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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-0739G
Plant ID No.: 099-00016
Applicant: Dock's Creek, LLC (*formerly Aquila Dock, Inc.*)
Facility Name: Kenova Facility
Location: Kenova, Wayne County, WV
SIC Code: 1221 (Bituminous Coal & Lignite - Surface)
Application Type: Modification
Received Date: February 15, 2013
Engineer Assigned: Thornton E. Martin Jr.
Fee Amount: \$2,000
Date Received: February 20, 2013
Complete Date: March 26, 2013
Applicant's Ad Date: February 16, 2013
Newspaper: *Wayne County News*
UTM's: Easting: 361.5 km Northing: 4244.1 km Zone: 17
Description: This application is to incorporate the temporary operating cement kiln dust coal enhancement system (R13-2899T) registered under River Trading Refined Coal, LLC, a subsidiary of Dock's Creek, LLC into their current plant operating permit (R13-0739F).

BACKGROUND

A cement kiln dust (CKD) coal enhancement system was constructed by River Trading Refined Coal, LLC at the Dock's Creek, LLC facility near Kenova, West Virginia. The CKD system is currently permitted under R13-2899T and, by this application, the as-built system is proposed to be incorporated into permit R13-0739F.

Registration R13-0739F was an after-the-fact permit modification issued on February 15, 2011 for ongoing as-built modifications to the facility from those in registration R13-0739E, the addition

of seven (7) conveyors installed in 2010 and various throughput revisions were made to provide the facility more flexibility in receiving and transferring of material through the site.

Permit R13-0739E was issued on December 03, 2008, permitting Aquila Dock, Inc. to modify their existing coal preparation plant located adjacent to US Route 52 south of Kenova, Wayne County, WV. Permit R13-0739E superceded and replaced Permit R13-0739D approved on March 21, 2008. Application R13-0739D was for a modification to replace the existing stoker plant, add a partial enclosure to crusher CR4 in addition to the water spray, relocate hopper H2 from the Southern Storage Yard to the Northern Storage Yard, add a barge off-loading facility for coal (B3, BC46, B4 and BC47) and adjust the facility's throughputs in order to remain a 45CSR30 (Title V) nonmajor source. The PM₁₀ monitoring language from permit R13-2424A (which was declared inactive) was included in permit R13-0739D in Section 3.2.1.

DESCRIPTION OF PROCESS

The following paragraphs describe the various systems that comprise the Dock's Creek Facility. Reference to previous registrations are to indicate when the changes occurred. The various systems are not thoroughly defined here but, only highlight key parameters for a working knowledge of the operations.

Proposed CKD Coal Enhancement System

The CKD system is proposed to operate at a rate of 500 tons per hour (tph) coal and 5 tph CKD, with a yearly throughput of 500,000 tons per year (tpy) coal and 5,000 tpy CKD. An overall increase in coal throughput for the Dock's Creek facility is not requested; the coal throughput for the CKD system is from the existing coal throughput for the facility.

Coal is transferred (TTP1/MDH) by endloader to hopper TH1/PE, then to belt conveyor TBC1/N (TTP2/PE). There are five (5) CKD silos (TS1/FE, TS2/FE, TS3/FE, TS4/FE and TS5/FE) that transfer CKD to a tube conveyor (TC1/FE, TC2/FE, TC3/FE, TC4/FE and TC5/FE) and then to conveyor TBC1/N via the following transfer points: TS1/FE to TC1/FE (TTP5/FE) to TBC1/N (TTP6/FE), TS2/FE to TC2/FE (TTP7/FE) to TBC1/N (TTP8/FE), TS3/FE to TC3/FE (TTP9/FE) to TBC1/N (TTP10/FE), TS4/FE to TC4/FE (TTP11/FE) to TBC1/N (TTP12/FE) and TS5/FE to TC5/FE (TTP13/FE) to TBC1/N (TTP14/FE). The coal/CKD mixture transfers from TBC1/N to TBC2/N (TTP3/PE) and then to the existing stockpiling area (TTP4/MDH). In addition, the CKD system adds calcium bromide (CaBr₂) solution at a rate of up to 0.5% per ton of CKD; however, CaBr₂ is not a regulated air pollutant.

