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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G10-D017F
Plant ID No.: 039-00480
Applicant: Kanawha Eagle Mining, LLC
Facility Name: South Hollow Preparation Plant
Location: Winifrede, Kanawha County, WV
SIC Code: 1221 and 1222 (Bituminous Coal & Lignite - Underground)
NAICS Code: 212112 (Bituminous Coal Underground Mining)
Application Type: Modification
Received Date: February 16, 2017
Engineer Assigned: Thornton E. Martin Jr.
Fee Amount: \$1,500
Date Received: October 12, 2016
Complete Date: March 31, 2017
Applicant's Ad Date: February 23, 2017
Newspaper: *Charleston Gazette Mail*
UTM Coordinates: Easting: 450.97763 km Northing: 4223.28461 km Zone: 17
Lat/Lon Coordinates: Latitude 38.156264 Longitude -81.558339 NAD83
Description: This application addresses changes in the process flow, controls, equipment identifications, transfer points, addition/deletion of equipment and inclusion of emergency generators.

BACKGROUND

This facility was formerly operated by Emerald Processing, Limited Liability Company under General Permit G40-D017D issued on April 2, 2015. The new owner/operator, Kanawha Eagle Mining, LLC is a subsidiary of parent corporation Blackhawk Mining. This modification application is for the re-configuration of the facility which will include changes in the process flow, controls, equipment identifications, transfer points, addition/deletion of equipment and inclusion of emergency generators. The quantitative change in emissions (decrease) will not be included as part of this evaluation since the facility will be operated under new ownership.

DESCRIPTION OF PROCESS

Raw coal from the Eagle Mine is transferred to the plant via belt BC-01(PE) @ TP-01(TC-FE) and TP-02(TC-FW). Raw coal from the Peerless Mine will transfer to stockpile OS-01(SW-WS) @ TP-03(TC-FE) and TP-04(TC-MDH); will reclaim under pile to feeder-breaker CR-01(FE) for transfer via belt BC-03(PE) to the plant feed belt BC-09(PE) @ TP-05(LO-UC) thru TP-07(TC-FE). Raw coal from the newest deep mine will transfer via a series of belt conveyors BC-04(NC) thru BC-07(NC) to the plant transfer belts BC-08(PE) and BC-09(PE) @ TP-08(TC-FE) thru TP-16(TC-FW). Stacker belt BC-05 can be used to transfer raw coal to open stockpile OS-02(SW-WS) for loadout to truck @ TP-09(TC-MDH) and TP-10(LO-MDH). This coal can be trucked to raw coal stockpile OS-03(SW-WS) @ TP-11(UL-MDH) in the event of belt system breakdown. Raw coal from BC-07 can also transfer to the raw coal stockpiles OS-03(SW-WS) and OS-04(SW-WS) via a series of belt conveyors BC-12(PE) thru BC-14(PE) @ TP-23(TC-FE) thru TP-27(TC-PE).

Raw coal entering the plant will be screened by SS-01(FW) and crushed by CR-02(FW); transferred to belts BC-10(PE) and BC-11(PE); transfer to the raw coal silos BS-01(FE), BS-02(FE) and stockpiles OS-03 and OS-04 @ TP-17(TC-FW) thru TP-22(TC-FE). From the silos and stockpiles, raw coal will reclaim under bin and under pile to belt conveyors BC-15(FE), BC-16(FE) and BC-17(PE) for transfer to plant @ TP-28(LO-UC) thru TP-34(TC-FW).

Plant stoker coal will transfer to stoker bin BS-03(FE) via belt BC-18(PE) for loadout to truck or train @ TP-35(TC-FW) thru TP-38(LO-TC).

Clean coal from the plant will transfer to the clean coal silos BS-04(FE) and BS-05(FE) via belts BC-19(PE) and BC-20(PE) @ TP-39(TC-FW) thru TP-42(TC-FE) and reclaim under bin to belts BC-21(FE) and BC-22(FE) for transfer to loadout bin BS-06(FE) @ TP-43(LO-UC) thru TP-46(TC-FE). Clean coal can be transferred to rail or truck @ TP-47(LR-TC) and TP-48(LO-TC).

