312 Justice Avenue
Logan, WV 25601

Phone (304) 752-8320
Fax (304) 752-7488

October 1, 2016

RECEIVED
OCT 07 2016
WV DEP / DIV OF AIR QUALITY

Mr. William F. Durham, Director
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

RE: Greenbrier Smokeless Coal Mining
General Permit Modification
ID# 025-00068

Dear Mr. Durham:

On behalf of Greenbrier Smokeless Coal Mining, I am submitting the enclosed General Permit Class I Administrative Update Application for the Mountaineer I Preparation Plant Facility for your review and approval. Additional application copies are also being submitted.

The application addresses the deletion of the direct ship screen and transfers. No submittal fee is required as this permit action will decrease the point source emissions total by 26.82 PM tons per year and the particulate matter less than 10 microns by 12.6 PM10 tons per year. No legal advertisement is required.

If additional information or clarification is needed, please contact me at the Logan address listed above or call 304-752-8320.

Sincerely,

Donna J. Toler
Air Quality Project Manager

donnatoler@suddenlink.net

TABLE OF CONTENTS

	General Permit Application
Section A	Current Business Certificate
Section B	Process Description
Section C	Description of Fugitive Emissions
Section D	Process Flow Diagram
Section E	Plot or Site Plan
Section F	Area Map
Section G	Affected Source Sheets
Section H	Baghouse Information
Section I	Emission Calculations
Section J	Class I Legal Advertisement
Section K	Electronic Submittal Diskette
Section L	Certification
Section M	Check List
Section N	Generators and Tanks

WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF AIR QUALITY
601 57TH Street SE
Charleston, WV 25304
Phone: (304) 926-0475 • *www.wvdep.org*

APPLICATION FOR GENERAL PERMIT REGISTRATION

CONSTRUCT, ***MODIFY***, *RELOCATE OR ADMINISTRATIVELY UPDATE*
A STATIONARY SOURCE OF AIR POLLUTANTS

PLEASE CHECK ALL THAT APPLY (IF KNOWN):
☐ **CONSTRUCTION** ■ **MODIFICATION** ☐ **RELOCATION**
☐ **ADMINISTRATIVE UPDATE** ☐ **AFTER-THE-FACT**

FOR AGENCY USE ONLY: *PLANT I.D. #* ***025-00068***

PERMIT # _____ *PERMIT WRITER:* _____

■ **G10-C** – Coal Preparation and Handling
☐ **G20-B** – Hot Mix Asphalt
☐ **G30-B** – Natural Gas Compressor Stations
☐ **G40-B** – Nonmetallic Minerals Processing
☐ **G50-B** – Concrete Batch

9. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY ONLY):
025-00068

SECTION I. GENERAL INFORMATION

1. NAME OF APPLICANT (AS REGISTERED WITH THE WV SECRETARY OF STATE'S OFFICE):
GREENBRIER SMOKELESS COAL MINING, LLC

2. FEDERAL EMPLOYER ID NO. **(FEIN):**
42-1640597

3. APPLICANT'S MAILING ADDRESS:
PO BOX Q, 4425 ANJEAN ROAD, RUPERT, WV 25984

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? ■ **YES** ☐ **NO**

⇨ IF **YES,** PROVIDE A COPY OF THE **CERTIFICATE OF INCORPORATION / ORGANIZATION / LIMITED PARTNERSHIP** (ONE PAGE) INCLUDING ANY NAME CHANGE AMENDMENTS **OR** OTHER ***BUSINESS CERTIFICATE*** AS **ATTACHMENT A.**

⇨ IF **NO,** PROVIDE A COPY OF THE **CERTIFICATE OF AUTHORITY / AUTHORITY OF L.L.C. / REGISTRATION** (ONE PAGE) INCLUDING ANY NAME CHANGE AMENDMENTS **OR** OTHER ***BUSINESS CERTIFICATE*** AS **ATTACHMENT A .**

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.) :	8. STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODE FOR THE FACILITY:
Delete Direct Ship Screen and transfer points TP-55 & TP-56	**1221 and 1222**

9A. DAQ PLANT I.D. NO. (FOR AN EXISTING FACILITY:	10A. LIST ALL CURRENT 45CSR13 AND 45CSR30 (TITLE V) PERMIT NUMBERS ASSOCIATED WITH THIS PROCESS (FOR EXISTING FACILITY ONLY):
0 25 - 0 0 0 68	**G10-D085E**

PRIMARY OPERATING SITE INFORMATION

11A. NAME OF PRIMARY OPERATING SITE:	12A. MAILING ADDRESS OF PRIMARY OPERATING SITE:
Mountaineer I Prep Plant	**Same**

13A. DOES THE APPLICANT OWN, LEASE, HAVE AN OPTION TO BUY, OR OTHERWISE HAVE CONTROL OF THE *PROPOSED SITE*?

■ **YES** ☐ **NO**

➪ IF **YES**, PLEASE EXPLAIN: **OWNER AND OPERATOR**

➪ 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.

From Charleston, take I-64 to Sam Black Church Exit, turn left to Rupert, turn right onto Church Street which turns into Anjean Road – plant entrance located on left.

INCLUDE A **MAP** AS **ATTACHMENT F**.

15A. NEAREST CITY OR TOWN:	16A. COUNTY:	
Rupert	**Greenbrier**	
17A. UTM NORTHING (KM):	18A. UTM EASTING (KM):	19A. UTM ZONE:
4208.9947	**530.4736**	**17**

LAT/LONG FOR PLANT: 38-01-48 AND 80-39-10

1ST *ALTERNATE OPERATING SITE INFORMATION*

11B. NAME OF PRIMARY OPERATING SITE:	12B. MAILING ADDRESS OF PRIMARY OPERATING SITE:
N/A	

13B. DOES THE APPLICANT OWN, LEASE, HAVE AN OPTION TO BUY, OR OTHERWISE HAVE CONTROL OF THE *PROPOSED SITE*?

☐ **YES** ☐ **NO**

➪ IF **YES**, PLEASE EXPLAIN: _____

_____

➪ 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.

15B. NEAREST CITY OR TOWN:	16B. COUNTY:	
17B. UTM NORTHING (KM):	18B. UTM EASTING (KM):	19B. UTM ZONE:

2ND *ALTERNATE OPERATING SITE INFORMATION*

11C. NAME OF PRIMARY OPERATING SITE: **N/A**	12C. MAILING ADDRESS OF PRIMARY OPERATING SITE:

13C. DOES THE APPLICANT OWN, LEASE, HAVE AN OPTION TO BUY, OR OTHERWISE HAVE CONTROL OF THE *PROPOSED SITE*?

☐ **YES** ☐ **NO**

➪ IF **YES**, PLEASE EXPLAIN: _____

➪ 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.

15C. NEAREST CITY OR TOWN:	16C. COUNTY:	
17C. UTM NORTHING (KM):	18C. UTM EASTING (KM):	19C. UTM ZONE:

20. PROVIDE THE DATE OF ANTICIPATED INSTALLATION OR CHANGE: **Upon Permit Approval** ➪ IF THIS IS AN **AFTER-THE-FACT** PERMIT APPLICATION, PROVIDE THE DATE UPON WHICH THE PROPOSED CHANGE DID HAPPEN: ____/____/____	21. DATE OF ANTICIPATED START- UP IF REGISTRATION IS GRANTED: **Upon Permit Approval**

22. PROVIDE MAXIMUM PROJECTED **OPERATING SCHEDULE** OF ACTIVITY/ ACTIVITIES OUTLINED IN THIS APPLICATION:

HOURS PER DAY **24** DAYS PER WEEK **7** WEEKS PER YEAR **52** PERCENTAGE OF OPERATION **100%**

WEST VIRGINIA
STATE TAX DEPARTMENT
BUSINESS REGISTRATION CERTIFICATE

ISSUED TO:
GREENBRIER SMOKELESS COAL MINING LLC
ANJEAN RD
RUPERT, WV 25984

BUSINESS REGISTRATION ACCOUNT NUMBER: 1029-7454

This certificate is issued on: 06/10/2010

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.

atL006 v.1
L0854350592

ATTACHMENT B

DETAILED PROCESS DESCRIPTION

The Mountaineer I Mine is located in a remote area off Anjean Road in Greenbrier County. This administrative update addresses the deletion of the direct ship screen previously proposed. Greenbrier Smokeless proposes to leave the portable pea coal system in this permit as well as on the Pollock Surface Mine because of a flaw in the preparation plant which may prohibit plant production of pea coal. Therefore, if the plant is unable to produce the correct size, the portable system would be moved to the plant to aid in separation and sizing. No other changes are recommended.

Raw coal will be fed to the screening building housing screen SS-01(FW) and SS-02(FW) from the underground mine belts BC-01(PE) @ TP-01(TC-FE) and TP-02(TC-FW) and BC-15(PE) and BC-16(PE) @ TP-05(TC-FE), TP-06(TC-FE), and TP-07(TC-FW). Coal from screen SS-01 and SS-02 discharge to raw coal belt BC-02(PE) at TP-04(TC-FE) and TP-09(TC-FE) for transfer to open stockpile OS-01(SW-WS) @ TP-14(TC-PE).

Reject from screens SS-01 and SS-02 transfers via belt BC-03(PE) to open stockpile OS-03(SW-WS) and cleaned up as maintenance by front-end loader @ TP-03(RC-FW0, TP-08(TC-FW), TP-10(TC-MDH) and TP-11(LO-MDH). Belt BC-14(PE), previously proposed and not yet constructed, will transfer reject from belt BC-03 to refuse belt BC-12(PE) @ TP-12(TC-FE) and TP-13(TC-FE).

Trucked in raw coal will be received at truck dup bin BS-02(PW) @ TP-15(UD-PW); to to screen SS-04(FW) @ TP-16(TC-FW). Screen SS-04 discharges reject via chute to stockpile OS-04(SW-WS) which is cleaned up as maintenance by front-end loader @ TP-17(TC-MDH) and TP-18(LO-MDH). Screen SS-04 can transfer directly to belt BC-06(PW) @ TP-19(TC-FW) or to crusher CR-02(FW) @ TP-20(TC-FW) and to belt BC-06 @ TP-21(TC-FW). Belt BC-06 will then transfer coal to open stockpile OS-02(SW-WS) @ TP-22(TC-PE).

Raw coal from OS-02 and OS-01 is reclaimed underpile to belt BC-07(PE) @ TP-23(Lo-UC), TP-24(LO-UC) and fed to the in-plant screens SS-05(FW) and SS-06(FW) and wet wash @ TP-25(TC-FW) thru TP-28(TC-FW). Load-in to OS-01 and OS-02 are controlled by stacking tubes.

Plant clean coal transfers to stockpile OS-05(SW-WS) via belt BC-08(PE) @ TP-29(TC-FE) and TP-30(TC-PE); reclaim underpile to belt BC-09(PE) @ TP-31(LO-UC); transfer to stockpile OS-06(SW-WS) @ TP-32(TC-PE); to belt BC-10(PE) @ TP-33(TC-FE); and to stockpile OS-07(SW-WS) @ TP-34(TC-PE). Clean coal can also be received to stockpile @ TP-35(UL-MDH). The clean coal will reclaim underpile to the loadout belt BC-11(PE) @ TP-36(LO-UC) and TP-37(LO-UC) where it is sent to rail via the batch weigh system BS-05(FE) and BS-06(FE) @ TP-38(TC-FE) thru TP-40(LR-TC).

Coarse refuse is transferred to stockpile OS-08(SW-WS) via belt BC-12(PE) @ TP-41(TC-FE) and TP-45(TC-MDH). A sand and lime mixture used for refuse treatment is dumped to stockpile OS-10(SW-WS) @ TP-42(UL-MDH) and loaded to bin BS-03(PW) @ TP-43(UD-PW). The bin discharges to belt BC-12 @ TP-44(TC-PE). The refuse

material is transferred from the stockpile to the disposal area by truck @ TP-46(LO-MDH) and TP-47(UL-MDH).

Fine or caked refuse transfers from the plant to stockpile OS-09(SW-WS) via belt BC-13(PE) @ TP-48(TC-FE) and TP-49(TC-MDH). The refuse material is transferred from the stockpile to the disposal area by truck @ TP-50(LO-MDH) and TP-51(UL-MDH).

Truck dump BS-01, belt BC-04, screen SS-03, crusher CR-01, and belt BC-05 have been retired in place and will be removed from the property.

Greenbrier Smokeless proposed and constructed a direct ship truck dump adjacent to the preparation plant in 2014. Coal will be received by truck at bin BS-07(PW) @ TP-52(UD-PW); transfer to belt BC-17(PE) @ TP-53(TC-FE); where the material can transfer directly to belt BC-18(PE) @ TP-55(TC-FW) or to crusher CR-03(FW) @ TP-56(TC-FW). Coal from crusher CR-03 will also transfer coal to belt BC-18(PE) @ TP-57(TC-FW); to stockpile OS-11(SW-WS) @ TP-58(TC-MDH); and to existing belt BC-09 under pile @ TP-59(LO-UC).

The May 2015 modification addressed the installation and operation of a permanent pea coal belt conveyor BC-23(PE). Pea coal will exit the plant via chute to stacker belt BC-23(PE) @ TP-70(TC-FW) and transfer to four separate stockpiles OS-15(SW-WS) thru OS-18(SW-WS) where it is loaded to truck for delivery at TP-71(TC-MDH) thru TP-78(LO-MDH).

ATTACHMENT B

Modification August 2015:

This modification addressed the replacement of the Ford V6 Generator with a Cummins QSX15-G9 1800RPM 755 HP Generator and to declare a small Caterpillar C4.4 ACERT Generator.

September 2016 Administrative Update:

This application deletes the direct ship screen SS-07 and deletes the associated transfer points. No other changes are anticipated.

