



west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475 • Fax: (304) 926-0479

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G10-D145C
Plant ID No.: 081-00078
Applicant: Marfork Coal Company, Inc.
Facility Name: Marfork Prep Plant
Location: Pettus, Raleigh 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: Modification
Received Date: February 5, 2016
Engineer Assigned: Dan Roberts
Fee Amount: \$1,500
Date Received: February 5, 2016
Applicant's Ad Date: February 8, 2016
Newspaper: *The Register-Herald*
Complete Date: March 16, 2016
UTM Coordinates: Easting: 454.7512 km Northing: 4199.9610 km NAD83 Zone 17N
Lat/Lon Coordinates: Latitude: 37.946111 Longitude: -81.515000 NAD83
Description: Modification to do the following: add five refuse belt conveyors (BC-37, BC-38, BC-39, BC-40 and BC-41) with maximum throughput rates of 1,500 TPH and 6,000,000 TPY; add three raw coal belt conveyors (BC42, BC-43 and BC-44) with maximum throughput rates of 2,000 TPH and 2,000,000 TPY; change the maximum throughput rates for conveyor BC-01 from 6,000 TPH and 2,000,000 TPY to 4,000 TPH and 4,000,000 TPY; decrease the maximum throughput rates for conveyors BC-04 thru BC-08 from 2,400 TPH and 4,000,000 TPY to 1,000 TPH and 1,000,000 TPY; decrease the maximum annual throughput rate for conveyor BC-09 from 4,000,000 TPY to 3,000,000 TPY; increase the maximum hourly throughput rate for conveyors BC-22 thru BC-34 and BC-36 from 1,350 TPH to 1,500 TPH.

BACKGROUND

Marfork Coal Company, Inc. owns and operates the existing Marfork Prep Plant under current permit G10-D145B, which was approved on September 3, 2014. Marfork Coal Company, Inc. is a subsidiary of Alpha Natural Resources.

DESCRIPTION OF PROCESS

The Marfork Preparation Plant Facility is located in a remote area near Pettus in Raleigh County, WV.

Modification application G10-D145C addresses the following: a decrease in the rate and throughput for the Low Gap belts, as the mine is idle with an unknown startup date; installation of raw coal belt conveyor BC-42 which will transfer to another new belt conveyor BC-43 that now feeds stockpile OS-02; and the installation of another belt conveyor BC-44 that will transfer to BC-09 to feed stockpile OS-04. Refuse belt transfer rates have also been changed from 1,350 TPH to 1,500 TPH.

Although the equipment's maximum hourly operating rates show the ability to process 21,021,000 tons of coal on an annual basis, projections for the raw coal production from area deep mines and the raw coal truck dump will limit raw coal throughput to 12,000,000 tons per year. Alpha Natural Resources requests that the facility be limited to 12,000,000 raw tons throughput to depict reasonable operation, with leave to evaluate the facility annually and further modify the facility as production increases.

Raw coal delivered to the plant would be transferred to stockpile areas OS-01(SW-WS), OS-02(SW-WS), OS-03(SW-WS) and OS-04(SW-WS) from the Coon Eagle Mine via BC-01(PE); from Coon Cedar Mine via BC-02(PE); from the Low Gap Mine area via BC-04(PE), BC-05(PE), BC-06(PE), BC-07(PE), BC-08(PE) and BC-09(PE); and trucked coal would go through truck dump BS-01(PW) and go to OS-03 via BC-03(PE). This process is depicted in transfer points TP-01(TC-PE) thru TP-12(TC-PE).

With modification application G10-D145C, existing raw coal belt conveyor BC-01 from the Coon Eagle Mine will transfer to proposed belt conveyor BC-42 (PE) @ TP-83(TC-FE); BC-42 will transfer to proposed conveyor BC-43(PE) which will now feed stockpile OS-02 @ TP-84(TC-FE) and TP-85 (TC-PE); BC-42 will also transfer to proposed belt conveyor BC-44(PE) @ TP-86(TC-FE); BC-44 will transfer to existing belt conveyor BC-09 @ TP-87(TC-FE).

Raw coal is then reclaimed to belt BC-10(FE); transferred to belt BC-11(PE) and sent to the 10x20 Single Deck Screen SS-01(FW). Marfork plans to fully enclose the screen and add water sprays to reduce the screen's potential to emit. The screen will discharge refuse to refuse crusher CR-01(FE) for transfer to refuse belt BC-22(PE) and discharge raw coal to belt BC-12(PE) for transfer to the plant. This process is depicted in transfer points TP-13(LO-UC) thru TP-22(TC-FW).

