Percentile	Overburd_Poll_Enviro_Percent	Overburd_Poll_Enviro_Percentile	Sensitive_Population_Percent
1	24015030908	Census Tract 309.08, Cecil County, Maryland	5,540	43.33	32.13	6.73	45.25	77.58
2	24015030503	Census Tract 305.03, Cecil County, Maryland	5,154	48.31	71.29	14.62	81.61	37.72
3	24015030501	Census Tract 305.01, Cecil County, Maryland	4,538	39.40	13.26	7.83	52.29	39.27
4	24015030905	Census Tract 309.05, Cecil County, Maryland	2,575	38.27	10.12	3.37	20.98	59.30

#	Sensitive_Population_Percentile	OverburdenedAllPercent	OverburdenedAllPercentile	Area(mi²)
1	88.24	69.58	58.78	2.04
2	9.57	30.14	73.68	0.81
3	10.80	7.52	15.86	0.18
4	48.39	21.67	8.41	0.11

Overburdened Pollution Environmental Score (%ile score)

#	GEOID20	Geographic_Area_Name	RentalsOccupiedPre79Percent	Percentile	PercentRMP	PercentRMPEJ	PercentHazWaste	PercentHazWasteEJ
1	24015030908	Census Tract 309.08, Cecil County, Maryland	3.93	26.18	9.13	17.76	3.44	14.68
2	24015030503	Census Tract 305.03, Cecil County, Maryland	13.23	63.29	24.41	35.14	16.33	33.85
3	24015030501	Census Tract 305.01, Cecil County, Maryland	5.75	27.96	5.20	7.90	10.28	11.33
4	24015030905	Census Tract 309.05, Cecil County, Maryland	8.69	27.82	4.43	5.09	1.69	4.36

#	PercentSuperFundNPL	PercentSuperFundNPLEJ	PercentHazWW	PercentHazWWEJ	BrownFPercent	Percentile_1	PercentPowerPlants	Percentile_12
1	37.09	27.32	6.94	7.93	0.00	0.00	0.00	0.00
2	43.17	40.96	16.86	25.79	8.44	100.00	9.09	95.42
3	33.41	14.97	15.87	9.92	0.00	0.00	0.00	0.00
4	14.53	9.35	0.99	0.99	0.00	0.00	0.00	0.00

#	PercentCAFOS	Percentile_12_13	PercentActiveMines	Percentile_12_13_14	PollutionEnvironmentalPercent	PollnEnvironmentalPercentile	Area(mi²)
1	0.00	0.00	0.00	0.00	6.73	45.25	2.04
2	0.00	0.00	0.00	0.00	14.62	81.61	0.81
3	0.00	0.00	0.00	0.00	7.83	52.29	0.18
4	2.17	95.69	0.00	0.00	3.37	20.98	0.11

Overburdened Exposure Score (%ile score)

#	GEOID20	Geographic_Area_Name	Total_Pop	PercentNATA_Cancer	Percentile_NATA_Cancer	PercentNATA_Resp_HI	Percentile_NATA_Resp_HI	PercentNATA_Diesel
1	24015030908	Census Tract 309.08, Cecil County, Maryland	5,540.00	60.00	22.72	60.00	15.02	23.27
2	24015030503	Census Tract 305.03, Cecil County, Maryland	5,154.00	60.00	33.71	60.00	22.28	26.80
3	24015030501	Census Tract 305.01, Cecil County, Maryland	4,538.00	40.00	5.00	60.00	8.31	23.82
4	24015030905	Census Tract 309.05, Cecil County, Maryland	2,575.00	40.00	3.42	60.00	5.68	20.55

#	Percentile_NATA_Diesel	PercentNATA_PM25	PercentileNATA_PM25	PercentOzone	PercentileOzone	PercentTraffic	PercentileTraffic	PercentTRI
1	14.49	89.63	13.81	94.23	20.34	3.69	15.86	15.79
2	24.52	90.66	22.61	93.27	28.39	3.10	21.89	52.63
3	8.18	91.58	8.96	93.07	10.42	1.45	5.55	5.26
4	4.71	90.79	5.76	93.75	7.46	1.07	3.26	0.00

#	PercentileTRI	PercentHazWasteLF	Percentile_HazWasteLF	PollutionExposurePercent	PollutionExposurePercentile	Area(mi²)
1	94.87	0.00	0.00	43.33	32.13	2.04
2	99.52	0.00	0.00	48.31	71.29	0.81
3	80.18	0.00	0.00	39.40	13.26	0.18
4	0.00	0.00	0.00	38.27	10.12	0.11

Overburdened Sensitive Population (%ile score)

#	GEOID20	Geographic_Area_Name	PerAstma	PercentileAst	PerMyo	PercentileMyo	PerLow	PercentileLow
1	24015030908	Census Tract 309.08, Cecil County, Maryland	75.55	88.11	77.20	87.35	60.30	82.09
2	24015030503	Census Tract 305.03, Cecil County, Maryland	0.20	1.09	0.20	1.09	68.80	84.83
3	24015030501	Census Tract 305.01, Cecil County, Maryland	0.20	0.89	0.20	0.89	68.20	78.95
4	24015030905	Census Tract 309.05, Cecil County, Maryland	53.70	38.82	57.60	41.22	34.60	24.47

#	PercentBroad	PercentileBroad	PercentSens	PercentileSens	Area(mi²)
1	2.73	16.61	53.94	68.54	2.04
2	18.32	93.30	21.88	45.08	0.81
3	10.42	52.22	19.76	33.24	0.18
4	8.69	29.53	38.65	33.51	0.11

Socioeconomic/Demographic Score 2020 (Percentile score) (Underserved Community)

#	Census tract identifier	Geographic Area Name	Total Population	Percent Poverty	Percent Minority	Percent Limited English Proficiency	Demographic Score (Percent for this tract)	Demographic Score (Percentile Distribution acoss Maryland)	Area(mi²)
1	24015030908	Census Tract 309.08, Cecil County, Maryland	5,540	31.42	14.58	0.00	15.33	33.58	2.04
2	24015030503	Census Tract 305.03, Cecil County, Maryland	5,154	42.91	25.36	1.06	23.11	50.79	0.81
3	24015030501	Census Tract 305.01, Cecil County, Maryland	4,538	19.79	5.69	0.58	8.68	12.75	0.18
4	24015030905	Census Tract 309.05, Cecil County, Maryland	2,575	12.58	4.82	0.11	5.84	3.98	0.11

