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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G10-D171
Plant ID No.: 019-00119
Applicant: Sewell Mountain Coal Co., LLC
Facility Name: Sewell Mountain Plant
Location: Lookout, Fayette County, WV
SIC Codes: 1222 (Bituminous Coal & Lignite - Underground)
NAICS Codes: 212112 (Bituminous Coal Underground Mining)
Application Type: Construction
Received Date: April 14, 2017
Engineer Assigned: Dan Roberts
Fee Amount: \$1,500
Date Received: April 18, 2017
Applicant's Ad Date: April 10, 2017
Newspaper: *The Fayette-Tribune*
Complete Date: June 6, 2017
UTM Coordinates: Easting: 505.667 km • Northing: 4216.848 km • NAD83 Zone 17N
Lat/Lon Coordinates: Latitude: 38.10223 • Longitude: -80.93418 • NAD83
Description: Application to construct a raw coal wet wash coal preparation plant, which will include one crusher, one screen, 10 belt conveyors, two truck loadout bins and three open storage piles.

BACKGROUND

Sewell Mountain Coal Co., LLC has proposed to construct the Sewell Mountain Plant under application G10-D171. Sewell Mountain Coal Co., LLC will be leasing the site and is a subsidiary corporation of JJ Resources, LLC.

DESCRIPTION OF PROCESS (taken directly from the application)

Raw coal shall enter the facility directly from an underground min on belt conveyor BC-1.

BC-1 will transfer raw coal to belt conveyor BC-2 at transfer point TP-1, which will be partially enclosed. BC-2 then transfers the raw coal to tripper conveyor BC-3 at transfer point TP-2, which will be partially enclosed. The raw coal can then be transferred to an open raw coal stockpile OS-1 at either transfer points TP-3, TP-4, TP-5 and TP-6 (all four are partially enclosed with stacker tubes). Raw coal will be transferred from stockpile OS-1 by five underpile feeders that feed the raw coal onto underpile conveyor BC-4 at transfer points TP-7 through TP-11, which are all fully enclosed. BC-4 then transfers the raw coal into the top of scalping screen SC-1 at transfer point TP-12, which will be partially enclosed. The scalping screen SC-1 will be fully enclosed. The sized coal will then be transferred onto belt conveyor BC-5 at transfer point TP-13, which will be partially enclosed. BC-5 will enter the wet wash plant at transfer point TP-14 (fully enclosed inside the building).

Refuse from the wet wash process will leave the plant on belt conveyor BC-6 at transfer point TP-15 (fully enclosed inside the building). From BC-6, the refuse will be transferred into bin BS-1 at transfer TP-16, which will be partially enclosed. From the bin BS-1, refuse shall be transferred into a truck at transfer point TP-17 via a telescopic chute. When the truck reaches the disposal area, it will be dumped onto the ground at transfer point TP-17A (no controls).

Clean coal as a stoker product shall exit the plant at TP-18 onto belt conveyor BC-7 (fully enclosed inside the building). Stoker coal will then be transferred to radial stacker belt conveyor BC-8 at transfer point TP-19, which will be partially enclosed. Stoker coal can then be transferred onto stockpile OS-2 at transfer point TP-20. A maximum drop height of 25 feet will be maintained. Stoker coal shall be loaded out of the pile into a truck by endloader at transfer point TP-21, which will be partially enclosed.

Other clean coal shall exit the plant into a crusher CR-1 at transfer point TP-22. From crusher CR-1, the clean coal will then be transferred onto belt conveyor BC-9 at transfer point TP-23. Transfer points TP-22 and TP-23 as well as crusher CR-1 will all be fully enclosed inside the building. From BC-9, clean coal will then be transferred to radial stacker belt conveyor BC-10 at transfer point TP-24, which will be partially enclosed. From BC-10, clean coal can then be transferred into either open stockpile OS-3 at transfer point TP-25, where a maximum drop height of 25 feet will be maintained, or directly to clean coal bin BS-2 at transfer point TP-27, which will be partially enclosed. If clean coal is diverted into the bin, it will then be loaded directly into trucks at transfer point TP-28, which will have a telescopic chute. Clean coal can also be loaded out of stockpile OS-3 and into a truck by endloader, which will be partially enclosed.

All belt conveyors will be provided with partial enclosures over them. The moisture content of the clean and raw coal is estimated to be 6% and then refuse 15%.

The facility shall be modified and operated in accordance with the following equipment and control device information taken from general permit registration application G10-D171 and any amendments thereto:

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Description	Maximum Capacity		Control Device ²	Associated Transfer Points		
				TPH	TPY		Location: B - Before A - After	ID. No.	Control Device ³
Raw Coal Circuit									
BC-1	C 2017	5 and 8	Slope Conveyor - receives raw coal from the deep mine and transfers it to BC-2	3,000	2,000,000	PE	B A	N/A TP-1	N/A PE
BC-2	C 2017	5 and 8	Tripper Feed Conveyor - receives raw coal from BC-1 and transfers to BC-3	3,000	2,000,000	PE	B A	TP-1 TP-2	PE PE
BC-3	C 2017	5 and 8	Tripper Conveyor - receives raw coal from BC-2 and transfers it onto OS-1 through one of four 100' tall stacking tubes	3,000	2,000,000	PE	B A A A A	TP-2 TP-3 TP-4 TP-5 TP-6	PE PE PE PE PE
OS-01	C 2017	5 and 8	Raw Coal Open Storage Pile - maximum 200,000 tons capacity, 143,000 ft ² base area and 90' height - receives raw coal from BC-3, stores it and then it is reclaimed by five underground feeders onto BC-4	3,000	2,000,000	WS	B B B A A A A A	TP-3 TP-4 TP-5 TP-6 TP-7 TP-8 TP-9 TP-10 TP-11	PE PE PE PE FE FE FE FE FE
BC-4	C 2017	5 and 8	Reclaim Conveyor - receives raw coal from OS-1 via five underground feeders and transfers it to BC-5	650	2,000,000	PE	B B B B A	TP-7 TP-8 TP-9 TP-10 TP-11 TP-12	FE FE FE FE FE PE
SC-1	C 2017	5 and 8	Vibrating Scalping Screen - receives raw coal from BC-4, sizes it from +4' to -4" and drops the sized raw coal onto BC-5	650	2,000,000	FE	B A	TP-12 TP-13	PE PE
BC-5	C 2017	5 and 8	Plant Feed Conveyor - receives sized raw coal from SC-1 and transfers it into the wet wash plant	650	2,000,000	PE	B A	TP-13 TP-14	PE FE
Refuse Circuit									
BC-6	C 2017	5 and 8	Refuse Conveyor - receives refuse from the wet wash circuit and transfers it to BS-1	400	1,000,000	PE	B A	TP-15 TP-16	FE PE
BS-1	C 2017	5 and 8	Refuse Truck Loadout Bin - 500 tons capacity - receives refuse from BC-16, stores it and then loads it into trucks through a telescopic chute for transport to the refuse disposal area where it is dumped	400	1,000,000	FE	B A A	TP-16 TP-17 TP-17A	PE TC N
Clean Stoker Coal Circuit									
BC-7	C 2017	5 and 8	Stoker Conveyor - receives clean stoker coal from the wet wash circuit and transfers it to BC-8	200	300,000	PE	B A	TP-18 TP-19	FE PE
BC-8	C 2017	5 and 8	Belt Conveyor - receives clean stoker coal from BC-7 and transfers it onto OS-02	200	300,000	PE	B A	TP-19 TP-20	PE N
OS-2	C 2017	5 and 8	Clean Stoker Coal Open Storage Pile - maximum 15,000 tons capacity, 30,600 ft ² base area and 50' height - receives clean stoker coal from BC-8, stores it and then it is reclaimed by an endloader and loaded onto trucks for shipment	200	300,000	WS	B A	TP-20 TP-21	N PE
Clean Coal Circuit									
CR-1	C 2017	5 and 8	Double Roll Crusher - receives clean coal from the wet wash circuit, crushes it from +2" to -2" and drops the crushed clean coal onto BC-9	550	700,000	FE	B A	TP-22 TP-23	FE FE
BC-9	C 2017	5 and 8	Clean Coal Collecting Conveyor - receives clean coal from CR-1 and transfers it to BC-10	550	700,000	PE	B A	TP-23 TP-24	FE PE
BC-10	C 2017	5 and 8	Belt Conveyor - receives clean coal from BC-9 and transfers it onto OS-3 or into BS-2	550	700,000	PE	B A A	TP-24 TP-25 TP-27	PE N PE
OS-3	C 2017	5 and 8	Clean Coal Open Storage Pile - maximum 50,000 tons capacity, 77,600 ft ² base area and 50' height - receives clean coal from BC-10, stores it and then it is reclaimed by endloader and loaded onto trucks for shipment	550	700,000	WS	B A	TP-25 TP-26	N PE
BS-2	C 2017	5 and 8	Clean Coal Truck Loadout Bin - 500 tons capacity - receives clean coal from BC-10 and then loads it into trucks through a telescopic chute for shipment	550	700,000	FE	B A	TP-27 TP-28	PE TC

- 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 on or before April 28, 2008 shall not discharge gases which exhibit 20 percent opacity or greater. 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; FW - Full Enclosure with Water Sprays; PE - Partial Enclosure; PW - Partial Enclosure with Water Sprays; WS - Water Sprays; TC - Telescopic Chute; and N - No Control.

DESCRIPTION OF FUGITIVE EMISSIONS (taken directly from the application)

Fugitive emissions from the site will consist of emissions from paved and unpaved haulroads and from wind erosion of stockpiles. The narrative below will provide a Fugitive Emission Control Plan for the facility.

Raw coal shall enter the facility directly from an underground mine and into open stockpile OS-1. Control of fugitive dust due to wind erosion at open stockpile OS-1 will be accomplished by the used of compaction using equipment found on-site. A water truck with a fixed spray bar will be used to control fugitive dust around the stockpile.

Clean coal will leave the site via haulroad where part of it is unpaved and part of it is paved. See the Area Map for road locations and lengths. A water truck with a fixed spray bar will be used to control fugitive dust on all of the roads. Since the haul to a county road is long, and paved leading up to the intersection to the county road, no truck wash system is proposed for this facility.

The refuse haul is shown on the Area Map. Thos road will also utilize the water truck as described above.

Endloaders may transfer coal from open stockpiles OS-2 and OS-3 into trucks. Again, the water truck described above will be directly related to th amount of precipitation during the work day.

Fugitive emissions will be minimized at open stockpiles OS-2 and OS-3 by the use of compaction of the piles by onsite equipment. The water truck shall also operate around the stockpiles to help to minimize fugitive emissions.

SITE INSPECTION

On July 24, 2017, the writer performed an unannounced site inspection at the proposed location. The facility will be located in a remote area outside of Lookout, Fayette County, WV. There was a locked gate at the top of the hill as it started down into the valley. There was a newer sign for Sewell Mountain Coal Co., LLC's Sewell Mountain Complex which listed WVDEP SMA#: E-0096-00, P-0689-00, R-0651-00; NPDES #: WV0091014; and MSHA ID #: 46-05417 46-03467. This sign was attached over a much older sign for Meadow River Coal Co.

The nearest residence is located approximately 1,500 feet to the north of the proposed site further out along County Route 60/12. The next nearest residence is located approximately 3,200

feet to the east of the proposed site. There appears to be evidence that there is reclaimed mine lands and former mining activity in this area. The facility will be inspected by the DAQ's Compliance and Enforcement Section on a set schedule after it has been constructed.

Directions from Charleston, WV, are to take US Route 60 East to Lookout, WV, travel 4.3 mile past the intersection of US Route 60 and State Route 19 and turn left onto County Route 60/12 (Propps Ridge Road) and travel north for approximately 3.2 miles where the entrance to the site forks off to the right starting downhill and there is a yellow gate.

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 facility-wide emissions 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 a the potential to discharge controlled particulate matter emissions of 490.28 pounds per hour (lb/hour) and 324.87 tons per year (TPY) of particulate matter (PM), of which 116.39 lb/hour and 79.93 TPY will be particulate matter less than 10 microns in diameter (PM₁₀). Refer to the following table for a complete summary of the facility's proposed potential to discharge:

- Facility Emissions Summary - Sewell Mountain Coal Co., LLC Sewell Mountain Plant	Controlled PM Emissions		Controlled PM ₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.21	0.93	0.10	0.44
Unpaved Haulroad Emissions	137.01	94.06	40.44	27.76
Paved Haulroad Emissions	327.77	204.86	63.93	39.96
<i>Fugitive Emissions Total</i>	<i>464.99</i>	<i>299.84</i>	<i>104.47</i>	<i>68.16</i>
Point Source Emissions				
Equipment Emissions	15.20	21.40	7.14	10.06
Transfer Point Emissions	10.10	3.63	4.78	1.71
<i>Point Source Emissions Total (PTE)</i>	<i>25.30</i>	<i>25.03</i>	<i>11.92</i>	<i>11.77</i>
FACILITY EMISSIONS TOTAL	490.28	324.87	116.39	79.93

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the proposed facility. The proposed construction of Sewell Mountain Coal Co., LLC's wet wash coal preparation plant is subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Wet wash coal preparation plants and Coal Refuse Disposal Areas

The proposed facility 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 proposed construction 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 for a regulated pollutant (PM and PM₁₀) and involve the construction of one crusher, one screen 10 belt conveyors, three open storage piles and two truck loadout bins, which are defined as affected facilities in 40 CFR 60 Subpart Y. The applicant has submitted an application for a registration to construct. The applicant published a Class I legal advertisement in *The Fayette-Tribune* on March 10, 2017 and submitted the \$500 application fee and \$1,000 application 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 facility will be subject to 40 CFR 60 Subpart Y because it will be constructed after October 24, 1974 and process more than 200 tons of coal per day. The proposed construction includes one crusher, one screen 10 belt conveyors, three open storage piles and two truck loadout bins, which are defined as affected facilities in 40 CFR 60 Subpart Y. Therefore, the proposed modification 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 facility is *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 facility's potential to emit will be 12.21 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 facility remains a nonmajor source subject to 45CSR30. The facility is not subject to the permitting requirements of 45CSR30 and is classified as a deferred source.

The proposed construction of Sewell Mountain Coal Co., LLC's wet wash coal preparation plant 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 facility is *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 facility's potential to emit will be 25.96 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 modification is 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 proposed facility. This facility will be located in Fayette County, WV, which is currently in attainment for PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter). This proposed facility will be a minor source as defined by 45CSR14 and 45CSR19, 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.

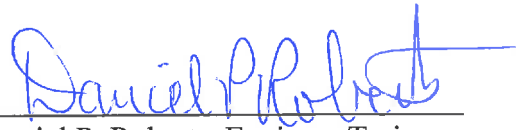
The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions 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 to construct 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 Sewell Mountain Coal Co., LLC for the construction of a wet wash coal

Fact Sheet G10-D171
Sewell Mountain Coal Co., LLC
Sewell Mountain Plant

preparation plant to be located near Lookout, Fayette County, WV is hereby recommended.



Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

July 25, 2017
Date