Screen SS-01 reject materials can transfer to refuse crusher CR-03(FW) and transfer to refuse belt BC-23(PE) inside the plant @ TP-49(TC-FW) and TP-50(TC-FW).

Plant refuse is transferred to the disposal area via a series of partially enclosed belt conveyors BC-23(PE) thru BC-39(PE) @ TP-51(TC-FW) thru TP-71(TC-MDH). In the event of belt malfunction or breakdown, refuse can also transfer from belt BC-23 to refuse bin BS-07(FE) for transfer to the disposal area by truck @ TP-52(TC-FE) thru TP-54(UL-MDH).

Refuse slurry material exits the plant via slurry line to the filter press building where it will be processed and transfer to the refuse disposal area via a series of refuse belts BC-40(PE) thru BC-42(PE) @ TP-72(TC-FE) thru TP-75(TC-MDH).

Refuse material will exit the plant at TP-76(TC-FW) and go to press building where it will discharge to belt conveyor BC-43(PE) @ TP-77(TC-FE) and discharge to the exiting refuse belt conveyor system at TP-78(TC-FE).

The facility shall be modified and operated in accordance with the following equipment and control device information taken from registration applications G10-D017F, G10-D017D, G10-D017C, G10-C017B, G10-B017A and G10-B017 and any amendments thereto:

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	Emission Unit Description	Maximum Permitted Throughput		Control Equipment ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID No.	Control Equipment ²
Eagle Mine Raw Coal Circuit								
BC-01	2005	Belt Conveyor receives raw coal from the Eagle Mine and transfers to the screen SS-01 inside the preparation plant	800	7,008,000	PE	B A	TP-01 TP-02	TC-FE TC-FW
Overland Raw Coal Circuit								
BC-04	2004	Belt Conveyor transfers raw coal from area mines to belt conveyor BC-05	1,200	10,512,000	NC	A	TP-08	TC-FE
BC-05	2016	Belt Conveyor receives raw coal from belt conveyor BC-04 and transfers to either open stockpile OS-02 or to belt conveyor BC-06.	1,200	10,512,000	NC	B A A	TP-08 TP-09 TP-12	TC-FE TC-MDH TC-FE
OS-02	2017	(25,000 Ton) Open Stockpile receives raw coal from belt conveyor BC-05. Trucks carry the raw coal from OS-02 to OS-03.	1,200	5,256,000		B A A	TP-09 TP-10 TP-11	TC-MDH LO-UC UL-MDH
BC-06	2016	Belt Conveyor receives raw coal from belt conveyor BC-05 and transfers to belt conveyor BC-07	1,200	10,512,000	NC	B A	TP-12 TP-13	TC-FE TC-FE
BC-07	2016	Belt Conveyor receives raw coal from belt conveyor BC-06 and transfers to either belt conveyor BC-08 or to belt conveyor BC-12	1,200	10,512,000	NC	B A A	TP-13 TP-14 TP-23	TC-FE TC-FE TC-FE
BC-08	2005	Belt Conveyor receives raw coal from belt conveyor BC-07 and transfers to belt conveyor BC-09	800	7,008,000	PE	B A	TP-14 TP-15	TC-FE TC-FE
BC-09	1999	Belt Conveyor receives raw coal from belt conveyor BC-08 and crusher CR-01 (see Peerless Raw Coal Circuit) then transfers to screen SS-01 (see Preparation Plant Circuit)	800	7,008,000	PE	B B A	TP-15 TP-07 TP-16	TC-FE TC-FE TC-FW
BC-12	2005	Belt Conveyor receives raw coal from belt conveyor BC-07 and transfers to belt conveyor BC-13	1,200	10,512,000	PE	B A	TP-23 TP-24	TC-FE TC-FE
BC-13	2005	Belt Conveyor receives raw coal from belt conveyor BC-12 and transfers to open stockpile OS-03 or to belt conveyor BC-14 through flop gate	1,200	10,512,000	PE	B A A	TP-24 TP-25 TP-26	TC-FE TC-FE TC-FE
OS-03	2017	20,000 Ton Open Stockpile receives raw coal from belt conveyor BC-13 through stacking tube. Raw coal is reclaimed under pile through feeder to belt conveyor BC-17	----	7,008,000	SW-WS	B A	TP-25 TP-31	TC-FE LO-UC
BC-14	2005	Belt Conveyor receives raw coal from belt conveyor BC-13 and transfers to open stockpile OS-04	1,200	5,256,000	PE	B A	TP-26 TP-27	TC-FE TC-PE
OS-04	2017	40,000 Ton Open Stockpile receives raw coal from belt conveyor BC-14 through stacking tube. Raw coal is reclaimed under pile to belt conveyor BC-15	----	5,256,000	SW-WS	B A	TP-27 TP-28	TC-PE LO-UC
BC-15	2005	Belt Conveyor receives raw coal underpile from open stockpile OS-04 and transfers to belt conveyor BC-16	800	5,256,000	FE	B A	TP-28 TP-29	LO-UC TC-FE
BC-16	2005	Belt Conveyor receives raw coal from belt conveyor BC-15 and transfers to Preparation Plant feed conveyor BC-17	800	5,256,000	FE	B A	TP-29 TP-30	TC-FE TC-FE
Peerless Raw Coal Circuit								
BC-02	2005	Belt Conveyor receives raw coal from the Peerless Mine and transfers to open stockpile OS-01	800	7,008,000	NC	B A	TP-03 TP-04	TC-FE TC-MDH
OS-01	2017	20,000 Ton Open Stockpile receives raw coal from belt conveyor BC-02 and raw coal is loaded out underpile	----	7,008,000	SW-WS	B A	TP-04 TP-05	TC-MDH LO-UC
CR-01	2012	Raw Coal Breaker receives raw coal underpile and transfers to belt conveyor BC-03	800	7,008,000	FE	B A	TP-05 TP-06	LO-UC TC-FE
BC-03	2004	Belt Conveyor receives raw coal from breaker and transfers to belt conveyor BC-09	800	7,008,000	PE	B A	TP-06 TP-07	TC-FE TC-FE
Preparation Plant Circuit								
BC-17	2012	Plant Feed Conveyor receives raw coal from the raw coal silos BS-01, BS-02 and open stockpiles OS-03, OS-04	800	7,008,000	PE	B B B A	TP-33 TP-32 TP-31 TP-30 TP-34	LO-UC LO-UC LO-UC TC-FE TC-FW
SS-01	1999	In-Plant Single Deck Screen receives raw coal from belt conveyor BC-01 (see Eagle Mine Circuit) and from belt conveyor BC-09 (see Overland Raw Coal Circuit). Screened raw coal drops to Raw Coal Silo Feed Conveyor BC-10; oversized material (refuse) drops to In-Plant Crusher CR-03	800	7,008,000	FW	B B A A	TP-02 TP-16 TP-17 TP-49	TC-FW TC-FW TC-FW TC-FW
CR-02	2000	In-Plant Hammermill Crusher receives raw coal from In-Plant, crushes then transfers onto raw coal silo feed conveyor BC-10	800	7,008,000	FW	B A	TP-18 TP-19	TC-FW TC-FW

Equip- ment ID No.	Date of Construction, Reconstruction or Modification ¹	Emission Unit Description	Maximum Permitted Throughput		Control Equip- ment ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID No.	Control Equip- ment ²
CR-03	2005	In-Plant Single Roll Crusher receives refuse from In-Plant Screen SS-01, crushes then transfers to refuse conveyor BC-23	100	876,000	FW	B A	TP-49 TP-50	TC-FW TC-FW
BC-10	1999	Raw Coal Silo Feed Conveyor receives screened raw coal from SS-01 and crushed raw coal from CR-02 then transfers to either raw coal silos BS-01 or BS-02 through flop gate	800	7,008,000	PE	B B A A	TP-17 TP-19 TP-20 TP-21	TC-FW TC-FW TC-FE TC-FE
BC-18	2012	Stoker Conveyor transfers Stoker Coal from plant to Stoker Bin BS-03	300	2,628,000	PE	B A	TP-35 TP-36	TC-FW TC-FE
BC-19	2012	Clean Coal Silo Feed Conveyor transfers clean coal from the Preparation Plant to clean coal silo BS-04 or to the transfer conveyor BC-20	800	7,008,000	PE	B A A	TP-39 TP-40 TP-41	TC-FW TC-FE TC-FE
BC-23	1993	Refuse Conveyor receives refuse from In-Plant Crusher CR-03 and transfers to Plant Refuse Bin BS-07 or to refuse conveyor BC-24	800	7,008,000	PE	B A A	TP-50, 51 TP-52 TP-55	TC-FW TC-FE TC-FE
Stoker Coal Circuit								
BS-03	2017	160 Ton Stoker Bin receives stoker coal from conveyor BC-18 and transfers into railcar or truck	----	7,008,000	FE	B A A	TP-35 TP-37 TP-38	TC-FW LR-TC LO-TC
Clean Coal Circuit								
BS-04	2017	7,500 Ton Clean Coal Silo receives clean coal from the clean coal silo feed conveyor BC-19. Clean Coal is reclaimed by loadout conveyor BC-22	----	7,008,000	FE	B A	TP-40 TP-45	TC-FE LO-UC
BC-20	2012	Clean Coal Transfer Conveyor receives clean coal from the clean coal silo feed conveyor BC-19 and transfers to clean coal silo BS-05	800	7,008,000	PE	B A	TP-41 TP-42	TC-FE TC-FE
BS-05	2017	10,000 Ton Clean Coal Silo receives clean coal from transfer conveyor BC-20. Clean Coal is reclaimed by loadout conveyor BC-21	----	7,008,000	FE	B A	TP-42 TP-43	TC-FE LO-UC
BC-21	2012	Clean Coal Loadout Conveyor receives clean coal from clean coal silo BS-05 and transfers to clean coal loadout conveyor BC-22	4,000	7,008,000	FE	B A	TP-43 TP-44	LO-UC TC-FE
BC-22	2012	Clean Coal Loadout Conveyor receives clean coal from clean coal silo BS-04 and loadout conveyor BC-21 then transfers to the Clean Coal Flood Loadout Bin BS-06	4,000	7,008,000	PE	B B A	TP-45 TP-44 TP-46	LO-UC TC-FE TC-FE
BS-06	2017	200 Ton Clean Coal Flood Loadout Bin receives clean coal from loadout conveyor BC-22. Clean coal is transferred to railcar or truck	----	7,008,000	FE	B A A	TP-46 TP-47 TP-48	TC-FE LR-TC LO-TC
Refuse Circuit								
BS-07	2017	150 Ton Refuse Bin receives refuse from refuse conveyor BC-23 and transfers to truck	----	3,504,000	FE	B A	TP-52 TP-54	TC-FE UL-MDH
BC-24	1997	Refuse Conveyor receives refuse from Plant Refuse Conveyor BC-23 and transfers to refuse conveyor BC-25	800	7,008,000	PE	B A	TP-55 TP-56	TC-FE TC-FE
BC-25	1997	Refuse Conveyor receives refuse from refuse conveyor BC-24 and transfers to refuse conveyor BC-26	800	7,008,000	PE	B A	TP-56 TP-57	TC-FE TC-FE
BC-26	1997	Refuse Conveyor receives refuse from refuse conveyor BC-25 and transfers to belt conveyor BC-27	800	7,008,000	PE	B A	TP-57 TP-58	TC-FE TC-FE
BC-27	1997	Belt Conveyor receives slurry from belt conveyor BC-43 and belt conveyor BC-26 then transfers to belt conveyor BC-28	800	7,008,000	PE	B A	TP-78,58 TP-59	TC-FE TC-FE
BC-28	1997	Belt Conveyor receives slurry from belt conveyor BC-27 and transfers to belt conveyor BC-29	800	7,008,000	PE	B A	TP-59 TP-60	TC-FE TC-FE
BC-29	1997	Belt Conveyor receives slurry from belt conveyor BC-28 and transfers to belt conveyor BC-30	800	7,008,000	PE	B A	TP-60 TP-61	TC-FE TC-FE
BC-30	1997	Belt Conveyor receives slurry from belt conveyor BC-29 and transfers to belt conveyor BC-31	800	7,008,000	PE	B A	TP-61 TP-62	TC-FE TC-FE
BC-31	1997	Belt Conveyor receives slurry from belt conveyor BC-30 and transfers to belt conveyor BC-32	800	7,008,000	PE	B A	TP-62 TP-63	TC-FE TC-FE
BC-32	1997	Belt Conveyor receives slurry from belt conveyor BC-31 and transfers to belt conveyor BC-33	800	7,008,000	PE	B A	TP-63 TP-64	TC-FE TC-FE
BC-33	1997	Belt Conveyor receives slurry from belt conveyor BC-32 and transfers to belt conveyor BC-34	800	7,008,000	PE	B A	TP-64 TP-65	TC-FE TC-FE
BC-34	1997	Belt Conveyor receives slurry from belt conveyor BC-33 and transfers to belt conveyor BC-35	800	7,008,000	PE	B A	TP-65 TP-66	TC-FE TC-FE
BC-35	2005	Belt Conveyor receives slurry from belt conveyor BC-34 and transfers to belt conveyor BC-36	800	7,008,000	PE	B A	TP-66 TP-67	TC-FE TC-FE
BC-36	2005	Belt Conveyor receives slurry from belt conveyor BC-35 and transfers to belt conveyor BC-37	800	7,008,000	PE	B A	TP-67 TP-68	TC-FE TC-FE

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	Emission Unit Description	Maximum Permitted Throughput		Control Equipment ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID No.	Control Equipment ²
BC-37	2005	Belt Conveyor receives slurry from belt conveyor BC-36 and transfers to belt conveyor BC-38	800	7,008,000	PE	B A	TP-68 TP-69	TC-FE TC-FE
BC-38	1993	Belt Conveyor receives slurry from belt conveyor BC-37 and transfers to belt conveyor BC-39	800	7,008,000	PE	B A	TP-69 TP-70	TC-FE TC-FE
BC-39	1997	Belt Conveyor receives slurry from belt conveyor BC-38 and transfers to disposal area	800	7,008,000	PE	B A	TP-70 TP-71	TC-FE TC-MDH
Slurry Circuit								
SL	2017	Slurry Line transfers slurry from Plant to Slurry Building	300	2,628,000	FE	B A	TP-76 TP-76	TC-FW TC-FE
PBLDG	2017	Slurry Building receives slurry from Slurry Line and then transfers to slurry conveyor BC-43	300	2,628,000	FE	B A	TP-76 TP-76	TC-FE TC-FE
BC-43	2017	Belt Conveyor receives slurry from PBLDG and transfers to belt conveyor BC-27	300	2,628,000	PE	B A	TP-77 TP-78	TC-FE TC-FE
SL	2017	Slurry Line transfers slurry from Plant to Filter Press	300	2,628,000	FE	B A	TP-72 TP-72	TC-FW TC-FE
FPRESS	2017	Filter Press receives slurry from Slurry Line and then transfers to slurry conveyor BC-40	300	2,628,000	FE	B A	TP-72 TP-72	TC-FE TC-FE
BC-40	1997	Belt Conveyor receives slurry from Filter Press and transfers to belt conveyor BC-40	300	2,628,000	PE	B A	TP-72 TP-73	TC-FE TC-FE
BC-41	1997	Belt Conveyor receives slurry from belt conveyor BC-40 and transfers to belt conveyor BC-42	300	2,628,000	PE	B A	TP-73 TP-74	TC-FE TC-FE
BC-42	1997	Belt Conveyor receives slurry from belt conveyor BC-41 and transfers to ground	300	2,628,000	NC	B A	TP-74 TP-75	TC-FE TC-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 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 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; MDH - Minimize Drop Height; 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 unpaved haulroads and work areas. The haulroads, stockpiles, and work areas will be controlled by water truck in accordance with the compliance section of the General Permit. The water truck will be operated three times daily, and more frequently as needed in dry periods.

An additive to prevent freezing will be utilized in the winter months when freezing conditions are present. New course limestone gravel base material will be added to unpaved haulroads as needed.

SITE INSPECTION

On February 06, 2017, Fred Teel of the DAQ's Compliance and Enforcement Section performed a full on-site targeted inspection of the facility. Mr. Teel did not find any violations at the time of the inspection and the facility was given a status code of 30 - In Compliance.

Directions from Charleston, WV are to take Rt. 61 to Fields Creek (Winifrede Hollow Road), turn right onto Winifrede Road, go straight, plant located approximately 5 miles from the Post Office at the end of the road.

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 modification (not including emergency engines) will result in a new facility-wide potential to discharge controlled particulate matter emissions of 217.06 pounds per hour (PPH) and 961.98 tons per year (TPY) of particulate matter (PM), of which 67.06 PPH and 298.54 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:

Table 1: New Facility-wide Emissions

Kanawha Eagle Mining, LLC South Hollow Preparation Plant	Controlled PM Emissions		Controlled PM ₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.06	0.27	0.03	0.13
Unpaved Haulroad Emissions	162.43	713.38	46.94	206.17
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
<i>Fugitive Emissions Total</i>	<i>162.49</i>	<i>713.65</i>	<i>46.97</i>	<i>206.30</i>
Point Source Emissions				
Equipment Emissions	13.00	56.94	6.11	26.76
Transfer Point Emissions	11.61	35.09	5.49	16.60
<i>Point Source Emissions Total (PTE)</i>	<i>24.61</i>	<i>92.03</i>	<i>11.60</i>	<i>43.36</i>
FACILITY-WIDE EMISSIONS	187.10	805.68	58.57	249.66

The addition of the emergency generators and their associated emissions are not represented in the above table. Three generators to be installed will be stationary to provide backup power for critical functions in the event of power outages and three generators will be small portables to power guard shacks and office trailer in the event of power outages. Refer to the following tables for a complete summary of the emergency engines and their respective emissions:

Table 2: Emergency Generators

Emission Unit ID	Detail Make/Model	Year of Manufacture	Design Capacity	EPA Certification	Control Device
Gen Set - 1	Caterpillar Olympian	2006-2010	185 kW 248 bhp	Tier 3	N/A
Gen Set - 2	Caterpillar NGGWV	2006-2010	250 kW 313 bhp	Tier 3	N/A
Gen Set - 3	Caterpillar D150-8 CAT C6.6	2006-2010	150 kW 188 bhp	Tier 3	N/A
Gen Set - 4	Caterpillar XQ20-P2	2004-2007	22 kW 30 bhp	Tier 2	N/A
Gen Set - 5	Caterpillar XQ20-P2	2004-2007	22 kW 30 bhp	Tier 2	N/A
Gen Set - 6	Caterpillar XQ30-6	2004-2007	49 kW 65 bhp	Tier 2	N/A

The Applicants' consultant listed the Engine Manufacture Date for Gen Set - 1 and Gen Set - 2 as 2013 and Gen Set -3 through Gen Set - 6 as 2014. The Manufacturers Data sheets for each engine were included in the Application. Based on the Manufacturers Data, Gen Set - 1 through Gen Set - 3 are EPA Tier 3 certified engines and Gen Set - 4 through Gen Set - 6 are EPA Tier 2 certified engines. Manufacturers are required to produce engines to meet the current EPA emission standard depending on the year of production. Therefore, the engines would have been produced in the date range as shown in Table 2.

In addition, the consultants' estimated emissions for all pollutants were based on AP-42 emission factors only. The writer re-calculated engine emissions for NOx, CO and PM based on the standard for each pollutant for each engine and the remaining are based on AP-42 emission factors as submitted. All emissions are based on 500 hours of operation.

Table 3: Emergency Generator Emission Summary - Criteria Pollutants

Source ID No.	Potential Emissions (lbs/hr)					Potential Emissions (tons/yr)				
	NOx	CO	VOC	SO ₂	PM ₁₀	NOx	CO	VOC	SO ₂	PM ₁₀
Gen Set - 1	1.55	1.43	0.613	0.508	0.082	0.387	0.357	0.153	0.127	0.020
Gen Set - 2	2.09	1.93	0.773	0.642	0.110	0.523	0.482	0.193	0.160	0.028
Gen Set - 3	1.26	1.16	0.464	0.385	0.066	0.314	0.289	0.116	0.096	0.017
Gen Set - 4	0.345	0.267	0.074	0.062	0.029	0.086	0.067	0.019	0.015	0.007
Gen Set - 5	0.345	0.267	0.074	0.062	0.029	0.086	0.067	0.019	0.015	0.007
Gen Set - 6	0.769	0.540	0.161	0.133	0.043	0.192	0.135	0.040	0.033	0.011
TOTAL	6.359	5.594	2.159	1.792	0.359	1.588	1.397	0.54	0.446	0.09

Table 4: Emergency Generator Emission Summary - Hazardous/Toxic Pollutants

Source	Potential Emissions (lbs/hr)						Potential Emissions (tons/yr)					
	Benzene	Acetaldehyde	Toluene	Xylenes	n-Hexane	Formaldehyde	Benzene	Acetaldehyde	Toluene	Xylenes	n-Hexane	Formaldehyde
Gen Set - 1	0.00149	0.00122	0.00065	0.00045	0	0.00188	0.00037	0.00031	0.00016	0.00011	0	0.00047
Gen Set - 2	0.00244	0.00201	0.00011	0.00075	0	0.00309	0.00061	0.00050	0.00027	0.00018	0	0.00077
Gen Set - 3	0.00142	0.00117	0.00062	0.00043	0	0.00180	0.00036	0.00029	0.00015	0.00011	0	0.00045
Gen Set - 4	0.00025	0.00021	0.00011	0	0	0.00032	0	0	0	0	0	0
Gen Set - 5	0.00025	0.00021	0.00011	0	0	0.00032	0	0	0	0	0	0
Gen Set - 6	0.00025	0.00021	0.00011	0	0	0.00032	0	0	0	0	0	0
TOTAL	0.006	0.005	0.002	0.002	0.000	0.008	0.001	0.001	0.001	0.001	0.000	0.002

REGULATORY APPLICABILITY

PSD has no applicability to the modified facility. The modification of Kanawha Eagle Mining, LLC's existing wet wash coal preparation plant and railcar loadout 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 modification is subject to the requirements of 45CSR13 because it will involve the construction of one belt conveyor and involve the modification of various pieces of existing equipment and stockpiles, which are defined as affected facilities and subject to 40 CFR 60 NSPS Subpart Y revised on April 28, 2008 and then again on May 27, 2009. The applicant has submitted an application for a Permit to modify. The applicant published a Class I legal advertisement in *Charleston Gazette Mail* on February 23, 2017 and submitted \$500 for the 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 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 belt conveyor and the modification of various pieces of existing equipment and stockpiles, 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.

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 43.49 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.

45CFR60 Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Three of the six engines are subject to 40CFR60 Subpart III, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines because they were manufactured after April 1, 2006. All six of the Generator Sets will utilize EPA certified engines.

40CFR63 Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Kanawha Eagle Mining, LLC is subject to 40CFR63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion

Engines because the engines are considered a new area source of HAPs since they are constructed on or after June 12, 2006, however, the only requirements that apply are those required under 45CFR60 Subpart III.

The proposed modification of Kanawha Eagle Mining, LLC's wet wash coal preparation plant and railcar loadout 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 92.30 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

Various VOC/non-criteria regulated pollutants are emitted from the incomplete combustion of diesel fuel. These emissions, however, are generally small and do not adversely impact the quality of the surrounding ambient air.

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 Kanawha County, WV, which is currently designated a PM_{2.5} nonattainment area (for both the annual and the 2006 24-hr standards), but is in attainment for all other regulated pollutants. This modified facility will remain a minor source as defined by 45CSR14 and 45CSR19, 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.

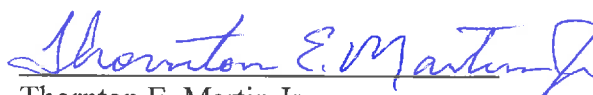
MONITORING OF OPERATIONS

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 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 application for a Permit 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 Kanawha Eagle Mining, LLC for the modification of their existing wet wash coal preparation plant and railcar loadout located near Winifrede, Kanawha County, WV is hereby recommended.



Thornton E. Martin Jr.
Permit Engineer

March 31, 2017

Date