Dock's Creek, LLC (formerly Aquila Dock, Inc.) revised the facility throughput by combining the various systems at the facility (excluding the Stoker Plant and Ammonium Nitrate System) into one worst case emissions estimate for registration R13-0739F. The throughput for the Truck to Barge, Rail to Barge, Rail Reloader, Barge Off-Loading, and the Truck or Barge to Rail Systems were combined, not to exceed nine (9) million tons per year (TPY) of coal, with the capability to crush and screen a maximum of 6.0 MM tons at the facility. The facility proposed to handle coke at up to 250,000 TPY and limestone at up to 250,000 TPY. Trucking at the facility is unchanged with the exception of additional trucking for the CKD.

Truck and Barge to Rail System

Conveyor TBRBC5 is constructed with a feeder (TBRF1) to transfer from stockpile directly to the conveyor, as well as a sampling system (TBRBC5 to TBRBC8 to analyzer to TBRBC9 back to TBRBC5). TBRBC4 will discharge to TBRBC6. Conveyor TBRBC7, will allow coal from the Rail to Barge system to be conveyed to stockpile TBROS1.

Facility haulroads include a North Yard entrance and exit with a paved section of roadway running along Route 52. This roadway (PR-4) is paved down to the truck scales at the entrance into the stockpiling area. From this point on, the trucks travel on unpaved roadways (UPR-4) to the stockpiling or truck dump area. This total haulroad is designated as HR-4.

The trucks will enter the facility and travel to any point of destination in the North or South Yard. The trucks entering and heading to the Truck and Barge Rail system will unload the coal into open stockpile TBROS2.

The stockpiling conveyor TBRBC3 (TBRBC3A and TBRBC3B no longer a tripping conveyor) will pass to one of three stacking tubes to fill the coal pile. The stockpile will be managed by dozers and endloaders and will be reclaimed by an underground reclaim system. The underground feeders will reclaim the coal to the reclaim tunnel conveyor TBRBC4, which will pass it to transfer conveyor TBRBC6 or to BC16 of the Rail to Barge System. Coal passed to the Rail to Barge System will be stockpiled on the rail to barge area or loaded directly to barge. The coal will go to conveyor TBRBC6 and then to the Batch Weigh Loadout System (TBRB3) to load railcars.

Total coal loaded to railcar in this system is 6,000,000 million tons per year, which will come from two sources: trucked in coal at 5,000,000 million tons per year; or barged in coal at 4,000,000 million tons per year.

Stoker Coal Plant - Coal

Modification (R13-0739F) adjusted the limit of coal processed by screens S1, S2 and S5 to be no more than 6,000,000 TPY. Throughput for S6 is 1,375,000 TPY, S7 is 1,875,000 TPY and CR6 is 1,375,000 TPY.

The coal is loaded into the facility via endloader to hopper H14. The H14 feeder will deposit the coal onto the primary belt BC35. BC35 will transfer the coal to the primary screen S5 where it can go in three (3) different directions. The oversize material can be deposited into crusher CR6 for sizing before being deposited onto the crusher belt BC38. BC38 then transfers the sized coal to the secondary belt BC37. The secondary conveyor belt BC37 can also receive coal directly from screen S5. Lastly screen S5 can deposit the fines onto the fines belt conveyor BC36. Coal deposited onto the secondary belt conveyor BC37 is transferred to the secondary screen S6 where it can go in three (3) different directions depending on the size. The oversize material can be deposited on the north yard stockpile area or be routed back to crusher CR6 via the oversize stacker belt BC40. The stoker material will be deposited on the stoker stacker belt conveyor BC39 for transport to the north yard stockpile area. The fines material will be transferred to the fines belt conveyor BC36 where it is combined with the fines from screen S5. The material from the fines circuit is transferred to the

power screen S7 where it can go in two (2) different directions. After screening at S7 fines can be transferred to the under flow belt BC44 for transport to the fines stacker belt BC45. The fines stacker belt BC45 then deposits the material into the north yard stockpile area. The fines can also be routed to the midget belt BC42 where it can go in two (2) different directions. With the aid of a flop gate the material on the midget belt can go to either the midget stacker belt BC43 or to the recombined belt BC41. The midget stacker BC43 will deposit the material onto the north yard stockpile area and the recombined belt BC41 will deposit the material onto the stoker stacker belt BC39 where it will be added to the stoker material from the secondary screen S6.