Clean middlings coal transfers to the clean coal stockpile area via belt BC-13(PE). Oversize clean coal runs thru clean coal crusher CR-02(FW) inside the plant while all clean coal is transferred from the plant to clean coal stockpile OS-05(SW-WS) thru OS-10(SW-WS) via clean coal belt conveyors BC-14(PE) thru BC-18(PE) @ TP-23(TC-FW) thru TP-37(TC-PE) as depicted.

Pit-cleaned direct ship coal is delivered to truck dump BS-03(PW); goes thru pick breaker CR-03(FW); to transfer belt BC-20(PE); to a secondary crusher CR-04(FW); and to the stockpile feed belt BC-21(PE) @ TP-38(UD-PW) thru TP-44(TC-PE).

Clean coal is reclaimed from the stockpile areas to the loadout belt BC-19(PE); to loadout bin BS-02(FE); then to railcar @ transfer points TP-45(LO-UC) thru TP-52(LR-TC).

Refuse material from the plant is transferred to the disposal area via belt conveyors BC-20(PE) thru proposed BC-36(NC). Refuse belt BC-24 has the option of transferring to refuse bin BS-04(FE) to be loaded out to truck or transferring to refuse belt BC-25. Bin BS-04 is used only if a problem is encountered during the refuse process. This process is depicted at transfer points TP-53(TC-FW) thru TP-69(TC-MDH) and proposed TP-76(TC-MDH). Limestone sand/gravel is sometimes used as treatment for the refuse material and is delivered to a small stockpile OS-11(SW-WS); transferred by front-end loader to feed bin BS-05(PW); where it is deposited onto refuse belt BC-24 for neutralization. This process is depicted @ TP-70(UL-MDH) thru TP-72(TC-PE).

Another refuse maintenance area that is currently out of service and would require a great deal of mechanical work to restore is also on site. Cleaned-up material would be fed by front-end loader to bin BS-06(PW); transfer to belt BC-35(PE); and discharge to refuse belt BC-25. There are no plans to start this system but has been included for operational flexibility. This process takes place at transfer points TP-73(UL-MDH) thru TP-75(TC-PE).

With modification application G10-D145C, five new refuse belt conveyors will be added to the Low Gap Refuse Disposal Area. The belt conveyors will enter the system where existing belt conveyor BC-25 will transfer to proposed belt conveyors BC-37(PE) @ TP-77(TC-PE); BC-37 to BC-38(PE) @ TP-78(TC-PE); BC-38 to BC-39 (PE) @ TP-79(TC-PE); BC-39 to BC-40(PE) @ TP-80(TC-PE); BC-40 to BC-41(NC) @ TP-81(TC-PE); BC-41 to Ground @ TP-82(TC-MDH).

The facility shall be modified and operated in accordance with the following equipment and control device information taken from registration application G10-D145C and any amendments thereto:

Equip-ment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Description	Maximum Capacity		Control Equip-ment ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip-ment ³
Raw Coal Circuit									
BC-01	M 2016 C 1994	5 and 8	Belt Conveyor - receives raw coal from Brushy Eagle (Coon Eagle) mine and transfers it to BC-42 or onto OS-01	4,000	4,000,000	PE	A A	TP-01 TP-83	TC-PE TC-FE

