

**Application for General Permit Registration
G40-C Nonmetallic Mineral Processing
West Virginia Department of Environmental Protection
Division of Air Quality**



Primary Operating Site

Greer Industries, Inc. dba Cheat River Limestone Company: Rowlesburg, WV

1st Alternate Operating Site

Greer Industries, Inc. dba Buckeye Stone Company: Morgantown, WV

2nd Alternate Operating Site

Deckers Creek Limestone Company: Greer, WV

April 2016

GREER ENGINEERING

8477 Veterans Memorial Highway

Masontown, West Virginia 26542

(304) 864-5411

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WEST VIRGINIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 DIVISION OF AIR QUALITY
 601 57th Street, SE
 Charleston, WV 25304
 Phone: (304) 926-0475 • www.dep.wv.gov/daq

APPLICATION FOR GENERAL PERMIT REGISTRATION
 CONSTRUCT, MODIFY, RELOCATE OR ADMINISTRATIVELY UPDATE
 A STATIONARY SOURCE OF AIR POLLUTANTS

- CONSTRUCTION MODIFICATION RELOCATION CLASS I ADMINISTRATIVE UPDATE
 CLASS II ADMINISTRATIVE UPDATE

CHECK WHICH TYPE OF GENERAL PERMIT REGISTRATION YOU ARE APPLYING FOR:

- | | |
|--|---|
| <input type="checkbox"/> G10-D – Coal Preparation and Handling
<input type="checkbox"/> G20-B – Hot Mix Asphalt
<input type="checkbox"/> G30-D – Natural Gas Compressor Stations
<input type="checkbox"/> G33-A – Spark Ignition Internal Combustion Engines
<input type="checkbox"/> G35-A – Natural Gas Compressor Stations (Flare/Glycol Dehydration Unit) | <input checked="" type="checkbox"/> G40-C – Nonmetallic Minerals Processing
<input type="checkbox"/> G50-B – Concrete Batch
<input type="checkbox"/> G60-C – Class II Emergency Generator
<input type="checkbox"/> G65-C – Class I Emergency Generator
<input type="checkbox"/> G70-A – Class II Oil and Natural Gas Production Facility |
|--|---|

SECTION I. GENERAL INFORMATION

1. Name of applicant (as registered with the WV Secretary of State's Office): Greer Industries, Inc.		2. Federal Employer ID No. (FEIN): 34-073-7241	
3. Applicant's mailing address: 8477 Veterans Memorial Highway Masontown, WV 26542		4. Applicant's physical address: 112 Center Street Rowlesburg, WV 26425	
5. If applicant is a subsidiary corporation, please provide the name of parent corporation:			
6. WV BUSINESS REGISTRATION. Is the applicant a resident of the State of West Virginia? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			
<p>⇒ IF YES, provide a copy of the Certificate of Incorporation/ Organization / Limited Partnership (one page) including any name change amendments or other Business Registration Certificate as Attachment A.</p> <p>⇒ IF NO, provide a copy of the Certificate of Authority / Authority of LLC / Registration (one page) including any name change amendments or other Business Certificate as Attachment A.</p>			

SECTION II. FACILITY INFORMATION

7. Type of plant or facility (stationary source) to be constructed, modified, relocated or administratively updated (e.g., coal preparation plant, primary crusher, etc.): Portable Recrush Circuit and Air Classifier	8a. Standard Industrial Classification Classification (SIC) code: 1422	AND	8b. North American Industry System (NAICS) code: 212312
9. DAQ Plant ID No. (for existing facilities only): Note: Plant may be operated at three (3) company sites. Cheat River Limestone: 077-00014 Buckeye Stone Company: 061-00009 Deckers Creek Limestone: 061-00004	10. List all current 45CSR13 and other General Permit numbers associated with this process (for existing facilities only): <u>Cheat River Limestone: R13-2302 D</u> <u>Buckeye Stone Company: R13-2238 and R13-2276B</u> <u>Deckers Creek Limestone: G40-C008E</u>		

A: PRIMARY OPERATING SITE INFORMATION

11A. Facility name of primary operating site: <u>Greer Industries, Inc.</u> dba. <u>Cheat River Limestone Company</u>	12A. Address of primary operating site: Mailing: <u>8477 Veterans Memorial Highway</u> Physical: <u>112 Center Street</u> <u>Masontown, WV 26542</u> <u>Rowlesburg, WV 26542</u>	
13A. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇨ IF YES, please explain: <u>Applicant owns the site.</u> _____ _____ ⇨ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14A. ⇨ For Modifications or Administrative Updates 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 F. <u>From U.S. Route 50, take State Route 72 to Rowlesburg. Then take County Route 80 East across the Cheat River</u> <u>and make a left onto and follow County Route 80/8. Bear right onto Center street and follow until you reach the site</u> _____ _____		
15A. Nearest city or town: <u>Rowlesburg</u>	16A. County: <u>Preston</u>	17A. UTM Coordinates: Northing (KM): <u>4357.823</u> Easting (KM): <u>612.575</u> Zone: <u>17</u>
18A. Briefly describe the proposed new operation or change (s) to the facility: <u>Addition of a Portable Recrush Circuit and Air Classifier with the addition of rock/sand storage piles.</u>		19A. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: <u>39.36254</u> Longitude: <u>-79.69326</u>

B: 1ST ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits)

11B. Name of 1 st alternate operating site: <u>Greer Industries, Inc.</u> dba. <u>Buckeye Stone Company</u>	12B. Address of 1 st alternate operating site: Mailing: <u>8477 Veterans Memorial Highway</u> Physical: <u>442 Blaney Hollow Road</u> <u>Masontown, WV 26542</u> <u>Morgantown, WV 26508</u>	
13B. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇨ IF YES, please explain: <u>Applicant owns the site.</u> _____ _____ ⇨ IF NO, YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		

14B. ⇨ For Modifications or Administrative Updates 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 F . <u>From I-68 travel North on State Route 857 approximately 3 miles. Make a right onto Blaney Hollow Road and follow</u> <u>until you reach the site.</u> <hr/>		
15B. Nearest city or town: Morgantown	16B. County: Monongalia	17B. UTM Coordinates: Northing (KM): <u>4395.276</u> Easting (KM): <u>603.957</u> Zone: <u>17</u>
18B. Briefly describe the proposed new operation or change (s) to the facility: Addition of a portable recrush circuit and air classifier with the addition of rock/sand storage piles.		19B. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: <u>39.70101</u> Longitude: <u>-79.78742</u>

C: 2ND ALTERNATE OPERATING SITE INFORMATION (only available for G20, G40, & G50 General Permits):