Air Emissions Facilities

#	Agency Interest ID	Facilty Name	Agency Interest Alt Name	Premises ID	Emission Year	Air Code	NAIC Code	NAIC Description
1	8261	Allan Myers Materials-North East	Allan Myers Materials-North East-8261	015-0075	2021	SOP	324,121	Asphalt Paving Mixture and Block Manufacturing

#	Physical Address	Physical City	Physical State	Physical Zip Code	County	Carbon Monoxide (CO)	Nitrous Oxide	Particulate Matter (PT)
1	284 Quarry Rd	North East	MD	21,901	Cecil	117.69	78.33	6.71

#	Particulate Matter (10 Filterable)	Particulate Matter (2.5 Filterable)	PM Condensables	Volatile Organic Compounds (VOC)	Sulphur Dioxide (SOx)	Carbon Dioxide	Mercury	Methane
1	4.98	0.61	7.55	29.64	53.19	32,964.61	0.00	10.25

#	Billable Criteria Pollutants (BCRI)	Billiable Hazardous Pollutants (BHAP)	Total Billable and Non-Bilable Hazardous Air Pollutant Emissions (HAPS)	Count
1	173.69	0.18	5.92	1

Ozone (2015)

#	STATEFP10	COUNTYFP10	COUNTYNS10	GEOID10	NAME10	Ozone NAA Area	8-Hr Ozone (2015) Designation	8-HR Ozone (2015) Classification	8-Hr Ozone (2015) Status	Area(mi²)
1	24	015	00596115	24015	Cecil	Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	Nonattainment	Moderate	*No Data*	3.14

Fine Particles (2012)

#	STATEFP10	COUNTYFP10	COUNTYNS10	GEOID10	NAME10	PM2.5 (2012) Status	Area(mi²)
1	24	015	00596115	24015	Cecil	Attainment/Unclassifiable	3.14

Biosolids FY 2020 and Current Permits Distribution By Acreage

#	County Name	FY2020andAfter	Area(mi²)
1	Cecil	643.90	3.14

Biosolids FY2015 - 2019 Permits Distribution By Acreage

#	County Name	FY2015to2019	Area(mi²)
1	Cecil	1,666.50	3.14

Biosolids FY2010 - 2014 Permits Distribution By Acreage

#	County Name	FY2010to2014	Area(mi²)
1	Cecil	81.70	3.14

Biosolids FY2009 Permits Expired Distribution By Acreage

#	County Name	FY2009	Area(mi²)
1	Cecil	*No Data*	3.14

Biosolids FY 2020 and Current Permit Distribution By Percent Coverage

#	County Name	FY2020andAfter	Area(mi²)
1	Cecil	643.90	3.14

Biosolids FY2015 - 2019 Permit Distribution By Percent Coverage

#	County Name	FY2015to2019	Area(mi²)
1	Cecil	1,666.50	3.14

Biosolids FY2010 - 2014 Permit Distribution By Percent Coverage

#	County Name	FY2010to2014	Area(mi²)
1	Cecil	81.70	3.14

Biosolids FY2009 Expired Permit Distribution By Percent Coverage

#	County Name	FY2009	Area(mi²)
1	Cecil	*No Data*	3.14

10 Miles from Landfill

#	County	Type	Facility_N	ADDRESS	FILL	SITE__ACRE	AI_No_	Owner_Type
1	CECIL	WMF	Cecil Co. Central MunicipalLF	758 East Old Philadelphia Road, Elkton MD 21921.	40	418.00	19,069.00	CTY
2	CECIL	WMF	Cecil Co. Central MunicipalLF-HE	758 East Old Philadelphia Road, Elkton MD 21921.	40	418.00	19,069.00	CTY
3	CECIL	WTS	Woodlawn TransferStation	461 Waibel Road, Port Deposit MD 21904.	-	37.00	37,438.00	CTY

#	MD_GRID__E	PERMITNUMB	EXPIRATION	Area(mi²)
1	1107 /644	2012-WMF-0532	11/12/2017, 7:00 PM	3.14
2	1107 /644	2008-WMF-0629	4/21/2019, 8:00 PM	3.14
3	1058 /658	2010-WTS-0074	1/19/2016, 7:00 PM	3.14

10 Miles from Composting Facility

#	County	Facility	Address	Accepts_Fo	Location_o	Area(mi²)
1	*No Data*	Cecil County Central Landfill	758 E Old Philadelphia Rd, Elkton, MD 21921	No	758 E Old Philadelphia Rd, Elkton, MD 21921	3.14
2	*No Data*	West Coast Mushrooms	342 Hopewell Road, Rising Sun, MD 21911	No	342 Hopewell Rd, Rising Sun, MD 21911	3.14

30 mile buffer (Maryland)

#	Facility_Name_1	Facility_Contact_1	Contact_Phone	Contact_Email_1	Contact_2	Contact_2_Phone	Contact_2_Email	URL	Area(mi²)
1	Veteran Compost - Aberdeen	Justen Garrity	(443) 584-3478	info@veterancompost.com	*No Data*	*No Data*	*No Data*	https://www.veterancompost.com/	3.14

30 Mile Buffer (Out of State)

#	FacilityName	Contact	Area(mi²)
1	Longwood Gardens	https://files.dep.state.pa.us/Waste/Bureau%20of%20Waste%20Management/WasteMgtPortalFiles/PA_Permitted_Food_Waste_Composting_Facilities.pdf	3.14
2	Ar-Joy Farms	https://files.dep.state.pa.us/Waste/Bureau%20of%20Waste%20Management/WasteMgtPortalFiles/PA_Permitted_Food_Waste_Composting_Facilities.pdf	3.14
3	Cliff Sensenig	https://files.dep.state.pa.us/Waste/Bureau%20of%20Waste%20Management/WasteMgtPortalFiles/PA_Permitted_Food_Waste_Composting_Facilities.pdf	3.14
4	S&A Kreider & Sons Farm, Inc.	https://files.dep.state.pa.us/Waste/Bureau%20of%20Waste%20Management/WasteMgtPortalFiles/PA_Permitted_Food_Waste_Composting_Facilities.pdf	3.14

