TEMPORARY REGULATION 13 PERMIT APPLICATION CONSTRUCTION BY-PASS SYSTEM

Millville Quarry

Prepared for:

Bardon, Inc. 6401 Golden Triangle Drive, Suite 400 Greenbelt, Maryland 20770

Prepared by:

Potesta & Associates, Inc.

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Project No. 0101-17-0157-010

October 2017

POTESTA

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SECTION I-III

APPLICATION FOR NSR PERMIT

WEST VIRGINIA DEPARTMENT OF ENVIRONMENTAL PROTECTION DIVISION OF AIR QUALITY 601 57 th Street, SE Charleston, WV 25304 (304) 926-0475 WWW.dep.wv.gov/dag	APPLICATION FOR NSR PERMIT AND TITLE V PERMIT REVISION (OPTIONAL)								
PLEASE CHECK ALL THAT APPLY TO NSR (45CSR13) (IF KNOW CONSTRUCTION D MODIFICATION RELOCATION CLASS I ADMINISTRATIVE UPDATE TEMPORARY CLASS II ADMINISTRATIVE UPDATE AFTER-THE-FACT	ADMINISTRATIVE AMENDMENT SIGNIFICANT MODIFICATION IF ANY BOX ABOVE IS CHECKED, INCLUDE TITLE V REVISION INFORMATION AS ATTACHMENT S TO THIS APPLICATION								
(Appendix A, "Title V Permit Revision Flowchart") and abil	FOR TITLE V FACILITIES ONLY: Please refer to "Title V Revision Guidance" in order to determine your Title V Revision options (Appendix A, "Title V Permit Revision Flowchart") and ability to operate with the changes requested in this Permit Application. Section I. General								
 Name of applicant (as registered with the WV Secretary o Bardon, Inc. 									
3. Name of facility <i>(if different from above):</i> Millville Quarry	4. The applicant is the: ☐ OWNER □OPERATOR ⊠ BOTH								
5A. Applicant's mailing address:6401 Golden Triangle Drive, Suite 400Greenbelt, Maryland 20770	5B. Facility's present physical address:57 Blair RoadHarpers Ferry, West Virginia 25425								
change amendments or other Business Registration Cert	n/Organization/Limited Partnership (one page) including any name ificate as Attachment A. hority of L.L.C./Registration (one page) including any name change								
7. If applicant is a subsidiary corporation, please provide the	name of parent corporation: NA								
 8. Does the applicant own, lease, have an option to buy or otherwise have control of the <i>proposed site</i>? XES □ NO □ If YES, please explain: Applicant owns the site. □ If NO, you are not eligible for a permit for this source. 									
9. Type of plant or facility (stationary source) to be constru- administratively updated or temporarily permitted (e.g. crusher, etc.): Temporary equipment at limestone quarry	g., coal preparation plant, primary Classification System								
11A. DAQ Plant ID No. (for existing facilities only): 11B 037-00015 11B	List all current 45CSR13 and 45CSR30 (Title V) permit numbers associated with this process (for existing facilities only): G40-C003F (G currently under review) for the Millville Quarry								
All of the required forms and additional information can be found under the Permitting Section of DAQ's website, or requested by phone.									

12A.

- Series For Modifications, Administrative Updates or Temporary permits at an existing facility, please provide directions to the *present location* of the facility from the nearest state road;
- For **Construction** or **Relocation permits**, please provide directions to the *proposed new site location* from the nearest state road. Include a **MAP** as **Attachment B**.

From Charles Town, take U.S. 340 heading towards Harpers Ferry and make a right onto Blair Road. Go about 2 miles on winding road; if you get to the railroad tracks, you have gone too far. Turn right into Millville Quarry just before the railroad tracks.

12.B. New site address (if applicable):	12C. Nearest city or town:	12D. County:
Not Applicable (NA)	Millville	Jefferson
12.E. UTM Northing (KM): 4,352.354	12F. UTM Easting (KM): 259.027	12G. UTM Zone: 18
13. Briefly describe the proposed change(s) at the Temporary hopper and conveyor to by-pass of temporary hopper and conveyor hopper and conveyor temporary hopper and co	-	
 14A. Provide the date of anticipated installation o If this is an After-The-Fact permit application change did happen: / / 		14B. Date of anticipated Start-Up if a permit is granted: 11/15/2017
14C. Provide a Schedule of the planned Installat application as Attachment C (if more than o	• •	the units proposed in this permit
15. Provide maximum projected Operating Sche24Hours Per Day7Days Per We		plication:
16. Is demolition or physical renovation at an exis	ting facility involved? 🛛 YES 🗌 🛛	10
17. Risk Management Plans. If this facility is sub	pject to 112(r) of the 1990 CAAA, or will be	come subject due to proposed
changes (for applicability help see www.epa.go	ov/ceppo), submit your Risk Management	Plan (RMP) to U. S. EPA Region III.
18. Regulatory Discussion. List all Federal and	State air pollution control regulations that y	ou believe are applicable to the
proposed process (if known). A list of possible	applicable requirements is also included in	Attachment S of this application
(Title V Permit Revision Information). Discuss a	applicability and proposed demonstration(s) of compliance (if known). Provide thi
information as Attachment D.		, <i>,</i>
Section II. Additiona	al attachments and supporting	documents.
 Include a check payable to WVDEP – Division 45CSR13). 	of Air Quality with the appropriate applica	tion fee (per 45CSR22 and
20. Include a Table of Contents as the first page	e of your application package.	
 Provide a Plot Plan, e.g. scaled map(s) and/o source(s) is or is to be located as Attachmen 		operty on which the stationary
Solution → Solutio	tructure (e.g. church, school, business, res	idence).
22. Provide a Detailed Process Flow Diagram(s device as Attachment F.	s) showing each proposed or modified emis	ssions unit, emission point and control
23. Provide a Process Description as Attachme	ent G.	
Also describe and quantify to the extent point of the extent p	ossible all changes made to the facility sinc	e the last permit review (if applicable).
All of the required forms and additional information	can be found under the Permitting Section of	f DAQ's website, or requested by phone
24. Provide Material Safety Data Sheets (MSDS) for all materials processed, used or prod	uced as Attachment H.
, ,		

25. Fill out the Emission Units Table an	nd provide it as Attachment I.							
26. Fill out the Emission Points Data St	ummary Sheet (Table 1 and Tab	le 2) and provide it as Attachment J.						
27. Fill out the Fugitive Emissions Data Summary Sheet and provide it as Attachment K.								
28. Check all applicable Emissions Unit	t Data Sheets listed below:							
Bulk Liquid Transfer Operations	Haul Road Emissions	Quarry						
Chemical Processes	Hot Mix Asphalt Plant	oxtimes Solid Materials Sizing, Handling and Storage						
Concrete Batch Plant	Incinerator	Facilities						
Grey Iron and Steel Foundry	Indirect Heat Exchanger	Storage Tanks						
General Emission Unit, specify								
Fill out and provide the Emissions Unit I	Data Sheet(s) as Attachment L.							
29. Check all applicable Air Pollution C	ontrol Device Sheets listed below	<i>w</i> : NA – No add-on control devices.						
Absorption Systems	Baghouse	Flare						
Adsorption Systems	Condenser	Mechanical Collector						
Afterburner	Electrostatic Precipitate	or 🗌 Wet Collecting System						
Other Collectors, specify								
Fill out and provide the Air Pollution Cor	ntrol Device Sheet(s) as Attachn	nent M.						
30. Provide all Supporting Emissions C Items 28 through 31.	Calculations as Attachment N, o	r attach the calculations directly to the forms listed in						
	compliance with the proposed en	proposed monitoring, recordkeeping, reporting and nissions limits and operating parameters in this permit						
	y not be able to accept all measu	ner or not the applicant chooses to propose such res proposed by the applicant. If none of these plans le them in the permit.						
32. Public Notice. At the time that the a	application is submitted, place a C	Class I Legal Advertisement in a newspaper of general						
circulation in the area where the sour	rce is or will be located (See 45CS	SR§13-8.3 through 45CSR§13-8.5 and <i>Example Legal</i>						
Advertisement for details). Please s	submit the Affidavit of Publicatio	n as Attachment P immediately upon receipt.						
33. Business Confidentiality Claims.	Does this application include confi	dential information (per 45CSR31)?						
	🖂 NO							
	ng the criteria under 45CSR§31-4	nitted as confidential and provide justification for each I.1, and in accordance with the DAQ's <i>"Precautionary</i> nstructions as Attachment Q.						
Se	ection III. Certification o	f Information						
34. Authority/Delegation of Authority. Check applicable Authority Form be		ner than the responsible official signs the application. ble official.						
Authority of Corporation or Other Busi	ness Entity	Authority of Partnership						
Authority of Governmental Agency		Authority of Limited Partnership						
Submit completed and signed Authority								
· · · ·		ermitting Section of DAQ's website, or requested by phone.						

35A. Certification of Information. To certify this permit application, a Responsible Official (per 45CSR§13-2.22 and 45CSR§30-2.28) or Authorized Representative shall check the appropriate box and sign below.

Certification of Truth, Accuracy, and Completeness

I, the undersigned Responsible Official / Authorized Representative, hereby certify that all information contained in this application and any supporting documents appended hereto, is true, accurate, and complete based on information and belief after reasonable inquiry I further agree to assume responsibility for the construction, modification and/or relocation and operation of the stationary source described herein in accordance with this application and any amendments thereto, as well as the Department of Environmental Protection, Division of Air Quality permit issued in accordance with this application, along with all applicable rules and regulations of the West Virginia Division of Air Quality and W.Va. Code § 22-5-1 et seq. (State Air Pollution Control Act). If the business or agency changes its Responsible Official or Authorized Representative, the Director of the Division of Air Quality will be notified in writing within 30 days of the official change.

Compliance Certification

Except for requirements identified in the Title V Application for which compliance is not achieved, I, the undersigned hereby certify that, based on information and belief formed after reasonable inquiry, all air contaminant sources identified in this application are in compliance with all applicable requirements.

	()	DATE: Det. 9, 2017
35B. Printed name of signee: Stephen Ward	use blue ink)	(Please use blue ink) 35C. Title: Vice President
35D. E-mail:	36E. Phone: (301) 982-1400	36F. FAX: (855) 293-6428
stephen.ward@aggregate-us.com		
36A. Printed name of contact person (if differe	nt from above): Lisa Hunt	36B. Title: Area Environmental Manager
36C. E-mail: lisa.hunt@aggregate-us.com	36D. Phone:	36E. FAX: (855) 293-6428
	(301) 982-1400	

PLEASE CHECK ALL APPLICABLE ATTACHMENTS INCLUDE	ED WITH THIS PERMIT APPLICATION:
Attachment A: Business Certificate	☑ Attachment K: Fugitive Emissions Data Summary Sheet
Attachment B: Map(s)	Attachment L: Emissions Unit Data Sheet(s)
Attachment C: Installation and Start Up Schedule	Attachment M: Air Pollution Control Device Sheet(s)
Attachment D: Regulatory Discussion	Attachment N: Supporting Emissions Calculations
Attachment E: Plot Plan	Attachment O: Monitoring/Recordkeeping/Reporting/Testing Plans
Attachment F: Detailed Process Flow Diagram(s)	Attachment P: Public Notice
Attachment G: Process Description	Attachment Q: Business Confidential Claims
Attachment H: Material Safety Data Sheets (MSDS)	Attachment R: Authority Forms
Attachment I: Emission Units Table	Attachment S: Title V Permit Revision Information
Attachment J: Emission Points Data Summary Sheet	Application Fee
FOR AGENCY USE ONLY - IF THIS IS A TITLE V SOURCE:	
Forward 1 copy of the application to the Title V Permitting	g Group and:
For Title V Administrative Amendments:	
NSR permit writer should notify Title V permit writ	ter of draft permit,
For Title V Minor Modifications:	of a management of a monotone was a second to a second secon
Title V permit writer should send appropriate notif	fication to EPA and affected states within 5 days of receipt,
NSR permit writer should notify Title V permit writ	ter of draft permit.
For Title V Significant Modifications processed in parallel	with NSR Permit revision:
NSR permit writer should notify a Title V permit with the state of	riter of draft permit,
Public notice should reference both 45CSR13 and	Title V permits,
EPA has 45 day review period of a draft permit.	
All of the required forms and additional information can be for	ound under the Permitting Section of DAQ's website, or requested by phone.

ATTACHMENT A

BUSINESS CERTIFICATE



I, Natalie E. Tennant, Secretary of State of the State of West Virginia, hereby certify that

BARDON, INC.

Control Number: 99R50

a corporation formed under the laws of Maryland has filed its "Application for Certificate of Authority" to transact business in West Virginia as required by the provisions of the West Virginia Code. I hereby declare the organization to be registered as a foreign corporation from its effective date of September 23, 2011.

Therefore, I issue this

CERTIFICATE OF AUTHORITY

to the corporation authorizing it to transact business in West Virginia



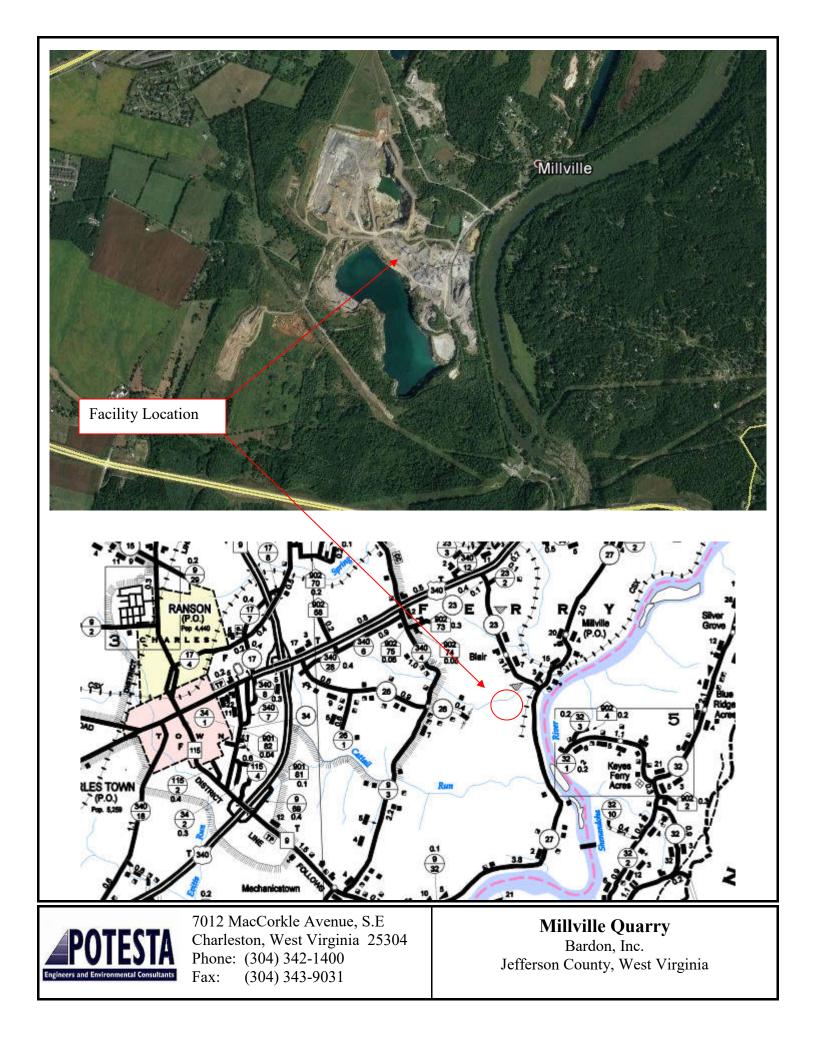
Given under my hand and the Great Seal of the State of West Virginia on this day of September 23, 2011

Materii Eyem

Secretary of State

ATTACHMENT B

SITE LOCATION MAP



ATTACHMENT C

INSTALLATION/STARTUP SCHEDULE

ATTACHMENT C

INSTALLATION AND STARTUP SCHEDULE

Construction/installation of the proposed construction by-pass system is scheduled to begin on or about November 15, 2017. Startup is scheduled to begin shortly after the completion of the installation procedures.

ATTACHMENT D

REGULATORY DISCUSSION

ATTACHMENT D

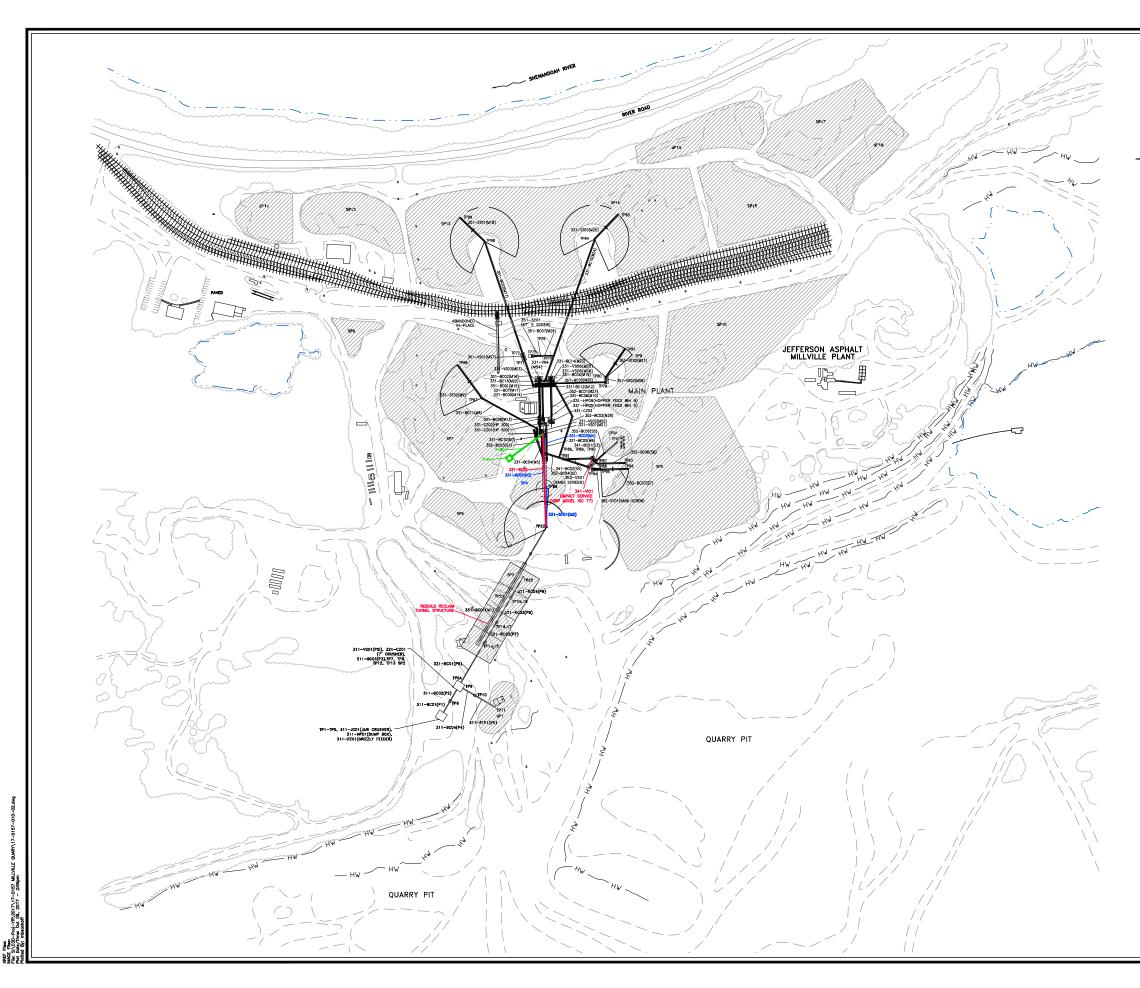
REGULATORY DISCUSSION

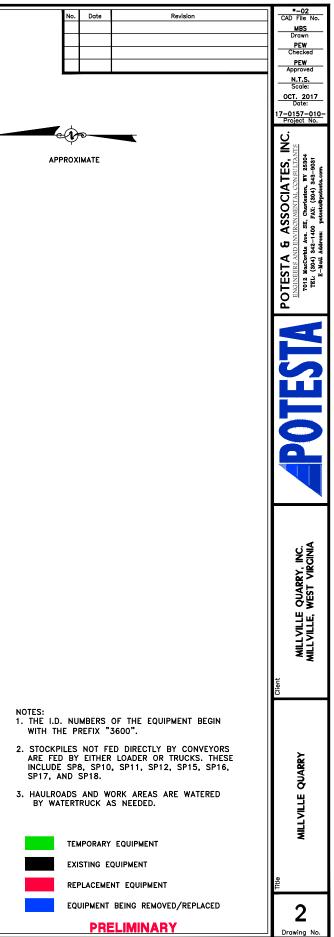
The proposed facility is required to comply with the requirements contained in the applicable provisions of (1) 45CSR7, (2) 45CSR13, (3) 45CSR16, and (4) 40CFR60, Subpart OOO.

- 1. 45CSR7 requires the facility to maintain fugitive dust control systems, and obtain required permits.
- 2. 45CSR13 requires the facility to operate within the limits of the permit and in accordance with the permit application.
- 3. 45CSR16 formally adopts NSPS of 45CFR60.
- 4. 45CFR60, Subpart OOO, requires notification of startup, operation of air pollution control equipment, and performance testing and recordkeeping. The proposed equipment is subject to Subpart OOO.

ATTACHMENT E

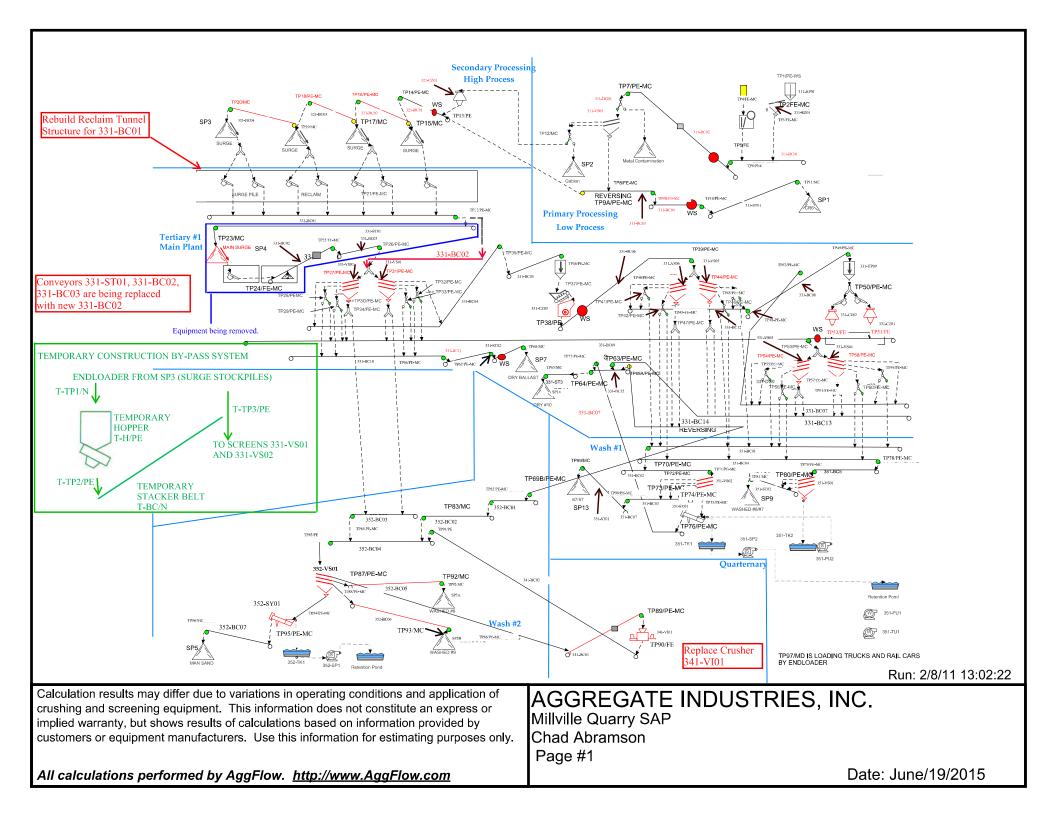
PLOT PLAN





ATTACHMENT F

PROCESS FLOW DIAGRAM



ATTACHMENT G

PROCESS DESCRIPTION

ATTACHMENT G

PROCESS DESCRIPTION

Bardon, Inc. is submitting this application to obtain a temporary permit for a construction by-pass system. Millville Quarry is covered under general permit registration G40-C003F with the G version currently under review at the Division of Air Quality (DAQ). The G version of the general permit registration is for equipment replacement. One part of the project will replace part of the main plant feed system. With the main plant feed system being replaced, the facility cannot operate. The equipment proposed herein will be used to by-pass the equipment that is being replaced and allow continued operation of the quarry.

The proposed by-pass system will involve endloaders moving material from the existing main plant feed stockpile (SP3) and delivering it to hopper T-H/PE through T-TP1/N. From T-H/PE the material will pass through T-TP2/PE to conveyor T-BC/N. Conveyor T-BC/N will convey the material to existing screens 331-VS01 and 331-VS02 through T-TP3/PE.

It is anticipated that the construction of the new equipment will take from three (3) to six (6) months. Upon completion of the construction and start of operation of the permanent equipment, this temporary equipment will be removed from operation.

ATTACHMENT I

EMISSION UNITS TABLE

Attachment I

Emission Units Table

(includes all emission units and air pollution control devices

that will be part of this permit application review, regardless of permitting status)

Emission Unit ID¹	Emission Point ID ²	Emission Unit Description	Year Installed/ Modified	Design Capacity	Type ³ and Date of Change	Control Device ⁴
T-H	T-H	Temporary Hopper	2017	50 tons	New 2017	PE
T-BC	T-BC	Temporary Belt Conveyor	2017	1,000 tph	New 2017	Ν

³New, modification, removal ⁴For <u>C</u>ontrol Devices use the following numbering system: 1C, 2C, 3C,... or other appropriate designation.

ATTACHMENT J

EMISSION POINTS DATA SUMMARY SHEETS

Attachment J Emission Points Data Summary Sheet

	Table 1: Emissions Data																		
Emission Point ID No. (Must match Emission Units Table-& Plot Plan)	Emission Point Type ¹					Through (Must mate	Jnit Vented This Point th Emission ble & Plot an)	Air Pollution Devic (Must m Emission Unit Plot Pla	e atch s Table &	Vent Tin Emissio (chemical p only	n Unit <i>rocesses</i>	All Regulated Pollutants Chemical Name/CAS ³ (Speciate VOCs & HAPS)	Maximum Uncontrolled		Maximum F Controlled Er		Emission Form or Phase (At exit	Est. Method Used ⁶	Emission Concentration ⁷ (ppmv or mg/m ⁴)
		ID No.	Source	ID No.	Device Type	Short Term ²	Max (hr/yr)		lb/hr	ton/yr	lb/hr	ton/yr	conditions, Solid, Liquid or Gas/Vapor)						
Transfer Points T-TP1 through T-TP3 Created by T-H and T-BC	Transfer Points	T-H and T-BC	T-H and T-BC	NA	NA	NA	NA	PM PM10 PM2.5	16.50 7.80 1.20	8.25 3.90 0.60	11.00 5.20 0.80	5.51 2.60 0.40	Solid Solid Solid	AP-42	NA				

The EMISSION POINTS DATA SUMMARY SHEET provides a summation of emissions by emission unit. Note that uncaptured process emission unit emissions are not typically considered to be fugitive and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET. Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions). Please complete the FUGITIVE EMISSIONS DATA SUMMARY SHEET for fugitive emission activities.

¹ Please add descriptors such as upward vertical stack, downward vertical stack, horizontal stack, relief vent, rain cap, etc.

2 Indicate by "C" if venting is continuous. Otherwise, specify the average short-term venting rate with units, for intermittent venting (i.e., 15 min/hr). Indicate as many rates as needed to clarify frequency of venting (e.g., 5 min/day, 2 days/wk).

3 List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS2, VOCs, H2S, Inorganics, Lead, Organics, O3, NO, NO2, SO2, SO3, all applicable Greenhouse Gases (including CO2 and methane), etc. DO NOT LIST H2, H2O, N2, O2, and Noble Gases.

4 Give maximum potential emission rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

- 5 Give maximum potential emission rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).
- 6 Indicate the method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

7 Provide for all pollutant emissions. Typically, the units of parts per million by volume (ppmv) are used. If the emission is a mineral acid (sulfuric, nitric, hydrochloric or phosphoric) use units of milligram per dry cubic meter (mg/m3) at standard conditions (68 °F and 29.92 inches Hg) (see 45CSR7). If the pollutant is SO2, use units of ppmv (See 45CSR10).

Attachment J **Emission Points Data Summary Sheet**

	Table 2: Release Parameter Data											
			Exit Gas		Emission Point El	evation (ft)	UTM Coordinates (km)					
Emission Point ID No. (Must match Emission Units Table)	Inner Diameter (ft.)	Temp. (°F)	Volumetric Flow ¹ (acfm) <i>at operating conditions</i>	Velocity (fps)	Ground Level (Height above mean sea level)	Stack Height ² (Release height of emissions above ground level)	Northing	Easting				
NA												

¹ Give at operating conditions. Include inerts. ² Release height of emissions above ground level.

ATTACHMENT K

FUGITIVE EMISSIONS DATA SUMMARY SHEETS

Attachment K

FUGITIVE EMISSIONS DATA SUMMARY SHEET

The FUGITIVE EMISSIONS SUMMARY SHEET provides a summation of fugitive emissions. Fugitive emissions are those emissions which could not reasonably pass through a stack, chimney, vent or other functionally equivalent opening. Note that uncaptured process emissions are not typically considered to be fugitive, and must be accounted for on the appropriate EMISSIONS UNIT DATA SHEET and on the EMISSION POINTS DATA SUMMARY SHEET.

Please note that total emissions from the source are equal to all vented emissions, all fugitive emissions, plus all other emissions (e.g. uncaptured emissions).

	APPLICATION FORMS CHECKLIST - FUGITIVE EMISSIONS
1.)	Will there be haul road activities?
	Yes No
	If YES, then complete the HAUL ROAD EMISSIONS UNIT DATA SHEET.
2.)	Will there be Storage Piles?
	□ Yes
	☐ If YES, complete Table 1 of the NONMETALLIC MINERALS PROCESSING EMISSIONS UNIT DATA SHEET.
3.)	Will there be Liquid Loading/Unloading Operations?
	□ Yes
	If YES, complete the BULK LIQUID TRANSFER OPERATIONS EMISSIONS UNIT DATA SHEET.
4.)	Will there be emissions of air pollutants from Wastewater Treatment Evaporation?
	□ Yes
	If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
5.)	Will there be Equipment Leaks (e.g. leaks from pumps, compressors, in-line process valves, pressure relief devices, open-ended valves, sampling connections, flanges, agitators, cooling towers, etc.)?
	□ Yes
	☐ If YES, complete the LEAK SOURCE DATA SHEET section of the CHEMICAL PROCESSES EMISSIONS UNIT DATA SHEET.
6.)	Will there be General Clean-up VOC Operations?
	□ Yes
	If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET.
7.)	Will there be any other activities that generate fugitive emissions?
	□ Yes
	☐ If YES, complete the GENERAL EMISSIONS UNIT DATA SHEET or the most appropriate form.
	ou answered "NO" to all of the items above, it is not necessary to complete the following table, "Fugitive Emissions nmary."

FUGITIVE EMISSIONS SUMMARY	All Regulated Pollutants ⁻ Chemical Name/CAS ¹	Maximum Uncontrolled		Maximum P Controlled En	Est. Method	
	Chemical Name/CAS ⁺	lb/hr	ton/yr	lb/hr	ton/yr	Used ⁴
Haul Road/Road Dust Emissions Paved Haul Roads						
Unpaved Haul Roads	РМ РМ10 РМ2.5	140.45 41.46 4.15	70.23 20.73 2.07	42.14 12.44 1.25	21.07 6.22 0.62	AP-42
Storage Pile Emissions						
Loading/Unloading Operations						
Wastewater Treatment Evaporation & Operations						
Equipment Leaks						
General Clean-up VOC Emissions						
Other						

¹ List all regulated air pollutants. Speciate VOCs, including all HAPs. Follow chemical name with Chemical Abstracts Service (CAS) number. LIST Acids, CO, CS₂, VOCs, H₂S, Inorganics, Lead, Organics, O₃, NO, NO₂, SO₂, SO₃, etc. DO NOT LIST CO₂, H₂, H₂O, N₂, O₂, and Noble Gases.

² Give rate with no control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch). ³ Give rate with proposed control equipment operating. If emissions occur for less than 1 hr, then record emissions per batch in minutes (e.g. 5 lb VOC/20 minute batch).

batch).
 ⁴ Indicate method used to determine emission rate as follows: MB = material balance; ST = stack test (give date of test); EE = engineering estimate; O = other (specify).

ATTACHMENT L

EMISSIONS UNIT DATA SHEETS

Affected Source Sheet Source Specific Emissions Data: Solid Materials Sizing, Handling and Storage Facilities

Required Information Regarding Dust Control Equipment Measures

- 1. If water or chemical sprays are to be used on conveyors, transfer points, stockpiles, etc... for dust control, the location of all spray bars or spray systems should be shown on the plot plans and/or line drawings. The following information should be provided for each spray system:
 - a. Design water flow through spray bar
 - b. Type and amount of chemicals used and the mix ratio of chemical to water used at the sprays.
 - c. Methods employed to winterize sprays (e.g. keep sprays from freezing and becoming inoperable during cold weather)

Not Applicable

- A detailed written description should be submitted of dust control measures/programs that will be employed on haul roads and in areas of vehicle activity around material stockpiled. The haulways and areas to be treated should be shown by shading or similar description on the plant plan. The following points should be specifically addressed:
 - a. Equipment (e.g. water trucks, fixed spray bars, wheel and truck underbody washers, etc...) that will be used in this dust control program.
 - b. Frequency of application of water and chemical to roads and stockpile areas during dry periods.
 - c. Amount of chemical suppressants to be used, if applicable, in pounds or gallons per square yard of surface to be treated.
 - d. Type of haulroad or haulway surface(s) that will be maintained (e.g. coarse gravel, reddog, etc...)
 - e. Approximate maximum length of haulroads (miles or feet).
 - f. Maximum daily truck traffic on haulroads (number of trucks).

Not Applicable

- 3. If full or partial enclosures are to be used to minimize dust entrainment, a drawing of each such enclosure should be submitted (for example at truck dump bins, breakers, conveyor transfer points).
- 4. If particulate control devices such as baghouses or scrubbers are to be used, complete an appropriate <u>Air Pollution Control Device Sheet</u> and furnish a drawing showing details of enclosures and ductwork associated with these control systems.

AFFECTED SOURCE SHEET

Source Specific Emissions Data: Solid Materials Sizing, Handling, and Storage Facilities

Plot Plan(s) and Line Drawing(s)

- a. Finish the plot plan(s) of the plant area which contains sufficient detail to show the scaled layout of the equipment involved in each materials handling system (e.g. conveyors, transfer points, crushers, screens, bins, stockpiles, truck dump bins, etc...). Show equipment or buildings described in other sections of this application on the plot plan as appropriate. The guidelines for Plot Plans should be followed to the extent possible.
- b. Furnish the line drawing(s) or schematic(s) showing each component or facet of each materials handling system (e.g. conveyors, transfer points, stockpiles, crushers, screens, bins etc...). Show process equipment described in other sections of this application as needed for clarity.
- c. On the line drawing(s) or schematic(s) furnished in accordance with item (b) assign an ID number to each conveyor, transfer point (including truck, barge and rail car loading/unloading etc...), storage structure, stockpile, crusher, and screening unit. If any equipment is shown on the line drawing(s) which was described in other sections of this application, use the ID numbers assigned to the equipment in those other sections and indicate equipment name or type (e.g. rotary dryer, vertical kiln etc...)
- d. To the extent possible, note the numbers assigned for equipment and storage facilities as per item (c) on the Plot Plans(s).
- e. The assigned ID numbers for equipment and transfer points must be used to complete Tables 1, 2, and 3 following.

Table 1: Affected Storage Activity

ID Number	T-H		
Affected Source Name	T-H		
Type Storage ¹	В		
Material Stored	Limestone		
Typical Moisture Content (%)	1.5		
Avg % of material passing 200 mesh sieve	1		
Maximum Total Yearly Throughput in storage (tons)	1,000,000		
Maximum Quantity of Material in Storage ² (tons)	50		
Maximum Stockpile Base Area (sq. ft.)	NA		
Maximum Stockpile height (ft)	NA		
Type dust controls during storage ³	PE		
Method of material load-in to bin or stockpile ⁴	FE		
Type dust controls during load-in ⁵	MD		
Method of material load-out to bin or stockpile ⁴	UC		
Type dust controls during load-out ⁵	PE		

ID	Type Conveyor or Transfer	Material Handled [(Note nominal	Material Con Transfer Ra		Type Dust	Approximate Material	
Number	Point ⁶	size of material transferred] ⁷	Maximum TPH	Maximum MM TPY	Control Measures⁵	Moisture Content (%)	
		Co	nveyors				
T-BC	BC	0''-8''	1,000	1,000,000	N	1.5	
		Tran	sfer Points	·			
T-TP1	OTH10	0" – 8"	1,000	1,000,000	N	1.5	
T-TP2	OTH6	0" – 8"	1,000	1,000,000	PE	1.5	
T-TP3	OTH5	0" – 8"	1,000	1,000,000	PE	1.5	
OTH1: Bi	n to Grate	1	OTH6: Bin to	o Conveyor	1	J	
OTH2: Grate to Conveyor			OTH7: Conveyor to Stockpile/Truck				
OTH3: Grate to Crusher			OTH8: Screen to Truck/Stockpile				
OTH4: Sc	reen/Crusher to Conv	veyor	OTH9: Conveyor to Screen Transfer Box				
OTH5: Co	onveyor to Screen/Cru	ısher	OTH10: Endloader to Bin or Hopper				

ID Number				
Type Crusher of	Type Crusher or Screen ⁸			
Material Sized				
Maximum	Tons/hour			
Material Throughput	Tons/year			
Material sized	from/to:9			
Typical moistur as crushed or s (%)	re content screened			
Type dust cont	rol			
	height (ft)			
Stack Parameters	diameter (ft)			
	Volume (ACFM)			
	Temp (°F)			
	hour/day			
Maximum Operating	day/year			
Schedule	hour/year			
	Jan-Mar			
Approximate	April-June			
Percentage of Operation	July-Sept			
from:	Oct-Dec			
Maximum	lb/hour			
Particulate Emissions	Ton/year			

 Table 3: Crushing and Screening None

Describe method of determining emissions and dust control efficiencies (if by test on a similar unit provide report, if by emission factor reference emission factors):

- 1 Type Storage Code as follows: (Capacity of each bin, building or enclosure)
 - OS Open Stockpile
 - B Bin or Storage Silo (full enclosure)
 - SB Storage Building (full enclosure)
 - E- Enclosure (walls but no top)
 - SWF- Stockpiles with wind fences
 - OTH- Other Specify in footnote or attachment
- 2. Give maximum and average quantity of material in storage at any given time (e.g. silo capacity, stockpile size, etc...)
- 3. TYPE DUST CONTROLS DURING STORAGE If storage is by other than by bin or full enclosure Code as follows:
 - N None
 - WS- Water Sprays
 - C- Spraying with chemical surfactant
 - OTH- Other Specify in footnote or attachment
- 4. METHOD OF PLACING MATERIAL ONTO STOCKPILE OR INTO BINS OR LOADING OUT FROM STOCKPILES OR BINS - Code as follows:
 - C- Clamshell
 - TD- Truck Dumping
 - FE- Front Endloader
 - ST- Stacking Tubes
 - MS- Mobile Conveyor Stacker
 - SS- Stationary Conveyor Stacker
 - P- Pneumatic Conveyor Stacker
 - FC- Fixed Height Chute from bins
 - TC- Telescoping Chute from bins
 - UC- Under-pole or under-bin reclaim conveyor
 - RC- Reclaim Conveyor (rake or bucket reclaim conveyor reclaiming from surface of stockpile)
 - OTH- Other Describe in a footnote or attachment
- 5. TYPE DUST CONTROLS Code as follows:
 - N- None
 - WS- Water Sprays
 - WSA- Water Sprays with Wetting Agents
 - CS- Chemical Dust Suppressant (sprays, etc...)
 - FE- Full Enclosures
 - PE- Partial Enclosures
 - MD- Minimization of material drop height
 - EM- Enclosure and evacuation to mechanical collector
 - EB- Enclosure and evacuation to baghouse
 - ES- Enclosure and evacuation to scrubber
 - OTH- Other describe in footnote or attachment

6. TYPE CONVEYOR OR TRANSFER POINT - Code as follows:

Conveyors

- BC- Belt Conveyor
- VC- Vibrating Conveyor
- SC- Screw Conveyor
- DL- Drag-link conveyor
- BE- Bucket Elevator
- PS- Pneumatic System
- OTH- Other describe in footnote or attachment

Transfer Points

- 01- Conveyor to Conveyor
- 02- Conveyor to Bucket Elevator
- 03- Conveyor to Hopper or Bin
- 04- Bucket Elevator to Hopper or Bin
- 05- Pneumatic conveyor to bin
- 06- Truck Dumping onto ground
- 07- Truck Dumping into hopper
- 08- Loading trucks through stationary chute
- 09- Loading trucks through telescoping chute
- 10- Loading Trucks by endloader
- 11- Railcar unloading-side or bottom dumping
- 12- Railcar unloading-rotary unloader
- 13- Railcar loading /unloading by pneumatic system
- 14- Railcar loading through stationary source
- 15- Railcar loading through telescopic chute
- 16- Railcar loading by front end-loader
- 17- Railcar loading by railcar
- 18- Barge loading/unloading by clamshell
- 19- Barge unloading bucket ladder unloader
- 20- Barge unloading from a fixed-height conveyor or stationary chute
- 21- Barge loading variable height conveyor or telescoping chute
- 22- Other describe in footnote or attachment
- 7. If more than one material is handled by the listed conveyor or transfer point list each material and furnish the requested data in the table for each material.
- 8. Describe type of unit such as hammermill, ball mill, double-deck (DD) screen, double roll (DR) crusher, etc....
- 9. Describe nominal size reduction, example +2" / -3/8

Attachment L FUGITIVE EMISSIONS FROM UNPAVED HAULROADS

UNPAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

				-		PM		PM-1	0
k =	Particle size multiplier					4.9		1.5	
s =	Silt content of road surface ma	aterial (%)				10		10	
p =	Number of days per year with precipitation >0.01 in.				148		148		
ltem Numbe	r Description	Number of Wheels	Mean Vehicle Weight (tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips per Hour	Maximun Trips per Year	-	Control Efficiency (%)
1	Endloader	4	80	NA	0.25	50	50,000	WS	70
2									
3									
4									
5									
6									

Source: AP-42 Fifth Edition – 13.2.2 Unpaved Roads

 $E = k \times 5.9 \times (s \div 12) \times (S \div 30) \times (W \div 3)^{0.7} \times (w \div 4)^{0.5} \times ((365 - p) \div 365) =$ Where:

Ib/Vehicle Mile Traveled (VMT)

		PM	PM-10
k =	Particle size multiplier	4.9	1.5
s =	Silt content of road surface material (%)	10	10
S =	Mean vehicle speed (mph)	NA	NA
W =	Mean vehicle weight (tons)	80	80
w =	Mean number of wheels per vehicle	4	4
p =	Number of days per year with precipitation >0.01 in.	148	148

For lb/hr: $[lb \div VMT] \times [VMT \div trip] \times [Trips \div Hour] =$ lb/hrFor TPY: $[lb \div VMT] \times [VMT \div trip] \times [Trips \div Hour] \times [Ton \div 2000 lb] =$

Tons/year

SUMMARY OF UNPAVED HAULROAD EMISSIONS

	PM				PM-10			
Item No.	Uncon	trolled	Cont	rolled	Uncor	trolled	Conti	rolled
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	140.45	70.23	42.14	21.07	41.46	20.73	12.44	6.22
2								
3								
4								
5								
6								
TOTALS	140.45	70.23	42.14	21.07	41.46	20.73	12.44	6.22

FUGITIVE EMISSIONS FROM PAVED HAULROADS

INDUSTRIAL PAVED HAULROADS (including all equipment traffic involved in process, haul trucks, endloaders, etc.)

I =	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface material silt content (%)	
L =	Surface dust loading (lb/mile)	

ltem Number	Description	Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips per Hour	Maximum Trips per Year	Control Device ID Number	Control Efficiency (%)
1	NA						
2							
3							
4							
5							
6							

Source: AP-42 Fifth Edition – 11.2.6 Industrial Paved Roads

 $E = 0.077 \times I \times (4 \div n) \times (s \div 10) \times (L \div 1000) \times (W \div 3)^{0.7} =$

lb/Vehicle Mile Traveled (VMT)

Where:

=	Industrial augmentation factor (dimensionless)	
n =	Number of traffic lanes	
s =	Surface meterial silt content (%)	
L =	Surface dust loading (lb/mile)	
W =	Average vehicle weight (tons)	

For lb/hr:

[lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] = lb/hr

For TPY:

[lb ÷ VMT] × [VMT ÷ trip] × [Trips ÷ Hour] × [Ton ÷ 2000 lb] =

Tons/year

SUMMARY OF PAVED HAULROAD EMISSIONS

Item No.	Uncon	itrolled	Controlled		
item No.	lb/hr	TPY	lb/hr	TPY	
1					
2					
3					
4					
5					
6					
TOTALS					

ATTACHMENT N

SUPPORTING EMISSION CALCULATIONS

Millville Quarry Temporary Equipment

Checked By: LKB Date: 10/06/2017

Proposed Temporary Equipment Operations

Expected Operational Timeframe (months)=	6
Hourly Throughput (tph) =	1,000
Total Throughput (tons) =	1,000,000

Proposed PTE

Point Sources

Source Description	Regulated Air	Uncor	itrolled	Controlled		
Source Description	Pollutant	(lb/hr)	(tpy)*	(lb/hr)	(tpy)*	
Transfer Points	PM	16.50	8.25	11.00	5.51	
	PM10	7.80	3.90	5.20	2.60	
	PM2.5	1.20	0.60	0.80	0.40	
	PM Subtotal:	16.50	8.25	11.00	5.51	
	PM10 Subtotal:	7.80	3.90	5.20	2.60	
	PM2.5 Subtotal:	1.20	0.60	0.80	0.40	

Fugitive Sources

Source Description	Regulated Air	Uncon	trolled	Controlled		
Source Description	Pollutant	(lb/hr)	(tpy)*	(lb/hr)	(tpy)*	
Vehicular Traffic	PM	140.45	70.23	42.14	21.07	
	PM10	41.46	20.73	12.44	6.22	
	PM2.5	4.15	2.07	1.25	0.62	
	PM Subtotal:	140.45	70.23	42.14	21.07	
	PM10 Subtotal:	41.46	20.73	12.44	6.22	
	PM2.5 Subtotal:	4.15	2.07	1.25	0.62	

Total Emissions (Point + Fugitive)

Regulated Air	Uncontrolled		Controlled		
Pollutant	(lb/hr)	(tpy)*	(lb/hr)	(tpy)*	
PM	156.95	78.48	53.14	26.58	
PM10	49.26	24.63	17.64	8.82	
PM2.5	5.35	2.67	2.05	1.02	

* total emissions anticipated to occur in a six (6) month period.

Millville Quarry Temporary Equipment

Potesta & Associates, Inc. Project No. 0101-17-0157-010

By: PEW	Checked By: LKB
Date: 10/4/2017	Date: 10/06/2017

Transfer Points

Emission factor equation:

$$\begin{split} & E = k \left(0.0032 \right) \left(\text{U}/5 \right)^{1.3} / \left(\text{M}/2 \right)^{1.4} \\ & \text{From } \textit{AP-42 Fifth Edition }, \text{ Section 13.2.4, Aggregate Handling and Storage Piles} \end{split}$$

	PM	PM10	PM2.5	
E =	?	?	?	lb/ton
$\mathbf{k} =$	0.74	0.35	0.053	dimensionless, particle size multiplier
U =	7	7	7	mph, mean wind speed
M =	?	?	?	%, moisture content

Particulate Matter (PM)

Particulate Matter (PM)						Rounding to = 2 PM			2	
ID	Transfer	Capacity	Content (M)	Factor	De	vice	Uncon	trolled	Cont	rolled
	(tph)	(tpy)	(%)	(lb/ton)	Туре	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
T-TP1	1,000	1,000,000	1.5	0.0055	Ν	0	5.50	2.75	5.50	2.75
T-TP2	1,000	1,000,000	1.5	0.0055	PE	50	5.50	2.75	2.75	1.38
T-TP3	1,000	1,000,000	1.5	0.0055	PE	50	5.50	2.75	2.75	1.38
						Total PM	16.50	8.25	11.00	5.51

	Transfer Capacity		anacity		ntrol			110		
ID			Content (M)	Factor	De	vice	Uncon	trolled	Cont	olled
	(tph)	(tpy)	(%)	(lb/ton)	Туре	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
T-TP1	1,000	1,000,000	1.5	0.0026	Ν	0	2.60	1.30	2.60	1.30
T-TP2	1,000	1,000,000	1.5	0.0026	PE	50	2.60	1.30	1.30	0.65
T-TP3	1,000	1,000,000	1.5	0.0026	PE	50	2.60	1.30	1.30	0.65
			-			Total PM10	7.80	3.90	5.20	2.60

Particulate Matter less than 2.5 Microns (PM2.5)

	Transfer Capacity Moisture		Moisture Emission Control		ntrol	PM2.5				
ID	Tansier	Capacity	Content (M)	Factor	De	vice	Uncon	trolled	Cont	rolled
	(tph)	(tpy)	(%)	(lb/ton)	Туре	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
T-TP1	1,000	1,000,000	1.5	0.0004	Ν	0	0.40	0.20	0.40	0.20
T-TP2	1,000	1,000,000	1.5	0.0004	PE	50	0.40	0.20	0.20	0.10
T-TP3	1,000	1,000,000	1.5	0.0004	PE	50	0.40	0.20	0.20	0.10
						Total PM2.5	1.20	0.60	0.80	0.40

Millville Quarry Temporary Equipment Potesta & Associates, Inc. Project No. 0101-17-0157-010

By: PEW	Checked By: LKB
Date: 10/4/2017	Date: 10/06/2017

Vehicle Traffic - Endloader

Unpaved haulroad emission factor equation:

 $E = k(s/12)^{a} (W/3)^{b} ((365-p)/365)$

From AP-42 Sixth Edition, Section 13.2.2, Fugitive Dust Sources

	PM	PM10	PM2.5	
E =	?	?	?	lb/VMT
$\mathbf{k} =$	4.9	1.5	0.15	particle size multiplier
a =	0.7	0.9	0.9	constant
b =	0.45	0.45	0.45	constant
s =	10	10	10	% silt in road surface
$W_{endloader} =$	80	80	80	mean vehicle weight
$\mathbf{p} =$	148	148	148	# days with 0.01" rain
E _{endloader} =	11.24	3.32	0.33	lb/VMT

Vehicle	Tons/Hr	Tons/Yr
Endloaders	1,000	1,000,000

Endloaders 70 20	Vehicle	Vehicle Wt	Load Wt
	Endloaders	70	20

Rounding to =

2

Vehicular Traffic		Number of	Number of	Сог	ntrol	TSP Emissions			
Miles/Tri		Trips/Hour	Trips/Year	rips/Year Device		Uncontrolled		Controlled	
ID	(miles)	(trips/hour)	(trips/year)	Туре	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Endloaders	0.25	50	50,000	WS	70	140.45	70.23	42.14	21.07
	•					140.45	70.23	42.14	21.07

Vehicular Traffic		Number of	Number of	Control		PM10 Emissions			
ID	Miles/Trip	Trips/Hour	Trips/Year	ips/Year Device		Uncontrolled		Controlled	
ID	(miles)	(trips/hour)	(trips/year)	Туре	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Endloaders	0.25	50	50,000	WS	70	41.46	20.73	12.44	6.22
						41.46	20.73	12.44	6.22

Vehicular Traffic		Number of	Number of	Сог	ntrol	PM2.5 Emissions			
ID	Miles/Trip	Trips/Hour	Trips/Year	Trips/Year Device		Uncontrolled		Controlled	
ID	(miles)	(trips/hour)	(trips/year)	Туре	Effic(%)	(lb/hr)	(tpy)	(lb/hr)	(tpy)
Endloaders	0.25	50	50,000	WS	70	4.15	2.07	1.25	0.62
						4.15	2.07	1.25	0.62

ATTACHMENT O

MONITORING/RECORDKEEPING/REPORTING/ TESTING PLANS

ATTACHMENT O MONITORING/RECORDKEEPING/REPORTING/TESTING PLANS

Bardon Inc. proposes to monitor, maintain records, and report as required by the issued permit.

ATTACHMENT P

PUBLIC NOTICE

AIR QUALITY PERMIT NOTICE

Notice of Application

Notice is given that Bardon, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality for a Regulation 13 Temporary Permit for Millville Quarry for a construction by-pass system. The facility is located off of County Route 23 (Blair Road) near Millville in Jefferson County, West Virginia. The latitude and longitude coordinates are: 39.287, -77.794.

The applicant estimates the potential to discharge the following Regulated Air Pollutants will be: PM of 26.58 tons per year (tpy) of which 21.07 tpy are fugitive, PM_{10} of 8.82 tpy of which 6.22 tpy are fugitive, and PM _{2.5} of 1.02 tpy of which 0.62 tpy are fugitive.

The facility is operational. The temporary equipment will be installed and operated while construction of permanent equipment occurs and should be installed November 15, 2017. Written comments will be received by the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street, SE, Charleston, WV 25304 for at least 30 calendar days from the date of publication of this notice.

Any questions regarding this permit application should be directed to the DAQ at (304) 926-0499, extension 1250, during normal business hours.

Dated this the (Insert Date) day of October, 2017.

By: Bardon, Inc. Stephen Ward Vice President 6401 Golden Triangle Drive, Suite 400 Greenbelt, Maryland 20770