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				TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip- ment ³
OS-01	M 2016 C 1994	5 and 8	Coon Eagle Mine Raw Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives raw coal from BC-01, stores it and then it is reclaimed underpile onto BC-10. Overflow is pushed to OS-02 (see below) by dozer.	---	4,000,000	SW-WS	B A	TP-01 TP-16	TC-PE LO-UC
BC-42	C 2016	5 and 8	Belt Conveyor - receives raw coal from BC-01 and transfers it to BC-43 or BC-44	2,000	2,000,000	PE	B A A	TP-83 TP-84 TP-86	TC-FE TC-FE TC-FE
BC-43	C 2016	5 and 8	Belt Conveyor - receives raw coal from BC-42 and transfers it to OS-02 (see below)	2,000	2,000,000	PE	B A	TP-84 TP-85	TC-FE TC-PE
OS-02	M 2016 C 1994	5 and 8	Coon Eagle Mine Raw Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives raw coal from OS-01 by dozer and BC-43, stores it and then it is reclaimed underpile onto BC-10 (see below)	---	3,000,000	SW-WS	B B A	TP-02 TP-85 TP-15	TC-MDH TC-PE LO-UC
BC-44	C 2016	5 and 8	Belt Conveyor - receives raw coal from BC-42 and transfers it to BC-09 through a structure formerly used as a truck dump bin, but is now a transfer point (see below)	2,000	2,000,000	PE	B A	TP-86 TP-87	TC-FE TC-FE
BC-02	C 1994	5 and 6	Coon Cedar Mine Belt Conveyor - receives raw coal from Coon Cedar mine and transfers it onto OS-03 (see below)	1,500	4,000,000	PE	A	TP-03	TC-PE
BS-01	C 2011	5 and 8	Truck Dump Bin - maximum 100 tons capacity - receives raw coal from trucks and transfers it to BC-03	100	2,000,000	PW	B A	TP-04 TP-05	UD-PW TC-FE
BC-03	C 1994	5 and 6	Belt Conveyor - receives raw coal from BS-01 and transfers it onto OS-03	2,400	2,000,000	PE	B A	TP-05 TP-06	TC-FE TC-PE
OS-03	C 1994	5 and 6	Cedar Coon Mine Raw Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives raw coal from BC-02 and BS-01 via BC-03, stores it and then it is reclaimed underpile onto BC-10 (see below)	---	4,000,000	SW-WS	B A	TP-06 TP-14	TC-PE LO-UC
BC-04	C 2004	5 and 6	Belt Conveyor - receives raw coal from Low Gap mine and transfers it to BC-05	1,000	1,000,000	PE	A	TP-07	TC-FE
BC-05	C 2004	5 and 6	Belt Conveyor - receives raw coal from Low Gap mine and BC-04 and transfers it to BC-06	1,000	1,000,000	PE	A	TP-08	TC-FE
BC-06	C 2004	5 and 6	Belt Conveyor - receives raw coal from Low Gap mine and BC-05 and transfers it to BC-07	1,000	1,000,000	PE	A	TP-09	TC-PE
BC-07	C 2004	5 and 6	Belt Conveyor - receives raw coal from Low Gap mine and BC-06 and transfers it to BC-08	1,000	1,000,000	PE	A	TP-10	TC-FE
BC-08	C 2004	5 and 6	Belt Conveyor - receives raw coal from BC-07 and transfers it to BC-09 through a structure formerly used as a truck dump bin, but is now a transfer point	1,000	1,000,000	PE	B A	TP-10 TP-11	TC-FE TC-FE
BC-09	C 2004	5 and 6	Belt Conveyor - receives raw coal from BC-08 and BC-44 and transfers it to OS-04	2,400	3,000,000	PE	B B A	TP-11 TP-87 TP-12	TC-FE TC-FE TC-PE

Equip- ment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Description	Maximum Capacity		Control Equip- ment ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip- ment ³
OS-04	C 1994	5 and 6	Low Gap Mine Raw Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives raw coal from BC-09, stores it and then it is reclaimed underpile onto BC-10	---	3,000,000	SW-WS	B A	TP-12 TP-13	TC-PE LO-UC
BC-10	M 2013 C 1994	5 and 8	Underpile Conveyor - receives raw coal from OS-01, OS-02, OS-03 and OS-04 and transfers it to BC-11	2,500	12,000,000	PE	B B B A	TP-13 TP-14 TP-15 TP-16 TP-17	LO-UC LO-UC LO-UC LO-UC TC-FE
BC-11	M 2013 C 1994	5 and 8	Belt Conveyor - receives raw coal from BC-10 and transfers it to SS-01	2,500	12,000,000	PE	B A	TP-17 TP-18	TC-FE TC-FW
SS-01	M 2013 C 1995	5 and 8	10 x 20 Single Deck Scalping Screen - receives raw coal from BC-11, classifies it and screened coal drops onto BC-12 while oversize material drops to CR-01 (see Refuse Circuit below)	2,500	12,000,000	FW	B A A	TP-18 TP-21 TP-19	TC-FW TC-FW TC-FW
BC-12	M 2013 C 1994	5 and 8	Plant Feed Conveyor - receives screened coal from SS-01 and transfers it into the preparation plant to the wet wash circuit	2,500	12,000,000	PE	B A	TP-21 TP-22	TC-FW TC-FW
Prep Plant Clean Coal Circuit									
BC-13	C 1994	5 and 6	Belt Conveyor - receives clean Middlings coal from the wet wash circuit and transfers it to BC-16 (see below)	1,200	3,300,000	PE	B A	TP-23 TP-24	TC-FW TC-PE
CR-02	C 1994	5 and 6	Clean Coal Crusher - receives oversize clean coal from the wet wash circuit, crushes it and then drops it onto BC-14	400	3,504,000	FW	B A	TP-25 TP-26	TC-FW TC-FW
BC-14	C 1994	5 and 6	Belt Conveyor - receives crushed clean coal from CR-02 and the wet wash circuit and transfers it to BC-15	1,200	6,600,000	PE	B B A	TP-26 TP-27 TP-28	TC-FW TC-FW TC-PE
BC-15	C 1994	5 and 6	Belt Conveyor - receives clean coal from BC-14 and transfers it to BC-16	1,200	6,600,000	PE	B A	TP-28 TP-29	TC-PE TC-PE
BC-16	C 1994	5 and 6	Belt Conveyor - receives clean coal from BC-13 and BC-15 and direct ship coal from BC-21 and transfers it onto OS-05, OS-06, OS-07, OS-08 or to BC-17	1,200	7,600,000	PE	B B B A A A A	TP-24 TP-29 TP-44 TP-30 TP-31 TP-32 TP-33 TP-34	TC-PE TC-PE TC-PE TC-PE TC-PE TC-PE TC-PE TC-PE
BC-17	C 1994	5 and 6	Belt Conveyor - receives clean coal from BC-16 and transfers it to OS-09 or BC-18	1,200	2,200,000	PE	B A A	TP-34 TP-35 TP-36	TC-PE TC-PE TC-PE
BC-18	C 1994	5 and 6	Belt Conveyor - receives clean coal from BC-17 and transfers is to OS-10	1,200	1,100,000	PE	B A	TP-36 TP-37	TC-PE TC-PE
OS-05	C 1994	5 and 6	Clean Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives clean coal from BC-16, stores it and then it is reclaimed underpile onto BC-19	2,500	1,100,000	SW-WS	B A	TP-30 TP-45	TC-PE LO-UC
OS-06	C 1994	5 and 6	Clean Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives clean coal from BC-16, stores it and then it is reclaimed underpile onto BC-19	2,500	1,100,000	SW-WS	B A	TP-31 TP-46	TC-PE LO-UC