Land Restoration Facilities

#	Brownfields Master Inventory Number (BMI #). BMI #s are formatted MD####.	Site Name	Other names the site may be known by	Location of Site	City of Site	State of Site	County of Site	Zip code of site	ShapeArea	Count
1	MD0268	Ordnance Products	*No Data*	1079 Mechanics Valley Road	North East	Maryland	Cecil	21901	94.60	1

Entities

#	Brownfields Master Inventory Number (BMI #). This is the site ID number LRP uses to identify sites. BMI #s are formatted MD####.	Site Name	Other names the site may be known by.	Location of Site	City of Site	State of Site	County of Site	Zip code of site
1	MD0268	Ordnance Products	*No Data*	1079 Mechanics Valley Road	North East	Maryland	Cecil	21901

#	Area of site in acres	File Available Electronically. Please note that a PIA request must be completed to review LRP files. In addition, only a portion of a file may be available electroncally.	Provides a link to the fact sheet for the property.	Count
1	94.60	No	https://mde.maryland.gov/programs/land/MarylandBrownfieldVCP/Documents/ordnance.pdf	1

Maryland Pond Locations

#	Facility Type	DAM HEIGHT	County	HAZARD CLASS	6 DIGIT WATERSHED	8 DIGIT WATERSHED	Count

Wastewater Discharge Facilities

#	AID	FAC_NAME	Comments	ValidateCo	GIS_Action	GIS_Comments	Corrective	ZipCodeCom
1	0	EDGEMOOR MATERIALS OF MARYLAND, INC.	*No Data*	Data Verified Accurate Based Upon Follow Up Research By MDE	*No Data*	*No Data*	*No Data*	*No Data*

#	CBSEG_92	BAY_TRIB	MD12DIG	County	MDMajorTrib	HUC	Tier2Catchments_yn	Tier2Catchments
1	NORTF	02130608	021306080377	8	8	020600020101	0	*No Data*

#	Tier3Catchments_yn	Tier3Catchments	SSPRA_yn	SSPRA	Impaired_yn	Impaired	WQA_yn	WQA
1	0	*No Data*	0	*No Data*	0	*No Data*	1	Biological

#	T3038Dig_yn	T3038Dig	TMDL8Dig_yn	TMDL8Dig	MHTArcheo_yn	MHTArcheo	Facility_Type	State_Num
1	0	*No Data*	0	*No Data*	0	*No Data*	*No Data*	*No Data*

#	WatershedYear	WatershedQuarter	WatershedCode	WatershedName	SimplePermittingAction	PermitAge	CycleYear	PreDraftComplete
1	*No Data*	*No Data*	*No Data*	*No Data*	*No Data*	*No Data*	*No Data*	*No Data*

#	DatePreDraftComplete	DraftPermitCompleteBy	IssueBy	AppFee	Bill	Amount	DSCHG_RATE	SW_AUTH_ROD
1	*No Data*	*No Data*	*No Data*	*No Data*	0	0.00	0.00	0

#	P2_OR_C_Bay_2000	District	SurWellName	SurWellSource	SurWellDist	CommWellName	CommWellSource	CommWellDist
1	0	35B	*No Data*	*No Data*	-99.00	*No Data*	*No Data*	-99.00

#	CommWellProtect	Active	Include	ManualActive	Count
1	0	0	1	0	1

MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT

SUPPLEMENT TO
DOCKET #07-24

COMPANY: Bluegrass Materials Company, LLC dba Martin Marietta Materials, Inc

LOCATION: North East Quarry, 233 Stevenson Road, North East, MD 21901

APPLICATION: Modification of the existing 1400 ton per hour crushing and screening plant with the addition of a 250 ton per hour quaternary crusher, a feeder, and three (3) conveyors.

ITEM	DESCRIPTION
1	Notice of Tentative Determination, Opportunity to Request a Public Hearing, and Opportunity to Submit Written Comments
2	Fact Sheet and Tentative Determination
3	Draft Permit to Construct and Conditions
4	Supplemental Information References List
5	Privilege Log – Not Applicable

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF TENTATIVE DETERMINATION, OPPORTUNITY TO REQUEST A PUBLIC HEARING, AND OPPORTUNITY TO SUBMIT WRITTEN COMMENTS

FIRST NOTICE

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of an application for a Permit to Construct submitted by Bluegrass Materials Company, LLC dba Martin Marietta Materials, Inc. on July 1, 2024, for the modification of the existing 1400 ton per hour crushing and screening plant with the addition of a 250 ton per hour quaternary crusher, a feeder, and three (3) conveyors. The proposed modification is located at 233 Stevenson Road, North East, Maryland, 21901.

Pursuant to Section 1-604, of the Environment Article, Annotated Code of Maryland, the Department has made a tentative determination that the Permit to Construct can be issued and is now ready to receive public comment on the application. Copies of the Department's tentative determination, the application, the draft permit to construct with conditions, and other supporting documents are available for public inspection on the Department's website. Look for Docket # 07-24 at the following link:

https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx

In accordance with HB 1200/Ch. 588 of 2022, the applicant provided an environmental justice (EJ) Score for the census tract in which the project is located using the Maryland EJ Screening Tool. The EJ Score, expressed as a statewide percentile, was shown to be 52 which the Department has verified. This score considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15% to identify underserved communities. Multiple environmental health indicators are used to identify overburdened communities. The Department's review of the environmental and socioeconomic indicators contributing to that EJ score is included in the tentative determination that is available for public inspection.

Interested persons may request a public hearing and/or submit written comments on the tentative determination. Requests for a public hearing must be submitted in writing and must be received by the Department no later than 20 days from the date of this notice. A requested public hearing will be held virtually using teleconference or internet-based conferencing technology unless a specific request for an in-person public hearing is received. Written comments must be received by the Department no later than 30 days from the date of this notice.

Interested persons may request an extension to the public comment period. The extension request must be submitted in writing and must be received by the Department no later than 30 days from the date of this notice or within 5 days after the hearing (if a hearing is requested), whichever is later. The public comment period may only be extended one time for a 60-day period.

All requests for a public hearing, requests for an extension to the public comment period, and all written comments should be directed to the attention of Ms. Shannon Heafey, Air Quality Permits Program by email to shannon.heafey@maryland.gov or by mail to the Air and Radiation Administration, 1800 Washington Boulevard, Baltimore, Maryland 21230. Further information may be obtained by calling Ms. Shannon Heafey at 410-537-4433.