11C. Name of 2 nd alternate operating site: <u>Deckers Creek Limestone Company</u>	12C. Address of 2 nd alternate operating site: Mailing: <u>8477 Veterans Memorial Highway</u> Physical: <u>5358 Earl L. Core Road</u> <u>Masontown, WV 26542</u> <u>Morgantown, WV 26508</u>	
13C. Does the applicant own, lease, have an option to buy, or otherwise have control of the proposed site? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO ⇨ IF YES , please explain: <u>Applicant owns site.</u> <hr/> ⇨ IF NO , YOU ARE NOT ELIGIBLE FOR A PERMIT FOR THIS SOURCE.		
14C. ⇨ For Modifications or Administrative Updates 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 F . <u>From I-68 take Earl L. Core Road/ State Route 7 East approximately 7 miles. Make a right into site</u> <u>at Deckers Creek Limestone Company sign.</u> <hr/>		
15C. Nearest city or town: Morgantown	16C. County: Monongalia	17C. UTM Coordinates: Northing (KM): <u>4381.281</u> Easting (KM): <u>597.735</u> Zone: <u>17</u>
18C. Briefly describe the proposed new operation or change (s) to the facility: Addition of portable recrush circuit and air classifier with the addition of rock/sand storage piles		19C. Latitude & Longitude Coordinates (NAD83, Decimal Degrees to 5 digits): Latitude: <u>39.57567</u> Longitude: <u>-79.86205</u>

20. Provide the date of anticipated installation or change: <u>07</u> / <u>01</u> / <u>2016</u> <input type="checkbox"/> If this is an After-The-Fact permit application, provide the date upon which the proposed change did happen: : <u> </u> / <u> </u> / <u> </u>	21. Date of anticipated Start-up if registration is granted: <u>08</u> / <u>01</u> / <u>2016</u>
22. Provide maximum projected Operating Schedule of activity/activities outlined in this application if other than 8760 hours/year. (Note: anything other than 24/7/52 may result in a restriction to the facility's operation). Hours per day <u>10</u> Days per week <u>5</u> Weeks per year <u>52</u> Percentage of operation <u>80-100%</u>	

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

23. Include a check payable to WVDEP – Division of Air Quality with the appropriate application fee (per 45CSR22 and 45CSR13).
24. Include a Table of Contents as the first page of your application package.
All of the required forms and additional information can be found under the Permitting Section (General Permits) of DAQ's website, or requested by phone.
25. Please check all attachments included with this permit application. Please refer to the appropriate reference document for an explanation of the attachments listed below. <ul style="list-style-type: none"> <input checked="" type="checkbox"/> ATTACHMENT A : CURRENT BUSINESS CERTIFICATE <input checked="" type="checkbox"/> ATTACHMENT B: PROCESS DESCRIPTION <input checked="" type="checkbox"/> ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS <input checked="" type="checkbox"/> ATTACHMENT D: PROCESS FLOW DIAGRAM <input checked="" type="checkbox"/> ATTACHMENT E: PLOT PLAN <input checked="" type="checkbox"/> ATTACHMENT F: AREA MAP <input checked="" type="checkbox"/> ATTACHMENT G: EQUIPMENT DATA SHEETS AND REGISTRATION SECTION APPLICABILITY FORM <input type="checkbox"/> ATTACHMENT H: AIR POLLUTION CONTROL DEVICE SHEETS <input checked="" type="checkbox"/> ATTACHMENT I: EMISSIONS CALCULATIONS <input checked="" type="checkbox"/> ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT <input checked="" type="checkbox"/> ATTACHMENT K: ELECTRONIC SUBMITTAL <input checked="" type="checkbox"/> ATTACHMENT L: GENERAL PERMIT REGISTRATION APPLICATION FEE <input type="checkbox"/> ATTACHMENT M: SITING CRITERIA WAIVER <input checked="" type="checkbox"/> ATTACHMENT N: MATERIAL SAFETY DATA SHEETS (MSDS) <input type="checkbox"/> ATTACHMENT O: EMISSIONS SUMMARY SHEETS <input checked="" type="checkbox"/> OTHER SUPPORTING DOCUMENTATION NOT DESCRIBED ABOVE (Equipment Drawings, Aggregation Discussion, etc.) <p style="margin-top: 10px; font-size: small;">Please mail an original and two copies of the complete General Permit Registration Application with the signature(s) to the DAQ Permitting Section, at the address shown on the front page of this application. Please DO NOT fax permit applications. For questions regarding applications or West Virginia Air Pollution Rules and Regulations, please refer to the website shown on the front page of the application or call the phone number also provided on the front page of the application.</p>

SECTION IV. CERTIFICATION OF INFORMATION

This General Permit Registration Application shall be signed below by a Responsible Official. A Responsible Official is a President, Vice President, Secretary, Treasurer, General Partner, General Manager, a member of a Board of Directors, or Owner, depending on business structure. A business may certify an Authorized Representative who shall have authority to bind the Corporation, Partnership, Limited Liability Company, Association, Joint Venture or Sole Proprietorship. Required records of daily throughput, hours of operation and maintenance, general correspondence, Emission Inventory, Certified Emission Statement, compliance certifications and all required notifications must be signed by a Responsible Official or an Authorized Representative. If a business wishes to certify an Authorized Representative, the official agreement below shall be checked off and the appropriate names and signatures entered. Any administratively incomplete or improperly signed or unsigned Registration Application will be returned to the applicant.

FOR A CORPORATION (domestic or foreign)

I certify that I am a President, Vice President, Secretary, Treasurer or in charge of a principal business function of the corporation

FOR A PARTNERSHIP

I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

I certify that I am the President or a member of the Board of Directors

FOR A JOINT VENTURE

I certify that I am the President, General Partner or General Manager

FOR A SOLE PROPRIETORSHIP

I certify that I am the Owner and Proprietor

I hereby certify that (please print or type) _____ is an Authorized Representative and in that capacity shall represent the interest of the business (e.g., Corporation, Partnership, Limited Liability Company, Association Joint Venture or Sole Proprietorship) and may obligate and legally bind the business. If the business changes its Authorized Representative, a Responsible Official shall notify the Director of the Office of Air Quality immediately, and/or,

I hereby certify that all information contained in this General Permit Registration Application and any supporting documents appended hereto is, to the best of my knowledge, true, accurate and complete, and that all reasonable efforts have been made to provide the most comprehensive information possible

Signature

(please use blue ink)

J Robert Gwynne
Responsible Official

3/31/2016

Date

Name & Title J. Robert Gwynne, Executive Vice President

(please print or type)

Signature

(please use blue ink)

Authorized Representative (if applicable)

Date

Applicant's Name Greer Industries, Inc.

Phone & Fax Phone: 304-864-5411 Fax: 304-864-5458

Phone

Fax

Email gwynne@greerindustries.com AND skisner@greerindustries.com

Attachment A: Current Business Certificate

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**GREER INDUSTRIES INC
DBA CHEAT RIVER LIMESTONE COMPANY
RR 1 BOX 260
ROWLESBURG, WV 26425-9617**

BUSINESS REGISTRATION ACCOUNT NUMBER: **2002-0627**

This certificate is issued on: **06/24/2010**

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W.Va. Code § 11-12.*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**GREER INDUSTRIES INC
DBA BUCKEYE STONE COMPANY
FAIRCHANCE ROAD
MORGANTOWN, WV 26505**

BUSINESS REGISTRATION ACCOUNT NUMBER: **1027-2441**

This certificate is issued on: **06/24/2010**

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with W. Va. Code § 11-12.*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

**WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION
CERTIFICATE**

ISSUED TO:
**DECKERS CREEK LIMESTONE COMPANY
5358 EARL L CORE RD
MORGANTOWN, WV 26508-5962**

BUSINESS REGISTRATION ACCOUNT NUMBER: 1043-8419

This certificate is issued on: 07/1/2011

*This certificate is issued by
the West Virginia State Tax Commissioner
in accordance with Chapter 11, Article 12, of the West Virginia Code*

*The person or organization identified on this certificate is registered
to conduct business in the State of West Virginia at the location above.*

This certificate is not transferrable and must be displayed at the location for which issued.

This certificate shall be permanent until cessation of the business for which the certificate of registration was granted or until it is suspended, revoked or cancelled by the Tax Commissioner.

Change in name or change of location shall be considered a cessation of the business and a new certificate shall be required.

TRAVELING/STREET VENDORS: Must carry a copy of this certificate in every vehicle operated by them.
CONTRACTORS, DRILLING OPERATORS, TIMBER/LOGGING OPERATIONS: Must have a copy of this certificate displayed at every job site within West Virginia.

Attachment B: Process Description

Process Description

Greer Industries, Inc. proposes to operate a portable crushing/screening plant with air classifier at three (3) possible locations; Cheat River Limestone Company, Buckeye Stone Company, and Deckers Creek Limestone Company. Greer seeks G40-C permit coverage to operate this portable plant at those listed locations. Greer will use existing stone stockpiles to feed a Mellot MC 300HPS-CC Portable Recrush Circuit Plant.

Greer will feed the new portable circuit with a bucket loader from existing permitted stockpiles into a 14-yard feed hopper. From the hopper, a series of belts will transfer the material into a Metso FS303CL Triple Deck Screen. Oversized material will be directed to a Metso HP 300 Cone Crusher and rerouted back to the screen. This screen will use three (3) different belts with water sprays to create three (3) stockpiles; #57s, #8s, and sand.

With a radial stacker, Greer will have the option to redirect the sand into a Fisher 13' Portable Air Separator. The classifier uses an internal fan assembly with no air discharge to separate unwanted fines from sand to produce a clean manufactured sand.

The portable plant will reprocess finished product from each facility that it operates. The operation of this plant will not affect permitted throughputs at any facility.

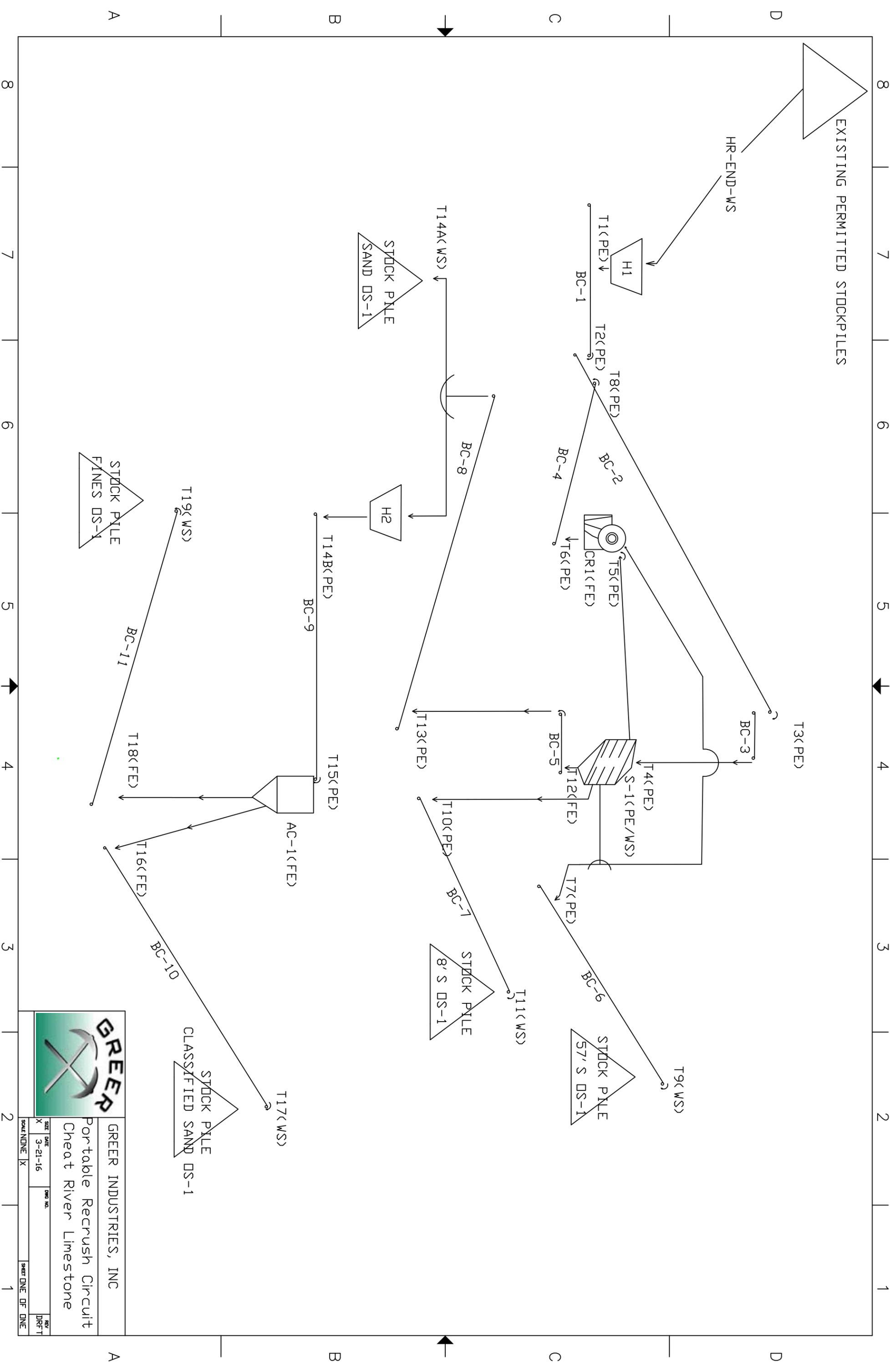
Attachment C: Description of Fugitive Emissions

Description of Fugitive Emissions

Fugitive emission sources associated with this permit includes only wind erosion from open stockpiles. New stockpiles associated with this plant will not exceed a cumulative base area of three (3) acres or 130,680 square feet of various limestone products.

The operation of this portable plant will not result in any increase in fugitive emissions associated with vehicular traffic from haul trucks. Haulroad emissions from haul trucks for maximum facility throughput have already been permitted for each potential site. The increase in fugitive emissions from additional endloader use is calculated as part of this application.

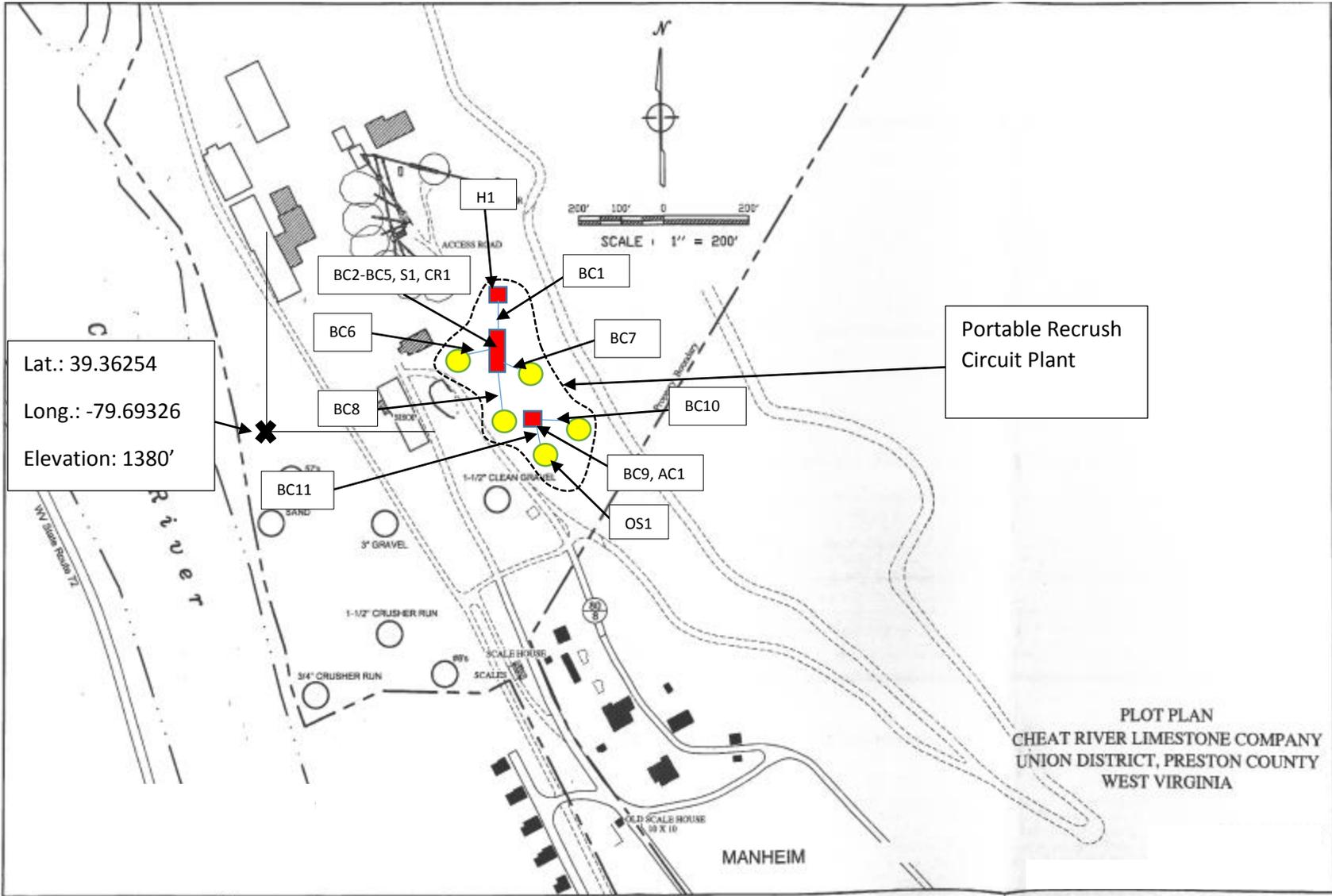
Attachment D: Process Flow Diagram



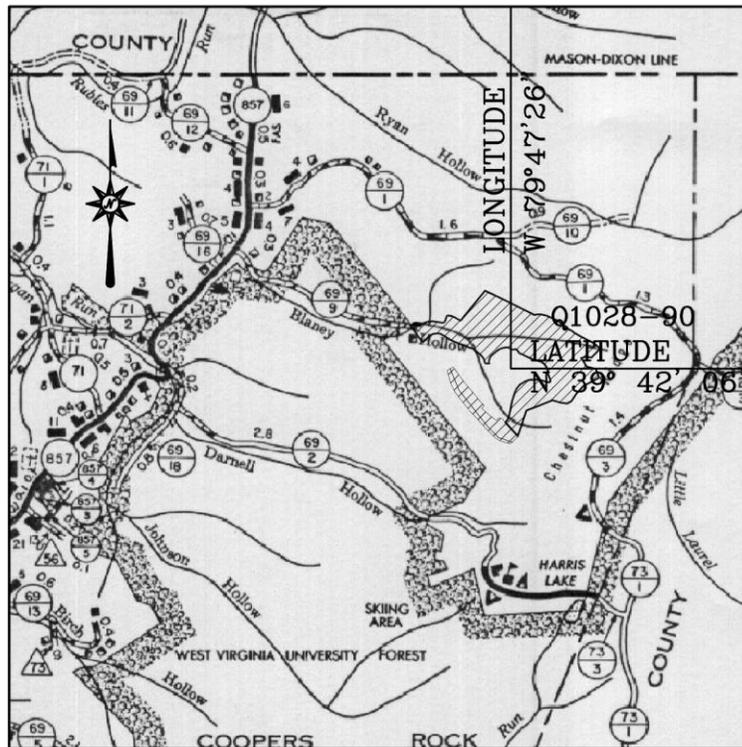
GREER INDUSTRIES, INC
 Portable Recrusher Circuit
 Cheat River Limestone