Barge Off-Loading Facility - Coal

A clamshell feed on bin B5 receives material to be offloaded from barge. Material is transferred to BC48 then to stockpile. The radial stacker BC47 feeds to coal/petcoke stockpiling or BC48A to limestone stockpiling. This limestone is trucked off-site.

Coal will arrive at the site via barge and a clamshell will remove the material and deposit the coal into a 25 ton bin (B3). From B3 it will be transferred by belt conveyor BC46 to a second 25 ton bin (B4). From B4 the coal will be deposited onto belt conveyor BC47 for transport to the stockpile area or will be placed on conveyor BC47A to be transported to the large stockpile system on the Truck and Barge to Rail System. BC47 to BC48A for limestone stockpiling. BC47A transfers coal onto the TBRBC3A.

Truck to Barge Process - Coal

BC1A feeds from stockpile to BC2. Radial stacker BC7 can feed to barge, stockpile or to BC46A which feeds Bin B4. A bypass on this system allows coal to bypass screen S1 and crusher CR2 if it has already been processed. This allows flexibility in the type of coal that can be transferred to barge in this process.

Coal which is trucked to the facility can be received at stockpile SP1 in the Southern Coal Storage Area or at stockpile SP2 at the Northern Coal Storage Area. A front endloader reclaims coal from SP1 and transfers it to an hopper H1 or an in-ground feeder. H1 and the in-ground feeder drop coal to belt conveyor BC1, which transfers it to belt conveyor BC2. BC2 transfers the coal to screen S1.

A front endloader reclaims coal from stockpile SP2 and transfers it to hopper H2 (relocated from the Southern Coal Storage Area), hopper H3, hopper H4 or hopper H5. H3 is equipped with feeder breaker FB2 and H5 is equipped with feeder breaker FB1. H2, H3, H4 and H5 drop coal to belt conveyor BC3, which transfers it to belt conveyor BC4. BC4 transfers the coal to belt conveyor BC5, which transfers it to screen S1.

Screen S1 receives coal from BC2 and BC5, sizes it and the oversize coal drops to crusher CR2, which drops to belt conveyor BC6, while the undersize coal drops directly to BC6. BC6

transfers the sized coal to belt conveyor BC7, however, a small portion goes to belt conveyor BC9 which transfers to the 9500 Analyzer Sampler and belt conveyor BC8 transfers it back to BC6.

Radial stacker belt conveyor RS7 transfers the coal to barges.

Rail to Barge Process - Coal/Petcoke

Conveyor BC21A is a radial stacker which can discharge to BC21 or to TBRBC7. The system has a sample analyzer fed from BC21 to BC53 to the analyzer to BC54 and returned to BC21A. Conveyors BC49 and BC50 were installed in February 2010. The conveyors BC16 and BC21 feed BC49 which transfers to BC50 to stockpile.

120-car unit trains are delivered to the facility. Five (5) rail cars at a time enter the rail car shakeout and a Hewitt Robins shaker is set on top of each of the rail cars. The doors are knocked open on the bottom of the rail cars and the coal/petcoke falls into 12 - 40 ton hoppers. The shakers are turned on and off alternately to assist in dropping the coal/petcoke from the rail cars. At the bottom of each 40 ton hopper is a Jeffrey Vibratory Feeder which drops the coal/petcoke to belt conveyors BC10 or BC11. BC10 and BC11 transfer it to belt conveyor BC12. BC12 transfers the coal/petcoke to portable belt conveyor BC13 in position 1 where it drops to stockpile SP1 (coal) or (petcoke).