Christopher R. Hoagland, Director
Air and Radiation Administration

MARYLAND DEPARTMENT OF ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

FACT SHEET AND TENTATIVE DETERMINATION
BLUEGRASS MATERIALS COMPANY, LLC C/O MARTIN MARIETTA MATERIALS, INC NORTHEAST QUARRY

PROPOSED MODIFICATION OF ONE (1) STONE CRUSHING AND SCREENING PLANT, RATED AT 1,400 TONS PER HOUR, POWERED BY ELECTRICITY

I. INTRODUCTION

The Maryland Department of the Environment (the "Department") received an application from Bluegrass Materials Company, LLC. C/O Martin Marietta Materials, Inc (Martin Marietta) on July 1, 2024 for a Permit to Construct to modify their existing electric powered 1,400 ton per hour crushing and screening plant with the addition of one (1) crusher, one (1) feeder, and three (3) conveyors at their existing North East Quarry at 233 Stevenson Road, North East, Maryland 21901.

A notice was placed in the Cecil Whig on November 6, 2024 and November 13, 2024 announcing an opportunity to request an informational meeting to discuss the application for a Permit to Construct. An informational meeting was not requested.

As required by law, all public notices were also provided to elected officials in all State, county, and municipality legislative districts located within a one mile radius of the facility's property boundary.

The Department has reviewed the application and has made a tentative determination that the proposed installation is expected to comply with all applicable air quality regulations. A notice will be published to provide the public with opportunities to request a public hearing and to comment on the application, the Department's tentative determination, the draft permit conditions, and other supporting documents. The Department will not schedule a public hearing unless a legitimate request is received.

If the Department does not receive any comments that are adverse to the tentative determination, the tentative determination will automatically become a final determination. If adverse comments are received, the Department will review the comments, and will then make a final determination with regard to issuance or denial of the permit. A notice of final determination will be published in a newspaper of general circulation in the affected area. The final determination may be subject to judicial review pursuant to Section 1-601 of the Environment Article, Annotated Code of Maryland.

II. CURRENT STATUS AND PROPOSED MODIFICATION

A. Current Status

Martin Marietta currently operates (Plant 2E) one (1) 1,400 ton per hour primary stone crushing and screening plant equipped with wet suppression, one (1) 1400 ton per hour secondary stone crushing and screening plant equipped with a wet suppression system, and one (1) rail load-out facility consisting of the following equipment:

- One (1) primary crusher not to exceed 1260 tph
- One (1) Metso HP500 secondary cone crusher
- One (1) Metso – Nordberg HP400 tertiary crusher
- One (1) Telsmith T-400 tertiary crusher
- One (1) Metso 7' X 16' – 3 deck screen
- One (1) Diester BHM-31020-O3T tertiary screen
- Diester BHM 3820 tertiary screen processing saturated product, not subject to NSPS Subpart OOO
- Seven (7) Syntron feeders
- Twenty-eight (28) conveyors including six (6) 48" belt width, eight (8) 36" belt width, thirteen (13) 30" belt width, and one (1) 24" belt width.

Martin Marietta also operates one (1) portable 600 ton per hour crushing and screening plant.

B. Proposed Installation

Martin Marietta has applied for a permit to construct to modify the existing crushing and screening plant (Plant 2E) with the addition of the following equipment:

- One (1) quaternary cone crusher;
- One (1) feeder; and
- Three (3) conveyors;

III. APPLICABLE REGULATIONS

The proposed modification is subject to all applicable Federal and State air quality control regulations, including, but not limited to the following:

(a) All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) promulgated under 40 CFR 60, Subparts A (General Provisions) and Subpart OOO for Nonmetallic Mineral Processing Plants.

(b) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.

(c) COMAR 26.11.02.19C & D, which require that the Permittee submit to the

Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in the submittals.

(d) COMAR 26.11.06.03C & D, which requires that the Permittee take reasonable precautions to prevent particulate matter from unconfined sources and materials handling and construction operations from becoming airborne.

(e) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

(f) COMAR 26.11.09.05E(2) and (3), which limits visible emissions from the diesel engines.

(g) COMAR 26.11.09.07 which limits the sulfur content for distillate fuel oils used in the facility.

(h) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

(i) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

IV. GENERAL AIR QUALITY

The U.S. Environmental Protection Agency (EPA) has established primary and secondary National Ambient Air Quality Standards (NAAQS) for six (6) criteria pollutants, i.e., sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, ozone, and lead. The primary standards were established to protect public health, and the secondary standards were developed to protect against non-health effects such as damage to property and vegetation.

The Department utilizes a statewide air monitoring network, operated in accordance with EPA guidelines, to measure the concentrations of criteria pollutants in Maryland's ambient air. The measurements are used to project statewide ambient air quality, and currently indicate that Cecil County complies with the NAAQS for sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide and lead.

Ground level ozone continues to present a problem for the entire Baltimore metropolitan area, which is classified as a non-attainment area for ozone. The primary contributors to the formation of ozone are emissions of oxides of nitrogen, primarily from combustion equipment, and emissions of Volatile Organic Compounds (VOC) such as paint solvents and gasoline vapors. Cecil County is included in the non-attainment area for ozone.

With regard to toxic air pollutants (TAPs), screening levels (i.e., acceptable ambient concentrations for toxic air pollutants) are generally established at 1/100 of allowed worker exposure levels (TLVs)[1]. The Department has also developed additional screening levels for carcinogenic compounds. The additional screening levels are established such that continuous exposure to the subject TAP at the screening level for a period of 70 years is expected to cause an increase in lifetime cancer risk of no more than 1 in 100,000.

V. ENVIRONMENTAL JUSTICE ANALYSIS

The concept behind the term environmental justice (EJ) is that regardless of race, color, national origin, or income, all Maryland residents and communities should have an equal opportunity to enjoy an enhanced quality of life. How to assess whether equal protection is being applied is the challenge.

Communities surrounded by a disproportionate number of polluting facilities puts residents at a higher risk for health problems from environmental exposures. It is important that residents who may be adversely affected by a proposed source be aware of the current environmental issues in their community in order to have meaningful involvement in the permitting process. Resources may be available from government and private entities to ensure that community health is not negatively impacted by a new source located in the community.

