



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G10-D159
Plant ID No.: 025-00068
Applicant: Greenbrier Smokeless Coal Mining, LLC
Facility Name: Pollock Screening Plant
Location: Rupert, Greenbrier County, WV
SIC Codes: 1221 (Bituminous Coal & Lignite - Surface)
NAICS Codes: 212111 (Bituminous Coal and Lignite Surface Mining)
Application Type: Construction
Received Date: May 13, 2015
Engineer Assigned: Dan Roberts
Fee Amount: \$1,500
Date Received: May 19, 2015
Applicant's Ad Date: May 14, 2015
Newspaper: *The West Virginia Daily News*
Complete Date: June 16, 2015
UTM's: Easting: 531.25110 km Northing: 4209.67571 km NAD83 Zone 17N
Lat/Lon Coordinates: Latitude: 38.028144 Longitude: -80.652778 NAD83
Description: Application to construct a 200 TPH and 1,752,000 TPY raw coal screening facility consisting of one dump bin, one screen, four belt conveyors and four open storage piles.

BACKGROUND

Greenbrier Smokeless Coal Mining, LLC currently owns and operates the existing Mountaineer I Prep Plant under registration G10-D085E, which was approved on June 16, 2015. This proposed raw coal screening plant for the Pollock Screening Plant (G10-D159) is currently permitted and operating at the Mountaineer I Prep Plant. Registration G10-D085E is for the installation of a permanent pea coal stacking belt and four open storage piles which will be fed

directly from the wet wash preparation plant. After the permanent pea coal system is constructed and operational, the portable screening plant will be relocated and used as the Pollock Screening Plant.

Greenbrier Smokeless Coal Mining, LLC’s proposed raw coal screening plant (G10-D159) and their existing wet wash coal preparation plant (G10-D085E) meet the definition of “Building, Structure, Facility, or Installation” in 45CSR14.2.10 and “Major Source” in 45CSR30.2.26 and shall be considered as one facility for determining applicability to 45CSR14 (PSD) and 45CSR30 (Title V). Therefore, Greenbrier Smokeless Coal Mining, LLC’s proposed raw coal screening plant (G10-D159) and their existing wet wash coal preparation plant (G10-D085E) shall be combined when determining applicability and share the common facility ID Number of 025-00068.

DESCRIPTION OF PROCESS

Coal will be delivered by truck to OS-01(SW-WS) @ TP-01(UL-MDH); transfer to bin BS-01(PW) @ TP-02(UD-PW); discharge to belt BS-01(PE) @ TP-03(TC-FE) which feeds screen SS-01(FE) @ TP-04(TC-FE). The screen will discharge to three uncovered product belts, depending on material size, BC-01,(NC), BC-02(NC), BC-03(NC) @ TP-05(TC-FE), TP-08(TC-FE) TP-11(TC-FE). Coal will be stockpiled in OS-02(SW-WS), OS-03(SW-WS), OS-04(SW-WS) @ TP-06(TC-MDH), TP-09(TC-MDH) and TP-12(TC-MDH). Coal will be transferred to truck by front-end loader for delivery @ TP-07(LO-MDH), TP-10(LO-MDH) and TP-13(LO-MDH).

The facility shall be constructed and operated in accordance with the following equipment and control device information taken from registration application G10-D159 and any amendments thereto:

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Emission Unit Description	Maximum Permitted Throughput		Control Device ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID No.	Control Device ³
Raw Coal Screening Plant									
OS-01	C 2015	5 and 8	Raw Coal Open Storage Pile - 15,000 ton capacity - maximum base area of 28,869 ft ² and 50' height - receives raw coal from trucks, stores it and then a front-end loader transfers it into BS-01	200	1,752,000	WS	B A	TP-01 TP-02	UL-MDH UD-PW
BS-01	C 2015	5 and 8	Dump Bin - 20 ton capacity - receives raw coal from a front-end loader and then feeds it onto BC-01	200	1,752,000	PW	B A	TP-02 TP-03	UD-PW TC-FE
BC-01	C 2015	5 and 8	Belt Conveyor - receives raw coal from BS-01 and transfers it to SS-01	200	1,752,000	PE	B A	TP-03 TP-04	TC-FE TC-FE
SS-01	C 2015	5 and 8	Triple Deck Screen - receives raw coal from BC-01, sizes it and the 2" x 0 material drops onto BC-02, the 1" x 0 material drops onto BC-03 while the 3/8" x 0 material drops onto BC-04	200	1,752,000	FE	B A A A	TP-04 TP-05 TP-08 TP-11	TC-FE TC-FE TC-FE TC-FE
BC-02	C 2015	5 and 8	Belt Conveyor - receives the sized 2" x 0 coal from SS-01 and transfers it to OS-02	100	584,000	NC	B A	TP-05 TP-06	TC-FE TC-MDH

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Emission Unit Description	Maximum Permitted Throughput		Control Device ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID No.	Control Device ³
OS-02	C 2015	5 and 8	Sized Raw Coal Open Storage Pile - 5,000 ton capacity - maximum base area of 8,869 ft ² and 20' height - receives sized 2" x 0 raw coal from BC-02, stores it and then a front-end loader transfers it to trucks for shipment	100	584,000	WS	B A	TP-06 TP-07	TC-MDH LO-MDH
BC-03	C 2015	5 and 8	Belt Conveyor - receives the sized 1" x 0 coal from SS-01 and transfers it to OS-03	100	584,000	NC	B A	TP-08 TP-09	TC-FE TC-MDH
OS-03	C 2015	5 and 8	Sized Raw Coal Open Storage Pile - 5,000 ton capacity - maximum base area of 8,869 ft ² and 20' height - receives sized 1" x 0 raw coal from BC-03, stores it and then a front-end loader transfers it to trucks for shipment	100	584,000	WS	B A	TP-09 TP-10	TC-MDH LO-MDH
BC-04	C 2015	5 and 8	Belt Conveyor - receives the sized 3/8" x 0 coal from SS-01 and transfers it to OS-04	100	584,000	NC	B A	TP-11 TP-12	TC-FE TC-MDH
OS-04	C 2015	5 and 8	Sized Raw Coal Open Storage Pile - 5,000 ton capacity - maximum base area of 8,869 ft ² and 20' height - receives sized 3/8" x 0 raw coal from BC-04, stores it and then a front-end loader transfers it to trucks for shipment	100	584,000	WS	B A	TP-12 TP-13	TC-MDH LO-MDH

¹ In accordance with 40 CFR 60 Subpart Y, coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified after April 28, 2008 shall not discharge gases which exhibit 10 percent opacity or greater. For open storage piles constructed, reconstructed, or modified after May 27, 2009, the permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for site conditions.

² All registered affected facilities under Class II General Permit G10-D are subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

³ Control Device Abbreviations: FE - Full Enclosure; FE, WS - Full Enclosure with Water Sprays; PE - Partial Enclosure; PE, WS - Partial Enclosure with Water Sprays; WS - Water Sprays; and NC - No Control.

DESCRIPTION OF FUGITIVE EMISSIONS (taken directly from the application)

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.

SITE INSPECTION

A site inspection was not deemed to be required at this time due to location proposed and the size and scope of the proposed facility. However, after construction is completed, the facility will be inspected on a predetermined schedule by the DAQ's Compliance and Enforcement Section.

Directions to the facility from Charleston are to take I-77 South/I-64 East toward Beckley and

travel 53.9 miles, keep left and take I-63 East toward Lewisburg and travel 37.0 miles, take Exit 156 for US-60/Midland Trail toward Sam Black Church and travel 0.3 miles, turn left onto US-60 and travel 6.0 miles to Rupert, turn right onto County Route CR1 Anjean Road/Church Street) and travel 0.4 miles, Church Street becomes McClung Avenue and travel 0.4 miles, McClung Avenue becomes Anjean Road and travel approximately 4 miles and the plant entrance will be on the left side of the road and proceed past the plant and follow the signs to the surface mine area.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haulroads are based on AP-42 Fifth Edition "Compilation of Air Pollution Emission Factors", Volume 1. Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The emission factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. The calculations were performed by the applicant's consultant using the DAQ's G10-C Excel Emission Calculation Spreadsheet and were checked for accuracy and completeness by the writer.

The proposed construction will result in the potential to discharge controlled particulate matter emissions of 70.70 pounds per hour (PPH) and 308.77 tons per year (TPY) of particulate matter (PM), of which 21.36 PPH and 93.10 TPY will be particulate matter less than 10 microns in diameter (PM₁₀). Refer to the following table for a complete summary of the proposed raw coal screening plant's potential to discharge:

- Proposed Emissions - Greenbrier Smokeless Coal Mining, LLC Pollock Screening Plant - G10-D159	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.09	0.39	0.04	0.18
Unpaved Haulroad Emissions	65.62	287.48	18.96	83.08
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
<i>Fugitive Emissions Total</i>	<i>65.71</i>	<i>287.87</i>	<i>19.01</i>	<i>83.27</i>
Point Source Emissions				
Equipment Emissions	4.00	17.52	1.88	8.23
Transfer Point Emissions	1.00	3.38	0.47	1.60
<i>Point Source Emissions Total (PTE)</i>	<i>5.00</i>	<i>20.90</i>	<i>2.35</i>	<i>9.84</i>
EMISSIONS TOTAL	70.70	308.77	21.36	93.10

Greenbrier Smokeless Coal Mining, LLC's proposed raw coal screening plant (G10-D159) and their existing wet wash coal preparation plant (G10-D085E) meet the definition of "Building, Structure, Facility, or Installation" in 45CSR14.2.10 and "Major Source" in 45CSR30.2.26 and shall be considered as one facility for determining applicability to 45CSR14 (PSD) and 45CSR30 (Title V). Therefore, Greenbrier Smokeless Coal Mining, LLC's proposed raw coal screening plant (G10-

D159) and their existing wet wash coal preparation plant (G10-D085E) shall be combined when determining applicability and share the common facility ID Number of 025-00068.

The proposed raw coal screening plant and existing wet wash coal preparation plant will have a combined estimated potential to discharge controlled emissions of 2,301.16 TPY of PM, of which 705.16 TPY will be PM₁₀ microns in diameter. The proposed raw coal screening plant and existing wet wash coal preparation plant will have a combined estimated potential to emit (open storage piles constructed or modified after May 27, 2009 and point sources combined) of 222.08 TPY of PM, of which 104.47 TPY will be PM₁₀. Refer to the following table for a complete summary of Greenbrier Smokeless Coal Mining, LLC's proposed raw coal screening plant and existing wet wash coal preparation plant's potential to discharge:

- Combined Emissions Totals - Greenbrier Smokeless Coal Mining, LLC Pollock Screening Plant - G10-D159	Controlled PM Emissions		Controlled PM ₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
G10-D159 - Raw Coal Screening Plant	65.71	287.87	19.01	83.27
G10-D85E - Wet Wash Coal Prep Plant	409.60	1,794.38	118.45	518.91
Fugitive Emissions Total	<i>475.31</i>	<i>2,082.25</i>	<i>137.46</i>	<i>602.18</i>
Point Source Emissions				
G10-D159 - Raw Coal Screening Plant	5.00	20.90	2.35	9.84
G10-D85E - Wet Wash Coal Prep Plant	47.82	198.01	22.50	93.14
Point Source Emissions Total	<i>52.82</i>	<i>218.91</i>	<i>24.85</i>	<i>102.98</i>
COMBINED EMISSIONS TOTAL	528.23	2,301.16	162.31	705.16

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the proposed raw coal screening plant. The construction of Greenbrier Smokeless Coal Mining, LLC's proposed raw coal screening plant is subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas

The proposed raw coal screening plant will be subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed are in operation.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The construction of the proposed raw coal screening plant is subject to the requirements of 45CSR13 because it will result in a potential to discharge greater than six pounds per hour and ten tons per year of regulated air pollutant (PM and PM₁₀) and involve the construction of one dump bin, one screen, four belt conveyors and four open storage piles, which are defined as affected facilities and subject to 40 CFR 60 NSPS Subpart Y. The applicant has submitted an application for a construction registration. The applicant published a Class I legal advertisement in *The West Virginia Daily News* on May 14, 2015 and submitted \$500 for the General Permit application fee and \$1,000 for the NSPS fee.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart Y: Standards of Performance for Coal Preparation and Processing Plants

This proposed raw coal screening plant will be subject to 40 CFR 60 Subpart Y because it will be constructed after October 24, 1974 and will process more than 200 tons of coal per day. The proposed construction will include one dump bin, one screen, four belt conveyors and four open storage piles, which are defined as affected facilities in 40 CFR 60 Subpart Y.

Therefore, the proposed construction is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants. The facility should be in compliance with Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal which was constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, the proposed raw coal screening plant and existing wet wash coal preparation plant are not listed in 45CSR30 subsection 2.26.b as one of the categories of stationary sources which must include fugitive emissions (open storage piles constructed or modified on or before May 27, 2009 and haulroads) when determining whether it is a major stationary source for the purposes of § 302(j) of the Clean Air Act. The proposed raw coal screening plant and existing wet wash coal preparation plant's *combined* potential to emit will be 104.47 TPY for PM₁₀ (open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than

the 45CSR30 threshold of 100 TPY of a regulated air pollutant used to define a major stationary source. Therefore, the proposed raw coal screening plant and existing wet wash coal preparation plant will be a nonmajor source subject to 45CSR30. The proposed raw coal screening plant and existing wet wash coal preparation plant will not be subject to the permitting requirements of 45CSR30 and will be classified as a deferred source.

The proposed construction of Greenbrier Smokeless Coal Mining, LLC's raw coal screening facility is not subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, the proposed raw coal screening plant and existing wet wash coal preparation plant are not one of the 100 TPY stationary sources listed under the definition of "Major Stationary Source" in subsection 2.43.a. Therefore, it must have the potential to emit 250 TPY or more of any regulated pollutant to meet the definition of a major source in subsection 2.43.b. At the end of subsection 2.4.3, this facility is not listed in Table 1 - Source Categories Which Must Include Fugitive Emissions. So, fugitive emissions (from open storage piles constructed or modified on or before May 27, 2009 and haulroads) are not included when determining major stationary source applicability. The proposed raw coal screening plant and existing wet wash coal preparation plant's *combined* potential to emit will be 222.08 TPY for PM (open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than the 45CSR14 threshold of 250 TPY for a regulated air pollutant used to define a major stationary source. Therefore, the proposed raw coal screening plant and existing wet wash coal preparation plant are not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the primary pollutants that will be emitted from this facility are PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and location of this facility and the extent of the proposed construction. This raw coal screening plant will be located in Greenbrier County, WV, which is currently in attainment for PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter). This proposed raw coal screening plant will be a minor source as defined by 45CSR14, therefore, an air quality impact analysis is not required.

GENERAL PERMIT ELIGIBILITY

The proposed construction of this facility meets the applicability criteria (Section 2.3), siting criteria (Section 3.1) and limitations and standards (Section 5.1) as specified in General Permit G10-D.

All registered facilities under Class II General Permit G10-D are subject to Sections 1.0, 1.1, 2.0, 3.0 and 4.0.

MONITORING OF OPERATIONS

The coal processing and conveying equipment and storage areas should be observed to make sure that the facility is meeting the applicable visible emission standards of 40 CFR 60, Subpart Y. Visible emissions from any coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008 shall not exceed 10 percent (10%) opacity as stated in 40 CFR 60.254(b). Equipment used in the loading, unloading, and conveying operations of open storage piles are not subject to the maximum 10% opacity limitation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

RECOMMENDATION TO DIRECTOR

The information contained in this general permit registration application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. No comments were received during the comment period. Therefore, the granting of a General Permit G10-D registration to Greenbrier Smokeless Coal Mining, LLC for the construction of their proposed coal screening facility to be located near Rupert, Greenbrier County, WV is hereby recommended.



Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

June 16, 2015
Date

Fact Sheet G10-D159
Greenbrier Smokeless Coal Mining, LLC
Pollock Screening Plant