ATTACHMENT C

DESCRIPTION OF FUGITIVE EMISSIONS

Potential sources of fugitive particulate emissions for this facility include emissions, which are not captured by pollution control equipment and emissions from open stockpiles and vehicular traffic on paved and unpaved haulroads and work areas. The haulroads and work areas will be controlled by water truck in accordance with section E.6.c.i. of the General Permit.

The water truck is equipped with pumps sufficient to maintain stockpiles, haulroads and work areas. The water truck will be operated three times daily, and more as needed in dry periods. An additive to prevent freezing will be utilized in the winter months when freezing conditions are present.

Origin/Datum: NA	Contour Interval: NA	District: MEADOW BLUFF
File: MTNR1PLNT_MFD_09262016.dwg	Sheet No.: 1 of 1	
Date: 09/26/2016	Quad: NA	County: GREENBRIER
Drawn By: LWL		

REVISIONS

No.	DATE	DESCRIPTION	BY

SCALE:

NTS

SUBMITTAL DATE:

SEPTEMBER 2016

GREENBRIER SMOKELESS COAL MINING,LLC

PO BOX 0, RUPERT, WEST VIRGINIA 25984
PHONE: 304.392.1000

Mountaineer 1 Preparation Plant

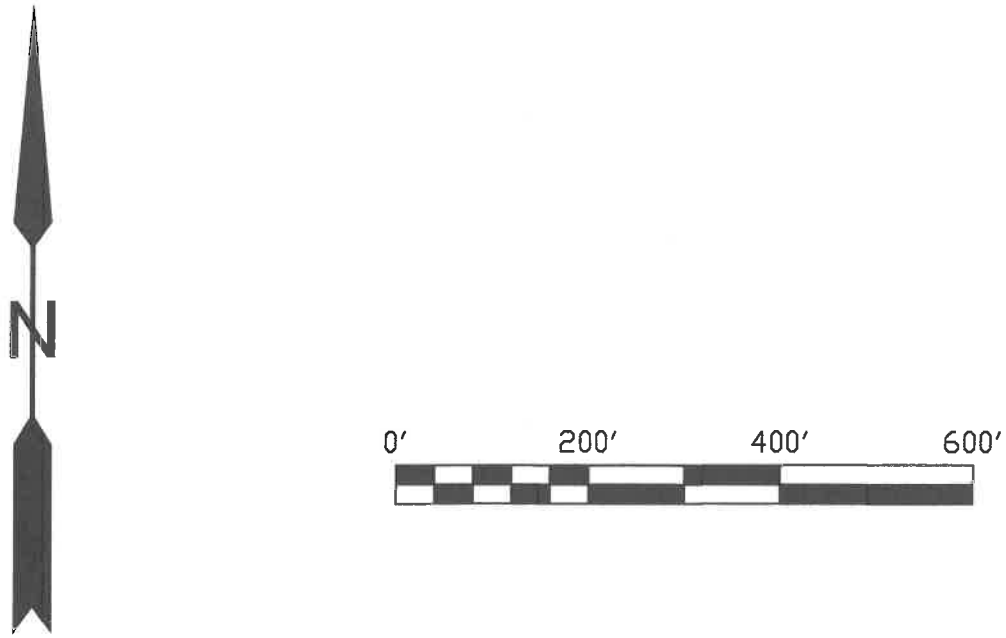
Division of Air Quality Facility ID Number 025-00068 Material Flow Diagram

LEGEND

RAW COAL

CLEAN COAL

REFUSE



Origin/Datum: NAD 27 / WV South	Contour Interval: 5'	District: MEADOW BLUFF
File: MTNR1PLNT_SITEPLN_09262016.dwg	Sheet No.: 1 of 1	
Date: 09-26-2016	Quad: RUPERT	County: GREENBRIER
Drawn By: LWL		

REVISIONS

No.	DATE	DESCRIPTION	BY

SCALE:

1" = 200'

SUBMITTAL DATE:

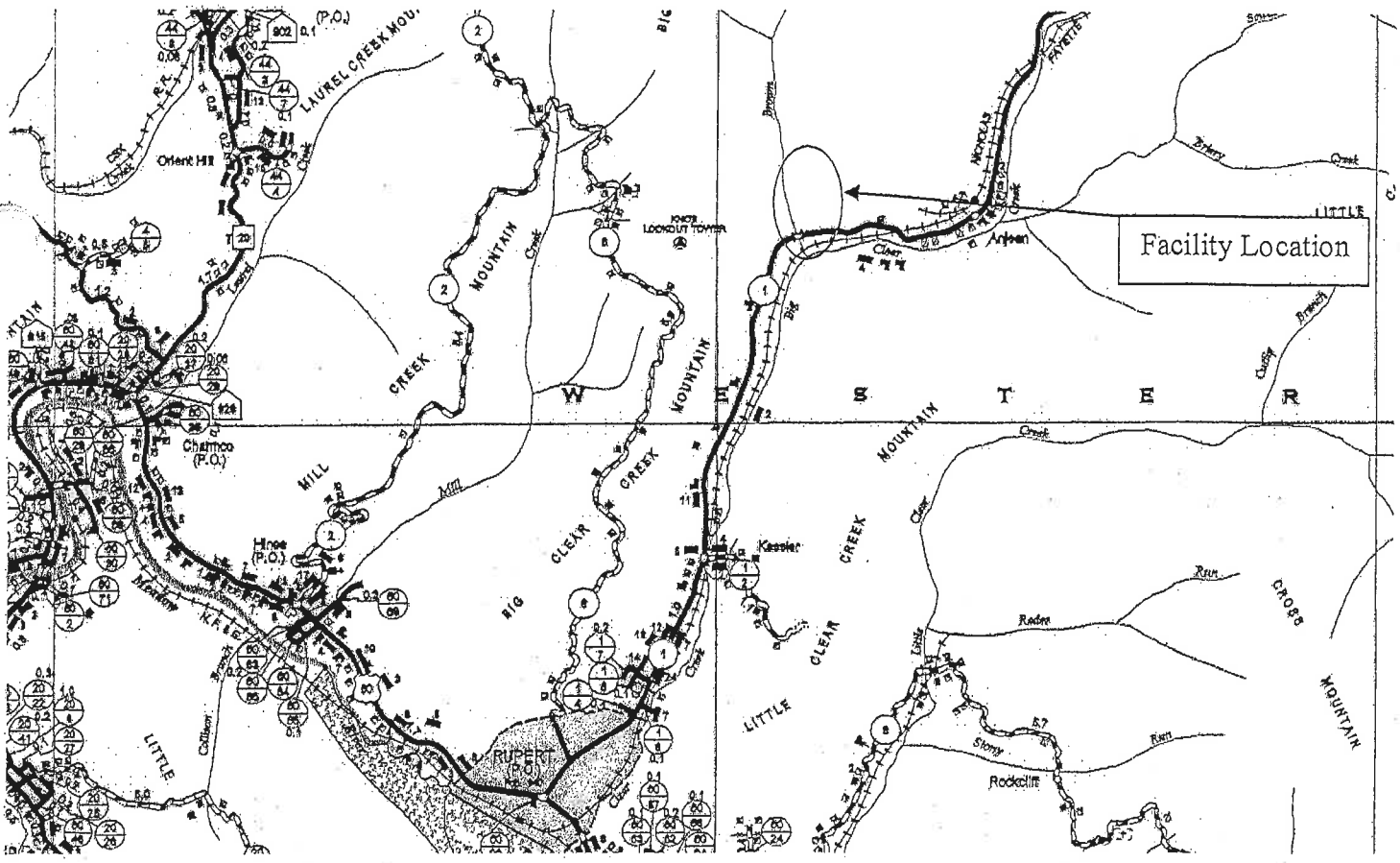
SEPTEMBER 2016

GREENBRIER SMOKELESS COAL MINING,LLC

PO BOX 0, RUPERT, WEST VIRGINIA 25984
PHONE: 304.392.1000

Mountaineer 1 Preparation Plant

Division of Air Quality Facility ID Number 025-00068 Site Plan


Facility Location
W
E
S
T
E
R
LAUREL CREEK MOU.
Orient Hill
Charmco (P.O.)
Hope (P.O.)
RUPERT (P.O.)
Anjean
Keesler
Rodcliff
LOOKOUT TOWER
MILL CREEK
BIG CLEAR CREEK
LITTLE CLEAR CREEK
CROSS MOUNTAIN
MOUNTAIN CREEK
LITTLE

CRUSHING AND SCREENING AFFECTED SOURCE SHEET

Source Identification Number[1]		CR-01	CR-02	CR-03		
Type of Crusher or Screen[2]		Deleted	DR	DR		
Date of Manufacture[3]			2013	2014		
Maximum Throughput[4]	tons/hour		600	600		
	tons/year		5,256,000	5,256,000		
Material sized from/to:[5]			4x0	4x0		
Average Moisture Content (%)[6]			5	5		
Control Device ID Number[7]			FW	FW		
Baghouse Stack Parameters[8]	height (ft)					
	diameter (ft)					
	volume (ACFM)					
	exit temp (°F)					
	UTM Coordinates					
Maximum Operating Schedule[9]	hours/day		24	24		
	days/year		365	365		
	hours/year		8760	8760		
Percentage of Operation[10]	January-March		25	25		
	April-June		25	25		
	July-September		25	25		
	Oct-December		25	25		

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		OT	Other
GC	Gyratory Crusher			
OT	Other			

3. Enter the date that each crusher and screen was manufactured.
4. Enter the maximum throughput for each crusher and screen in tons per hour and tons per year.
5. Describe the nominal material size reduction (e.g. +2"/ -_").
6. Enter the average percent moisture content of the material processed.
7. 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.
8. Enter the appropriate stack parameters if a baghouse control device is used.
9. Enter the maximum operating schedule for each crusher

CRUSHING AND SCREENING AFFECTED SOURCE SHEET

Source Identification Number[1]		SS-01	SS-02	SS-04	SS-05	SS-06
Type of Crusher or Screen[2]		SD	SD	SD	SD	SD
Date of Manufacture[3]		2007	2007	2007	2007	2007
Maximum Throughput[4]	tons/hour	700	700	600	350	350
	tons/year	6,132,000	6,132,000	5,256,000	3,066,000	3,066,000
Material sized from/to:[5]		4x2x0	4x2x0	4x2x0	4x2x0	4x2x0
Average Moisture Content (%)[6]		6	7	5	10	10
Control Device ID Number[7]		FW	FW	FW	FW	FW
Baghouse Stack Parameters[8]	height (ft)	N/A				
	diameter (ft)					
	volume (ACFM)					
	exit temp (°F)					
	UTM Coordinates					
Maximum Operating Schedule[9]	hours/day	24	24	24	24	24
	days/year	365	365	365	365	365
	hours/year	8760	8760	8760	8760	8760
Percentage of Operation[10]	January-March	25	25	25	25	25
	April-June	25	25	25	25	25
	July-September	25	25	25	25	25
	Oct-December	25	25	25	25	25

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
DR	Double Roll Crusher
BM	Ball Mill
RB	Rotary Breaker
JC	Jaw Crusher
GC	Gyratory Crusher
OT	Other

SS	Stationary Screen	
	SD	Single Deck Screen
	DD	Double-Deck Screen
	TD	Triple Deck Screen
	OT	Other

3. Enter the date that each crusher and screen was manufactured.
4. Enter the maximum throughput for each crusher and screen in tons per hour and tons per year.
5. Describe the nominal material size reduction (e.g. +2"/ -_").
6. Enter the average percent moisture content of the material processed.
7. 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.
8. Enter the appropriate stack parameters if a baghouse control device is used.
9. Enter the maximum operating schedule for each crusher

CRUSHING AND SCREENING AFFECTED SOURCE SHEET

Source Identification Number[1]		SS-07	SS-08			
Type of Crusher or Screen[2]		Delete	TD			
Date of Manufacture[3]			2014			
Maximum Throughput[4]	tons/hour		200			
	tons/year		1,752,000			
Material sized from/to:[5]			2x3/8			
Average Moisture Content (%)[6]			6			
Control Device ID Number[7]			PW			
Baghouse Stack Parameters[8]	height (ft)					
	diameter (ft)					
	volume (ACFM)					
	exit temp (°F)					
	UTM Coordinates					
Maximum Operating Schedule[9]	hours/day		24			
	days/year		365			
	hours/year		8760			
Percentage of Operation[10]	January-March		25			
	April-June		25			
	July-September		25			
	Oct-December		25			

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
   DR Double Roll Crusher
   BM Ball Mill
   RB Rotary Breaker
   JC Jaw Crusher
   GC Gyratory Crusher
   OT Other

   SS Stationary Screen
   - SD Single Deck Screen
   - DD Double-Deck Screen
   - TD Triple Deck Screen
   - OT Other

3. Enter the date that each crusher and screen was manufactured.
4. Enter the maximum throughput for each crusher and screen in tons per hour and tons per year.
5. Describe the nominal material size reduction (e.g. +2"/ -_").
6. Enter the average percent moisture content of the material processed.
7. 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.
8. Enter the appropriate stack parameters if a baghouse control device is used.
9. Enter the maximum operating schedule for each crusher

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number[1]	BS-01	BS-02	BS-03	BS-04	BS-05
Type of Material Stored[2]	Deleted	RC	Sand/lime	Magnitite	CC
Average Moisture Content (%)[3]		5	5	1	7
Maximum Yearly Storage Throughput (tons)[4]		5,256,000	52,500	500	5,380,000
Maximum Storage Capacity (tons)[5]		75	30	100	440
Maximum Base Area (ft^2)[6]					
Maximum Pile Height (ft)[7]					
Method of Material Load-in[8]		TD	Loader	P	SS
Load-in Control Device Identification Number[9]		UD-PW	UD-PW	TC-FW	TC-FE
Storage Control Device Identification Number[9]		SW-PW	SW-PW	In plant	SW-FE
Method of Material Load-out[8]		TC	TC	Wet Process	TC
Load-out Control Device Identification Number[9]		TC-FW	TC-PE	Wet Process	TC-FE

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)
   - OS Open Stockpile
   - SF Stockpiles with wind fences
   - E3 Enclosure (three sided enclosure)
   - SB Storage Building (full enclosure)
   - OT Other : **Pressurized Truck**
2. Describe the type of material stored or stockpiled (e.g. clean coal, raw coal, 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
   - FC Fixed Height Chute from Bins
   - FE Front Endloader
   - MC Mobile Conveyor/Stacker
   - UC Under-pile or Under-Bin Reclaim Conveyor
   - RC Rake or Bucket Reclaim Conveyor
   - SS Stationary Conveyor/Stacker
   - ST Stacking Tube
   - TC Telescoping Chute from Bins
   - TD Truck Dump
   - PC Pneumatic Conveyor/Stacker
   - OT Other

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number[1]	BS-06	BS-07	BS-08		
Type of Material Stored[2]	CC	CC	Deleted		
Average Moisture Content (%)[3]	7	5			
Maximum Yearly Storage Throughput (tons)[4]	5,380,000	5,256,000			
Maximum Storage Capacity (tons)[5]	220	100			
Maximum Base Area (ft^2)[6]					
Maximum Pile Height (ft)[7]					
Method of Material Load-in[8]	Chute	TD			
Load-in Control Device Identification Number[9]	TC-FE	UD-PW			
Storage Control Device Identification Number[9]	SW-FE	SW-PW			
Method of Material Load-out[8]	TC	TC			
Load-out Control Device Identification Number[9]	LR-TC	TC-FE			

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)
   - OS Open Stockpile
   - SF Stockpiles with wind fences
   - E3 Enclosure (three sided enclosure)
   - SB Storage Building (full enclosure)
   - OT Other : **Pressurized Truck**
2. Describe the type of material stored or stockpiled (e.g. clean coal, raw coal, 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
   - FC Fixed Height Chute from Bins
   - FE Front Endloader
   - MC Mobile Conveyor/Stacker
   - UC Under-pile or Under-Bin Reclaim Conveyor
   - RC Rake or Bucket Reclaim Conveyor
   - SS Stationary Conveyor/Stacker
   - ST Stacking Tube
   - TC Telescoping Chute from Bins
   - TD Truck Dump
   - PC Pneumatic Conveyor/Stacker
   - OT Other

CONVEYING AFFECTED SOURCE SHEET

Source Identification Number[1]	Date of Manufacture/ Modification[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		
#1 Mine BC-01	2008	RC	2x0	700	6,132,000	6	PE
OS-01 Feed BC-02	2008	RC	2x0	700	6,132,000	6	PE
SS Reject BC-03	2008	RC	+4	70	613,200	7	PE
BC-04	Deleted						
BC-05	Deleted						
OS-02 Feed BC-06	2008	RC	2x0	600	5,256,000	5	PE
RC Reclaim BC-07	2008	RC	2x0	700	6,132,000	6	PE
Plant CC BC-08	2008	CC	4x0	500	4,380,000	7	PE
OS-06 Feed BC-09	2008	CC	4x0	800	4,380,000	7	PE
OS-07 Feed BC-10	2008	CC	4x0	800	4,380,000	7	PE
Loadout BC-11	2008	CC	4x0	4000	5,380,000	7	PE
Refuse BC-12	2008	Refuse	-1 3/8	500	4,380,000	10	PE
Refuse BC-13	2008	Refuse	-1	200	1,752,000	15	PE
Proposed *BC-14	2010	Refuse	+4	70	613,200	7	PE
#3 Mine BC-15	2011	RC	2x0	700	6,132,000	7	PE
#3 Mine BC-16	2011	RC	2x0	700	6,132,000	7	PE
Direct Ship BC-17	2014	CC	4x0	600	5,256,000	5	PE
Direct Ship BC-18	2014	CC	2x0	600	5,256,000	5	PE

				Maximum Material Transfer Rate[5]			
BC-19	2014	CC	2x0	200	1,752,000	6	PE
BC-20	2014	CC	1 1/2X0	100	584,000	6	NC
BC-21	2014	CC	1x0	100	584,000	6	NC
BC-22	2014	CC	3/8x0	100	584,000	6	NC
BC-23	2015	CC	3/8x0	200	1,752,000	6	NC
*Note: BC-14 was proposed in 2010 and has not been constructed							

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number[1]	OS-01	OS-02	OS-03	OS-04	OS-05
Type of Material Stored[2]	RC	RC	Refuse	Refuse	CC
Average Moisture Content (%)[3]	6	5	7	5	7
Maximum Yearly Storage Throughput (tons)[4]	6,132,000	5,256,000	613,200	525,600	4,380,000
Maximum Storage Capacity (tons)[5]	60,000	20,000	50	50	45,000
Maximum Base Area (ft^2)[6]	88,869	88,869	100	100	88,869
Maximum Pile Height (ft)[7]	90'	90'	15'	15'	90'
Method of Material Load-in[8]	SS	SS	SS	Chute	SS
Load-in Control Device Identification Number[9]	TC-PE (ST)	TC-PE (ST)	TC-MDH	TC-MDH	TC-PE (ST)
Storage Control Device Identification Number[9]	SW-WS	SW-WS	SW-WS	SW-WS	SW-WS
Method of Material Load-out[8]	UC	UC	FE	FE	UC
Load-out Control Device Identification Number[9]	LO-UC	LO-UC	LO-MDH	LO-MDH	LO-UC

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)
   - OS Open Stockpile
   - SF Stockpiles with wind fences
   - E3 Enclosure (three sided enclosure)
   - SB Storage Building (full enclosure)
   - OT OtheR
2. Describe the type of material stored or stockpiled (e.g. clean coal, raw coal, 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
   - FC Fixed Height Chute from Bins
   - FE Front Endloader
   - MC Mobile Conveyor/Stacker
   - UC Under-pile or Under-Bin Reclaim Conveyor
   - RC Rake or Bucket Reclaim Conveyor
   - SS Stationary Conveyor/Stacker
   - ST Stacking Tube
   - TC Telescoping Chute from Bins
   - TD Truck Dump
   - PC Pneumatic Conveyor/Stacker

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number[1]	OS-06	OS-07	OS-08	OS-09	OS-10
Type of Material Stored[2]	CC	CC	Refuse	Refuse	Sand
Average Moisture Content (%)[3]	7	7	10	15	3
Maximum Yearly Storage Throughput (tons)[4]	4,380,000	4,380,000	4,380,000	1,752,000	52,500
Maximum Storage Capacity (tons)[5]	45,000	45,000	15,000	7,500	5,000
Maximum Base Area (ft^2)[6]	88,869	88,869	28,869	18,869	8,869
Maximum Pile Height (ft)[7]	90'	90'	35'	25'	15'
Method of Material Load-in[8]	SS	SS	Chute	Chute	Truck
Load-in Control Device Identification Number[9]	TC-PE (ST)	TC-PE (ST)	TC-MDH	TC-MDH	TC-MDH
Storage Control Device Identification Number[9]	SW-WS	SW-WS	SW-WS	SW-WS	SW-WS
Method of Material Load-out[8]	UC	UC	FE	FE	FE
Load-out Control Device Identification Number[9]	LO-UC	LO-UC	LO-MDH	LO-MDH	LO-MDH

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)
   - OS Open Stockpile
   - SF Stockpiles with wind fences
   - E3 Enclosure (three sided enclosure)
   - SB Storage Building (full enclosure)
   - OT OtheR
2. Describe the type of material stored or stockpiled (e.g. clean coal, raw coal, 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
   - FC Fixed Height Chute from Bins
   - FE Front Endloader
   - MC Mobile Conveyor/Stacker
   - UC Under-pile or Under-Bin Reclaim Conveyor
   - RC Rake or Bucket Reclaim Conveyor
   - SS Stationary Conveyor/Stacker
   - ST Stacking Tube
   - TC Telescoping Chute from Bins
   - TD Truck Dump
   - PC Pneumatic Conveyor/Stacker

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number[1]	OS-11	OS-12	OS-13	OS-14	
Type of Material Stored[2]	CC	CC	CC	CC	
Average Moisture Content (%)[3]	5	6	6	6	
Maximum Yearly Storage Throughput (tons)[4]	5,256,000	584,000	584,000	584,000	
Maximum Storage Capacity (tons)[5]	25,000	5,000	5,000	5,000	
Maximum Base Area (ft^2)[6]	38,869	8,869	8,869	8,869	
Maximum Pile Height (ft)[7]	60'	20'	20'	20'	
Method of Material Load-in[8]	SS	SS	SS	SS	
Load-in Control Device Identification Number[9]	TC-MDH	TC-MDH	TC-MDH	TC-MDH	
Storage Control Device Identification Number[9]	SW-WS	SW-WS	SW-WS	SW-WS	
Method of Material Load-out[8]	UC	UC	UC	UC	
Load-out Control Device Identification Number[9]	LO-UC	LO-UC	LO-UC	LO-UC	

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)
   - OS Open Stockpile
   - SF Stockpiles with wind fences
   - E3 Enclosure (three sided enclosure)
   - SB Storage Building (full enclosure)
   - OT OtheR
2. Describe the type of material stored or stockpiled (e.g. clean coal, raw coal, 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
   - FC Fixed Height Chute from Bins
   - FE Front Endloader
   - MC Mobile Conveyor/Stacker
   - UC Under-pile or Under-Bin Reclaim Conveyor
   - RC Rake or Bucket Reclaim Conveyor
   - SS Stationary Conveyor/Stacker
   - ST Stacking Tube
   - TC Telescoping Chute from Bins
   - TD Truck Dump
   - PC Pneumatic Conveyor/Stacker

STORAGE ACTIVITY AFFECTED SOURCE SHEET

Source Identification Number[1]	OS-15	OS-16	OS-17	OS-18	
Type of Material Stored[2]	CC	CC	CC	CC	
Average Moisture Content (%)[3]	6	6	6	6	
Maximum Yearly Storage Throughput (tons)[4]	438,000	438,000	438,000	438,000	
Maximum Storage Capacity (tons)[5]	5,000	5,000	5,000	5,000	
Maximum Base Area (ft^2)[6]	8,869	8,869	8,869	8,869	
Maximum Pile Height (ft)[7]	30'	30'	30'	30'	
Method of Material Load-in[8]	SS	SS	SS	SS	
Load-in Control Device Identification Number[9]	TC-MDH	TC-MDH	TC-MDH	TC-MDH	
Storage Control Device Identification Number[9]	SW-WS	SW-WS	SW-WS	SW-WS	
Method of Material Load-out[8]	Loader	Loader	Loader	Loader	
Load-out Control Device Identification Number[9]	LO-MDH	LO-MDH	LO-MDH	LO-MDH	

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)
   - OS Open Stockpile
   - SF Stockpiles with wind fences
   - E3 Enclosure (three sided enclosure)
   - SB Storage Building (full enclosure)
   - OT OtheR
2. Describe the type of material stored or stockpiled (e.g. clean coal, raw coal, 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
   - FC Fixed Height Chute from Bins
   - FE Front Endloader
   - MC Mobile Conveyor/Stacker
   - UC Under-pile or Under-Bin Reclaim Conveyor
   - RC Rake or Bucket Reclaim Conveyor
   - SS Stationary Conveyor/Stacker
   - ST Stacking Tube
   - TC Telescoping Chute from Bins
   - TD Truck Dump
   - PC Pneumatic Conveyor/Stacker

ATTACHMENT H

BAGHOUSE AIR POLLUTION CONTROL DEVICE SHEET
Not applicable for this facility

Complete a Baghouse Air Pollution Control Device Sheet for each baghouse control device.

1. Baghouse Control Device Identification Number:
2. Manufacturer's name and model identification:
3. Number of compartments in baghouse:
4. Number of compartments online during normal operation and conditions:
5. Gas flow rate into baghouse: _____ ACFM @ _____ °F and _____ PSIA
6. Total cloth area: _____ ft^2
7. Operating air to cloth ratio: _____ ft/min
8. Filter media type: _____
9. Stabilized static pressure drop across baghouse: _____ inches H_2O
10. Baghouse operation is:

    ☐ Continuous ☐ Automatic ☐ Intermittent
11. Method used to clean bags:

    ☐ Shaker ☐ Pulse jet ☐ Reverse jet ☐ Other
12. Emission rate of particulate matter entering and exiting baghouse at maximum design operating conditions:

    Entering baghouse:_____ lb/hr and _____ grains/ACF

    Exiting baghouse: _____ lb/hr and _____ grains/ACF
13. Guaranteed minimum baghouse collection efficiency: _____ %
14. Provide a written description of the capture system (e.g. hooding and ductwork arrangement), size of ductwork and hoods and air volume, capacity and operating horsepower of fan:

15. Describe the method of disposal for the collected material:

INPUTS

Include all information for each emission source and transfer point as listed in the permit application.

Name of applicant: Greenbrier Smokeless
Name of plant: Mountaineer #1 Plant
Sep-16

1. CRUSHING AND SCREENING (including all primary and secondary crushers and screens)

1a. PRIMARY CRUSHING

Primary Crusher ID Number	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %
CR-01	RC Crusher - Out of service retired	0	0	0	0
CR-02	DR Raw Coal Crusher	600	5,256,000	FW	90
CR-03	DR Direct Ship	600	5,256,000	FW	90

1b. SECONDARY AND TERTIARY CRUSHING

Secondary & Tertiary Crusher ID	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %

1c. SCREENING

Screen ID	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %
SS-01	RC SCREEN	700	6,132,000	FW	90
SS-02	RC SCREEN	700	6,132,000	FW	90
SS-03	RETIRED - NOT IN OPERATION	0	0		0
SS-04	RC SCREEN	600	5,256,000	FW	90
SS-05	IN PLANT SCREEN	350	3,066,000	FW	90
SS-06	IN PLANT SCREEN	350	3,066,000	FW	90
SS-07	delete 9-16				
SS-08	Portable Pea Coal Screen	200	1,752,000	PW	80

2. *TRANSFER POINTS (including all conveyor transfer points, equipment transfer points etc.)*

		PM	PM-10
k =	Particle Size Multiplier (dimensionless)	0.74	0.35
U =	Mean Wind Speed (mph)	7	

Transfer Point ID No.	Transfer Point Description Include ID Numbers of all conveyors, crushers, screens, stockpiles, etc. involved		Material Moisture Content %	Maximum Transfer Rate TPH	Maximum Transfer Rate TPY	Control Device ID Number	Control Efficiency %	
TP01	ROM To BC-01	#1 Deep Mine	6	700	6,132,000	TC-FE	80	
TP02	BC-01 to SS-01		6	700	6,132,000	TC-FW	90	
TP03	SS-01 to BC-02		6	700	6,132,000	TC-FW	90	
TP04	SS-01 to Reject Belt BC-03		6	70	613,200	TC-FE	80	
TP05	ROM to BC-15	#3 deep Mine	7	700	6,132,000	TC-FE	80	
TP06	BC-15 to BC-16		7	700	6,132,000	TC-FW	90	
TP07	BC-16 to SS-02		7	700	6,132,000	TC-FW	90	
TP08	SS-02 to BC-02		7	700	6,132,000	TC-FW	90	
TP09	SS-02 to Reject Belt BC-03		7	70	613,200	TC-FE	80	
TP10	BC-03 to OS-03		7	70	613,200	TC-MDH	0	
TP11	OS-03 to OS-08		7	70	613,200	LO-MDH	0	
TP12	BC-03 to BC-14	Proposed 2010	7	70	613,200	TC-FE	80	BC-14 not constructed
TP13	BC-14 to BC-12	Proposed 2010	7	70	613,200	TC-FE	80	
TP14	BC-02 to OS-01		6	700	6,132,000	TC-PE	50	
TP15	Truck to BS-02	Trucked in	5	600	5,256,000	UD-PW	80	
TP16	BS-02 to SS-04		5	600	5,256,000	TC-FW	90	
TP17	SS-04 to OS-04		5	60	525,600	TC-MDH	0	
TP18	OS-04 to OS-08		5	60	525,600	LO-MDH	0	
TP19	SS-04 to BC-06		5	600	5,256,000	TC-FW	90	
TP20	SS-04 to CR-02		5	600	5,256,000	TC-FW	90	
TP21	CR-02 to BC-06		5	600	5,256,000	TC-FW	90	
TP22	BC-06 to OS-02		5	600	5,256,000	TC-PE	50	
TP23	OS-01 to BC-07	Plant Feed	6	700	6,132,000	LO-UC	80	
TP24	OS-02 to BC-07		5	700	6,132,000	LO-UC	80	
TP25	BC-07 to SS-05		6	350	3,066,000	TC-FW	90	
TP26	SS-05 to Wet Wash		10	350	3,066,000	TC-FW	90	
TP27	BC-07 to SS-06		6	350	3,066,000	TC-FW	90	
TP28	SS-06 to Wet Wash		10	350	3,066,000	TC-FW	90	
TP29	Plant to BC-08	Clean Coal	7	500	4,380,000	TC-FE	80	
TP30	BC-08 to OS-05		7	500	4,380,000	TC-PE	50	
TP31	OS-05 to BC-09		7	800	4,380,000	LO-UC	80	
TP32	BC-09 to OS-06		7	800	4,380,000	TC-PE	50	
TP33	BC-09 to BC-10		7	800	4,380,000	TC-FE	80	
TP34	BC-10 to OS-07		7	800	4,380,000	TC-PE	50	
TP35	Truck to CC Stockpiles		7	114	1,000,000	UL-MDH	0	
TP36	OS-06 to BC-11		7	4,000	5,380,000	LO-UC	80	
TP37	OS-07 to BC-11		7	4,000	5,380,000	LO-UC	80	
TP38	BC-11 to Surge Bin BS-05		7	4,000	5,380,000	TC-FE	80	
TP39	BS-05 to Loadout Bin BS-06		7	4,000	5,380,000	TC-FE	80	
TP40	BS-06 to Railcar		7	4,000	5,380,000	LR-TC	75	
TP41	Plant to BC-12	Coarse Refuse	10	500	4,380,000	TC-FE	80	
TP42	Truck to OS-10	Sand/lime	3	6	52,500	TC-PE	50	
TP43	OS-10 to BS-03	Sand/lime	3	6	52,500	TC-PE	50	
TP44	BS-03 to BC-12	Sand/lime	3	6	52,500	TC-PE	50	
TP45	BC-12 to OS-08		10	500	4,380,000	TC-MDH	0	
TP46	OS-08 to Truck		10	500	4,380,000	LO-MDH	0	
TP47	Truck to Disposal Area		10	500	4,380,000	UL-MDH	0	
TP48	Plant to BC-13	Fine caked refus	15	200	1,752,000	TC-FE	80	
TP49	BC-13 to OS-09		15	200	1,752,000	TC-MDH	0	
TP50	OS-09 to Truck		15	200	1,752,000	LO-MDH	0	
TP-51	Truck to Disposal Area		15	200	1,752,000	UL-MDH	0	
	JANUARY 2014 MODIFICATION							
TP-52	Truck to BS-07	Direct Ship	5	600	5,256,000	UD-PW	80	
TP-53	BS-07 to BC-17	Direct Ship	5	600	5,256,000	TC-FE	80	
TP-54	BC-17 to CR-03	Direct Ship	5	600	5,256,000	TC-FE	80	
TP-55	*delete 9-16*							
TP-56	*delete 9-16*							

TP-57	CR-03 to BC-18	Direct Ship	5	600	5,256,000	TC-FW	90
TP-58	BC-18 to OS-11	Direct Ship	5	600	5,256,000	TC-MDH	0
TP-59	OS-11 to BC-09	Direct Ship	5	600	5,256,000	LO-UC	80
TP60	Stockpile to BS-08	Pea Coal	6	200	1,752,000	TC-PW	80
TP61	BS-08 to BC-19	Pea Coal	6	200	1,752,000	TC-FE	80
TP62	BC-19 to SS-08	Pea Coal	6	200	1,752,000	TC-PW	80
TP63	SS-08 to BC-20	Pea Coal	6	100	584,000	TC-FW	90
TP64	BC-20 to OS-12	Pea Coal	6	100	584,000	TC-MDH	0
TP65	SS-08 to BC-21	Pea Coal	6	100	584,000	TC-FW	90
TP66	BC-21 to OS-13	Pea Coal	6	100	584,000	TC-MDH	0
TP67	SS-08 to BC-22	Pea Coal	6	100	584,000	TC-FW	90
TP68	BC-22 to OS-14	Pea Coal	6	100	584,000	TC-MDH	0
TP-69	All stockpiles to BC-09	Pea Coal	6	200	1,752,000	LO-UC	80
	Constructed						
TP-70	Plant to BC-23	Pea Coal	6	200	1,752,000	TC-FW	90
TP-71	BC-23 to OS-15	Pea Coal	6	50	438,000	TC-MDH	0
TP-72	OS-15 to Truck	Pea Coal	6	50	438,000	LO-MDH	0
TP-73	BC-23 to OS-16	Pea Coal	6	50	438,000	TC-MDH	0
TP-74	OS-16 to Truck	Pea Coal	6	50	438,000	LO-MDH	0
TP-75	BC-23 to OS-17	Pea Coal	6	50	438,000	TC-MDH	0
TP-76	OS-17 to Truck	Pea Coal	6	50	438,000	LO-MDH	0
TP-77	BC-23 to OS-18	Pea Coal	6	50	438,000	TC-MDH	0
TP-78	OS-18 to Truck	Pea Coal	6	50	438,000	LO-MDH	0

3. WIND EROSION OF STOCKPILES *(including all stockpiles of raw coal, clean coal, coal refuse, etc.)*

p =	number of days per year with precipitation >0.01 inch	157
f =	percentage of time that the unobstructed wind speed	20
	exceeds 12 mph at the mean pile height	

Source ID No.	Stockpile Description	Silt Content of Material %	Stockpile base area Max. sqft	Control Device ID Number	Control Efficiency %
OS-01	Raw Coal Stockpile	5	88,869	SW-WS	75
OS-02	Raw Coal Stockpile	5	88,869	SW-WS	75
OS-03	Screen Reject	5	100	SW-WS	75
OS-04	Screen Reject	5	100	SW-WS	75
OS-05	Clean Coal Stockpile	3	88,869	SW-WS	75
OS-06	Clean Coal Stockpile	3	88,869	SW-WS	75
OS-07	Clean Coal Stockpile	3	88,869	SW-WS	75
OS-08	Coarse Refuse	3	28,869	SW-WS	75
OS-09	Caked Refuse	1	18,869	SW-WS	75
OS-10	Sand-Lime	5	8,869	SW-WS	75
OS-11	Direct Ship	3	38,869	SW-WS	75
OS-12	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-13	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-14	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-15	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-16	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-17	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-18	Clean Coal Stockpile	3	8,869	SW-WS	75

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

s =	silt content of road surface material (%)	9
p =	number of days per year with precipitation >0.01 inch	157
M_{dry} =	surface material moisture content (%) - dry conditions	0.2

Item Number	Description		Number of wheels	Mean Vehicle Weight(tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1	Raw Trucks In	5,256,000	18	50	15	4	12	105,120	HR-WS	70
2	Sand/Lime	52,500	10	25	15	2.5	0.23	2,100	HR-WS	70
3	Mag Truck	500	18	50	15	2	0.001	10	HR-WS	70
4	Refuse out	6,132,000	6	70	15	1	10	87,600	HR-WS	70
5	Direct Ship	5,256,000	18	50	15	2	12	105,120	HR-WS	70
6										
7	Endloaders/Dozers	1,752,000	4	20	5	0.01	10	87,600	HR-WS	70
8	Pea Coal Out	1,752,000	14	25	10	2	8	70,080	HR-WS	70

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

sL =	road surface silt loading, (g/ft^2)	1
P =	number of days per year with precipitation >0.01 inch	157

Item Number	Description		Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1	Clean Coal In	1,000,000	50	0.2	2.28	20,000	HR-WS	70
2								
3								
4								
5								
6								
7								
8								

EMISSIONS SUMMARY

Name of applicant: Greenbrier Smokeless
Name of plant: Mountaineer #1 Plant

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

	Uncontrolled PM		Controlled PM	
	lb/hr	TPY	lb/hr	TPY
FUGITIVE EMISSIONS				
Stockpile Emissions	2.54	11.11	0.63	2.78
Unpaved Haulroad Emissions	1,361.77	5,965.66	408.53	1,789.70
Paved Haulroad Emissions	1.45	6.34	0.43	1.90
Fugitive Emissions Total	**1,365.75**	**5,983.10**	**409.60**	**1,794.38**
POINT SOURCE EMISSIONS				
Equipment Emissions	314.00	1,375.32	33.40	146.29
Transfer Point Emissions	31.78	88.10	8.30	24.90
Point Source Emissions Total*	**345.78**	**1,463.42**	**41.70**	**171.19**
*Note: Point Source Total Controlled PM TPY emissions is used for 45CSR14 Major Source determination (see below)				
Facility Emissions Total	**1,711.53**	**7,446.53**	**451.29**	**1,965.57**

***Facility Potential to Emit (PTE) (Baseline Emissions) = 171.19**

(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				
Stockpile Emissions	1.19	5.22	0.30	1.31
Unpaved Haulroad Emissions	393.56	1,724.11	118.07	517.23
Paved Haulroad Emissions	0.28	1.23	0.08	0.37
Fugitive Emissions Total	**395.03**	**1,730.56**	**118.45**	**518.91**
POINT SOURCE EMISSIONS				
Equipment Emissions	147.58	646.40	15.70	68.76
Transfer Point Emissions	15.03	41.67	3.92	11.78
Point Source Emissions Total*	**162.61**	**688.07**	**19.62**	**80.54**
*Note: Point Source Total Controlled PM-10 TPY emissions is used for 45CSR30 Major Source determination				
Facility Emissions Total	**557.64**	**2,418.63**	**138.07**	**599.44**

1. Emissions From CRUSHING AND SCREENING

1a. Primary Crushing

Primary Crusher ID Number	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
CR-01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CR-02	12.000	52.560	1.200	5.256	5.640	24.703	0.564	2.470
CR-03	12.000	52.560	1.200	5.256	5.640	24.703	0.564	2.470
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
TOTAL	24.000	105.120	2.400	10.512	11.280	49.406	1.128	4.941

1b. Secondary and Tertiary Crushing

Secondary & Tertiary Crusher ID	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
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
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1c. Screening

Screen ID Number	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
SS-01	70.000	306.600	7.000	30.660	32.900	144.102	3.290	14.410
SS-02	70.000	306.600	7.000	30.660	32.900	144.102	3.290	14.410
SS-03	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SS-04	60.000	262.800	6.000	26.280	28.200	123.516	2.820	12.352
SS-05	35.000	153.300	3.500	15.330	16.450	72.051	1.645	7.205
SS-06	35.000	153.300	3.500	15.330	16.450	72.051	1.645	7.205
SS-07	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SS-08	20.000	87.600	4.000	17.520	9.400	41.172	1.880	8.234
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
TOTAL	290.000	1270.200	31.000	135.780	136.300	596.994	14.570	63.817

Crushing and Screening	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TOTAL	314.000	1375.320	33.400	146.292	147.580	646.400	15.698	68.757

1. *Emissions From CRUSHING AND SCREENING (Continued)*

EMISSION FACTORS

source: Air Pollution Engineering Manual and References

(lb/ton of material throughput)

PM	
Primary Crushing	0.02
Tertiary Crushing	0.06
Screening	0.1

PM-10	
Primary Crushing	0.0094
Tertiary Crushing	0.0282
Screening	0.047

2. Emissions From TRANSFER POINTS

Transfer Point ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TP01	0.551	2.415	0.110	0.483	0.261	1.142	0.052	0.228
TP02	0.551	2.415	0.055	0.242	0.261	1.142	0.026	0.114
TP03	0.551	2.415	0.055	0.242	0.261	1.142	0.026	0.114
TP04	0.055	0.242	0.011	0.048	0.026	0.114	0.005	0.023
TP05	0.444	1.946	0.089	0.389	0.210	0.921	0.042	0.184
TP06	0.444	1.946	0.044	0.195	0.210	0.921	0.021	0.092
TP07	0.444	1.946	0.044	0.195	0.210	0.921	0.021	0.092
TP08	0.444	1.946	0.044	0.195	0.210	0.921	0.021	0.092
TP09	0.044	0.195	0.009	0.039	0.021	0.092	0.004	0.018
TP10	0.044	0.195	0.044	0.195	0.021	0.092	0.021	0.092
TP11	0.044	0.195	0.044	0.195	0.021	0.092	0.021	0.092
TP12	0.044	0.195	0.009	0.039	0.021	0.092	0.004	0.018
TP13	0.044	0.195	0.009	0.039	0.021	0.092	0.004	0.018
TP14	0.551	2.415	0.276	1.208	0.261	1.142	0.130	0.571
TP15	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP16	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP17	0.061	0.267	0.061	0.267	0.029	0.126	0.029	0.126
TP18	0.061	0.267	0.061	0.267	0.029	0.126	0.029	0.126
TP19	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP20	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP21	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP22	0.610	2.672	0.305	1.336	0.289	1.264	0.144	0.632
TP23	0.551	2.415	0.110	0.483	0.261	1.142	0.052	0.228
TP24	0.712	3.117	0.142	0.623	0.337	1.474	0.067	0.295
TP25	0.276	1.208	0.028	0.121	0.130	0.571	0.013	0.057
TP26	0.135	0.591	0.013	0.059	0.064	0.279	0.006	0.028
TP27	0.276	1.208	0.028	0.121	0.130	0.571	0.013	0.057
TP28	0.135	0.591	0.013	0.059	0.064	0.279	0.006	0.028
TP29	0.317	1.390	0.063	0.278	0.150	0.658	0.030	0.132
TP30	0.317	1.390	0.159	0.695	0.150	0.658	0.075	0.329
TP31	0.508	1.390	0.102	0.278	0.240	0.658	0.048	0.132
TP32	0.508	1.390	0.254	0.695	0.240	0.658	0.120	0.329
TP33	0.508	1.390	0.102	0.278	0.240	0.658	0.048	0.132
TP34	0.508	1.390	0.254	0.695	0.240	0.658	0.120	0.329
TP35	0.072	0.317	0.072	0.317	0.034	0.150	0.034	0.150
TP36	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP37	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP38	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP39	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP40	2.539	1.708	0.635	0.427	1.201	0.808	0.300	0.202
TP41	0.193	0.844	0.039	0.169	0.091	0.399	0.018	0.080
TP42	0.012	0.055	0.006	0.027	0.006	0.026	0.003	0.013
TP43	0.012	0.055	0.006	0.027	0.006	0.026	0.003	0.013
TP44	0.012	0.055	0.006	0.027	0.006	0.026	0.003	0.013
TP45	0.193	0.844	0.193	0.844	0.091	0.399	0.091	0.399
TP46	0.193	0.844	0.193	0.844	0.091	0.399	0.091	0.399
TP47	0.193	0.844	0.193	0.844	0.091	0.399	0.091	0.399
TP48	0.044	0.191	0.009	0.038	0.021	0.090	0.004	0.018
TP49	0.044	0.191	0.044	0.191	0.021	0.090	0.021	0.090
TP50	0.044	0.191	0.044	0.191	0.021	0.090	0.021	0.090
TP-51	0.044	0.191	0.044	0.191	0.021	0.090	0.021	0.090
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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
TP-52	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP-53	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP-54	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP-55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TP-56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
TP-57	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP-58	0.610	2.672	0.610	2.672	0.289	1.264	0.289	1.264
TP-59	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
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
TP60	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
TP61	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
TP62	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
TP63	0.079	0.230	0.008	0.023	0.037	0.109	0.004	0.011
TP64	0.079	0.230	0.079	0.230	0.037	0.109	0.037	0.109
TP65	0.079	0.230	0.008	0.023	0.037	0.109	0.004	0.011
TP66	0.079	0.230	0.079	0.230	0.037	0.109	0.037	0.109
TP67	0.079	0.230	0.008	0.023	0.037	0.109	0.004	0.011
TP68	0.079	0.230	0.079	0.230	0.037	0.109	0.037	0.109
TP-69	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
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
TP-70	0.158	0.690	0.016	0.069	0.075	0.326	0.007	0.033
TP-71	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-72	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-73	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-74	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-75	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-76	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-77	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-78	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
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
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
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	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	31.781	88.102	8.296	24.903	15.032	41.670	3.924	11.778

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] = 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= $I$88*(0.0032)*((((Inputs!$I$72)/5)^1.3)/(((Inputs!G78+0.000000001)/2)^1.4)
=lb/ton

For PM-10 E= $J$88*(0.0032)*((((Inputs!$I$72)/5)^1.3)/(((Inputs!G78+0.000000001)/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-01	0.568	2.490	0.142	0.622	0.267	1.170	0.067	0.293
OS-02	0.568	2.490	0.142	0.622	0.267	1.170	0.067	0.293
OS-03	0.001	0.003	0.000	0.001	0.000	0.001	0.000	0.000
OS-04	0.001	0.003	0.000	0.001	0.000	0.001	0.000	0.000
OS-05	0.341	1.494	0.085	0.373	0.160	0.702	0.040	0.176
OS-06	0.341	1.494	0.085	0.373	0.160	0.702	0.040	0.176
OS-07	0.341	1.494	0.085	0.373	0.160	0.702	0.040	0.176
OS-08	0.111	0.485	0.028	0.121	0.052	0.228	0.013	0.057
OS-09	0.024	0.106	0.006	0.026	0.011	0.050	0.003	0.012
OS-10	0.057	0.248	0.014	0.062	0.027	0.117	0.007	0.029
OS-11	0.149	0.653	0.037	0.163	0.070	0.307	0.018	0.077
OS-12	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-13	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-14	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-15	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-16	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-17	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-18	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
TOTALS	2.536	11.109	0.634	2.777	1.192	5.221	0.298	1.305

Source:
Air Pollution Engineering Manual

Storage Pile Wind Erosion (Active Storage)

E = 1.7*[s/1.5]*[(365-p)/235]*[f/15] = (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)*((Inputs!F147)/1.5)*((365-Inputs!I139)/235)*((Inputs!I140)/15)

For PM-10 E=0.47*(1.7)*((Inputs!F147)/1.5)*((365-Inputs!I139)/235)*((Inputs!I140)/15)

For lb/hr [lb/day/acre]*[day/24hr]*[base area of pile (acres)] = lb/hr

For Ton/yr [lb/day/acre]*[365day/yr]*[Ton/2000lb]*[base area of pile (acres)] = 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	682.04	2987.35	204.61	896.21	197.11	863.36	59.13	259.01
2	5.98	27.30	1.79	8.19	1.73	7.89	0.52	2.37
3	0.03	0.14	0.01	0.04	0.01	0.04	0.00	0.01
4	165.32	724.11	49.60	217.23	47.78	209.27	14.33	62.78
5	341.02	1493.68	102.31	448.10	98.56	431.68	29.57	129.50
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.94	4.12	0.28	1.24	0.27	1.19	0.08	0.36
8	166.43	728.96	49.93	218.69	48.10	210.67	14.43	63.20
TOTALS	1361.77	5965.66	408.53	1789.70	393.56	1724.11	118.07	517.23

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

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

E= k*((s/12)^a)*((W/3)^b) =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= (($I$35)*(((Inputs!$I$163)/12)^($I$36))*(((Inputs!H171)/3)^$I$37))

For PM-10 E= (($J$35)*(((Inputs!$I$163)/12)^($J$36))*(((Inputs!H171)/3)^$J$37))

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)

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	1.45	6.34	0.43	1.90	0.28	1.23	0.08	0.37
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	1.45	6.34	0.43	1.90	0.28	1.23	0.08	0.37

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) = 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)	1	
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	0.0047	0.0047

Emission Factors

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

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

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

NO ADVERTISEMENT REQUIRED FOR CLASS I ADMINISTRATIVE UPDATE

ATTACHMENT K

ELECTRONIC SUBMITTAL DISK LOCATED IN ORIGINAL COPY ONLY

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)

G 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

G I certify that I am a General Partner

FOR A LIMITED LIABILITY COMPANY

[redacted] I certify that I am a General Partner or General Manager

FOR AN ASSOCIATION

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

FOR A JOINT VENTURE

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

FOR A SOLE PROPRIETORSHIP

G I certify that I am the Owner and Proprietor

G

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 Chief 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 _____ 9/15/16
(please use blue ink) Responsible Official Date

Name & Title ROBERT L. CLINE, AUTHORIZED REPRESENTATIVE
(please print or type)

Signature _____
(please use blue ink) Authorized Representative (if applicable) Date

Applicant's Name: GREENBRIER SMOKELESS COAL MINING, LLC

Phone 304-392-1000

Email: rcline@gscoal.com and llavender@gscoal.com (contact)

SECTION III. ATTACHMENTS AND SUPPORTING DOCUMENTS

PLEASE CHECK ALL ATTACHMENTS INCLUDED WITH THIS PERMIT APPLICATION:

Please See the appropriate reference document for an explanation of the attachments listed below.

- ■ ATTACHMENT A : CURRENT BUSINESS CERTIFICATE
- ■ ATTACHMENT B: PROCESS DESCRIPTION
- ■ ATTACHMENT C: DESCRIPTION OF FUGITIVE EMISSIONS
- ■ ATTACHMENT D: PROCESS FLOW DIAGRAM
- ■ ATTACHMENT E: PLOT PLAN
- ■ ATTACHMENT F: AREA MAP
- ■ ATTACHMENT G: AFFECTED SOURCE SHEETS
- ■ ATTACHMENT H: BAGHOUSE AIR POLLUTION CONTROL DEVICE SHEET
- ■ ATTACHMENT I: EMISSIONS CALCULATIONS
- ☐ ATTACHMENT J: CLASS I LEGAL ADVERTISEMENT – NOT REQUIRED
- ■ ATTACHMENT K: ELECTRONIC SUBMITTAL DISKETTE
- ■ CERTIFICATION OF INFORMATION
- ☐ APPLICATION FEE – NOT REQUIRED

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. PLEASE DO NOT FAX PERMIT APPLICATIONS. FOR QUESTIONS REGARDING APPLICATIONS OR WEST VIRGINIA AIR POLLUTION RULES AND REGULATIONS PLEASE CALL (304) 926-3727.

ENGINE DATA SHEET

Source Identification Number[1]		Gen Set - 1		Gen Set - 2		Gen Set - 3	
Engine Manufacturer and Model		Generac OHVI V-Twin		Cummins QSX15-G9		Caterpillar FN02046	
Manufacturer's Rated bhp/rpm		32		755		2628	
Source Status[2]		ES		ES		ES	
Date Installed/Modified/Removed (Month/Year)[3]		June 2009		8/2015		Nov 2009	
Engine Manufactured/Reconstruction Date[4]		2009		2013		2009	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No)[5]		yes		Yes		Yes	
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[6]		No		N/A		N/A	
Engine, Fuel and Combustion Data	Engine Type	4 Stroke		4 Stroke		4 Stroke	
	APCD Type[8]	N/A		N/A		N/A	
	Fuel Type[9]	Propane		No 2 Fuel Oil		No 2 Fuel Oil	
	H_2S (gr/100 scf)	N/A		N/A		N/A	
	Operating bhp/rpm	N/A		N/A		N/A	
	BSFC (Btu/bhp-hr)	N/A		N/A		N/A	
	Fuel throughput (ft^3/hr)	2.57 GPH		13.9		13.9	
	Fuel throughput ($MMft^3$/yr)	1285 GPY		6950		6950	
	Operation (hrs/yr)	500		500		500	
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
	NO_X	0.9920	0.248	23.4050	5.851	81.4680	20.367
	CO	0.2138	0.053	5.0434	1.261	17.5550	4.389
	VOC	0.0790	0.020	1.8649	0.466	6.4912	1.623
	SO_2	0.0656	0.016	1.5478	0.387	5.3874	1.347
	PM_{10}	0.0704	0.018	1.6610	0.415	5.7816	1.445
	Formaldehyde	0.00225	0.000562	0.00221	0.000553	0.00221	0.000553

1. Enter the appropriate Source Identification Number for each reciprocating internal combustion compressor/generator engine located at the facility. Multiple compressor engines should be designated CE-1, CE-2, CE-3 etc. Emergency Generator engines should be designated EG-1, EG-2, EG-3 etc. If more than three (3) engines exist, please use additional sheets.

2. Enter the Source Status using the following codes:

   NS Construction of New Source (installation) ES Existing Source

MS Modification of Existing Source RS Removal of Source

3. Enter the date (or anticipated date) of the engine's installation (construction of source), modification or removal.

4. Enter the date that the engine was manufactured, modified or reconstructed.

5. Is the engine a certified stationary compression ignition internal combustion engine according to 40CFR60 Subpart IIII. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4210 as appropriate.

   Provide a manufacturer's data sheet for all engines being registered.

6. Is the engine a certified stationary spark ignition internal combustion engine according to 40CFR60 Subpart JJJJ. If so, the engine and control device must be operated and maintained in accordance with the manufacturer's emission-related written instructions. You must keep records of conducted maintenance to demonstrate compliance, but no performance testing is required. If the certified engine is not operated and maintained in accordance with the manufacturer's emission-related written instructions, the engine will be considered a non-certified engine and you must demonstrate compliance according to 40CFR§60.4243a(2)(i) through (iii), as appropriate.

   Provide a manufacturer's data sheet for all engines being registered.

7. Enter the Engine Type designation(s) using the following codes:

LB2S	Lean Burn Two Stroke	RB4S	Rich Burn Four Stroke
LB4S	Lean Burn Four Stroke		

8. Enter the Air Pollution Control Device (APCD) type designation(s) using the following codes:

A/F	Air/Fuel Ratio	IR	Ignition Retard
HEIS	High Energy Ignition System	SIPC	Screw-in Precombustion Chambers
PSC	Prestratified Charge	LEC	Low Emission Combustion
NSCR	Rich Burn & Non-Selective Catalytic Reduction	SCR	Lean Burn & Selective Catalytic Reduction

9. Enter the Fuel Type using the following codes:

PQ	Pipeline Quality Natural Gas	RG	Raw Natural Gas
2FO	#2 Fuel Oil	LPG	Liquid Propane Gas

10. Enter the Potential Emissions Data Reference designation using the following codes. Attach all referenced data to this *Compressor/Generator Data Sheet(s)*.

MD	Manufacturer's Data	AP	AP-42	
GR	GRI-HAPCalc™	OT	Other _____	(please list)

11. Enter each engine's Potential to Emit (PTE) for the listed regulated pollutants in pounds per hour and tons per year. PTE shall be calculated at manufacturer's rated brake horsepower and may reflect reduction efficiencies of listed Air Pollution Control Devices. Emergency generator engines may use 500 hours of operation when calculating PTE. PTE data from this data sheet shall be incorporated in the *Emissions Summary Sheet*.

STORAGE TANK DATA SHEET

Source ID #[1]	Status[2]	Content[3]	Volume[4]	Dia[5]	Throughput[6]	Orientation[7]	Liquid Height[8]
T1	Exist	Diesel	1,000	4	8,000	HORZ	
T2	Exist	Diesel	500	4	3,000	HORZ	
T3	Exist	Nalco Antifreeze	5,000	6	5,000	HORZ	
T4	Exist	Nalco Antifreeze	5,000	6	5,000	HORZ	
T5	Exist	Nalco Antifreeze	5,500	6	5,000	HORZ	
T6	Exist	Nalco Antifreeze	5,500	6	5,000	HORZ	
T7	Exist	Diesel	3,500	5.5	12,000	HORZ	
T8	Exist	Kerosene	500	4	2,000	HORZ	
T9	Exist	Diesel	2,000	6	8,000	HORZ	
T10	Exist	Diesel	500	4	2,000	HORZ	
T11	Exist	Diesel	500	4	2,000	HORZ	
T12	Exist	Plant Wash Fluid	5,000	6	30,000	HORZ	
T13	Exist	Plant Wash Fluid	5,000	6	30,000	HORZ	

1. Enter the appropriate Source Identification Numbers (Source ID #) for each storage tank located at the facility. Tanks should be designated T01, T02, T03, etc.
2. Enter storage tank Status using the following:

   EXIST Existing Equipment NEW Installation of New Equipment
   REM Equipment Removed
3. Enter storage tank content such as condensate, pipeline liquids, glycol (DEG or TEG), lube oil, etc.
4. Enter storage tank volume in gallons.
5. Enter storage tank diameter in feet.
6. Enter storage tank throughput in gallons per year.
7. Enter storage tank orientation using the following:

   VERT Vertical Tank HORZ Horizontal Tank
8. Enter storage tank average liquid height in feet.

EMISSION SUMMARY SHEET FOR CRITERIA POLLUTANTS

						Registration Number (Agency Use) G10-D				
	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
Source ID No.	NO_X	CO	VOC	SO_2	PM_{10}	NO_X	CO	VOC	SO_2	PM_{10}
Transfer Points					3.98					12.03
Crush/Screen					18.52					81.11
Stockpiles					0.30					1.31
Haulroads					118.15					517.6
Mag Bin					0.69					0.02
				Total	141.64				Total	612.07
Generator 1	0.9920	0.2138	0.079	0.0658	0.0704	0.248	0.053	0.020	0.016	0.018
Generator 2	23.405	5.0434	1.8649	1.5478	1.6610	5.851	1.261	0.466	0.387	0.415
Generator 3	81.4680	17.5550	6.4912	5.3874	5.7816	20.367	4.389	1.623	1.347	1.445
Generator 4	5.3785	1.1590	0.4285	0.3557	0.3817	1.345	0.290	0.107	0.089	0.095

**NOTE – GENERATOR EMISSIONS ARE UNCONTROLLED

EMISSION SUMMARY SHEET FOR HAZARDOUS/TOXIC POLLUTANTS

Registration Number (Agency Use) G10-D

	Potential Emissions (lbs/hr)						Potential Emissions (tons/yr)					
Source ID No.	Benzene	Acetaldehyde	Toluene	Xylenes	n-Hexane	Formaldehyde	Benzene	Acetaldehyde	Toluene	Xylenes	n-Hexane	Formaldehyde
Transfer Points												
Crush/Screen												
Stockpiles												
Haulroads												
Mag Bin												
Gen Set - 1	0.00178	0.00146	0.00078	0.00054		0.00225	0.000444	0.000365	0.000195	0.000136		0.000563
Gen Set - 2	0.00175	0.00144	0.00077	0.00053		0.00221	0.000437	0.00036	0.000192	0.000134		0.000553
Gen Set - 3	0.00175	0.00144	0.00077	0.00053		0.00221	0.000437	0.00036	0.000192	0.000134		0.000553
Gen Set - 4	0.00175	0.00144	0.00077	0.00053		0.00221	0.000437	0.00036	0.000192	0.000134		0.000553
Total	0.00525	0.00432	0.00231	0.00159	NA	0.00663	0.001311	0.00108	0.00576	0.000402	NA	0.001659

ENGINE DATA SHEET

Source Identification Number[1]		Gen Set - 4					
Engine Manufacturer and Model		Caterpillar C4.4					
Manufacturer's Rated bhp/rpm		173.5					
Source Status[2]		ES					
Date Installed/Modified/Removed (Month/Year)[3]		8/2015					
Engine Manufactured/Reconstruction Date[4]		2009					
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart IIII? (Yes or No)[5]		Yes					
Is this a Certified Stationary Spark Ignition Engine according to 40CFR60 Subpart JJJJ? (Yes or No)[6]		No					
Engine, Fuel and Combustion Data	Engine Type	4 Stroke					
	APCD Type[8]	N/A					
	Fuel Type[9]	No 2 Fuel Oil					
	H_2S (gr/100 scf)	N/A					
	Operating bhp/rpm	N/A					
	BSFC (Btu/bhp-hr)	N/A					
	Fuel throughput (ft^3/hr)	13.9					
	Fuel throughput ($MMft^3$/yr)	6950					
	Operation (hrs/yr)	500					
Reference[10]	Potential Emissions[11]	lbs/hr	tons/yr	lbs/hr	tons/yr	lbs/hr	tons/yr
	NO_X	5.3785	1.345				
	CO	1.1590	0.290				
	VOC	0.4285	0.107				
	SO_2	0.3557	0.089				
	PM_{10}	0.3817	0.095				
	Formaldehyde	0.00221	0.000553				

GREENBRIER SMOKELESS COAL MINING **Dan Roberts**
Coal Preparation Plant - CAT C4.4 ACERT GENERATOR ID: 025-00068

TERIA POLLUTANTS

AP-42 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-1 for Diesel Fuel

	55	**kW**
Diesel Fuel Engine	**173.5**	**hp**
Max. Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)	**500**	**hrs/year**
Heating Value for diesel	**128700**	**Btu/gal**

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

Pollutant		Emission Factor (lb/hp-hr)	Emission Factor (lb/MMBtu)	Rating	lb/hour	TPY
NOx	AP42	0.03100	4.41	D	5.3785	1.345
CO	AP42	0.00668	0.95	D	1.1590	0.290
SOx	AP42	0.00205	0.29	D	0.3557	0.089
PM/PM10	AP42	0.00220	0.31	D	0.3817	0.095
TOC	AP42	0.00247	0.35	D	0.4285	0.107

HAZARDOUS AIR POLLUTANTS

42 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-2
40CSR30 Table 45-30A Hazardous Air Pollutants

Diesel Fuel Engine	**173.5**	**hp**	
aximum Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)	**500**	**hours/year**	
cation, based on EPA WebFIRE/AP-42 3.4-1 assumptions on diesel	**19300**	**Btu/lb**	
	7.1	**lb/gal**	
Heating Value for diesel	**137030**	**BTU/US gal**	
Maximum diesel usage at 2200 rpm	**13.9**	**gal/hour**	

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

CAS NO.		**Emission Factor (lb/MMBtu)**	**Rating**	**lb/hour**	**TPY**
71-43-2	Benzene	0.000933	E	0.00178	0.000444
108-88-3	Toluene	0.000409	E	0.00078	0.000195
	Xylenes	0.000285	E	0.00054	0.000136
	1,3-Butadiene	0.0000391	E	7.4E-05	1.86E-05
50-00-0	Formaldehyde	0.00118	E	0.00225	0.000562
	Acetaldehyde	0.000767	E	0.00146	0.000365
	Acrolein	0.0000925	E	0.00018	4.4E-05
91-20-3	Naphthalene	0.0000848	E	0.00016	4.04E-05
	Burning diesel fuel:		***Total HAPs***	**0.00722**	**0.001805**
				lb/hour	**TPY**

GREENBRIER SMOKELESS COAL MINING **Dan Roberts**
Coal Preparation Plant - CAT FN02046 GENERATOR ID: 025-00068

TERIA POLLUTANTS

AP-42 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-1 for Diesel Fuel

	500	**kW**
Diesel Fuel Engine	**2628**	**hp**
Max. Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)	**500**	**hrs/year**
Heating Value for diesel	**128700**	**Btu/gal**

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

Pollutant		Emission Factor (lb/hp-hr)	Emission Factor (lb/MMBtu)	Rating	lb/hour	TPY
NOx	AP42	0.03100	4.41	D	81.4680	20.367
CO	AP42	0.00668	0.95	D	17.5550	4.389
SOx	AP42	0.00205	0.29	D	5.3874	1.347
PM/PM10	AP42	0.00220	0.31	D	5.7816	1.445
TOC	AP42	0.00247	0.35	D	6.4912	1.623

HAZARDOUS AIR POLLUTANTS

/ 42 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-2
4 SR30 Table 45-30A Hazardous Air Pollutants

Diesel Fuel Engine	**2628**	**hp**
aximum Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)	**500**	**hours/year**
cation, based on EPA WebFIRE/AP-42 3.4-1 assumptions on diesel	**19000**	**Btu/lb**
	7.1	**lb/gal**
Heating Value for diesel	**134900**	**BTU/US gal**
Maximum diesel usage at 2200 rpm	**13.9**	**gal/hour**

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

CAS NO.		Emission Factor (lb/MMBtu)	Rating	lb/hour	TPY
71-43-2	Benzene	0.000933	E	0.00175	0.000437
108-88-3	Toluene	0.000409	E	0.00077	0.000192
	Xylenes	0.000285	E	0.00053	0.000134
	1,3-Butadiene	0.0000391	E	7.3E-05	1.83E-05
50-00-0	Formaldehyde	0.00118	E	0.00221	0.000553
	Acetaldehyde	0.000767	E	0.00144	0.00036
	Acrolein	0.0000925	E	0.00017	4.34E-05
91-20-3	Naphthalene	0.0000848	E	0.00016	3.98E-05
	Burning diesel fuel:		***Total HAPs***	**0.00711**	**0.001777**
				lb/hour	**TPY**

GREENBRIER SMOKELESS COAL MINING **Dan Roberts**
Coal Preparation Plant - CUMMINS GENERATOR ID: 025-00068

TERIA POLLUTANTS

AP-42 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-1 for Diesel Fuel

	500	**kW**
Diesel Fuel Engine	**755**	**hp**
Max. Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)	**500**	**hrs/year**
Heating Value for diesel	**128700**	**Btu/gal**

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

Pollutant		**Emission Factor (lb/hp-hr)**	**Emission Factor (lb/MMBtu)**	**Rating**	**lb/hour**	**TPY**
NOx	AP42	0.03100	4.41	D	23.4050	5.851
CO	AP42	0.00668	0.95	D	5.0434	1.261
SOx	AP42	0.00205	0.29	D	1.5478	0.387
PM/PM10	AP42	0.00220	0.31	D	1.6610	0.415
TOC	AP42	0.00247	0.35	D	1.8649	0.466

HAZARDOUS AIR POLLUTANTS

/ 42 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-2
4 SR30 Table 45-30A Hazardous Air Pollutants

Diesel Fuel Engine	**755**	**hp**	
aximum Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)		**500**	**hours/year**
cation, based on EPA WebFIRE/AP-42 3.4-1 assumptions on diesel		**19300**	**Btu/lb**
		7.1	**lb/gal**
Heating Value for diesel		**137030**	**BTU/US gal**
Maximum diesel usage at 755 rpm		**13.9**	**gal/hour**

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

CAS NO.		**Emission Factor (lb/MMBtu)**	**Rating**	**lb/hour**	**TPY**
71-43-2	Benzene	0.000933	E	0.00178	0.000444
108-88-3	Toluene	0.000409	E	0.00078	0.000195
	Xylenes	0.000285	E	0.00054	0.000136
	1,3-Butadiene	0.0000391	E	7.4E-05	1.86E-05
50-00-0	Formaldehyde	0.00118	E	0.00225	0.000562
	Acetaldehyde	0.000767	E	0.00146	0.000365
	Acrolein	0.0000925	E	0.00018	4.4E-05
91-20-3	Naphthalene	0.0000848	E	0.00016	4.04E-05
	Burning diesel fuel:		***Total HAPs***	**0.00722**	**0.001805**
				lb/hour	**TPY**

GREENBRIER SMOKELESS COAL MINING **Dan Roberts**
Coal Preparation Plant - CUMMINS GENERATOR ID: 025-00068

TERIA POLLUTANTS

AP-42 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-1 for Diesel Fuel

	6	**kW**
Diesel Fuel Engine	**32**	**hp**
Max. Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)	**500**	**hrs/year**
Heating Value for diesel	**128700**	**Btu/gal**

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

Pollutant		Emission Factor (lb/hp-hr)	Emission Factor (lb/MMBtu)	Rating	lb/hour	TPY
NOx	AP42	0.03100	4.41	D	0.9920	0.248
CO	AP42	0.00668	0.95	D	0.2138	0.053
SOx	AP42	0.00205	0.29	D	0.0656	0.016
PM/PM10	AP42	0.00220	0.31	D	0.0704	0.018
TOC	AP42	0.00247	0.35	D	0.0790	0.020

HAZARDOUS AIR POLLUTANTS

/ 12 5th Edition Section 3.3 Gasoline and Diesel Industrial Engines (10/96) - Table 3.3-2
45CSR30 Table 45-30A Hazardous Air Pollutants

Diesel Fuel Engine	**32**	**hp**	
aximum Hours of Operation (5 hrs/day, 5 days/week, 20 weeks/year)	**500**	**hours/year**	
cation, based on EPA WebFIRE/AP-42 3.4-1 assumptions on diesel	**19300**	**Btu/lb**	
	7.1	**lb/gal**	
Heating Value for diesel	**137030**	**BTU/US gal**	
Maximum diesel usage at 32 rpm	**13.9**	**gal/hour**	

E (hourly) = Emission Factor (lb/hp-hr) * Horse Power (hp)
E (annual) = Emission Factor (lb/hp-hr) * Horse Power (hp) * Maximum Hours of Operation * 1 ton per 2000 lb

CAS NO.		Emission Factor (lb/MMBtu)	Rating	lb/hour	TPY
71-43-2	Benzene	0.000933	E	0.00178	0.000444
108-88-3	Toluene	0.000409	E	0.00078	0.000195
	Xylenes	0.000285	E	0.00054	0.000136
	1,3-Butadiene	0.0000391	E	7.4E-05	1.86E-05
50-00-0	Formaldehyde	0.00118	E	0.00225	0.000562
	Acetaldehyde	0.000767	E	0.00146	0.000365
	Acrolein	0.0000925	E	0.00018	4.4E-05
91-20-3	Naphthalene	0.0000848	E	0.00016	4.04E-05
	Burning diesel fuel:		***Total HAPs***	**0.00722**	**0.001805**
				lb/hour	**TPY**

INPUTS

Include all information for each emission source and transfer point as listed in the permit application.

Name of applicant: Greenbrier Smokeless
Name of plant: Mountaineer #1 Plant
Aug-15

1. CRUSHING AND SCREENING (including all primary and secondary crushers and screens)

1a. PRIMARY CRUSHING

Primary Crusher ID Number	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %
CR-01	RC Crusher - Out of service retired	0	0	0	0
CR-02	DR Raw Coal Crusher	600	5,256,000	FW	90
CR-03	DR Direct Ship	600	5,256,000	FW	90

1b. SECONDARY AND TERTIARY CRUSHING

Secondary & Tertiary Crusher ID	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %

1c. SCREENING

Screen ID	Description	Maximum Material Processing Capacity TPH	Maximum Material Processing Capacity TPY	Control Device ID Number	Control Efficiency %
SS-01	RC SCREEN	700	6,132,000	FW	90
SS-02	RC SCREEN	700	6,132,000	FW	90
SS-03	RETIRED - NOT IN OPERATION	0	0		0
SS-04	RC SCREEN	600	5,256,000	FW	90
SS-05	IN PLANT SCREEN	350	3,066,000	FW	90
SS-06	IN PLANT SCREEN	350	3,066,000	FW	90
SS-07	DS SCREEN	600	5,256,000	FW	90
SS-08	Portable Pea Coal Screen	200	1,752,000	PW	80

2. TRANSFER POINTS (including all conveyor transfer points, equipment transfer points etc.)

		PM	PM-10
k =	Particle Size Multiplier (dimensionless)	0.74	0.35
U =	Mean Wind Speed (mph)	7	

Transfer Point ID No.	Transfer Point Description Include ID Numbers of all conveyors, crushers, screens, stockpiles, etc. involved		Material Moisture Content %	Maximum Transfer Rate TPH	Maximum Transfer Rate TPY	Control Device ID Number	Control Efficiency %	
TP01	ROM To BC-01	#1 Deep Mine	6	700	6,132,000	TC-FE	80	
TP02	BC-01 to SS-01		6	700	6,132,000	TC-FW	90	
TP03	SS-01 to BC-02		6	700	6,132,000	TC-FW	90	
TP04	SS-01 to Reject Belt BC-03		6	70	613,200	TC-FE	80	
TP05	ROM to BC-15	#3 deep Mine	7	700	6,132,000	TC-FE	80	
TP06	BC-15 to BC-16		7	700	6,132,000	TC-FW	90	
TP07	BC-16 to SS-02		7	700	6,132,000	TC-FW	90	
TP08	SS-02 to BC-02		7	700	6,132,000	TC-FW	90	
TP09	SS-02 to Reject Belt BC-03		7	70	613,200	TC-FE	80	
TP10	BC-03 to OS-03		7	70	613,200	TC-MDH	0	
TP11	OS-03 to OS-08		7	70	613,200	LO-MDH	0	
TP12	BC-03 to BC-14	Proposed 2010	7	70	613,200	TC-FE	80	BC-14 not constructed
TP13	BC-14 to BC-12	Proposed 2010	7	70	613,200	TC-FE	80	
TP14	BC-02 to OS-01		6	700	6,132,000	TC-PE	50	
TP15	Truck to BS-02	Trucked in	5	600	5,256,000	UD-PW	80	
TP16	BS-02 to SS-04		5	600	5,256,000	TC-FW	90	
TP17	SS-04 to OS-04		5	60	525,600	TC-MDH	0	
TP18	OS-04 to OS-08		5	60	525,600	LO-MDH	0	
TP19	SS-04 to BC-06		5	600	5,256,000	TC-FW	90	
TP20	SS-04 to CR-02		5	600	5,256,000	TC-FW	90	
TP21	CR-02 to BC-06		5	600	5,256,000	TC-FW	90	
TP22	BC-06 to OS-02		5	600	5,256,000	TC-PE	50	
TP23	OS-01 to BC-07	Plant Feed	6	700	6,132,000	LO-UC	80	
TP24	OS-02 to BC-07		5	700	6,132,000	LO-UC	80	
TP25	BC-07 to SS-05		6	350	3,066,000	TC-FW	90	
TP26	SS-05 to Wet Wash		10	350	3,066,000	TC-FW	90	
TP27	BC-07 to SS-06		6	350	3,066,000	TC-FW	90	
TP28	SS-06 to Wet Wash		10	350	3,066,000	TC-FW	90	
TP29	Plant to BC-08	Clean Coal	7	500	4,380,000	TC-FE	80	
TP30	BC-08 to OS-05		7	500	4,380,000	TC-PE	50	
TP31	OS-05 to BC-09		7	800	4,380,000	LO-UC	80	
TP32	BC-09 to OS-06		7	800	4,380,000	TC-PE	50	
TP33	BC-09 to BC-10		7	800	4,380,000	TC-FE	80	
TP34	BC-10 to OS-07		7	800	4,380,000	TC-PE	50	
TP35	Truck to CC Stockpiles		7	114	1,000,000	UL-MDH	0	
TP36	OS-06 to BC-11		7	4,000	5,380,000	LO-UC	80	
TP37	OS-07 to BC-11		7	4,000	5,380,000	LO-UC	80	
TP38	BC-11 to Surge Bin BS-05		7	4,000	5,380,000	TC-FE	80	
TP39	BS-05 to Loadout Bin BS-06		7	4,000	5,380,000	TC-FE	80	
TP40	BS-06 to Railcar		7	4,000	5,380,000	LR-TC	75	
TP41	Plant to BC-12	Coarse Refuse	10	500	4,380,000	TC-FE	80	
TP42	Truck to OS-10	Sand/lime	3	6	52,500	TC-PE	50	
TP43	OS-10 to BS-03	Sand/lime	3	6	52,500	TC-PE	50	
TP44	BS-03 to BC-12	Sand/lime	3	6	52,500	TC-PE	50	
TP45	BC-12 to OS-08		10	500	4,380,000	TC-MDH	0	
TP46	OS-08 to Truck		10	500	4,380,000	LO-MDH	0	
TP47	Truck to Disposal Area		10	500	4,380,000	UL-MDH	0	
TP48	Plant to BC-13	Fine caked refus	15	200	1,752,000	TC-FE	80	
TP49	BC-13 to OS-09		15	200	1,752,000	TC-MDH	0	
TP50	OS-09 to Truck		15	200	1,752,000	LO-MDH	0	
TP-51	Truck to Disposal Area		15	200	1,752,000	UL-MDH	0	
	JANUARY 2014 MODIFICATION							
TP-52	Truck to BS-07	Direct Ship	5	600	5,256,000	UD-PW	80	
TP-53	BS-07 to BC-17	Direct Ship	5	600	5,256,000	TC-FE	80	
TP-54	BC-17 to SS-07	Direct Ship	5	600	5,256,000	TC-FE	80	
TP-55	SS-07 to BC-18	Direct Ship	5	600	5,256,000	TC-FW	90	Screen Not constructed
TP-56	SS-07 to CR-03	Direct Ship	5	600	5,256,000	TC-FW	90	at this time

TP-57	CR-03 to BC-18	Direct Ship	5	600	5,256,000	TC-FW	90
TP-58	BC-18 to OS-11	Direct Ship	5	600	5,256,000	TC-MDH	0
TP-59	OS-11 to BC-09	Direct Ship	5	600	5,256,000	LO-UC	80
TP60	Stockpile to BS-08	Pea Coal	6	200	1,752,000	TC-PW	80
TP61	BS-08 to BC-19	Pea Coal	6	200	1,752,000	TC-FE	80
TP62	BC-19 to SS-08	Pea Coal	6	200	1,752,000	TC-PW	80
TP63	SS-08 to BC-20	Pea Coal	6	100	584,000	TC-FW	90
TP64	BC-20 to OS-12	Pea Coal	6	100	584,000	TC-MDH	0
TP65	SS-08 to BC-21	Pea Coal	6	100	584,000	TC-FW	90
TP66	BC-21 to OS-13	Pea Coal	6	100	584,000	TC-MDH	0
TP67	SS-08 to BC-22	Pea Coal	6	100	584,000	TC-FW	90
TP68	BC-22 to OS-14	Pea Coal	6	100	584,000	TC-MDH	0
TP-69	All stockpiles to BC-09	Pea Coal	6	200	1,752,000	LO-UC	80
	Modification April 2015:						
TP-70	Plant to BC-23	Pea Coal	6	200	1,752,000	TC-FW	90
TP-71	BC-23 to OS-15	Pea Coal	6	50	438,000	TC-MDH	0
TP-72	OS-15 to Truck	Pea Coal	6	50	438,000	LO-MDH	0
TP-73	BC-23 to OS-16	Pea Coal	6	50	438,000	TC-MDH	0
TP-74	OS-16 to Truck	Pea Coal	6	50	438,000	LO-MDH	0
TP-75	BC-23 to OS-17	Pea Coal	6	50	438,000	TC-MDH	0
TP-76	OS-17 to Truck	Pea Coal	6	50	438,000	LO-MDH	0
TP-77	BC-23 to OS-18	Pea Coal	6	50	438,000	TC-MDH	0
TP-78	OS-18 to Truck	Pea Coal	6	50	438,000	LO-MDH	0

3. WIND EROSION OF STOCKPILES *(including all stockpiles of raw coal, clean coal, coal refuse, etc.)*

p =	number of days per year with precipitation >0.01 inch	157
f =	percentage of time that the unobstructed wind speed exceeds 12 mph at the mean pile height	20

Source ID No.	Stockpile Description	Silt Content of Material %	Stockpile base area Max. sqft	Control Device ID Number	Control Efficiency %
OS-01	Raw Coal Stockpile	5	88,869	SW-WS	75
OS-02	Raw Coal Stockpile	5	88,869	SW-WS	75
OS-03	Screen Reject	5	100	SW-WS	75
OS-04	Screen Reject	5	100	SW-WS	75
OS-05	Clean Coal Stockpile	3	88,869	SW-WS	75
OS-06	Clean Coal Stockpile	3	88,869	SW-WS	75
OS-07	Clean Coal Stockpile	3	88,869	SW-WS	75
OS-08	Coarse Refuse	3	28,869	SW-WS	75
OS-09	Caked Refuse	1	18,869	SW-WS	75
OS-10	Sand-Lime	5	8,869	SW-WS	75
OS-11	Direct Ship	3	38,869	SW-WS	75
OS-12	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-13	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-14	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-15	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-16	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-17	Clean Coal Stockpile	3	8,869	SW-WS	75
OS-18	Clean Coal Stockpile	3	8,869	SW-WS	75

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

s =	silt content of road surface material (%)	9
p =	number of days per year with precipitation >0.01 inch	157
M_{dry} =	surface material moisture content (%) - dry conditions	0.2

Item Number	Description		Number of wheels	Mean Vehicle Weight(tons)	Mean Vehicle Speed (mph)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1	Raw Trucks In	5,256,000	18	50	15	4	12	105,120	HR-WS	70
2	Sand/Lime	52,500	10	25	15	2.5	0.23	2,100	HR-WS	70
3	Mag Truck	500	18	50	15	2	0.001	10	HR-WS	70
4	Refuse out	6,132,000	6	70	15	1	10	87,600	HR-WS	70
5	Direct Ship	5,256,000	18	50	15	2	12	105,120	HR-WS	70
6										
7	Endloaders/Dozers	1,752,000	4	20	5	0.01	10	87,600	HR-WS	70
8	Pea Coal Out	1,752,000	14	25	10	2	8	70,080	HR-WS	70

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

sL =	road surface silt loading, (g/ft^2)	1
P =	number of days per year with precipitation >0.01 inch	157

Item Number	Description		Mean Vehicle Weight (tons)	Miles per Trip	Maximum Trips Per Hour	Maximum Trips Per Year	Control Device ID Number	Control Efficiency %
1	Clean Coal In	1,000,000	50	0.2	2.28	20,000	HR-WS	70
2								
3								
4								
5								
6								
7								
8								

EMISSIONS SUMMARY

Name of applicant: Greenbrier Smokeless
Name of plant: Mountaineer #1 Plant

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

	Uncontrolled PM		Controlled PM	
	lb/hr	TPY	lb/hr	TPY
FUGITIVE EMISSIONS				
Stockpile Emissions	2.54	11.11	0.63	2.78
Unpaved Haulroad Emissions	1,361.77	5,965.66	408.53	1,789.70
Paved Haulroad Emissions	1.45	6.34	0.43	1.90
Fugitive Emissions Total	**1,365.75**	**5,983.10**	**409.60**	**1,794.38**
POINT SOURCE EMISSIONS				
Equipment Emissions	374.00	1,638.12	39.40	172.57
Transfer Point Emissions	33.00	93.45	8.42	25.44
Point Source Emissions Total*	**407.00**	**1,731.57**	**47.82**	**198.01**
*Note: Point Source Total Controlled PM TPY emissions is used for 45CSR14 Major Source determination (see below)				
Facility Emissions Total	**1,772.75**	**7,714.67**	**457.41**	**1,992.38**

***Facility Potential to Emit (PTE) (Baseline Emissions) = 198.01**

(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				
Stockpile Emissions	1.19	5.22	0.30	1.31
Unpaved Haulroad Emissions	393.56	1,724.11	118.07	517.23
Paved Haulroad Emissions	0.28	1.23	0.08	0.37
Fugitive Emissions Total	**395.03**	**1,730.56**	**118.45**	**518.91**
POINT SOURCE EMISSIONS				
Equipment Emissions	175.78	769.92	18.52	81.11
Transfer Point Emissions	15.61	44.20	3.98	12.03
Point Source Emissions Total*	**191.39**	**814.11**	**22.50**	**93.14**
*Note: Point Source Total Controlled PM-10 TPY emissions is used for 45CSR30 Major Source determination				
Facility Emissions Total	**586.42**	**2,544.68**	**140.95**	**612.05**

1. Emissions From CRUSHING AND SCREENING

1a. Primary Crushing

Primary Crusher ID Number	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
CR-01	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
CR-02	12.000	52.560	1.200	5.256	5.640	24.703	0.564	2.470
CR-03	12.000	52.560	1.200	5.256	5.640	24.703	0.564	2.470
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
TOTAL	24.000	105.120	2.400	10.512	11.280	49.406	1.128	4.941

1b. Secondary and Tertiary Crushing

Secondary & Tertiary Crusher ID	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
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
TOTAL	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

1c. Screening

Screen ID Number	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
SS-01	70.000	306.600	7.000	30.660	32.900	144.102	3.290	14.410
SS-02	70.000	306.600	7.000	30.660	32.900	144.102	3.290	14.410
SS-03	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
SS-04	60.000	262.800	6.000	26.280	28.200	123.516	2.820	12.352
SS-05	35.000	153.300	3.500	15.330	16.450	72.051	1.645	7.205
SS-06	35.000	153.300	3.500	15.330	16.450	72.051	1.645	7.205
SS-07	60.000	262.800	6.000	26.280	28.200	123.516	2.820	12.352
SS-08	20.000	87.600	4.000	17.520	9.400	41.172	1.880	8.234
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
TOTAL	350.000	1533.000	37.000	162.060	164.500	720.510	17.390	76.168

Crushing and Screening	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TOTAL	374.000	1638.120	39.400	172.572	175.780	769.916	18.518	81.109

1. *Emissions From CRUSHING AND SCREENING (Continued)*

EMISSION FACTORS

source: Air Pollution Engineering Manual and References

(lb/ton of material throughput)

PM	
Primary Crushing	0.02
Tertiary Crushing	0.06
Screening	0.1

PM-10	
Primary Crushing	0.0094
Tertiary Crushing	0.0282
Screening	0.047

2. *Emissions From TRANSFER POINTS*

Transfer Point ID No.	PM				PM-10			
	Uncontrolled		Controlled		Uncontrolled		Controlled	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
TP01	0.551	2.415	0.110	0.483	0.261	1.142	0.052	0.228
TP02	0.551	2.415	0.055	0.242	0.261	1.142	0.026	0.114
TP03	0.551	2.415	0.055	0.242	0.261	1.142	0.026	0.114
TP04	0.055	0.242	0.011	0.048	0.026	0.114	0.005	0.023
TP05	0.444	1.946	0.089	0.389	0.210	0.921	0.042	0.184
TP06	0.444	1.946	0.044	0.195	0.210	0.921	0.021	0.092
TP07	0.444	1.946	0.044	0.195	0.210	0.921	0.021	0.092
TP08	0.444	1.946	0.044	0.195	0.210	0.921	0.021	0.092
TP09	0.044	0.195	0.009	0.039	0.021	0.092	0.004	0.018
TP10	0.044	0.195	0.044	0.195	0.021	0.092	0.021	0.092
TP11	0.044	0.195	0.044	0.195	0.021	0.092	0.021	0.092
TP12	0.044	0.195	0.009	0.039	0.021	0.092	0.004	0.018
TP13	0.044	0.195	0.009	0.039	0.021	0.092	0.004	0.018
TP14	0.551	2.415	0.276	1.208	0.261	1.142	0.130	0.571
TP15	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP16	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP17	0.061	0.267	0.061	0.267	0.029	0.126	0.029	0.126
TP18	0.061	0.267	0.061	0.267	0.029	0.126	0.029	0.126
TP19	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP20	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP21	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP22	0.610	2.672	0.305	1.336	0.289	1.264	0.144	0.632
TP23	0.551	2.415	0.110	0.483	0.261	1.142	0.052	0.228
TP24	0.712	3.117	0.142	0.623	0.337	1.474	0.067	0.295
TP25	0.276	1.208	0.028	0.121	0.130	0.571	0.013	0.057
TP26	0.135	0.591	0.013	0.059	0.064	0.279	0.006	0.028
TP27	0.276	1.208	0.028	0.121	0.130	0.571	0.013	0.057
TP28	0.135	0.591	0.013	0.059	0.064	0.279	0.006	0.028
TP29	0.317	1.390	0.063	0.278	0.150	0.658	0.030	0.132
TP30	0.317	1.390	0.159	0.695	0.150	0.658	0.075	0.329
TP31	0.508	1.390	0.102	0.278	0.240	0.658	0.048	0.132
TP32	0.508	1.390	0.254	0.695	0.240	0.658	0.120	0.329
TP33	0.508	1.390	0.102	0.278	0.240	0.658	0.048	0.132
TP34	0.508	1.390	0.254	0.695	0.240	0.658	0.120	0.329
TP35	0.072	0.317	0.072	0.317	0.034	0.150	0.034	0.150
TP36	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP37	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP38	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP39	2.539	1.708	0.508	0.342	1.201	0.808	0.240	0.162
TP40	2.539	1.708	0.635	0.427	1.201	0.808	0.300	0.202
TP41	0.193	0.844	0.039	0.169	0.091	0.399	0.018	0.080
TP42	0.012	0.055	0.006	0.027	0.006	0.026	0.003	0.013
TP43	0.012	0.055	0.006	0.027	0.006	0.026	0.003	0.013
TP44	0.012	0.055	0.006	0.027	0.006	0.026	0.003	0.013
TP45	0.193	0.844	0.193	0.844	0.091	0.399	0.091	0.399
TP46	0.193	0.844	0.193	0.844	0.091	0.399	0.091	0.399
TP47	0.193	0.844	0.193	0.844	0.091	0.399	0.091	0.399
TP48	0.044	0.191	0.009	0.038	0.021	0.090	0.004	0.018
TP49	0.044	0.191	0.044	0.191	0.021	0.090	0.021	0.090
TP50	0.044	0.191	0.044	0.191	0.021	0.090	0.021	0.090
TP-51	0.044	0.191	0.044	0.191	0.021	0.090	0.021	0.090
0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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
TP-52	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP-53	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP-54	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
TP-55	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP-56	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP-57	0.610	2.672	0.061	0.267	0.289	1.264	0.029	0.126
TP-58	0.610	2.672	0.610	2.672	0.289	1.264	0.289	1.264
TP-59	0.610	2.672	0.122	0.534	0.289	1.264	0.058	0.253
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
TP60	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
TP61	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
TP62	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
TP63	0.079	0.230	0.008	0.023	0.037	0.109	0.004	0.011
TP64	0.079	0.230	0.079	0.230	0.037	0.109	0.037	0.109
TP65	0.079	0.230	0.008	0.023	0.037	0.109	0.004	0.011
TP66	0.079	0.230	0.079	0.230	0.037	0.109	0.037	0.109
TP67	0.079	0.230	0.008	0.023	0.037	0.109	0.004	0.011
TP68	0.079	0.230	0.079	0.230	0.037	0.109	0.037	0.109
TP-69	0.158	0.690	0.032	0.138	0.075	0.326	0.015	0.065
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
TP-70	0.158	0.690	0.016	0.069	0.075	0.326	0.007	0.033
TP-71	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-72	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-73	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-74	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-75	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-76	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-77	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
TP-78	0.039	0.173	0.039	0.173	0.019	0.082	0.019	0.082
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
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
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	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	33.001	93.446	8.418	25.437	15.609	44.198	3.981	12.031

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] = 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= $I$88*(0.0032)*((((Inputs!$I$72)/5)^1.3)/(((Inputs!G78+0.000000001)/2)^1.4)
=lb/ton

For PM-10 E= $J$88*(0.0032)*((((Inputs!$I$72)/5)^1.3)/(((Inputs!G78+0.000000001)/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-01	0.568	2.490	0.142	0.622	0.267	1.170	0.067	0.293
OS-02	0.568	2.490	0.142	0.622	0.267	1.170	0.067	0.293
OS-03	0.001	0.003	0.000	0.001	0.000	0.001	0.000	0.000
OS-04	0.001	0.003	0.000	0.001	0.000	0.001	0.000	0.000
OS-05	0.341	1.494	0.085	0.373	0.160	0.702	0.040	0.176
OS-06	0.341	1.494	0.085	0.373	0.160	0.702	0.040	0.176
OS-07	0.341	1.494	0.085	0.373	0.160	0.702	0.040	0.176
OS-08	0.111	0.485	0.028	0.121	0.052	0.228	0.013	0.057
OS-09	0.024	0.106	0.006	0.026	0.011	0.050	0.003	0.012
OS-10	0.057	0.248	0.014	0.062	0.027	0.117	0.007	0.029
OS-11	0.149	0.653	0.037	0.163	0.070	0.307	0.018	0.077
OS-12	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-13	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-14	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-15	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-16	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-17	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
OS-18	0.034	0.149	0.009	0.037	0.016	0.070	0.004	0.018
TOTALS	2.536	11.109	0.634	2.777	1.192	5.221	0.298	1.305

Source:
Air Pollution Engineering Manual

Storage Pile Wind Erosion (Active Storage)

E = 1.7*[s/1.5]*[(365-p)/235]*[f/15] = (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)*((Inputs!F147)/1.5)*((365-Inputs!I139)/235)*((Inputs!I140)/15)

For PM-10 E=0.47*(1.7)*((Inputs!F147)/1.5)*((365-Inputs!I139)/235)*((Inputs!I140)/15)

For lb/hr [lb/day/acre]*[day/24hr]*[base area of pile (acres)] = lb/hr

For Ton/yr [lb/day/acre]*[365day/yr]*[Ton/2000lb]*[base area of pile (acres)] = 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	682.04	2987.35	204.61	896.21	197.11	863.36	59.13	259.01
2	5.98	27.30	1.79	8.19	1.73	7.89	0.52	2.37
3	0.03	0.14	0.01	0.04	0.01	0.04	0.00	0.01
4	165.32	724.11	49.60	217.23	47.78	209.27	14.33	62.78
5	341.02	1493.68	102.31	448.10	98.56	431.68	29.57	129.50
6	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	0.94	4.12	0.28	1.24	0.27	1.19	0.08	0.36
8	166.43	728.96	49.93	218.69	48.10	210.67	14.43	63.20
TOTALS	1361.77	5965.66	408.53	1789.70	393.56	1724.11	118.07	517.23

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

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

E= k*((s/12)^a)*((W/3)^b) =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= ($I$35)*(((Inputs!$I$163)/12)^($I$36))*(((Inputs!H171)/3)^$I$37))

For PM-10 E= ($J$35)*(((Inputs!$I$163)/12)^($J$36))*(((Inputs!H171)/3)^$J$37))

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)

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	1.45	6.34	0.43	1.90	0.28	1.23	0.08	0.37
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	1.45	6.34	0.43	1.90	0.28	1.23	0.08	0.37

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) = 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)	1	
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	0.0047	0.0047

Emission Factors

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

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

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)