Extensive research has documented that health disparities exist between demographic groups in the United States, such as differences in mortality and morbidity associated with factors that include race/ethnicity, income, and educational attainment.

The Maryland General Assembly passed HB 1200, effective October 1, 2022, that adds to MDE's work incorporating diversity, equity and inclusion into our mission to help overburdened and underserved communities with environmental issues. In accordance with HB 1200/Ch, 588 of 2022, the applicant provided an environmental justice (EJ) Score for the census tract in which the proposed source is located using the Maryland EJ Screening Tool. The EJ Score, expressed as a statewide percentile, was shown to be 52, which the Department has verified. This score considers three demographic indicators, minority population above 50%, poverty rate above 25% and limited English proficiency above 15%, to identify underserved communities. Multiple environmental health indicators are used to identify overburdened communities.

To account for other sources of pollution surrounding the proposed source, the Department conducted an additional EJ Score analysis to evaluate the impact of other sources located within 1 mile of the proposed source. The highest EJ Score in a census tract located within 1 mile of the proposed source, expressed as a statewide percentile, was shown to be 52.

[1] TLVs are threshold limit values (exposure limits) established for toxic materials by the American Conference of Governmental Industrial Hygienists (ACGIH). Some TLVs are established for short-term exposure (TLV – STEL), and some are established for longer-term exposure (TLV – TWA), where TWA is an acronym for time-weight average.

An EJ Score of 52 indicates that the proposed installation is located in an area that is not disproportionately impacted by sources of pollution or at a higher risk of health problems from environmental exposures than other areas in Maryland. The Department has reviewed the air quality impacts from this proposed installation and has determined that the proposed installation will meet all applicable air quality standards.

VI. COMPLIANCE DEMONSTRATION AND ANALYSIS

The proposed installation must comply with all State imposed emissions limitations and screening levels, as well as the NAAQS. The Department has conducted an engineering and air quality review of the application. The emissions were projected based on U.S. EPA established emissions factors for crushing and screening plants. The conservative U.S. EPA's SCREEN3 model was also used to project the maximum ground level concentrations from the proposed facility, which was then compared to the screening levels and the NAAQS.

A. **Estimated Emissions** - The maximum emissions of air pollutants of concern from the proposed installation are listed in Table I.

B. **Compliance with National Ambient Air Quality Standards -** The maximum ground level concentrations for particulate matter (as PM10) based on the emissions from the proposed plant are listed in column 2 of Table II. The combined impact of the projected installation and the ambient background concentration for each pollutant shown in column 3 of Table II is less than the NAAQS for each pollutant shown in column 4.

The modification will not cause an increase in emissions of oxides of nitrogen and volatile organic compounds and will not significantly affect local ground level ozone concentrations.

C. **Compliance with Air Toxics Regulations** – The toxic air pollutant of concern, crystalline silica, that would be emitted from this facility is listed in column 1 of Table III. The predicted maximum off-site ambient concentration of crystalline silica is shown in column 4 of Table III, and the maximum concentration is less than the corresponding screening level for the toxic air pollutant shown in column 2.

VII. TENTATIVE DETERMINATION

Based on the above information, the Department has concluded that the proposed installation will comply with all applicable Federal and State air quality control requirements. In accordance with the Administrative Procedure Act, the Department has made a tentative determination to issue the Permit to Construct.

Enclosed with the tentative determination is a copy of the draft Permit to Construct.

TABLE I
PROJECTED MAXIMUM EMISSIONS FROM THE PROPOSED INSTALLATION

POLLUTANT	PROJECTED INCREASE IN EMISSIONS FROM PROPOSED INSTALLATION	
	(lbs/day)	(tons/year)
Particulate Matter (PM_{10})	7.88	0.85

TABLE II
PROJECTED IMPACT OF EMISSIONS OF CRITERIA POLLUTANTS FROM THE PROPOSED INSTALLATION ON AMBIENT AIR QUALITY

POLLUTANTS	**MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS CAUSED BY EMISSIONS FROM PROPOSED PROCESS ($\mu g/m^3$)**	**BACKGROUND AMBIENT AIR CONCENTRATIONS ($\mu g/m^3$)***	**NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ($\mu g/m^3$)**
Particulate Matter (PM_{10})	24-hr max →1.3	24-hr max.→ 101	24-hr max.→ 150

*Background concentrations were obtained from Maryland air monitoring stations as follows:

PM_{10} → Monitoring Station in Old Town, Baltimore City

TABLE III
PREDICTED MAXIMUM OFF-SITE AMBIENT CONCENTRATIONS FOR TOXIC AIR POLLUTANTS EMITTED FROM THE PROPOSED INSTALLATION

TOXIC AIR POLLUTANTS	**SCREENING LEVELS ($\mu g/m^3$)**	**PROJECTED WORST-CASE FACILITY-WIDE EMISSIONS (lbs/hr)**	**PREDICTED MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS ($\mu g/m^3$)**
Crystalline Silica	1-hour→ None 8-hour→ 0.25 Annual→ None	0.001	1-hour→ None 8-hour→ 0.071 Annual→ None

The values represent maximum facility-wide emissions of toxic air pollutants during any 1-hour period of facility operation. The values are based on worst-case emissions from the proposed facility and were predicted by EPA's SCREEN3 model, which provides conservative estimations concerning the impact of pollutants on ambient air quality.

DRAFT PERMIT

Wes Moore Serena McIlwain

Air and Radiation Administration

1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

☒ Construction Permit ☐ Operating Permit

PERMIT NO.
As listed on Page 2

DATE ISSUED:

PERMIT FEE:
2000.00 (PAID)

EXPIRATION DATE:
In accordance with
COMAR 26.11.02.04B

LEGAL OWNER & ADDRESS
Bluegrass Materials, LLC
c/o Martin Marrietta Materials, Inc
233 Stevenson Rd
North East, MD 21901
Attention: Ms. Whitney McGuigan Environmental Engineer

SITE
North East Quarry
233 Stevenson Rd
North East, MD 21901
AI # 20331

SOURCE DESCRIPTION

The permit authorizes the installation of one (1) quaternary crusher one (1) feeder and three (3) conveyors to be added to an existing quarry

This Permit to Construct also serves as a Temporary Permit to Operate the new equipment that expires 180 days after initiating operation of the plant.