Equip- ment ID No.	Date of Construction, Reconstruction or Modification ¹	G10-D Applicable Sections ²	Description	Maximum Capacity		Control Equip- ment ³	Associated Transfer Points		
				TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip- ment ³
OS-07	C 1994	5 and 6	Clean Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives clean coal from BC-16 and direct ship coal from BC-21, stores it and then it is reclaimed underpile onto BC-19	2,500	2,100,000	SW-WS	B A	TP-32 TP-47	TC-PE LO-UC
OS-08	C 1994	5 and 6	Clean Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives clean coal from BC-16, stores it and then it is reclaimed underpile onto BC-19	2,500	1,100,000	SW-WS	B A	TP-33 TP-48	TC-PE LO-UC
OS-09	C 1994	5 and 6	Clean Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives clean coal from BC-17, stores it and then it is reclaimed underpile onto BC-19	2,500	1,100,000	SW-WS	B A	TP-35 TP-49	TC-PE LO-UC
OS-10	C 1994	5 and 6	Clean Coal Stockpile - maximum 40,000 tons capacity, 88,869 ft ² base area and 75' height - receives clean coal from BC-18, stores it and then it is reclaimed underpile onto BC-19	2,500	1,100,000	SW-WS	B A	TP-37 TP-50	TC-PE LO-UC
BC-19	C 1994	5 and 6	Clean Coal Reclaim Conveyor - receives clean coal underpile OS-05, OS-06, OS-07, OS-08, OS-09 and OS-10 and transfers it to BS-02	4,500	7,600,000	PE	B B B B B A	TP-45 TP-46 TP-47 TP-48 TP-49 TP-50 TP-51	LO-UC LO-UC LO-UC LO-UC LO-UC LO-UC TC-FE
BS-02	C 1994	5 and 6	Train Loadout Bin - maximum 150 tons capacity - receives clean coal for shipment from BC-19 and loads it into railcars	---	7,600,000	FE	B A	TP-51 TP-52	TC-FE LR-TC
Pit-Cleaned Direct Ship Circuit									
BS-03	C 2011	5 and 8	Truck Dump - maximum 100 tons capacity - receives direct ship coal from trucks and feeds it into CR-03	---	1,000,000	PW	B A	TP-38 TP-39	UD-PW TC-FW
CR-03	C 2011	5 and 8	Pick Breaker - receives direct ship coal from BS-03, breaks it and then drops it onto BC-20	800	1,000,000	FW	B A	TP-39 TP-40	TC-FW TC-FW
BC-20	C 2011	5 and 8	Transfer Conveyor - receives sized direct ship coal from CR-03 and transfers it to CR-04	800	1,000,000	PE	B A	TP-40 TP-41	TC-FW TC-FW
CR-04	C 2011	5 and 8	Secondary Crusher - receives sized direct ship coal from BC-20, crushes it and then drops it onto BC-21	800	1,000,000	FW	B A	TP-41 TP-42	TC-FW TC-FW
BC-21	C 2011	5 and 8	Direct Ship Feed Conveyor - receives crushed direct ship coal from CR-04 and transfers it onto OS-07 or BC-16 (see above)	800	1,000,000	PE	B A A	TP-42 TP-43 TP-44	TC-FW TC-PE TC-PE
Refuse Circuit									
CR-01	C 1994	5 and 6	Refuse Crusher - receives refuse from SS-01, crushes the material and then drops it onto BC-22	630	1,200,000	FE	B A	TC-19 TP-20	TC-FW TC-FE
BC-22	M 2016 C 1994	5 and 8	Refuse Conveyor - receives refuse from the wet wash circuit and CR-01 and transfers it to BC-23	1,500	6,000,000	PE	B B A	TP-53 TP-20 TP-54	TC-FW TC-FE TC-PE
BC-23	M 2016 C 1994	5 and 8	Refuse Conveyor - receives refuse from BC-22 and transfers it to BC-24	1,500	6,000,000	PE	B A	TP-54 TP-55	TC-PE TC-PE