A front endloader reclaims coal from stockpile SP1 and transfers it to hopper H6 or hopper H7 or hopper H8. H6 drops the coal to belt conveyor BC 14, which transfers it to belt conveyor BC15. BC15 transfers the coal/petcoke from BC12 and BC14 to belt conveyor BC16. BC16 will also receive coal from the Truck and Barge to Rail System over conveyor TBRBC4. BC16 transfers it to radial stacker belt conveyor BC17. BC17 transfers coal/petcoke to barge, coal to stockpile SP1 or petcoke to stockpile SP1.

A front endloader transfers coal to radial stacker belt conveyor BC21A, which transfers it to belt conveyor BC21 or to the proposed TBRBC7. BC21 transfers coal from belt conveyor BC20 to radial stacking conveyor BC17 (see above).

Also, a front endloader reclaims coal from the storage area and transfers it to hoppers H7 or H8. H7 and H8 drop coal to belt conveyor BC19, which transfers it to screen S2. Oversize coal drop to crusher CR1, which then drops to belt conveyor BC20. Undersize coal drops directly to belt conveyor BC20. BC20 transfers the sized coal to belt conveyor BC21 (see above).

Rail Reloader Plant

A sample analyzer is fed from BC32A to BC51 to the analyzer to BC52 and returned to BC32A.

An endloader transfers coal from the stockpile area to hopper HA. From hopper HA, coal is dropped directly to belt conveyor BC32 then to BC32A. Belt conveyor BC32A transfers the coal to rail cars.

Existing Barge Off-Loading - Ammonium Nitrate

The maximum annual amount of ammonium nitrate to be off-loaded from barges and loaded

to trucks is 300,000 TPY.

A crane clamshell transfers ammonium nitrate from barges to hopper H11. Hopper H11 drops it to conveyor BC33 which transfers it to fully enclosed bins B1 or B2. From bins B1 and B2, the ammonium nitrate may be loaded directly to trucks or dropped to conveyor BC34 and transferred to stockpile SP18 enclosed within a concrete dome. A front endloader then transfers it to hopper H12, which drops to conveyor BC35. Conveyor BC35 then transfers the ammonium nitrate back to bins B1 or B2.

Existing Barge Off-Loading - Sand, Gravel and Magnetite

The maximum annual amount of sand, gravel and magnetite combined to be off-loaded from barges and loaded to trucks is 500,000 TPY.

A crane clamshell transfers magnetite from barge to stockpile SP15, gravel to stockpile SP16 and sand to stockpile SP17. Sand, gravel and magnetite is then reclaimed via a front endloader and loaded to trucks.

Haulroads and Stockpiles

The haulroad calculations were modified in Permit R13-0739E to show the revisions to the access to the North Yard. South Yard access continues to occur as needed; however, the majority of materials entering the site, enter through the North Yard. The total amount of material to be trucked into the site will be 5,000,000 TPY with a maximum of 30 trucks per hour. Based on the emissions estimate, trucking entering at the North Yard will travel the longest distance; therefore, the North Yard entrance through HR-4 is the worst case emissions estimate. Vehicles entering the site at the South Yard will travel a shorter distance. The coal allowed to be shipped off-site by truck remains at 460,000 TPY and the miscellaneous materials (ammonium nitrate, etc.) continues to be 500,000 TPY.

The R13-0739F registration consolidated the Open Stockpiling - SP1 through SP11 were combined into two (2) stockpiling areas: North Yard Stockpiling (SP1) and South Yard Stockpiling (SP2). The North Yard Stockpile will contain multiple stockpiles of coal. Multiple piles of coal, petcoke and limestone may be found in the South Yard Stockpiling. Coke stockpiling will not exceed 0.5 acres and is located in the South Yard Stockpiling. Stockpiles associated with the Ammonium Nitrate System, Stoker Plant and Truck or Barge to Rail System are unchanged; however, the Stoker Plant is located in the North Yard Stockpiling Area. The maximum stockpile base area remains at 30.52 acres.