This permit includes a limitation on facility-wide emissions of Oxides of Nitrogen (NOx) in order that Bluegrass Materials Company, LLC may be recognized as a synthetic minor with respect to Title V of the Clean Air Act.

This Permit supersedes all previous Permits to Construct issued to Premises No. 015-0005.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air and Radiation Administration

BLUEGRASS MATERIALS COMPANY, LLC
NORTH EAST QUARRY
233 STEVENSON ROAD
NORTH EAST, MD 21901
PERMIT-TO-CONSTRUCT CONDITIONS
PREMISES No. 015-0005

INDEX

This permit is issued to cover the following registered installations:

ARA Registration Number	Description	Date of Installation
015-0005-6-0299	Plant 2E – One (1) 1400 ton per hour primary stone crushing and screening plant equipped with a wet suppression system, one (1) 1400 ton per hour secondary stone crushing and screening plant equipped with a wet suppression system, and one (1) rail load-out facility consisting of the following equipment: • One (1) primary crusher not to exceed 1260 tph • One (1) Metso HP500 secondary cone crusher • One (1) Metso – Nordberg HP400 tertiary crusher • One (1) Telsmith T-400 tertiary crusher • One (1) Metso 7' X 16' – 3 deck screen • One (1) Diester BHM-31020-O3T tertiary screen • Diester BHM 3820 tertiary screen processing saturated product, not subject to NSPS Subpart OOO • One (1) Metso HP300 Quaternary crusher • Eight (8) Syntron feeders • Thirty-one (31) conveyors including six (6) 48" belt width, eight (8) 36" belt width, sixteen (16) 30" belt width, and one (1) 24" belt width. All equipment will be powered by electricity obtained from the electric grid.	Installed in 2010 Modified in March 2012, 2015, 2019, 2021, and 2025 Change of Ownership in 2015

ARA Registration Number	Description	Date of Installation
015-0005-6-0364	Portable crushing and screening plant processing up to 600 tons per hour and consisting of the following equipment: • one (1) primary crusher; • one (1) secondary crusher; • one (1) tertiary crusher; • two (2) screens; • associated conveyors; • up to four (4) diesel fired, Tier III or better, engines rated at 540 horsepower or less; • up to two (2) diesel fired, Tier III or better, engines rated at 174 horsepower or less; and • one (1) diesel fired, Tier III or better, engine rated at 51 horsepower or less. Fugitive dust shall be controlled by wet suppression systems as necessary.	Initial installation 2018 Subsequent equivalent equipment may be installed to replace existing equipment, as needed.

Part A – General Provisions

(1) The following Air and Radiation Administration (ARA) Permit-to-Construct applications and supplemental information are incorporated into this permit by reference:

(a) All valid applications for Processing or Manufacturing Equipment (Form 5) received at the Department prior to issuance of this permit and pertaining to all registered equipment. This includes the Form 5 received July 1, 2024, for the installation of one (1) quaternary crusher, one (1) feeder, and three (3) conveyors all powered by on grid electricity and equipped with a wet suppression system.

(b) All valid Emissions Data (Form 5B) received at the Department prior to issuance of this permit and pertaining to all registered equipment. This includes the Form 5EP received July 1, 2024, for the installation of one (1) quaternary crusher, one (1) feeder, and three (3)

conveyors all powered by on grid electricity and equipped with a wet suppression system.

(c) All valid Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration (Form 5T) received at the Department prior to issuance of this permit and pertaining to facility-wide emissions of any toxic air pollutants of all registered equipment. This includes the Form 5T received July 1, 2024, for the installation of one (1) quaternary crusher, one (1) feeder, and three (3) conveyors all powered by on grid electricity and equipped with a wet suppression system.

(d) All valid Supplemental Information received at the Department prior to issuance of this permit of all registered equipment including a process flow diagram sight plan, safety data sheets, and zoning approval received July 1, 2024, for the installation of one (1) quaternary crusher, one (1) feeder, and three (3) conveyors all powered by on grid electricity and equipped with a wet suppression system.

If there are any conflicts between representations in this permit and representations in the applications, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

(2) Upon presentation of credentials, representatives of the Maryland Department of the Environment (“MDE” or the “Department”) and the Cecil County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee’s property and permitted to:

(a) inspect any construction authorized by this permit;

(b) sample, as necessary to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;

(c) inspect any monitoring equipment required by this permit;

(d) review and copy any records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and

(e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.

(f) exercise its right of entry through use of an unmanned aircraft system to conduct inspections, collect samples, or make visual observations through photographic or video recordings to determine compliance with the requirements of this permit.

(3) The Permittee shall notify the Department prior to increasing quantities and/or changing the types of any materials referenced in the application or limited by this permit. If the Department determines that such increases or changes constitute a modification, the Permittee shall obtain a permit-to-construct prior to implementing the modification.

(4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.

(5) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.

(6) This permit supersedes all previous permits-to-construct issued to ARA Premises No. 015-0005.

(7) Subsequent to issuance of this permit, the Department may impose additional and modified requirements that are incorporated into a State permit-to-operate issued pursuant to COMAR 26.11.02.13.

Part B – Applicable Regulations

(1) This source is subject to all applicable federal air pollution control requirements including, but not limited to, the following:

(a) All applicable terms, provisions, emissions standards, testing, monitoring and record keeping and reporting requirements included in federal New Source Performance Standards (NSPS) promulgated

under 40 CFR 60, Subparts A (General Provisions) and Subpart OOO for Nonmetallic Mineral Processing Plants.

(b) All notifications required under 40 CFR 60, Subparts A and OOO shall be submitted to both of the following:

The Administrator
Compliance Program
Maryland Department of the Environment
Air and Radiation Administration
1800 Washington Boulevard, STE 715
Baltimore MD 21230

and

United States Environmental Protection Agency
Region III, Enforcement & Compliance Assurance Division
Air, RCRA and Toxics Branch (3ED21)
Four Penn Center
1600 John F. Kennedy Boulevard
Philadelphia, PA 19103-2852

(2) This source is subject to all applicable federally enforceable State air pollution control requirements including, but not limited to, the following regulations:

(a) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.