SIZE	DATE	DRW. NO.	REV.
X	3-21-16		DRFT
SHEET NO.	SHEET ONE OF ONE		

Attachment E: Plot Plan



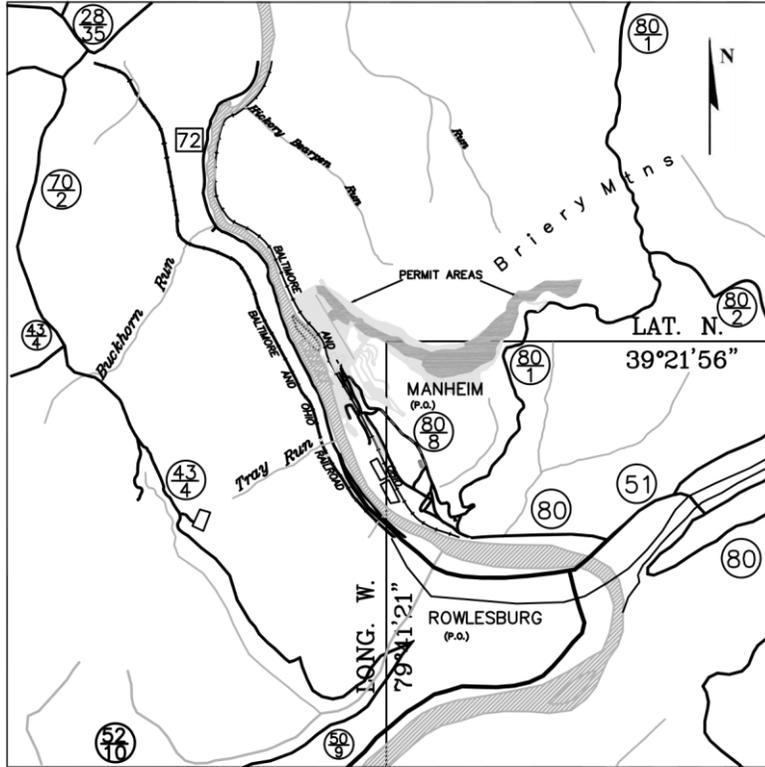
Attachment F: Area Map



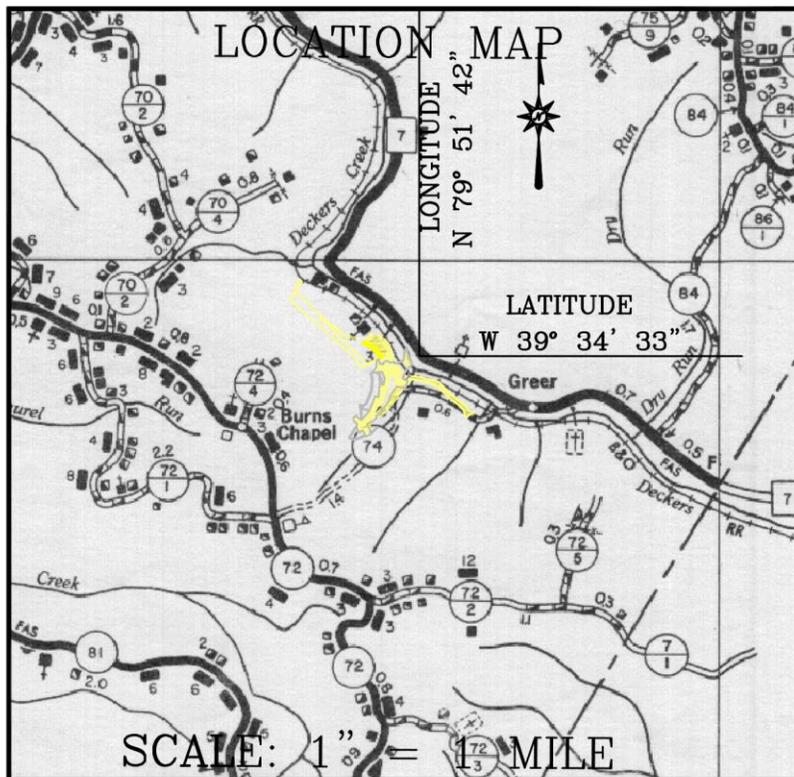
LOCATION MAP 1-INCH = 1-MILE
 GREER INDUSTRIES, INC.
 dba BUCKEYE STONE COMPANY

LOCATION MAP

SCALE: 1 INCH = 1 MILE



GREER INDUSTRIES INC. dba
CHEAT RIVER LIMESTONE COMPANY



LOCATION MAP
 DECKERS CREEK LIMESTONE COMPANY
 MORGAN DISTRICT, MONONGALIA COUNTY
 WEST VIRGINIA

SCALE 1 INCH = 1 MILE

Attachment G: Equipment Data Sheets and Registration Section Applicability Form

General Permit G40-C Registration Section Applicability Form

General Permit G40-C allows qualified registrants to seek registration for a variety of sources. These sources include nonmetallic mineral processing plants which include crushers, screens, transfer points (loading, unloading, etc.), open stockpiles, bins, haulroads, reciprocating internal combustion engine driven compressors, emergency standby generators, and tanks. All registered facilities will be subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

General Permit G40-C allows the registrant to choose which sections of the permit that they wish to seek registration under. Therefore, please mark which sections that you are applying for registration under. Please keep in mind, that if this registration is approved, the issued registration will state which sections will apply to your affected facility.

Section 5 ¹	Nonmetallic Mineral Processing Operations	<input checked="" type="checkbox"/>
Section 6	Standards of Performance for Nonmetallic Mineral Processing Plants that Commenced Construction, Reconstruction or Modification after August 31, 1983 but before April 22, 2008 (40CFR60 Subpart OOO)	<input type="checkbox"/>
Section 7	Standards of Performance for Nonmetallic Mineral Processing Plants that Commenced Construction, Reconstruction or Modification on or after April 22, 2008. (40CFR60 Subpart OOO)	<input checked="" type="checkbox"/>
Section 8 ²	Reciprocating Internal Combustion Engines (R.I.C.E.)	<input type="checkbox"/>
Section 9	Tanks	<input type="checkbox"/>
Section 10	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40CFR60 Subpart IIII)	<input type="checkbox"/>
Section 11	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (40CFR60 Subpart JJJJ)	<input type="checkbox"/>

1 Affected facilities that are subject to Section 5 may also be subject to Sections 6 and 7. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

2 Affected facilities that are subject to Section 8 may also be subject to Sections 10 or 11. Therefore, if the applicant is seeking registration under multiple sections, they will need to select all applicable sections.

CRUSHING AND SCREENING AFFECTED SOURCE SHEET

Source Identification Number ¹		CR-1	S-1	AC-1			
Type of Crusher or Screen ²		GD	TD	OT			
Make, Model No., Serial No. ³		HP300	FS303CL	Fisher-13			
Date of Construction, Reconstruction, or Modification (Month/Year) ⁴		2016	2016	2016			
Maximum Throughput ⁵	tons/hour	400	700	300			
	tons/year	446,000	780,000	390,000			
Material sized from/to: ⁶		+1-1/2"/-1-1/2	+1-1/2 to Sand	Sand			
Average Moisture Content (%) ⁷		2.1	2.1	2.1			
Control Device ID Number ⁸		CS-FE	CS-PW	CS-FE			
Baghouse Stack Parameters ⁹	height (ft)	NA	NA	NA			
	diameter (ft)	NA	NA	NA			
	volume (ACFM)	NA	NA	NA			
	exit temp (F)	NA	NA	NA			
	UTM Coordinates	NA	NA	NA			
Maximum Operating Schedule ¹⁰	hours/day	10	10	10			
	days/year	260	260	260			
	hours/year	2,600	2,600	2,600			

1. Enter the appropriate Source Identification Number for each crusher and screen. For example, in the case of an operation which incorporates multiple crushers, the crushers should be designated CR-1, CR-2, CR-3 etc. beginning with the breaker or primary crusher. Multiple screens should be designated S-1, S-2, S-3 etc.
2. Describe types of crushers and screens using the following codes:

HM	Hammermill	SS	Stationary Screen	DR	Double Roll Crusher
SD	Single Deck Screen	BM	Ball Mill	DD	Double-Deck Screen
RB	Rotary Breaker	TD	Triple Deck Screen	JC	Jaw Crusher
GC	Gyratory Crusher	OT	Other		
3. Enter the make, model number, and serial number of the crusher/screen.
4. Enter the date that each crusher and screen was constructed, reconstructed, or modified.
5. Enter the maximum throughput for each crusher and screen in tons per hour and tons per year.
6. Describe the nominal material size reduction (e.g. +2"/-3/8").
7. Enter the average percent moisture content of the material processed.
8. Enter the appropriate Control Device Identification Number for each crusher and screen. Refer to Table A - *Control Device Listing and Control Device Identification Number Instructions* in the *Reference Document* for Control Device ID prefixes and numbering.
9. Enter the appropriate stack parameters if a baghouse control device is used.
10. Enter the maximum operating schedule for each crusher and screen in hours per day, days per year and hours per year.

CONVEYING AFFECTED SOURCE SHEET

Source Identification Number ¹	Date of Construction, Reconstruction, or Modification (Month/Year) ²	Type of Material Handled ³	Size of Material Handled ⁴	Maximum Material Transfer Rate ⁵		Average Moisture Content (%) ⁶	Control Device ⁷
				tons/hour	tons/year		
BC-1	08/2016	SM	<4"	300	780,000	2.1	N
BC-2	08/2016	SM	<4"	700	780,000	2.1	N
BC-3	08/2016	SM	<4"	700	780,000	2.1	N
BC-4	08/2016	SM	<4"	400	446,000	2.1	N
BC-5	08/2016	SM	<4"	200	390,000	2.1	FE
BC-6	08/2016	SM	<4"	300	780,000	2.1	N
BC-7	08/2016	SM	<4"	300	780,000	2.1	N
BC-8	08/2016	SM	<4"	200	390,000	2.1	N
BC-9	08/2016	SM	<4"	200	390,000	2.1	PE
BC-10	08/2016	SM	<4"	200	390,000	2.1	PE
BC-11	08/2016	SM	<4"	200	390,000	2.1	PE

1. Enter the appropriate Source Identification Number for each conveyor using the following codes. For example, multiple belt conveyors should be designated BC-1, BC-2, BC-3 etc. Transfer points are considered emission points, not sources, and should not be included in the *Conveying Affected Source Sheet*. Transfer Point Identification Numbers shall be assigned in the *Emission Calculation Sheet*.

BC	Belt Conveyor	BE	Bucket Elevator	DL	Drag-link Conveyor
PS	Pneumatic System	SC	Screw Conveyor	VC	Vibrating Conveyor
OT	Other				
2. Enter the date that each crusher and screen was constructed, reconstructed, or modified.
3. Enter the type of material being handled - Raw Material (RM) Sized Material (SM) Refuse (R) Other (O)
4. Enter the nominal size of the material being conveyed (e.g. sized material- ¾" x 0). If more than one material is handled by the listed conveyor, list each material and enter the appropriate data for each material.
5. Enter the maximum material transfer rate for each conveyor in tons per hour and tons per year.
6. Enter the average percent moisture content of the conveyed material.
7. Enter the control device for the conveyor. PE - Partial Enclosure (example 3/4 hoop), FE - Full Enclosure, N – None

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number ¹	OS-1				
Type of Material Stored ²	Various Stockpiles of SM				
Average Moisture Content (%) ³	2.1				
Maximum Yearly Storage Throughput (tons) ⁴	780,000				
Maximum Storage Capacity (tons) ⁵	50,000 total for all stockpiles				
Maximum Base Area (ft ²) ⁶	130,680				
Maximum Pile Height (ft) ⁷	30ft				
Method of Material Load-in ⁸	SS				
Load-in Control Device Identification Number ⁹	WS				
Storage Control Device Identification Number ⁹	SW-WS				
Method of Material Load-out ⁸	FE				
Load-out Control Device Identification Number ⁹	Carry over moisture from load-in WS				

1. Enter the appropriate Source Identification Number for each storage activity using the following codes. For example, if the facility utilizes three storage bins, four open stockpiles and one storage building (full enclosure), the Source Identification Numbers should be BS-1, BS-2, and BS-3; OS-1, OS-2, OS-3, and OS-4; and SB-1, respectively.

BS	Bin or Storage Silo (full enclosure)	E3	Enclosure (three sided enclosure)
OS	Open Stockpile	SB	Storage Building (full enclosure)
SF	Stockpiles with wind fences	OT	Other
2. Describe the type of material stored or stockpiled. (e.g. sized material, raw material, refuse, etc).
3. Enter the average percent moisture content of the stored material.
4. Enter the maximum yearly storage throughput for each storage activity.
5. Enter the maximum storage capacity for each storage activity in tons (e.g. silo capacity, maximum stockpile size, etc.)
6. For stockpiles, enter the maximum stockpile base area.
7. For stockpiles, enter the maximum stockpile height.
8. Enter the method of load-in or load-out to/from stockpiles or bins using the following codes:

CS	Clamshell	SS	Stationary Conveyor/Stacker
FC	Fixed Height Chute from Bins	ST	Stacking Tube
FE	Front Endloader	TC	Telescoping Chute from Bins
MC	Mobile Conveyor/Stacker	TD	Truck Dump
UC	Under-pile or Under-Bin Reclaim Conveyor	PC	Pneumatic Conveyor/Stacker
RC	Rake or Bucket Reclaim Conveyor	OT	Other
9. Enter the appropriate Control Device Identification Number for each storage activity. Refer to Table A - *Control Device Listing and Control Device Identification Number Instructions* in the *Reference Document* for Control Device ID prefixes and numbering.

Attachment I: Emissions Calculations

EMISSIONS SUMMARY

Name of applicant: Greer Industries, Inc.
 Name of plant: Portable Recrush Circuit

Particulate Matter or PM (for 45CSR14 Major Source Determination)

Uncontrolled PM		Controlled PM	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.65	2.86	0.16	0.71
<i>Unpaved Haulroad Emissions</i>	25.08	109.84	7.52	32.95
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	25.73	112.70	7.69	33.67

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	25.80	15.07	5.16	3.01
<i>Transfer Point Emissions</i>	21.24	18.99	9.59	8.36
Point Source Emissions Total*	47.04	34.06	14.75	11.37

*Note: Point Source Total Controlled PM TPY emissions is used for 45CSR14 Major Source determination (see below)

Facility Emissions Total	72.77	146.76	22.44	45.04
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***Facility Potential to Emit (PTE) (Baseline Emissions) = 11.37**
 (Based on Point Source Total controlled PM TPY emissions from above) **ENTER ON LINE 26 OF APPLICATION**

Particulate Matter under 10 microns, or PM-10 (for 45CSR30 Major Source Determination)

Uncontrolled PM-10		Controlled PM-10	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.31	1.34	0.08	0.34
<i>Unpaved Haulroad Emissions</i>	7.40	32.42	2.22	9.73
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	7.71	33.76	2.30	10.06

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	9.10	5.31	1.82	1.06
<i>Transfer Point Emissions</i>	10.04	8.98	4.54	3.95
Point Source Emissions Total*	19.14	14.29	6.36	5.02

*Note: Point Source Total Controlled PM-10 TPY emissions is used for 45CSR30 Major Source determination

Facility Emissions Total	26.85	48.06	8.65	15.08
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EMISSION FACTORS

source: AP42, Fifth Edition, Revised 08/2004

(lb/ton of material throughput)

PM	
Primary Crushing	0.002
Tertiary Crushing	0.0054
Screening	0.025

PM-10	
Primary Crushing	0.001
Tertiary Crushing	0.0024
Screening	0.0087

2. Emissions From TRANSFER POINTS (continued)

Transfer Point ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	21.236	18.989	9.590	8.359	10.044	8.981	4.536	3.954

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.4 Aggregate Handling and Storage Piles

Emissions From Batch Drop

$$E = k * (0.0032) * [(U/5)^{1.3}] / [(M/2)^{1.4}] = \text{pounds/ton}$$

Where:

		PM	PM-10
k =	Particle Size Multiplier (dimensionless)	0.74	0.35
U =	Mean Wind Speed (mph)		
M =	Material Moisture Content (%)		

Assumptions:

k - Particle size multiplier

For PM (< or equal to 30um) k = 0.74

For PM-10 (< or equal to 10um) k = 0.35

Emission Factor

For PM E= $0.0032 * ((U/5)^{1.3}) / ((M/2)^{1.4})$
=lb/ton

For PM-10 E= $0.0032 * ((U/5)^{1.3}) / ((M/2)^{1.4})$
=lb/ton

For lb/hr [lb/ton]*[ton/hr] = [lb/hr]

For Tons/year [lb/ton]*[ton/yr]*[ton/2000lb] = [ton/yr]

3. Emissions From WIND EROSION OF STOCKPILES

Stockpile ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
OS-1	0.652	2.856	0.163	0.714	0.306	1.342	0.077	0.336
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TOTALS	0.652	2.856	0.163	0.714	0.306	1.342	0.077	0.336

Source:

Air Pollution Engineering Manual

Storage Pile Wind Erosion (Active Storage)

$$E = 1.7 \cdot [s/1.5] \cdot [(365-p)/235] \cdot [f/15] = (\text{lb/day/acre})$$

Where:

s =	silt content of material
p =	number of days with >0.01 inch of precipitation per year
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height

Emission Factors

For PM $E = (1.7) \cdot ((\text{Inputs!F147})/1.5) \cdot ((365 - \text{Inputs!I139})/235) \cdot ((\text{Inputs!I140})/15)$

For PM-10 $E = 0.47 \cdot (1.7) \cdot ((\text{Inputs!F147})/1.5) \cdot ((365 - \text{Inputs!I139})/235) \cdot ((\text{Inputs!I140})/15)$

For lb/hr $[\text{lb/day/acre}] \cdot [\text{day}/24\text{hr}] \cdot [\text{base area of pile (acres)}] = \text{lb/hr}$

For Ton/yr $[\text{lb/day/acre}] \cdot [365\text{day/yr}] \cdot [\text{Ton}/2000\text{lb}] \cdot [\text{base area of pile (acres)}] = \text{Ton/yr}$

4. Emissions From UNPAVED HAULROADS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	25.08	109.84	7.52	32.95	7.40	32.42	2.22	9.73
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	25.08	109.84	7.52	32.95	7.40	32.42	2.22	9.73

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.2 Unpaved Roads

Emission Estimate For Unpaved Haulroads at Industrial Sites (equation 1)

$$E = k \cdot (s/12)^a \cdot (W/3)^b = \text{lb/vmt}$$

Where:

		PM	PM-10
k =	particle size multiplier	4.90	1.50
a =	empirical constant	0.7	0.9
b =	empirical constant	0.45	0.45

Emission Factors

For PM $E = ((\$35) \cdot (((\text{Inputs!}\$163)/12)^{\$36}) \cdot (((\text{Inputs!}H171)/3)^{\$37}))$

For PM-10 $E = ((\$J35) \cdot (((\text{Inputs!}\$163)/12)^{\$J36}) \cdot (((\text{Inputs!}H171)/3)^{\$J37}))$

For lb/hr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per hour})$

For Ton/yr $(\text{lb/vmt}) \cdot (\text{miles per trip}) \cdot (\text{Max trips per year}) \cdot (1/2000)$

5. Emissions From INDUSTRIAL PAVED HAULROADS

Item No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source:

AP42, Fifth Edition, Revised 11/2006
13.2.1 PAVED ROADS

Emission Estimate For Paved Haulroads

$$E = [k * (sL/2)^{0.65} * (W/3)^{1.5} - C] * (1 - (P/4*N)) = \text{lb / Vehicle Mile Traveled (VMT)}$$

Where:

		PM	PM-10
k =	particle size multiplier	0.082	0.016
sL =	road surface silt loading, (g/ft ²)	70	
P =	number of days per year with precipitation >0.01 inch	157	
N =	number of days in averaging period	365	
C =	factor for exhaust, brake wear and tire wear	0.00047	0.00047

Emission Factors

For PM E= (\$I\$34*(((I\$35)/2)^0.65)*(((Inputs!G190)/3)^1.5)-(I\$38))*(1-((Inputs!\$I\$18

For PM-10 E= (\$J\$34)*(((I\$35)/2)^0.65)*(((Inputs!G190)/3)^1.5)-(I\$38))*(1-((Inputs!\$I\$

For lb/hr (lb/vmt)*(miles per trip)*(Max trips per hour)

For Ton/yr (lb/vmt)*(miles per trip)*(Max trips per year)*(1/2000)

Attachment J: Class I Legal Advertisement

Air Quality Permit Notice

Notice of Application

Notice is given that Greer Industries, Inc. has applied to the West Virginia Department of Environmental Protection, Division of Air Quality, for a General Permit Registration for a Nonmetallic Mineral Processing Plant located on 112 Center Street in Rowlesburg, in Preston County, West Virginia. The Latitude and Longitude are: 39.36254, -79.69326.

The applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be: Particulate Matter of 45.04 tons per year, and Particulate Matter less than 10 microns of 15.08 tons per year.

Startup of operation is planned to begin on or about the 1st day of August, 2016. 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 12th day of April, 2016.

By: Greer Industries, Inc. dba Cheat River Limestone Company

J. Robert Gwynne

Executive Vice President

8477 Veterans Memorial Highway

Masontown, WV 26542

Attachment K: Electronic Submittal

Attachment N: Safety Data Sheets

GREER INDUSTRIES, INC. SAFETY DATA SHEET (SDS)

Section I – Product and Company Identification

Product Identification	Manufacturer	24-Hour Emergency Contact No.	Recommended Use
Limestone; Crushed Stone; Aggregate; Limestone Sand; Calcium Carbonate; CaCO ₃ CAS No: 1317-65-3	Greer Industries, Inc. 8477 Veterans Memorial Highway Masontown, WV 26542	(800) 773-0412 or (304) 296-2549	Construction, aggregate, chemical feedstock, soil conditioner, flue gas desulfurization, etc.

Section II – Hazards Identification

Health Hazards	Skin Irritation (Category 3) Eye Irritation (Category 2B) Carcinogenicity (Category 1) Specific Target Organ Toxicity Single Exposure: Respiratory System (Cat 3) Specific Target Organ Toxicity Repeated Exposure: Respiratory System (Cat 1)
Pictograms	
Signal Word	Danger
Hazard Statements	Causes mild skin irritation. Causes eye irritation. May cause respiratory irritation. May cause cancer through inhalation. Causes damage to lungs through prolonged/repeated exposure by inhalation.
Precautionary Statements	Keep out of reach of children. Do not breathe dust. Use only outdoors or in a well-ventilated area. Wear protective gloves, eye protection, and respiratory protection. Wash exposed skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Dispose of contents or containers in accordance with applicable regulations. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF INHALED: Remove person to fresh air and keep at rest and comfortable. If skin or eye irritation occurs: Get medical advice. If exposed and concerned: Get medical advice. Call a doctor or emergency medical provider if you feel unwell.

Other Hazards not covered by GHS	None
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Section III – Composition / Information on Ingredients

INGREDIENTS (Specific Chemical Identity; Common Names)	CAS REGISTRY NO.	% By Weight (Approx)
Calcium Carbonate (CaCO ₃)	471-34-1	>70
Magnesium Carbonate (MgCO ₃)	546-93-0	<5
Silicon Dioxide (SiO ₂), Amorphous	7631-86-9	<40
Silica (Si), Crystalline Quartz	14808-60-7	>1
Aluminum Oxide (Al ₂ O ₃)	1344-28-1	<5
Iron Oxide (Fe ₂ O ₃)	1309-37-1	<3

Section IV – First Aid Measures

Inhalation	Move to fresh air. Contact a physician.
Ingestion	Drink large quantities of water. Contact a physician.
Skin Contact	Wash with soap and water
Eye Contact	Immediately flush eyes with large amounts of water. Contact a physician.

Section V – Firefighting Measures

Extinguishing Method	Not flammable
Special Firefighting Equipment and Precautions	No unusual fire or explosion hazards noted. Not a combustible dust.
Specific Hazards in Case of Fire	None known.

Section VI – Accidental Release Measures

Initial Actions to Be Taken	Ventilate the area around the accidental release and remove all unnecessary personnel.
Cleaning Methods	Normal clean-up procedures. Care should be taken to avoid causing dust to become airborne. Vacuum cleaning systems recommended.

Section VII – Handling and Storage

Waste Disposal Method	Dispose of product in accordance with Federal, State, and Local regulations.
Precautions to be Taken during Handling/Storage	Store away from incompatible chemicals and acids.

Section VIII – Exposure Controls / Personal Protection

Respiratory Protection	NIOSH approved dust filter mask as minimal protection	
Ventilation	Local Exhaust	To maintain TLV and PEL
	Mechanical	To maintain TLV and PEL
	Special	None
	Other	None
Protective Gloves	Gloves discretionary	
Eye Protection	Shielded glasses or fitted goggles to reduce the chance of eye injury	
Other Protective Clothing	None	

Work / Hygienic Practices	Maintain dust exposure limits below TLV and PEL. If not possible, use respiratory protection. Avoid contact with eyes and skin.
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INGREDIENTS	OSHA PEL⁽¹⁾	ACGIH TLV⁽²⁾
Calcium Carbonate (CaCO ₃)	(T) 15 mg/m ³	(T) 10 mg/m ³
Magnesium Carbonate (MgCO ₃)	(T) 15 mg/m ³	(T) 10 mg/m ³
Silicon Dioxide (SiO ₂), Amorphous	(T) [80 mg/m ³ / (%SiO ₂)]	(I) 10 mg/m ³ (R) 3 mg/m ³
Silica (Si), Crystalline Quartz	(T) [30 mg/m ³ / (SiO ₂ + 2)] (R) [10 mg/m ³ / (SiO ₂ + 2)]	(R) 0.05 mg/m ³
Aluminum Oxide (Al ₂ O ₃)	(T) 15 mg/m ³ (R) 5 mg/m ³	(T) 10 mg/m ³
Iron Oxide (Fe ₂ O ₃)	(T) 10 mg/m ³	(T) 5 mg/m ³

(T): Total; (R): Respirable; (I): Inhalable

- (1) OSHA PEL: Occupational Safety and Health Administration, Permissible Exposure Limit is the time weighted average exposure for an 8-hr work shift of a 40-hr workweek.
- (2) ACGIH TLV: American Conference of Governmental Industrial Hygienists, Threshold Limit Value is the time weighted average recommended concentration for an 8-hr work shift of a 40-hr workweek.

Section IX – Physical and Chemical Properties

Appearance	Light to dark gray solid
Odor and Threshold	None
pH	9.2 to 9.4 in saturated water solution at 25 °C
Melting Point	Decomposes at 1,750 °F (loses CO ₂)
Initial Boiling Point	5,162 °F
Flash Point	N/A
Evaporation Rate	N/A
Flammability	Product not flammable
Explosive Limits	No data available
Vapor Pressure	0.0 mm Hg
Vapor Density	N/A
Relative Density	2.7 - 2.8
Solubility	Negligible
Partition Coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	1,750 °F

Section X – Stability and Reactivity

Stability	Chemically stable.
Incompatibility – Conditions to Avoid	Acids, Fluorine
Hazardous Decomposition Products	Calcium oxide and carbon dioxide.
Hazardous Polymerization	None

Section XI – Toxicological Information

Acute Effects	Skin Contact: May cause irritation Eye Contact: May cause irritation Inhalation: May cause lung irritation
Chronic Effects	Limestone is not found to be toxic. It is not listed by MSHA, OSHA, or IARC as a carcinogen. This product may contain Crystalline Silica which has been classified as carcinogenic to humans when inhaled in the form of Quartz, Crystobalite, and/or Tridymite. Long-term exposure to crystalline silica may result in silicosis, lung cancer, or other respiratory diseases
Acute Toxicity	LD50 Oral – Rat 6,450 mg/kg IDLH – Humans 25 mg/m ³ (Crystobalite and Tridymite), 50 mg/m ³ (Quartz and Tripoli)

Section XII – Ecological Information

Ecotoxicity	Due to the elevated pH of the product, upon exposure to specific aquatic organisms and aquatic systems, it may be cause some ecotoxicity in high concentrations.
Persistence and Degradability	No data available
Bioaccumulative Potential	This material shows no bioaccumulation potential.
Mobility in Soil	No data available
Other Adverse Effects	Due to the material's alkalinity, if released into water or moist soil will cause an increase in pH.

Section XIII – Disposal Considerations

Dispose of unused material in accordance with the Federal, State, and Local disposal requirements.
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Section XIV – Transport Information

Limestone is not classified as a hazardous material by the Department of Transportation (DOT).
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Section XV – Regulatory Information

EPA, RCRA Hazardous Waste Classification (40CFR261)	Not Listed
EPA, RCRA Hazardous Waste Number (40CFR261.33)	Not Listed
EPA, CERCLA Hazardous Substance (40CFR261)	Not Listed
EPA, CERCLA Reportable Quantity (RQ)	Not Listed
EPA, SARA 311/312 Codes	Not Listed
EPA, SARA Toxic Chemical (40CFR372.65)	Not Listed
EPA, SARA EHS (Extremely Hazardous Substance (40CFR355)	Not Listed
EPA Threshold Planning Quantity (TPQ)	Not Listed
EPA, TSCA Inventory List	All Components Listed
OSHA, Air Contaminant (29CFR1910.1000, Table Z-1)	Listed
OSHA, Specifically Regulated Substance (29CFR1910)	Not Listed
MSHA	Not Listed
State Regulations – Consult state and local authorities for guidance	See Note
Canadian Environmental Protection Act, Domestic Substances List	Listed

Section XVI – Other Information

HMIS III Safety Rating	Health – 1; Flammability – 0; Physical Hazard – 0; Protective Equipment - A
Revision Information	This SDS was revised on 7/1/15. All previous versions are obsolete
WARNING	This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
CANADA - WHMIS	Classification D2A (Toxic)
Disclaimer	The technical data presented herein is given as information only and is assumed to be reliable. Greer Industries, Inc. assumes no responsibility for any inaccuracies or for any damage or injury that may occur during the use of this information.

Attachment O: Emissions Summary Sheets