The facility shall be modified and operated in accordance with the following equipment and control device information taken from permit applications R13-0739G, R13-0739F, R13-0739E, R13-0739D, R13-0739C, R13-0739B, R13-0729A and R13-0739:

Equipment ID #	Date of Manufacture ¹	Emission Unit Description	Design Capacity		Control Device(s) ²
			lb/hour	TPY	
Cement Kiln Dust (CKD) System					
TH1	2012	25 Ton Hopper - receives coal from endloader then transfers to belt conveyor TBC1	----	500,000	PE
TS1	2012	150 Ton CKD Silo - receives cement kiln dust from trucks. CKD transfers through tube conveyor TC1 for mixture with coal	----	1,000	FE
TC1	2012	Tube Conveyor - receives CKD from CKD Silo TS1 then transfers onto coal stream. A calcium bromide (CaBr ₂) solution is added to the mix at a rate of up to 5% per ton of CKD	2,000	1,000	FE
TS2	2012	150 Ton CKD Silo - receives cement kiln dust from trucks. CKD transfers through tube conveyor TC2 for mixture with coal	----	1,000	FE
TC2	2012	Tube Conveyor - receives CKD from CKD Silo TS2 then transfers onto coal stream. A calcium bromide (CaBr ₂) solution is added to the mix at a rate of up to 5% per ton of CKD	2,000	1,000	FE
TS3	2012	150 Ton CKD Silo - receives cement kiln dust from trucks. CKD transfers through tube conveyor TC3 for mixture with coal	----	1,000	FE
TC3	2012	Tube Conveyor - receives CKD from CKD Silo TS3 then transfers onto coal stream. A calcium bromide (CaBr ₂) solution is added to the mix at a rate of up to 5% per ton of CKD	2,000	1,000	FE
TS4	2012	150 Ton CKD Silo - receives cement kiln dust from trucks. CKD transfers through tube conveyor TC4 for mixture with coal	----	1,000	FE
TC4	2012	Tube Conveyor - receives CKD from CKD Silo TS4 then transfers onto coal stream. A calcium bromide (CaBr ₂) solution is added to the mix at a rate of up to 5% per ton of CKD	2,000	1,000	FE
TS5	2012	150 Ton CKD Silo - receives cement kiln dust from trucks. CKD transfers through tube conveyor TC5 for mixture with coal	----	1,000	FE
TC5	2012	Tube Conveyor - receives CKD from CKD Silo TS5 then transfers onto coal stream. A calcium bromide (CaBr ₂) solution is added to the mix at a rate of up to 5% per ton of CKD	2,000	1,000	FE
TBC1	2012	Belt Conveyor - receives coal from hopper TH1 then transfers CKD enhanced coal to belt conveyor TBC2	500	505,000	N
TBC2	2012	Belt Conveyor - receives CKD enhanced coal from belt conveyor TBC1 then transfers to existing stockpile area SP1 or SP2	500	505,000	N
Truck and Barge to Rail System					

Equipment ID #	Date of Manufacture ¹	Emission Unit Description	Design Capacity		Control Device(s) ²
			lb/hour	TPY	
TBRBC3A	2008	Belt Conveyor - receives sized coal (2"X0) from TBRBC7 and BC47A (see Barge Off-Loading System - Coal below) and transfers it to TBRBC3B then to TBROS1 via one of three stacking tubes	1,000	8,760,000	PE
TBRBC3B	2008	Belt Conveyor - receives sized coal (2"X0) from TBRBC3A and transfers it to TBROS1 via one of three stacking tubes	1,000	8,760,000	PE
TBRBC7	2010	Belt Conveyor - allows coal (2"X0) from the rail to barge system to be conveyed to TBROS1	1,000	8,760,000	PE
TBROS1	2008	200,000 ft ² Truck/Barge Fed Stockpile - 200,000 tons maximum - receives coal from TBRBC3A and 3B or TBRBC7, stores it and then underground feeders drop it to TBRBC4	-----	9,000,000 located in South Yard	N
TBRBC4	2008	Belt Conveyor - receives coal (2"X0) from TBROS1 via underground feeders and transfers it to TBRBC6	3,500	9,000,000	N
TBRBC6	2008	Belt Conveyor - receives sized coal (2"X0) from TBRBC4 and TBRBC9 then transfers it to TBRB3	3,500	9,000,000	PE
TBRB3	2008	Batch Weigh Loadout Bin - receives sized coal from TBRBC6 and loads it to railcars	3,500	9,000,000	FE
Analyzer Circuit					
TBRF1	2008	Feeder - transfers sized coal directly from stockpile onto conveyor TBRBC5	3,500	9,000,000	PE
TBRBC5	2008	Belt Conveyor - receives sized coal (2"X0) from stockpile and transfers it to TBRBC6 with a sample diverted to TBRBC8	3,500	9,000,000	PE
TBRBC8	2008	Belt Conveyor - receives sample from TBRBC5 and transfers to analyzer	5	43,800	FE
TBRBC9	2008	Belt Conveyor - receives sample from analyzer and transfers back to TBRBC5	5	43,800	FE
Storage Area					
SP1	2010	639,252 ft ² - North Yard Storage Area (consolidation of previously permitted stockpiles SP1 through SP11) receives coal from trucks and is reclaimed via front endloader to H10 (see Stoker Plant), HA (see Rail Reloader System), an inground feeder or H1 (see Truck to Barge System), Coal/Petcoke open stockpiles, Coal/Petcoke open stockpile (position 2), Coal/Petcoke open stockpile (position 1), Petcoke Open Stockpile received from BC17 and is reclaimed by front endloader to BC21A	-----	9,000,000 (Coal will be transferred from North to South Yard)	N
SP2	2010	307,461 ft ² - South Yard Storage Area receives coal from trucks and front endloader transfers to H2, H3, H4 or H5			
Rail to Barge System - Coal/Petcoke					
BC10	1978	Belt Conveyor - receives coal/petcoke (6"X0) from the Rail Car Shakeout feeders and transfers to BC12	2,700	1,500,000	N
BC11	1978	Belt Conveyor - receives coal/petcoke (6"X0) from the Rail Car Shakeout feeders and transfers to BC12	2,700	1,500,000	N
BC12	1978	Belt Conveyor - receives coal/petcoke (6"X0) from BC10 and BC11 and transfers to BC13, BC13A or BC15	2,700	1,500,000	N

Equipment ID #	Date of Manufacture ¹	Emission Unit Description	Design Capacity		Control Device(s) ²
			lb/hour	TPY	
BC13 (position 2)	1978	Portable Belt Conveyor - receives coal/petcoke (6"X0) from BC12 and transfers to SP1 (relocated in 2006 to position 2 from position 1)	2,700	1,500,000	N
BC13 (position 1)	1978	Portable Belt Conveyor - receives coal/petcoke (6"X0) from BC13A and transfers to SP1 (relocated in 2006 to position 2 from position 1)	2,700	1,500,000	N
H6	2001	25 ton Hopper - receives coal/petcoke from front endloader from SP1 and drops to BC14	1,500	9,000,000 for HA, H1-H8 combined	N
BC14	2001	Belt Conveyor - receives coal/petcoke from H6 and transfers to BC15	1,500	500,000	N
BC15	2001	Belt Conveyor - receives coal/petcoke (6"X0) from BC12 and BC14 and transfers to BC16	2,700	1,500,000	N
BC16	1978	Belt Conveyor - receives coal/petcoke (6"X0) from BC15 and TBRBC4 (see Truck or Barge to Rail System) and transfers to BC17 or BC49	2,700	1,500,000	N
BC17	1978	Radial Stacker Belt Conveyor - receives coal/petcoke (6"X0/2"X0) from BC16 and transfers to barge or SP1	2,700	1,500,000	N
BC21A	2008	Belt Conveyor - receives coal/petcoke (2"X0) from SP1 and transfers to BC21 or to TRBBC7	2,700	1,500,000	N
BC21	2001	Belt Conveyor - receives coal/petcoke (2"X0) from BC21A and BC20 and transfers to BC17 (see above) or BC49	2,700	1,500,000	N
BC49	2010	Belt Conveyor - receives coal/petcoke (6"X0/2"X0) from BC16 and BC21 and transfers to BC50	2,700	9,000,000	N
BC50	2010	Belt Conveyor - receives coal/petcoke (6"X0/2"X0) from BC49 and transfers to stockpile	2,700	9,000,000	N
H7	2001	25 ton Coal/Petcoke Hopper - receives coal/petcoke from front endloader and drops to BC18	1,500	9,000,000 for HA, H1-H8 combined	N
H8	2001	25 ton Coal/Petcoke Hopper - receives coal/petcoke from front endloader and drops to BC18	1,500	9,000,000 for HA, H1-H8 combined	N
BC18	2001	Belt Conveyor - receives coal/petcoke (6"X0) from H7 and H8 and transfers to BC19	1,500	1,000,000	N
BC19	2001	Belt Conveyor - receives coal/petcoke (6"X0) from BC18 and transfers to S2	1,500	1,000,000	N
S2	2001	Single Deck Screen - receives coal/petcoke (6"X0") from BC19, classifies it (2"X0) and drops oversize (6"X2") to CR1 and the undersize to BC20	1,500	2,000,000 ³	FE, WS
CR1	2001	Double Roll Crusher - receives oversize coal/petcoke (6"X2") from S2, crushes it (2"X0) and drops to BC20	500	4,380,000	FE, WS
BC20	2001	Belt Conveyor - receives sized coal/petcoke (2"X0) from S2 and CR1 and transfers it to BC21 (see above)	1,500	1,000,000	N
Analyzer Circuit					
BC53	2008	Belt Conveyor - receives coal/petcoke (2"X0) sample from BC21 and transfers to analyzer	5	43,800	FE

Equipment ID #	Date of Manufacture ¹	Emission Unit Description	Design Capacity		Control Device(s) ²
			lb/hour	TPY	
BC54	2008	Belt Conveyor - receives coal/petcoke (2"X0) sample from analyzer and transfers back to BC21A	5	43,800	FE
Truck to Barge System - Coal					
H1	2001	25 ton Coal Hopper - receives coal from front endloader and drops to BC1	----	1,000,000	N
BC1A	2010	Belt Conveyor - receives coal (6"X0) from stockpile and transfers to BC2	1,500	9,000,000	PE
BC1	1977	Belt Conveyor - receives coal (6"X0) from an inground feeder and H1 and transfers to BC2	1,500	9,000,000	PE
BC2	1977	Belt Conveyor - receives coal (6"X0) from BC1 and transfers to S1 (see below)	1,500	9,000,000	PE
H2	1977	25 ton Coal Hopper - receives coal from front endloader and drops to BC3 (relocated from the South Yard to the North Yard in 2008)	----	9,000,000 for HA, H1-H8 combined	N
H3	1977	25 ton Coal Hopper - receives coal from front endloader and drops to FB2	----		N
H4	1977	25 ton Coal Hopper - receives coal from front endloader and drops to BC3	----		N
H5	1977	25 ton Coal Hopper - receives coal from front endloader and drops to FB-1	----		N
FB1	2001	Feeder Breaker - receives coal (20"X0) from H5, crushes it (6"X0) and drops to BC3	800		3,000,000
FB2	2001	Feeder Breaker - receives coal (20"X0) from H3, crushes it (6"X0) and drops to BC3	800	3,000,000	PE, WS
BC3	1977	Belt Conveyor - receives coal (6"X0) from H2, H3, H4 and H5 and transfers to BC4	1,200	9,000,000	N
BC4	1977	Belt Conveyor - receives coal (6"X0) from BC3 and transfers to BC5	1,200	9,000,000	N
BC5	1977	Belt Conveyor - receives coal (6"X0) from BC4 and transfers to S1	1,200	9,000,000	N
S1	1977	Single Deck Screen - receives coal (6"X0") from BC2 and BC5, classifies it (2"X0) and drops oversize (6"X2") to CR2 and undersize to BC6	1,500	2,000,000 ³	FE, WS
CR2	1977	Impactor - receives oversize coal (6"X2") from S1, crushes it and drops to BC6	1,200	1,620,000	FE, WS
BC6	1977	Belt Conveyor - receives sized coal (2"X0) from S1, CR2 and BC9 and transfers to BC8 or BC7	1,500	9,000,000	N
BC8	2001	Belt Conveyor - receives sized coal (2"X0) from BC6 and transfers to 9500 Analyzer Sampler, which drops to BC9	5	43,800	N
BC9	2001	Belt Conveyor - receives sized coal (2"X0) from 9500 Analyzer Sampler and transfers back to BC6 (see above)	5	43,800	N
BC7	1977	Radial Stacker Belt Conveyor - receives sized coal (2"X0) from BC6 and transfers to barge, stockpile or BC46A	1,500	9,000,000	N
BC46A	2010	Belt Conveyor - receives sized coal (2"X0) from BC7 and transfers to bin B4	1,500	9,000,000	N
Rail Reloader System - Coal					