(b) COMAR 26.11.02.04B, which states that a permit to construct or an approval expires if, as determined by the Department:

(i) Substantial construction or modification is not commenced within 18 months after the date of issuance of the permit or approval, unless the Department specifies a longer period in the permit or approval;

(ii) Construction or modification is substantially discontinued for a period of 18 months after the construction or modification has commenced; or

(iii) The source for which the permit or approval was issued is not completed within a reasonable period after the date of issuance of the permit or approval.

(c) COMAR 26.11.02.09A, which requires that the Permittee obtain a permit-to-construct if an installation is to be modified in a manner that would cause changes in the quantity, nature, or characteristics of emissions from the installation as referenced in this permit.

(d) COMAR 26.11.06.03C and D, which requires that the Permittee take reasonable precautions to prevent particulate matter from unconfined sources and materials handling and construction operations from becoming airborne.

(e) COMAR 26.11.06.12 which states that a person may not construct modify, or operate, or cause to be constructed, modified, or operated, a New Source Performance Standard (NSPS) source in a manner which results or will result in violation of the provisions of 40 CFR, Part 60.

(f) COMAR 26.11.09.05E, which limits visible emissions from the diesel engines to 10% and 40% opacity during idle and operating modes, respectively. Exceptions to these opacity limits are as follows:

(i) The 10% opacity limit during idle mode does not apply for a period of 2 consecutive minutes after a period of idling of 15 minutes for the purpose of clearing the exhaust system;

(ii) The 10% opacity limit during idle mode does not apply to emissions resulting directly from a cold engine start-up and warm-up for the following maximum periods:

(A) Engines that are idling continuously when not in service: 30 minutes;

(B) All other engines: 15 minutes.

(iii) The 10% and 40% opacity limits do not apply while maintenance, repair, or testing is being performed by qualified mechanics.

(g) COMAR 26.11.09.07A(1), which limits the sulfur content of distillate fuel oils to not more than 0.3 percent by weight.

(3) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:

(a) COMAR 26.11.02.13A(16), which requires that the Permittee obtain from the Department, and maintain and renew as required, a valid State permit-to-operate.

(b) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in such submittals

(c) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.

(d) COMAR 26.11.15.05, which requires that the Permittee implement "Best Available Control Technology for Toxics" (T – BACT) to control emissions of toxic air pollutants.

(e) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions would unreasonably endanger human health.

Part C – Construction Conditions

(1) Except as otherwise provided in this part, the installation of the one (1) quaternary crusher, one (1) feeder, and three (3) conveyors shall be constructed in accordance with the specifications included in the incorporated applications.

(2) The one (1) quaternary crusher, one (1) feeder, and three (3) conveyors shall be equipped with wet suppression systems to meet the visible emissions of Subpart OOO and the particulate matter requirements of COMAR 26.11.06.03 as listed in (7) of Part D.

Part D – Operating and Monitoring Conditions

(1) The Permittee shall maintain and operate all installations and associated air pollution control equipment so as to assure full and continuous compliance with all applicable air pollution control regulations and permit conditions.

(2) Premises wide emissions of oxides of nitrogen (NOx) shall be less than 25 tons in any rolling 12-month period.

(3) The primary crusher for Plant 2E shall not exceed 1,260 tons per hour maximum capacity and must be powered by electricity.

(4) Each diesel engine associated with the portable crushing and screening plant (ARA Registration # 015-0005-6-0364) shall be limited to 2,400 operating hours in any rolling 12-month period unless the Permitee can demonstrate, to the satisfaction of the Department, that premises wide NOx emissions are less than 25 tons in any rolling 12-month period at other operating conditions.

(5) The Permittee shall properly maintain, calibrate, and operate all control panel instrumentation and all devices employed to monitor performance of the facility's air pollution control devices.

(6) The Permittee shall operate the portable crushing and screening plant (ARA Registration # 015-0005-6-0364) on the following parcels only that are designated as Mineral Extraction A (MEA) zoning districts unless the Permittee obtains an approval from the Permittee's local zoning authority (currently the Cecil County Division of Planning and Zoning) to operate the plant at other locations: Parcel Nos. 34, 662, 517, 36, and 663.

(7) Wet suppression systems shall be used whenever they are needed to comply with the fugitive particulate matter limits of COMAR 26.11.06.03C and D and the following opacity limits for affected facilities at nonmetallic mineral processing plants constructed, modified, or reconstructed on or after April 22, 2008 as specified in 40 CFR, Part 60, Subpart OOO:

(a) No more than 12 percent opacity from the crushers; and

(b) No more than 7 percent opacity from all other fugitive sources.
[Reference: 40 CFR §60.672(b) and Table 3 to 40 CFR 60 Subpart OOO]

(8) The Permittee shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in the wet suppression systems. The Permittee must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles. **[Reference: 40 CFR §60.674(b)]**

(9) All engines at the premises shall be nonroad engines, as defined in 40 CFR §1068.30, unless the Permittee complies with the stationary engine requirements of 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, as applicable, for the engines.

(10) Fugitive dust from plant roads and stockpiles shall be controlled, as necessary, by using water or approved chemical dust suppressants or a combination, thereof.

Part E – Notifications and Testing (New Quaternary Crusher)

(1) The Permittee shall submit written or electronic notification to the Department of the actual date of initial startup of the one (1) quaternary crusher, one (1) feeder, and three (3) conveyors, within 15 days after such date. **[Reference: 40 CFR §60.7(a)(3) and §60.676(i)]**

(2) Within 60 days after the one (1) quaternary crusher, one (1) feeder, and three (3) conveyors, are in operation, the Permittee shall demonstrate compliance with all applicable opacity standards. **[Reference: 40 CFR §60.11(b) and §60.672(b)]**

(3) During the compliance demonstration, the one (1) quaternary crusher, one (1) feeder, and three (3) conveyors, shall be operated at 90% or higher, of the normal operational throughput or at other operating conditions approved by the Department.

(4) The Permittee shall use Method 9 of Appendix A-4 to 40 CFR, Part 60 and the procedures in 40 CFR §60.11, with the following additions:

(a) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(b) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources

(e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A–4 of this part, Section 2.1) must be followed.