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OS-11	C 1997	5 and 6	Limestone Sand/Gravel Stockpile - maximum 500 tons capacity, 1,000 ft ² base area and 20' height - receives limestone sand/gravel from trucks, stores it and then it is transferred via a front endloader into BS-05	----	20,000	SW-WS	B A	TP-70 TP-71	UL-MDH TC-PW
BS-05	C 1997	5 and 6	Limestone Sand/Gravel Feed Bin - maximum 50 tons capacity - receives limestone sand/gravel from a front endloader and drops it onto BC-24	---	20,000	PW	B A	TP-71 TP-72	TC-PW TC-PE
BC-24	M 2016 C 1994	5 and 8	Refuse Conveyor - receives refuse from BC-23 and limestone sand/gravel from BS-05 for neutralization then transfers it to BS-04 or BC-25 (see below)	1,500	6,000,000	PE	B B A A	TP-55 TP-72 TP-56 TP-59	TC-PE TC-PE TC-PE TC-PE
BS-04	C 1997	5 and 6	Refuse Bin - maximum 300 tons capacity - receives refuse from BC-24 on an infrequent basis, stores it and then loads it to truck for transport and disposal in the Low Gap area	----	1,000,000	FE	B A	TP-56 TP-57	TC-PE TC-MDH
BS-06 ⁴	C 2001 ⁴	5 and 6	Refuse Bin - maximum 30 tons capacity - received refuse material from front endloader and transfers it to BC-35	----	20,000	PW	B A	TP-73 TP-74	UL-MDH TC-FE
BC-35 ⁴	C 2001 ⁴	5 and 6	Refuse Conveyor - received refuse material from BS-06 and transfers it to BC-25	10	20,000	PE	B A	TP-74 TP-75	TC-FE TC-PE
BC-25	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-24 and BC-35 and transfers it to BC-26 or BC-37 (see below)	1,500	6,000,000	PE	B B A A	TP-59 TP-75 TP-60 TP-77	TC-PE TC-PE TC-PE TC-PE
BC-26	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-25 and transfers it to BC-27	1,500	6,000,000	PE	B A	TP-60 TP-61	TC-PE TC-PE
BC-27	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-26 and transfers it to BC-28	1,500	6,000,000	PE	B A	TP-61 TP-62	TC-PE TC-PE
BC-28	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-27 and transfers it to BC-29	1,500	6,000,000	PE	B A	TP-62 TP-63	TC-PE TC-PE
BC-29	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-28 and transfers it to BC-30	1,500	6,000,000	PE	B A	TP-63 TP-64	TC-PE TC-PE
BC-30	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-29 and transfers it to BC-31 through a structure formerly used as a refuse bin, but is now a transfer point	1,500	6,000,000	PE	B A	TP-64 TP-65	TC-PE TC-PE
BC-31	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-30 and transfers it to BC-32	1,500	6,000,000	PE	B A	TP-65 TP-66	TC-PE TC-PE
BC-32	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-31 and transfers it to BC-33	1,500	6,000,000	PE	B A	TP-66 TP-67	TC-PE TC-MDH
BC-33	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-32 and transfers it to BC-34	1,500	6,000,000	N	B A	TP-67 TP-68	TC-MDH TC-MDH
BC-34	M 2016 C 1997	5 and 8	Refuse Conveyor - receives refuse from BC-33 and transfers it to BC-36	1,500	6,000,000	N	B A	TP-68 TP-69	TC-MDH TC-MDH
BC-36	M 2016 C 2014	5 and 8	Refuse Conveyor - receives refuse from BC-34 and transfers it to the ground in the refuse disposal area	1,500	6,000,000	N	B A	TP-69 TP-76	TC-MDH TC-MDH
BC-37	C 2016	5 and 8	Refuse Conveyor - receives refuse from BC-25 (see above) and transfers it to BC-38	1,500	6,000,000	PE	B A	TP-77 TP-78	TC-PE TC-PE
BC-38	C 2016	5 and 8	Refuse Conveyor - receives refuse from BC-37 and transfers it to BC-39	1,500	6,000,000	PE	B A	TP-78 TP-79	TC-PE TC-PE

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BC-39	C 2016	5 and 8	Refuse Conveyor - receives refuse from BC-38 and transfers it to BC-40	1,500	6,000,000	PE	B A	TP-79 TP-80	TC-PE TC-PE
BC-40	C 2016	5 and 8	Refuse Conveyor - receives refuse from BC-39 and transfers it to BC-41	1,500	6,000,000	PE	B A	TP-80 TP-81	TC-PE TC-PE
BC-41	C 2016	5 and 8	Refuse Conveyor - receives refuse from BC-40 and transfers it to the ground in the refuse disposal area	1,500	6,000,000	PE	B A	TP-81 TP-82	TC-PE 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.
- 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; UC - Under-pile Conveyor (full enclosure); MDH - Minimize Drop Height; and N - No Control.
- ⁴ Dump bin BS-06 and belt conveyor BC-35 are currently out of service and would require a great deal of mechanical work to restore, but has been included in the registration for operational flexibility.

DESCRIPTION OF FUGITIVE EMISSIONS (taken directly from the application)

Potential sources of fugitive particulate emissions for this facility include emissions, which are not captured by pollution control equipment and emissions from open stockpiles and vehicular traffic on paved and unpaved haulroads and work areas. The haulroads and work areas will be controlled by water truck in accordance with section E.6.c.i. of the General Permit.

The water truck is equipped with pumps sufficient to maintain stockpiles, haulroads and work areas. The water truck will be operated three times daily, and more as needed in dry periods. An additive to prevent freezing will be utilized in the winter months when freezing conditions are present.

As addressed in the Fugitive Emissions Dust Control Plan, dozers are located in the stockpile areas and compaction is used as the stockpile control mechanism.

SITE INSPECTION

On September 18, 2014, Fred Teel of the DAQ's Compliance and Enforcement Section performed a scheduled full on-site targeted inspection. Mr. Teel's contacts at the facility were Stephanie Morgan and Danny Cox. At the time of the inspection, the facility was found to be in compliance and was given a status code of 30 - In Compliance.

Directions to the facility from Charleston are to take I-77 South/I-64 East toward Beckley and travel 5.0 miles, take Exit 89 for WV-94 toward WV-61/Marmet/Chesapeake and travel 0.2 miles,

turn right onto Lens Creek Road/WV-94 and continue to follow WV-94 and travel 9.8 miles, keep left at the fork on continue on WV-94 and travel 0.03 miles, turn slight left onto WV-3/Coal River Road and continue to follow WV-3 and travel 20.8 miles, turn left onto County Route 3/1 (Sacksville Road/Little Marsh/Packville Marfork Road) and travel approximately 1.1 miles and the facility will be on the right side 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 increase in emissions calculations were performed by the writer using the DAQ's G10-C Excel Emission Calculation Spreadsheet and a copy has been attached.

The proposed modification will result in an increase in the facility's potential to discharge controlled particulate matter emissions of 1.84 pounds per hour (lb/hour) and 2.70 tons per year (TPY) of particulate matter (PM), of which 0.87 lb/hour and 1.28 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 - Marfork Coal Company, Inc. Marfork Prep Plant	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.00	0.00	0.00	0.00
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>0.00</i>	<i>0.00</i>	<i>0.00</i>	<i>0.00</i>
Point Source Emissions				
Equipment Emissions	0.00	0.00	0.00	0.00
Transfer Point Emissions	1.84	2.70	0.87	1.28
<i>Point Source Emissions Total (PTE)</i>	<i>1.84</i>	<i>2.70</i>	<i>0.87</i>	<i>1.28</i>
INCREASE IN EMISSIONS	1.84	2.70	0.87	1.28

The proposed modification will result in a new facility-wide potential to discharge controlled particulate matter emissions of 95.69 lb/hour and 265.62 TPY of particulate matter (PM), of which 37.49 lb/hour and 91.80 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:

- New Facility-wide Emissions - Marfork Coal Company, Inc. Marfork Prep Plant	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	1.27	5.54	0.60	2.61
Unpaved Haulroad Emissions	31.75	139.23	9.17	40.24
Paved Haulroad Emissions	6.53	28.66	1.27	5.56
<i>Fugitive Emissions Total</i>	<i>39.55</i>	<i>173.43</i>	<i>11.04</i>	<i>48.41</i>
Point Source Emissions				
Equipment Emissions	34.72	69.90	16.32	32.85
Transfer Point Emissions	21.42	22.28	10.13	10.54
<i>Point Source Emissions Total (PTE)</i>	<i>56.14</i>	<i>92.19</i>	<i>26.45</i>	<i>43.39</i>
FACILITY EMISSIONS TOTAL	95.69	265.62	37.49	91.80

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the modified facility. The proposed modification of Marfork Coal Company, Inc.'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 result in an increase in emissions less than six (6) pounds per hour and ten (10) tons per year and involve the construction of eight (8) belt conveyors and the modification of 15 existing belt conveyors, which are defined as affected facilities in 40 CFR 60 Subpart Y. The applicant has submitted an application for a registration to modify. The applicant published a Class I legal advertisement in *The Register-Herald* on February 8, 2016 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 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 eight (8) belt conveyors and the modification of 15 existing belt 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 (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 43.98 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 modification of Marfork Coal Company, Inc.'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 93.43 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 facility and the extent of the proposed modification. This facility is located in Raleigh County, WV, which is currently 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.

Increase in Emissions

2/19/16
PPR

EMISSIONS SUMMARY

Name of applicant: Marfork Coal Company
 Name of plant: G10-D145C - Increase
 Jul-14

Particulate Matter or PM (for 45CSR14 Major Source Determination)

Uncontrolled PM		Controlled PM	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.00	0.00	0.00	0.00
<i>Unpaved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	0.00	0.00	0.00	0.00

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	0.00	0.00	0.00	0.00
<i>Transfer Point Emissions</i>	4.46	4.78	1.84	2.70
Point Source Emissions Total*	4.46	4.78	1.84	2.70

*Note: Point Source Total Controlled PM TPY emissions is used for 45CSR14 Major Source determination (see below)

Facility Emissions Total	4.46	4.78	1.84	2.70
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***Facility Potential to Emit (PTE) (Baseline Emissions) =** **2.70**
(Based on Point Source Total controlled PM TPY emissions from above) ENTER ON LINE 26 OF APPLICATION

Particulate Matter under 10 microns, or PM-10 (for 45CSR30 Major Source Determination)

Uncontrolled PM-10		Controlled PM-10	
lb/hr	TPY	lb/hr	TPY

FUGITIVE EMISSIONS				
<i>Stockpile Emissions</i>	0.00	0.00	0.00	0.00
<i>Unpaved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
<i>Paved Haulroad Emissions</i>	0.00	0.00	0.00	0.00
Fugitive Emissions Total	0.00	0.00	0.00	0.00

POINT SOURCE EMISSIONS				
<i>Equipment Emissions</i>	0.00	0.00	0.00	0.00
<i>Transfer Point Emissions</i>	2.11	2.26	0.87	1.28
Point Source Emissions Total*	2.11	2.26	0.87	1.28

*Note: Point Source Total Controlled PM-10 TPY emissions is used for 45CSR30 Major Source determination

Facility Emissions Total	2.11	2.26	0.87	1.28
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2. TRANSFER POINTS (including all conveyor transfer points, equipment transfer points etc.)

k =	Particle Size Multiplier (dimensionless)	PM	PM-10
U =	Mean Wind Speed (mph)	0.74	0.35
		7	

Transfer Point ID No.	Transfer Point Description Include ID Numbers of all conveyors, crushers, screens, stockpiles, etc. involved		Material Moisture Content %	Maximum Transfer Rate		Control Device ID Number	Control Efficiency %
				TPH	TPY		
TP-01	BC-01 to OS-01	Coon Eagle In	8	(6,000)	(2,000,000)	TC-PE	50
TP-01	BC-01 to OS-01	Coon Eagle In	8	4,000	4,000,000	TC-PE	50
TP-07	BC-04 to BC-05	Low Gap In	8	(2,400)	(4,000,000)	TC-FE	80
TP-07	BC-04 to BC-05	Low Gap In	8	1,000	1,000,000	TC-FE	80
TP-08	BC-05 to BC-06		8	(2,400)	(4,000,000)	TC-FE	80
TP-08	BC-05 to BC-06		8	1,000	1,000,000	TC-FE	80
TP-09	BC-06 to BC-07		8	(2,400)	(4,000,000)	TC-FE	80
TP-09	BC-06 to BC-07		8	1,000	1,000,000	TC-FE	80
TP-10	BC-07 to BC-08		8	(2,400)	(4,000,000)	TC-FE	80
TP-10	BC-07 to BC-08		8	1,000	1,000,000	TC-FE	80
TP-11	BC-08 to BC-09		8	(2,400)	(4,000,000)	TC-FE	80
TP-11	BC-08 to BC-09		8	1,000	1,000,000	TC-FE	80
TP-12	BC-09 to OS-04		8	(2,400)	(4,000,000)	TC-PE	50
TP-12	BC-09 to OS-04		8	2,400	3,000,000	TC-PE	50
TP-13	OS-04 to BC-10		7	(2,500)	(4,000,000)	LO-UC	80
TP-13	OS-04 to BC-10		7	2,500	3,000,000	LO-UC	80
TP-14	OS-03 to BC-10		7	(2,500)	(6,000,000)	LO-UC	80
TP-14	OS-03 to BC-10		7	2,500	4,000,000	LO-UC	80
TP-15	OS-02 to BC-10		7	(2,500)	(1,000,000)	LO-UC	80
TP-15	OS-02 to BC-10		7	2,500	3,000,000	LO-UC	80
TP-16	OS-01 to BC-10		7	(2,500)	(2,000,000)	LO-UC	80
TP-16	OS-01 to BC-10		7	2,500	4,000,000	LO-UC	80
TP-53	Plant to BC-22	Refuse	15	(1,350)	(6,000,000)	TC-FW	90
TP-53	Plant to BC-22	Refuse	15	1,500	6,000,000	TC-FW	90
TP-54	BS-22 to BC-23		15	(1,350)	(6,000,000)	TC-PE	50
TP-54	BS-22 to BC-23		15	1,500	6,000,000	TC-PE	50
TP-55	BC-23 to BC-24		15	(1,350)	(6,000,000)	TC-PE	50
TP-55	BC-23 to BC-24		15	1,500	6,000,000	TC-PE	50
TP-59	BC-24 to BC-25		15	(1,350)	(6,000,000)	TC-PE	50
TP-59	BC-24 to BC-25		15	1,500	6,000,000	TC-PE	50
TP-60	BC-25 to BC-26		15	(1,350)	(6,000,000)	TC-PE	50
TP-60	BC-25 to BC-26		15	1,500	6,000,000	TC-PE	50
TP-61	BC-26 to BC-27		15	(1,350)	(6,000,000)	TC-PE	50
TP-61	BC-26 to BC-27		15	1,500	6,000,000	TC-PE	50
TP-62	BC-27 to BC-28		15	(1,350)	(6,000,000)	TC-PE	50
TP-62	BC-27 to BC-28		15	1,500	6,000,000	TC-PE	50
TP-63	BC-28 to BC-29		15	(1,350)	(6,000,000)	TC-PE	50
TP-63	BC-28 to BC-29		15	1,500	6,000,000	TC-PE	50
TP-64	BC-29 to BC-30		15	(1,350)	(6,000,000)	TC-PE	50
TP-64	BC-29 to BC-30		15	1,500	6,000,000	TC-PE	50
TP-65	BC-30 to BC-31		15	(1,350)	(6,000,000)	TC-PE	50
TP-65	BC-30 to BC-31		15	1,500	6,000,000	TC-PE	50
TP-66	BC-31 to BC-32		15	(1,350)	(6,000,000)	TC-PE	50
TP-66	BC-31 to BC-32		15	1,500	6,000,000	TC-PE	50
TP-67	BC-32 to BC-33		15	(1,350)	(6,000,000)	TC-MDH	0
TP-67	BC-32 to BC-33		15	1,500	6,000,000	TC-MDH	0
TP-68	BC-33 to BC-34		15	(1,350)	(6,000,000)	TC-MDH	0
TP-68	BC-33 to BC-34		15	1,500	6,000,000	TC-MDH	0
TP-69	BC-34 to BC-36		15	(1,350)	(6,000,000)	TC-MDH	0
TP-69	BC-34 to BC-36		15	1,500	6,000,000	TC-MDH	0
TP-76	BC-36 to Ground		15	(1,350)	(6,000,000)	TC-MDH	0
TP-76	BC-36 to Ground		15	1,500	6,000,000	TC-MDH	0
PROPOSED NEW CONVEYORS							
TP-77	existing BC-25 to BC-37		15	1,500	6,000,000	TC-PE	50
TP-78	BC-37 to BC-38		15	1,500	6,000,000	TC-PE	50
TP-79	BC-38 to BC-39		15	1,500	6,000,000	TC-PE	50

