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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G10-D057B **After-the-Fact**
Plant ID No.: 005-00078
Applicant: Rivers Edge Mining, LLC
Facility Name: Jarrells Branch Coal Handling Facility
Location: Wharton, Boone County, WV
SIC Codes: 1221 (Bituminous Coal & Lignite - Surface)
1222 (Bituminous Coal & Lignite - Underground)
NAICS Codes: 212111 (Bituminous Coal and Lignite Surface Mining)
212112 (Bituminous Coal Underground Mining)
Application Type: Class I Administrative Update
Received Date: February 13, 2015
Engineer Assigned: Dan Roberts
Fee Amount: N/A
Date Received: N/A
Applicant's Ad Date: N/A
Newspaper: N/A
Complete Date: April 15, 2015
UTM Coordinates: Easting: 440.7 km Northing: 4196.9 km NAD83 Zone 17N
Lat/Lon Coordinates: Latitude: 37.917715 Longitude: -81.674662 NAD83
Description: **After-the-Fact** modification from reconfiguring the facility in 2011 because of the closing of the Rivers Edge Mine. At the Rivers Edge Mine, open stockpile OS1 and CC11 Underground Mine Belt have been deleted and conveyor BC3 was relocated to the CC10 Mine Portal. Also, the maximum throughputs for conveyor BC1 have been increased from 750 TPH and 1,050,000 TPY to 750 TPH and 4,575,000 TPY and conveyor BC4 from 1,500 TPH and 9,000,000 TPY to 2,250 TPH and 10,050,000 TPY.

BACKGROUND

Rivers Edge Mining, LLC owns and/or operates the existing Jarrells Branch Coal Handling Facility and leases the property and is a subsidiary of Patriot Coal Corporation. The facility is currently operating under registration G10-C057A which was approved on February 1, 2006.

The changes proposed in this application are the result of the Rivers Edge Mine ceasing operation in 2011. As a result, equipment at the facility has been reconfigured and open stockpile OS1 and CC11 Underground Mine Belt have been deleted and conveyor BC3 was relocated. Conveyor BC3 was relocated from the Rivers Edge Mine to the CC10 Mine Portal. Also, the maximum throughputs for conveyor BC1 have been increased from 750 TPH and 1,050,000 TPY to 750 TPH and 4,575,000 TPY and conveyor BC4 from 1,500 TPH and 9,000,000 TPY to 2,250 TPH and 10,050,000 TPY.

According to application G10-B057B, Rivers Edge Mining LLC’s Jarrells Branch facility feeds coal to Black Stallion Overland Belt, which is part of Eastern Associated Coal, LLC’s Wells Prep Plant (005-00016, G10-D031F). Rivers Edge Mining LLC and Eastern Associated Coal, LLC are both subsidiaries of Patriot Coal Corporation and are located on one or more contiguous or adjacent properties. Therefore, these two facilities 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).

DESCRIPTION OF PROCESS

Raw coal from the CC10 underground mine is transferred to conveyor belt BC1 via transfer point T1. Conveyor BC1 transfers the coal the conveyor belt BC3 via transfer point T2. Conveyor belt BC3 transfers the raw coal to stockpile OS2 via transfer point T3. Stockpile OS2 may be reclaimed by an underground feeder, which transfers material to the conveyor belt BC4 via transfer point T7. Conveyor BC4 transfers raw coal directly to conveyor belt BC2 via transfer point T8. Stockpile OS2 may be reclaimed by endloader to truck via transfer point T9. Trucks transport the raw coal offsite on unpaved haulroad UPR-R1. Conveyor BC2 transfers raw coal to the Black Stallion Overland Belt via transfer point T4. The Black Stallion Overland Belt is covered under another permit.

The facility shall be modified and operated in accordance with the following equipment and control device information taken from registration applications G10-D057B, G10-C057A and G10-B057 and any amendments thereto:

Equip-ment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Description	Maximum Capacity		Control Device ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Device ³
Raw Coal Circuit									
BC1	M 2011 ⁴ C 1997	5 and 8	Belt Conveyor - receives raw coal from the CC10 Mine Portal and transfers it to BC3	750	4,575,000	N	B A	T1 T2	PE MC - N
BC3	M 2011 ⁴ C 2002	5 and 8	Belt Conveyor - receives raw coal from BC3 and transfers it to OS2	750	4,575,000	PE	B A	T2 T3	MC - N FE

Fact Sheet G10-D057B
Rivers Edge Mining, LLC
Jarrells Branch Coal Handling Facility

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Description	Maximum Capacity		Control Device ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Device ³
OS2	C 2002	5 and 6	Raw Coal Stockpile - maximum 40,000 tons capacity, 49,598 ft ² base area and 88' height - receives raw coal from BC3, stores it and then underground reclaim feeders transfer it onto BC4 or an endloader transfers it to trucks	750 in out	4,575,000	N	B A A	T3 T7 T9	FE FE PE
BC4	M 2011 ⁴ C 2002	5 and 8	Belt Conveyor - receives raw coal from OS2 and transfers it to BC2	2,250	10,050,000	PE	B A	T7 T8	FE FE
BC2	C 1997	5 and 6	Belt Conveyor - receives raw coal from BC4 and transfers it to the Black Stallion Overland Belt which feeds Eastern Associated Coal LLC's Wells Prep Plant (005-00016, G10-D031F)	2,250	10,050,000	PE	B A	T8 T4	FE FE

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. 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.

² Control Device Abbreviations: FE - Full Enclosure; FW - Full Enclosure with Water Sprays; PE - Partial Enclosure; PW - Partial Enclosure with Water Sprays; WS - Water Sprays; WW - wet wash circuit; TC - Telescopic Chute; UC - Under-pile Conveyor (full enclosure); MDH - Minimize Drop Height; MC - Moisture Control; and N - No Control.

⁴ According to the application, the proposed changes were incorporated in 2011, but were not addressed until application G10-D057B was submitted in 2015.

SITE INSPECTION

Eric Ray of the DAQ's Compliance and Enforcement Section performed a scheduled full on-site targeted inspection on December 19, 2014. Mr. Ray's notes from the inspection were as follows: "One of the two deep mines supplying coal to the operation has shut down and the conveyor system has been reconfigured accordingly. As a result one short belt (BC2) and one stockpile (OS1) have been removed and belt BC1 has been lengthened. If anything this should result in a decrease in emissions as there is now one less transfer point in the operation and one less open stockpile. Increased production time from the remaining mine resulted in the facility violating the throughput limit on conveyor BC1, though not of the facility as a whole. Per e-mail from Nate Lanham with SLR, the facility's permit will be updated to reflect the new conveyor configuration and increased annual throughput on BC1." The facility was given a status code of 30 - In Compliance.

Eric Ray of the DAQ's Compliance and Enforcement Section performed a scheduled full on-site targeted inspection on December 19, 2014. Mr. Ray's notes from the inspection were as follows: "One of the two deep mines supplying coal to the operation has shut down and the conveyor system has been reconfigured accordingly. As a result one short belt (BC2) and one stockpile (OS1) have been removed and belt BC1 has been lengthened. If anything this should result in a decrease in emissions as there is now one less transfer point in the operation and one less open stockpile. The only real concern is the missing partial enclosure on the new section of BC1. But, given that the belt was moving coal during the inspection and no visible emissions were seen and that the facility is well below its limit on the amount of coal it can handle, this is a minor concern and will be addressed with a phone call to Mr. Moore."

Directions from Charleston, WV are to take US119 South to Danville, take exit to WVSR85

Fact Sheet G10-D057B
Rivers Edge Mining, LLC
Jarrells Branch Coal Handling Facility

going South, stay on WVSR85 for approximately 20 miles, pass Jarrells Branch and turn L (if headed S) into the Patriot Coal facility and stop at the guard shack for directions to the office.

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 writer subtracted the current permitted emissions totals from the proposed emission totals to get the increase in emissions.

The proposed changes will result in a decrease in the facility's potential to discharge controlled particulate matter emissions of 1.38 pounds per hour (PPH) and 1.68 tons per year (TPY) of particulate matter (PM), of which 0.65 PPH and 0.79 TPY will be particulate matter less than 10 microns in diameter (PM₁₀). Refer to the following table for a complete summary of the proposed facility's potential to discharge:

- Proposed Increase in Emissions - Rivers Edge Mining, LLC Bull Creek Preparation Plant	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	-0.08	-0.35	-0.04	-0.16
Unpaved Haulroad Emissions	0.00	0.00	0.00	0.00
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
<i>Fugitive Emissions Total</i>	<i>-0.08</i>	<i>-0.35</i>	<i>-0.04</i>	<i>-0.16</i>
Point Source Emissions				
Equipment Emissions	0.00	0.00	0.00	0.00
Transfer Point Emissions	-1.30	-1.33	-0.61	-0.63
<i>Point Source Emissions Total (PTE)</i>	<i>-1.30</i>	<i>-1.33</i>	<i>-0.61</i>	<i>-0.63</i>
INCREASE IN EMISSIONS	-1.38	-1.68	-0.65	-0.79

The proposed changes will result in a new potential to discharge controlled particulate matter emissions of 106.22 PPH and 455.13 TPY of particulate matter (PM), of which 33.96 PPH and 143.97 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:

- <i>New Facility-wide Emissions - Rivers Edge Mining, LLC Bull Creek Preparation Plant</i>	Controlled PM Emissions		Controlled PM ₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.16	0.69	0.07	0.33
Unpaved Haulroad Emissions	42.30	184.60	12.49	54.49
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
<i>Fugitive Emissions Total</i>	<i>42.26</i>	<i>185.29</i>	<i>12.56</i>	<i>54.81</i>
Point Source Emissions				
Equipment Emissions	0.00	0.00	0.00	0.00
Transfer Point Emissions	4.28	10.55	2.02	4.99
<i>Point Source Emissions Total (PTE)</i>	<i>4.28</i>	<i>10.55</i>	<i>2.02</i>	<i>4.99</i>
FACILITY EMISSIONS TOTAL				
	46.73	195.84	14.58	59.80

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the modified facility. The proposed modification of Rivers Edge Mining, LLC's existing 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, Coal Handling Operations and Coal Refuse Disposal Areas*

The facility is 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 changes are subject to the requirements of 45CSR13 because they will result in a decrease in facility's potential to discharge PM and PM₁₀ and involve the construction of one new conveyor and the modification of two existing conveyors, which are defined as affected facilities in 40 CFR 60 Subpart Y. The applicant has submitted an application for a Class I administrative update.

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

This facility is subject to 40 CFR 60 Subpart Y because it was constructed and modified after October 24, 1974 and processes more than 200 tons of coal per day. The proposed modification includes the construction of one new conveyor and the modification of two existing conveyors, 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(a) (less than 20% 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 on or before April 28, 2008) and 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.

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 (coal 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 4.99 TPY for PM₁₀ (coal 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 modification of Rivers Edge Mining, 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 coal 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 10.55 TPY for PM (coal 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 facility and the extent of the proposed modification. This facility is located in Boone County, WV, which is currently designated as being in attainment for PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter). This modified facility will remain a minor source as defined by 45CSR14, therefore, an air quality impact analysis is not required.

GENERAL PERMIT ELIGIBILITY

The proposed modification 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 on or before April 28, 2008 shall not exceed 20 percent (20%) opacity as stated in 40 CFR 60.254(a). 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.

RECOMMENDATION TO DIRECTOR

The information contained in this application for a Class I administrative update indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate

Fact Sheet G10-D057B
Rivers Edge Mining, LLC
Jarrells Branch Coal Handling Facility

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 Rivers Edge Mining, LLC for the proposed changes to their existing coal handling facility located near Wharton, Boone County, WV is hereby recommended.



Daniel P. Roberts
Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

April 17, 2015

Date