(c) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.
[Reference: 40 CFR §60.675(c)(1)]

(5) The duration of the Method 9 (40 CFR, Part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable opacity standards must be based on the average of the five 6-minute averages. **[Reference: 40 CFR §60.675(c)(3)]**

(6) The Permittee shall submit notification of the intended date of the required Method 9 observations to the Department at least 7 days prior to that date.

(7) Within 45 days following the required Method 9 observations, the Permittee shall submit the results to the Department.

Part F – Notifications and Testing (Portable Plant ARA# 015-0005-6-0364)

(1) The Permittee shall submit written or electronic notification to the Department of the actual date of arrival of any portable plant, within 15 days after such date. **[Reference: 40 CFR §60.7(a)(3) and §60.676(i)]**

(2) Within 60 days after a portable plant is in operation, the Permittee shall demonstrate compliance with all applicable opacity standards. A valid Method 9 test demonstrating compliance for this equipment at another premises, may be used to satisfy this requirement. **[Reference: 40 CFR §60.11(b) and §60.672(b)]**

(3) During the compliance demonstration, the portable plant shall be operated at 90% or higher, of the normal operational throughput or at other operating conditions approved by the Department.

(4) The Permittee shall use Method 9 of Appendix A-4 to 40 CFR, Part 60 and the procedures in 40 CFR §60.11, with the following additions:

(a) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).

(b) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A–4 of this part, Section 2.1) must be followed.

(c) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.
[Reference: 40 CFR §60.675(c)(1)]

(5) The duration of the Method 9 (40 CFR, Part 60, Appendix A–4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable opacity standards must be based on the average of the five 6-minute averages.
[Reference: 40 CFR §60.675(c)(3)]

(6) The Permittee shall submit notification of the intended date of the required Method 9 observations to the Department at least 7 days prior to that date.

(7) Within 45 days following the required Method 9 observations, the Permittee shall submit the results to the Department.

Part G – Record Keeping and Reporting

(1) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information:

(a) Manufacturer specifications for each portable plant brought on site;

(b) the hours of operation for each piece of equipment for each operating day;

(c) the amount of material, in tons, that is processed by the primary crusher for Plant 2E per hour;

(d) A log of each periodic inspection of the wet suppression systems, as required, including dates and corrective actions taken; and

(e) Copies of all required opacity observation test results.

(2) The Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, records necessary to support annual certifications of emissions and demonstrations of compliance for toxic air pollutants. Such records shall include, if applicable, the following:

(a) mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each registered source of emissions;

(b) accounts of the methods and assumptions used to quantify emissions;

(c) all operating data, including operating schedules and production data, that were used in determinations of emissions;

(d) amounts, types, and analyses of all fuels used;

(e) any records, the maintenance of which is required by this permit or by State or federal regulations, that pertain to the operation and maintenance of continuous emissions monitors, including:

(i) all emissions data generated by such monitors;

(ii) all monitor calibration data;

(iii) information regarding the percentage of time each monitor was available for service; and

(iv) information concerning any equipment malfunctions.

(f) information concerning operation, maintenance, and performance of air pollution control equipment and compliance monitoring equipment, including:

(i) identifications and descriptions of all such equipment;

(ii) operating schedules for each item of such equipment;

(iii) accounts of any significant maintenance performed;

(iv) accounts of all malfunctions and outages; and

(v) accounts of any episodes of reduced efficiency.

(g) limitations on source operation or any work practice standards that significantly affect emissions; and

(h) other relevant information as required by the Department.

(3) The Permittee shall submit to the Department by April 1 of each year a certification of emissions for the previous calendar year. The certifications shall be prepared in accordance with requirements, as applicable, adopted under COMAR 26.11.01.05 – 1 and COMAR 26.11.02.19D.

(a) Certifications of emissions shall be submitted on forms obtained from the Department.

(b) A certification of emissions shall include mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each of the facility's registered sources of emissions.

(c) The person responsible for a certification of emissions shall certify the submittal to the Department in the following manner:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

(4) The Permittee shall submit to the Department by April 1 of each year a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. Such analysis shall include either:

(a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or

(b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

(5) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions to the Compliance Program of the Air and Radiation Administration.

Part H – Temporary Permit-to-Operate Conditions

(1) This permit-to-construct shall also serve as a temporary permit-to-operate that confers upon the Permittee authorization to operate of the one (1) quaternary crusher, one (1) feeder, and three (3) conveyors for a period of up to 180 days after initiating operating of the one (1) crusher, one (1) feeder, and three (3) conveyors.

(2) The Permittee shall provide the Department with written or electronic notification of the date on which operation of the one (1) quaternary crusher, one (1) feeder, and three (3) conveyors is initiated. Such notification shall be provided within 15 business days of the date to be reported.

(3) During the effective period of the temporary permit-to-operate the Permittee shall operate the new installation as required by the applicable terms and conditions of this permit-to-construct, and in accordance with operating procedures and recommendations provided by equipment vendors.

(4) The Permittee shall submit to the Department an application for a State permit-to-operate no later than 60 days prior to expiration of the effective period of the temporary permit-to-operate.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION

SUPPLEMENTAL INFORMATION REFERENCES

The Code of Maryland Regulations (COMAR) is searchable by COMAR citation at the following Division of State Documents website:
https://dsd.maryland.gov/Pages/default.aspx

The Code of Federal Regulations (CFR), including New Source Performance Standards (NSPS) at 40 CFR, Part 60 and National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR, Parts 61 and 63, is searchable by CFR citation at the following U.S. Government Publishing Office website:
http://www.ecfr.gov

Information on National Ambient Air Quality Standards (NAAQS) is located at the following U.S. Environmental Protection Agency (EPA) website:
https://www.epa.gov/criteria-air-pollutants/naaqs-table

Information on Maryland's Ambient Air Monitoring Program is located at the following Maryland Department of the Environment website:
http://mde.maryland.gov/programs/Air/AirQualityMonitoring/Pages/index.aspx

Information on the U.S. EPA's Screen3 computer model and other EPA-approved air dispersion models is located at the following U.S. EPA website:
https://www.epa.gov/scram/air-quality-dispersion-modeling-screening-models

Information on the U.S. EPA TANKS Emission Estimation Software is located at the following U.S. EPA website:
https://www.epa.gov/air-emissions-factors-and-quantification/tanks-emissions-estimation-software-version-5

Information on the U.S. EPA Emission Factors and AP-42 is located at the following U.S. EPA website:
https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors