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GENERAL PERMIT REGISTRATION APPLICATION
ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	G10-D118C
Plant ID No.:	081-00243
Applicant:	Pocahontas Coal Company, LLC
Facility Name:	Midway (Affinity Preparation Plant)
Location:	Raleigh County
SIC Code:	1222 (Bituminous Coal & Lignite)
Application Type:	Modification
Received Date:	December 10, 2015
Engineer Assigned:	Thornton E. Martin Jr.
Fee Amount:	$1,500
Date Received:	December 11, 2015
Complete Date:	February 22, 2016
Applicant Ad Date:	December 16, 2015
Newspaper:	*The Register-Herald*
UTM's:	Easting: 480.0951 km Northing: 4173.8794 km Zone: 17
Description:	Modification of a Coal Preparation Plant to actual as-built; delete RC Silo; change in controls on crusher and screen; increasing storage; delete BC-05, BC-07, BC-08; change crusher from breaker to Jeffery DR and changes to truck traffic.

DESCRIPTION OF PROCESS (taken from the application)

Raw Coal Circuit - Maximum projected yearly throughput is 6,132,000 tons per year.

Raw coal will be received from an adjacent deep mine and transferred to open stockpile OS-01(SW-WS) via belt conveyors BC-01(PE) and BC-02(PE) @ TP-01(TC-FE) thru TP-03(TC-PE). A dozer will be employed to push material to/from the excess stockpile area identified as OS-03(SW-WS) @ TP-04(UL-MDH) and OS-06(LO-MDH). Incoming truck material will be dumped at TP-05(UL-MDH). Belt conveyor BC-03(PE) will reclaim from OS-01/OS-03 stockpile area @

TP-07(LO-UC) and send coal to the crusher/screening building via belt BC-04(PE) @ TP-08(TC-FE) and TP-09(TC-PW). From the scalping screen SS-01(PW), 2x0 coal will transfer directly to BC-06(PE) @ TP-11(TC-PW), while +2x0 coal will be transferred to crusher CR-01(FW) @ TP-12(TC-PW), then to belt BC-06 @ TP-13(TC-FE). Screen rock reject will be sent via chute to refuse belt BC-20(PE) @ TP-10(TC-PW). Belt conveyor BC-06 will feed raw coal silo #1 BS-01(FE) @ TP-14(TC-FE). Silo BS-01 will reclaim underbin to belt BC-09(PE) @ TP-15(LO-UC). Belt BC-09 will transfer to the wet wash plant @ TP-16(TC-FW).

Clean Coal Circuit - Maximum projected yearly throughput is 3,504,000 tons per year.

Clean coal will transfer @ TP-17(TC-FW) to belt BC-10(PE); to belt conveyor BC-21(PE) and to the clean coal stockpile OS-02(SW-WS) via belt BC-11(PE) @ TP-18(TC-FE), TP-19(TC-PE), and TP-20(TC-PE).

The stacking tube associated with OS-02 will accommodate 50,000 tons of coal and as the dozer pushes the material out, the stockpile will have the potential of storing another 50,000 tons. The excess clean coal area is identified as OS-04(SW-WS) @ TP-21(UL-MDH) and TP-27(LO-MDH).

Belt BC-11 will also transfer clean coal to belt conveyor BC-12(PE) @ TP-22(TC-FE) which will feed the clean coal silo BS-03(FE) @ TP-23(TC-FE); belt BC-12 will transfer to BC-13(PE) @ TP-24(TC-FE) which will feed BS-04(FE) @ TP-25(TC-FE). Stockpile OS-02/OS-04 will reclaim underpile to belt BC-16(PE) @ TP-28(LO-UC). Silo BS-03 will reclaim underbin @ TP-29(LO-UC) to loadout belt #1 BC-16(PE), while BS-04 will transfer underbin @ TP-30(LO-UC) to belt BC-15(PE) and transfer to belt BC-16 @ TP-31(TC-FE). Coal from loadout belt BC-16 will transfer to loadout belt BC-17(PE) @ TP-32(TC-FE) and to the batch weigh system @ TP-33(TC-FE). The batch weigh system consists of the surge bin BS-05(FE) which transfers to the loadout bin BS-06(FE) @ TP-34(TC-FE) and to railcar @ TP-35(LR-TC). Clean coal will load out to truck at TP-26(LO-MDH).

Refuse Circuit - Maximum projected yearly throughput is 3,504,000 tons per year.

Refuse will transfer from the plant to belt BC-18(PE) @ TP-36(TC-FW), which will transfer to belt BC-20(PE) @ TP-37(TC-FE). Belt BC-20 transfers to the refuse bin BS-07(FE) @ TP-38(TC-FE), which discharge to truck @ TP-39(LO-MDH) for delivery to the disposal area @ TP-40(UL-MDH).

There will be no VOC's or HAP's associated with the Affinity Mine Coal Preparation Plant.

The facility shall be constructed and operated in accordance with the following equipment and control device information taken from registration application G10-D118C:

Equipment ID No.	AMR[1]	Date of Manu-facture	Description	Maximum Capacity		Control Equip-ment[2]	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Equipment[2]
Raw Coal Circuit									
BC-01	M M	2010 2016	60" Deep Mine Conveyor - transfers from deep mine to BC-02	1,200	10,512,000	PE	B A	TP-01 TP-02	TC-FE TC-FE
BC-02	M M	2010 2016	60" Transfer Conveyor - transfers raw coal from BC-01 to open stockpile OS-01	1,200	10,512,000	PE	B A	TP-02 TP-03	TC-FE TC-PE
OS-01	M M	2010 2016	50,000T Raw Coal Stockpile - receives ROM from Affinity Mine, stores it and then underpile reclaim feeders drop it to BC-03	-----	10,512,000	ST, WS	B A A	TP-03 TP-04 TP-07	TC-PE UL-MDH LO-UC
BC-03	M M	2010 2016	48" Belt Conveyor - transfers raw coal from stockpile OS-01 /OS-03 to crush/screen feed belt BC-04	800	7,008,000	PE	B A	TP-07 TP-08	LO-UC TC-FE
BC-04	M M	2010 2016	48" Screen Feed Conveyor - transfers raw coal from stockpile reclaim belt BC-03 to scalping screen SS-01	800	7,008,000	PE	B A	TP-08 TP-09	TC-FE TC-PW
SS-01	M M	2010 2016	10x20 Scalping Screen - receives raw coal from conveyor BC-04, screens and transfers +2X0 to crusher CR-01, 2X0 to belt conveyor BC-06 and oversize material to ground via rock chute	800	7,008,000	PW	B A A A	TP-09 TP-12 TP-11 TP-10	TC-PW TC-PW TC-PW TC-PW
BC-05	M R	2010 2016	36" Raw Coal Transfer Conveyor - receives 2X0 coal from SS-01 and transfers to raw coal belt BC-06	REMOVED					
CR-01	M M	2010 2016	Jeffery 45 DR Crusher - receives +2x0 from SS-01 and transfers 2x0 to belt conveyor BC-06.	700	6,132,000	FW	B A	TP-12 TP-13	TC-PW TC-FE
OS-03	A M	2011 2016	70,000T Excess Raw Coal Stockpile - receives raw coal from truck and excess raw coal from OS-01. Raw coal is dozer pushed between OS-03 and OS-01.	----	5,256,000	SW-WS	B B A	TP-04 TP-05 TP-06	UL-MDH UL-MDH LO-MDH
BC-06	M M	2010 2016	36" Silo #1 Feed Conveyor - receives coal from screen SS-01 and crusher CR-01 then transfers to raw coal silo BS-01.	700	6,132,000	PE	B B A	TP-11 TP-13 TP-14	TC-PW TC-FE TC-FE
BC-07	M R	2010 2016	36" Silo #2 Feed Conveyor - receives raw coal BC-06 and transfers to raw coal silo #2	REMOVED					
BS-01	M M	2010 2016	6,000T Raw Coal Silo - receives coal from belt BC-06, stores it, and discharges underbin to plant feed belt BC-09	----	6,132,000	FE	B A	TP-14 TP-15	TC-FE LO-UC
BS-02	M R	2010 2016	2000T Raw Coal Silo - receives coal from belt BC-07, stores it, and discharges underbin to belt BC-08	REMOVED					
BC-08	M R	2010 2016	36" Silo #2 Reclaim Conveyor - reclaims underbin from BS-02 and transfers raw coal to plant feed conveyor BC-09	REMOVED					
BC-09	M M	2010 2016	36" Plant Feed Conveyor - receives raw coal from BS-01 and transfers to wet wash prep plant	700	6,132,000	PE	B A	TP-15 TP-16	LO-UC TC-FW
Affinity Prep Plant - Clean Coal									
BC-10	M	2010	36" Clean Coal Transfer Belt - transfers clean coal from plant to belt BC-21	400	3,504,000	PE	B A	TP-17 TP-18	TC-FW TC-FE
BC-21	A	2011	36" Clean Coal Transfer Belt - receives clean coal from belt BC-10 and transfers to belt BC-11	400	3,504,000	PE	B A	TP-18 TP-19	TC-FE TC-FE
BC-11	M	2010	36" Clean Coal Transfer Belt - receives clean coal from BC-21 and transfers it to stockpile OS-02 and to belt BC-12	400	3,504,000	PE	B A A	TP-19 TP-20 TP-22	TC-FE TC-PE TC-FE
OS-02	M M	2010 2016	50,000T Clean Coal Stockpile - receives coal via stacking tube from belt BC-11, dozer pushed excess clean coal to and from OS-04, and discharges to belt BC-16	----	3,504,000	ST, WS	B B A A	TP-20 TP-27 TP-21 TP-28	TC-PE LO-MDH UL-MDH LO-UC
OS-04	A	2016	50,000T Excess Clean Coal Stockpile - receives excess clean coal from stockpile OS-02 and is dozer pushed back to stockpile OS-02 or is loaded out to truck	----	1,752,000	SW-WS	B A A	TP-21 TP-27 TP-26	UL-MDH LO-MDH LO-MDH
BC-12	M	2010	36" Clean Coal Transfer Belt - receives clean coal from BC-11 and transfers coal to clean coal silo BS-03 or belt BC-13	400	3,504,000	PE	B A A	TP-22 TP-23 TP-24	TC-FE TC-FE TC-FE
BS-03	M	2010	10,000T Clean Coal Silo #1 - receives clean coal from belt BC-12, stores it, and discharges underbin to loadout belt #1 BC-16	----	3,504,000	FE	B A	TP-23 TP-29	TC-FE LO-UC
BC-13	M	2010	36" Clean Coal Transfer Belt - receives clean coal from BC-12 and transfers to clean coal silo BS-04	400	3,504,000	PE	B A	TP-24 TP-25	TC-FE TC-FE
BS-04	M M	2010 2016	6,000T Clean Coal Silo #2 - receives coal from BC-13, stores it, and discharges underbin to belt BC-15	----	3,504,000	FE	B A	TP-25 TP-30	TC-FE LO-UC

Equipment ID No.	A M R[1]	Date of Manu-facture	Description	Maximum Capacity		Control Equip-ment[2]	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Equipment[2]
BC-14	R	2010	36" Clean Coal Chain Belt - receives coal via above-the-ground feeder from stockpile OS-02 and transfers to loadout belt BC-16	REMOVED					
BC-15	M M	2010 2016	60" Clean Coal Reclaim Conveyor - receives clean coal from silo BS-04 and transfers to loadout belt BC-16	6,000	3,504,000	PE	B A	TP-30 TP-31	LO-UC TC-FE
Rail Car Loadout Circuit									
BC-16	M M	2010 2016	60" Clean Coal Loadout Conveyor #1 - receives clean coal from clean coal stockpile OS-02, clean coal Silo BS-03 and clean coal reclaim conveyor BC-15 then transfers to clean coal loadout conveyor #2 BC-17	6,000	3,504,000	PE	B B B A	TP-28 TP-29 TP-31 TP-32	LO-UC LO-UC TC-FE TC-FE
BC-17	M M	2010 2016	60" Clean Coal Loadout Conveyor - receives clean coal from loadout belt #1 BC-16 and transfers to the batch weigh loadout bin BS-05	6,000	3,504,000	PE	B A	TP-32 TP-33	TC-FE TC-FE
BS-05	M M	2010 2016	200T Batch Weigh Surge Bin - receives coal from loadout belt BC-17, stores it, and transfers to the loadout bin BS-06	—	3,504,000	FE	B A	TP-33 TP-34	TC-FE TC-FE
BS-06	M M	2010 2016	150T Batch Weigh Loadout Bin - receives clean coal from surge bin BS-05, stores it, and transfers to railcar	—	3,504,000	FE	B A	TP-34 TP-35	TC-FE LR-TC
Affinity Prep Plant - Refuse Circuit									
BC-18	M M	2010 2016	36" Plant Refuse Belt Conveyor - transfers refuse from plant to belt BC-20	400	3,504,000	PE	B A	TP-36 TP-37	TC-FW TC-FE
BC-19	M R	2010 2016	36" Refuse Belt Press Conveyor - transfers refuse from the plant refuse belt press system to refuse belt BC-18	REMOVED					
BC-20	M M	2010 2016	30" Overland Refuse Belt Conveyor - receives crusher reject and refuse from belt conveyor BC-18 and transfers to the refuse bin BS-07	400	3,504,000	PE	B B A	TP-10 TP-37 TP-38	TC-PW TC-FE TC-FE
BS-07	M M	2010 2016	200T Refuse Bin - receives refuse from belt conveyor BC-20, stores it, and discharges via chute/gate to truck, truck transports to disposal area	—	3,504,000	FE	B A A	TP-38 TP-39 TP-40	TC-FE LO-MDH UL-MDH

[1] A - Addition; M - Modification; R - Removal (Existing unmodified equipment to be included in the permit is labeled with an M.)

[2] FE - Full Enclosure; PE - Partial Enclosure; WS - Water Sprays; N - None; ST - Stacking Tube; UL-MDH - Truck Unloading; LO-MDH - Loadout Minimum Drop Height; FW - Fully Enclosed w/water spray; PW - Partially Enclosed w/ water spray; TC-FE - Transfer Point Fully Enclosed; TC-FW - Transfer Point Fully Enclosed w/water sprays; TC-PW - Transfer Point Partially Enclosed w/water sprays; TC-MDH - Transfer Point Minimum Drop Height

DESCRIPTION OF FUGITIVE EMISSIONS (taken 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 haulroads and work areas. The haulroads and work areas will be controlled by water truck in accordance with section 5.1.4 of the General Permit.

The water truck is equipped with pumps sufficient to maintain 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

The writer visited the site on March 04, 2011 and met with Dale Birchfield (Project Manager - overseeing initial site construction). At that time, contractors were working to complete the preparation plant, constructing belt lines and tying in existing storage silos and stacking tubes. John Moneypenny of the Compliance and Evforcement Section has performed a full on-site targeted inspection on February 19, 2014 and a partial on-site inspection on May 14, 2014. Both inspections

resulted in a Status Code of 30 - Facility in Compliance. The writer deemed that a site inspection was not necessary at this time due to the type and scope of the modification proposed.

Directions from Charleston, WV are to take I-77 toward Beckley, take WV-16 Robert C. Byrd Drive exit 42, merge onto WV-16 toward WV-97, turn left onto Midway Road/CR-16/14 old WV-16, turn right onto Coal City Rd., turn right onto Independence Rd. and follow to plant site.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, storage piles and unpaved haulroads are based on AP-42 "Compilation of Air Pollution Emission Factors." Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The estimated emission calculations were performed by the applicant's consultant and were checked for accuracy and completeness by the writer.

The proposed modification of a coal preparation plant will result in an estimated decrease in potential to discharge the following Regulated Air Pollutants: particulate matter baseline emissions of 49 tons per year, point source emissions of particulate matter less than ten microns total of 23 tons per year and controlled facility emissions total of 62 tons per year. Pocahontas Coal Company, LLC's proposed modification of a coal preparation plant will result in the following estimated potential to discharge controlled emissions:

Emissions Summary - *Pocahontas Coal Company, LLC G10-D118C*	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.52	2.26	0.24	1.06
Unpaved Haulroad Emissions	48.74	213.63	14.39	63.06
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	*49.26*	*215.89*	*14.63*	*64.12*
Point Source Emissions				
Equipment Emissions	17.40	76.21	8.18	35.82
Transfer Point Emissions	10.25	19.20	4.85	9.08
Point Source Emissions Total (PTE)	*27.65*	*95.41*	*13.03*	*44.90*
FACILITY EMISSIONS TOTAL	**76.90**	**311.30**	**27.65**	**109.02**

The following table outlines the change in the estimated potential to discharge controlled emissions:

Emissions Summary - *Pocahontas Coal Company, LLC Change from G10-D118B*	Controlled PM Emissions		Controlled PM_{10} Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.33	1.44	0.15	0.68
Unpaved Haulroad Emissions	-3.43	-14.89	-1.01	-4.39
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	*-3.10*	*-13.45*	*-0.86*	*-3.71*
Point Source Emissions				
Equipment Emissions	-11.40	-49.93	-5.36	-23.47
Transfer Point Emissions	0.15	0.90	0.07	0.43
Point Source Emissions Total (PTE)	*-11.25*	*-49.03*	*-5.28*	*-23.04*
FACILITY EMISSIONS TOTAL	**-14.36**	**-63.48**	**-6.15**	**-26.75**

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the proposed facility. The proposed modification of a coal preparation plant will be subject to the following state and federal rules:

45CSR5 *To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants and Coal Handling Operations*

The facility will be subject to the requirements of 45CSR5 because it will meet 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 within application G10-D118C 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 applicant has applied for a G10-D registration to modify pursuant to Section 2.17.e., the modification will result in a decrease in facility emissions and reflect as-built configuration of the equipment for the Midway/Affinity facility. The applicant submitted the appropriate $1,500 application fees and published a Class I legal advertisement in *The Register-Herald* on December 16, 2015.

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

This facility will be subject to 40 CFR 60 Subpart Y because it will have been constructed after October 24, 1974 and will process more than 200 tons of coal per day. The proposed Modification of a Coal Preparation Plant to actual as-built will include deleting the RC Silo;

change in controls on crusher and screen; increasing storage; deleting belt conveyors (BC-05, BC-07, BC-08); changing crusher from breaker to Jeffery DR and changes to truck traffic. The modification will include the equipment used in the loading, unloading and conveying operations of the affected facility, constructed, reconstructed or modified after May 27, 2009 in 40 CFR 60 Subpart Y. 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 constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation and Processing Plants. The facility must submit a fugitive coal dust emissions control plan as required by 40CFR§60.254(c)(2) after permit issuance.

45CSR30 Requirements for Operating Permits

The facility's potential to emit will be 45.96 TPY of a regulated air pollutant (PM_{10}), not including fugitive emissions from haulroads, which is less than the 45CSR30 threshold of 100 TPY for a major source. However, the facility will be subject to 40 CFR 60 Subpart Y. As a result of the granting of this registration, the source is a nonmajor source subject to 45CSR30.

The proposed modification of a coal preparation plant will <u>not</u> be 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 coal preparation plant is not listed in Table 1. The facility will have the potential to emit 97.67 TPY of a regulated air pollutant (PM), not including fugitive emissions from haulroads, which is less than the 45CSR14 threshold of 250 TPY. This facility is not listed in Table 2, and so fugitive emissions are not included when determining source applicability. 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 pollutants that will be emitted from this facility are PM (particulate matter) and PM_{10} (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 proposed location of this facility. This facility will be located in Raleigh County, WV, which is currently in attainment for PM (particulate matter) , PM_{10} (particulate matter less than 10 microns in diameter) and $PM_{2.5}$ (particulate matter less than 2.5 microns in diameter).

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.

MONITORING OF OPERATIONS

For the purposes of determining compliance with maximum throughput limits, the applicant shall maintain certified daily records and monthly records of the amount of coal processed. Also, the applicant shall maintain certified maintenance records. Such records shall be retained on site by the permittee for at least five (5) years and shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

PROPOSED CHANGES TO CURRENT REGISTRATION G10-D118B

- Delete RC Silo
- Change in controls on crusher and screen
- Increasing storage
- Delete BC-05, BC-07, BC-08
- Change crusher from breaker to Jeffery DR
- Changes to truck traffic.

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 public comments were received. Therefore, the granting of a G10-D registration to Pocahontas Coal Company, LLC for the modification of a coal preparation plant located near Midway, Raleigh County, WV is hereby recommended.

Thornton E. Martin Jr.
Permit Engineer

February 22, 2016
Date