Equipment ID #	Date of Manufacture ¹	Emission Unit Description	Design Capacity		Control Device(s) ²
			lb/hour	TPY	
HA	1982 ⁴	20 ton Coal Hopper - receives coal from front endloader and drops to BC32 (relocated in 2008)	1,000	9,000,000 for HA, H1-H8 combined	N
BC32	1982 ⁴	Belt Conveyor - receives coal (2"X0) from HA and drops to rail cars (relocated in 2008)	1,000	8,760,000	N
BC32A	2008	Belt Conveyor - receives coal (2"X0) from BC32 and transfers to Railcar	1,000	8,760,000	N
Analyzer Circuit					
BC51	2008	Belt Conveyor - receives coal/petcoke (2"X0) sample from BC32A and transfers to analyzer	5	43,560	FE
BC52	2008	Belt Conveyor - receives coal/petcoke (2"X0) sample from analyzer and transfers back to BC32A	5	43,560	FE
Barge Off-Loading System - Coal					
B5	2010	25 ton Coal/Limestone Hopper - receives coal or limestone from a clamshell unloading a barge and drops to BC48	600	9,000,000 for B3-B5 combined	PE
BC48	2010	Belt Conveyor - receives coal (2"X0) from B5 and transfers to stockpile			
B3	2008	25 ton Coal Hopper - receives coal or limestone from a clamshell unloading a barge and drops to BC46	600	9,000,000 for B3-B5 combined	PE
BC46	2008	Belt Conveyor - receives coal (2"X0) from B3 and transfers to B4	600	4,000,000	N
B4	2008	25 ton Coal/Limestone Hopper - receives coal or limestone from BC46 and drops to BC47 or BC47A	600	9,000,000 for B3-B5 combined	PE
BC47	2008	Belt Conveyor - receives coal (2"X0) from B4 and transfers to coal/petcoke stockpile area or limestone to BC48A for stockpiling	600	4,000,000	N
BC48A	2010	Belt Conveyor - receives limestone from BC47 and transfers to stockpile		250,000	
BC47A	2008	Belt Conveyor - receives coal (2"X0) from B4 and transfers to TBRBC3A (see Truck and Barge to Rail System above)	600	4,000,000	PE
Stoker Plant - Coal					
SP12	2008	11,310 ft ² Coal Open Stockpile - 2,000 tons - feed coal for the modified stoker plant	-----	2,500,000 combined located in North Yard	N
SP13	2008	11,310 ft ² Coal Open Stockpile - 2,000 tons - feed coal for the modified stoker plant	-----		N
SP14	2008	11,310 ft ² Coal Open Stockpile - 2,000 tons - feed coal for the modified stoker plant	-----		N
H14	2008	25 ton Coal Hopper - receives coal from front endloader (from SP12, SP13 and SP14) and drops to BC35	400	2,500,000	N
BC35	2008	Belt Conveyor - receives coal from H14 and transfers to S5	400	2,500,000	N
S5	2008	Triple Deck Screen (Primary Screen) - receives coal (6"X0) from BC35, classifies it (1/4"X0) and drops oversize (6"X2") to CR6, secondary to BC37 and fines to BC36 (see below)	400	2,500,000 ³	PE, WS

Equipment ID #	Date of Manufacture ¹	Emission Unit Description	Design Capacity		Control Device(s) ²
			lb/hour	TPY	
CR6	2008	Roll Crusher (Primary Crusher) - receives oversize coal (6"X2") from S5, crushes it (2"X0) and drops to BC38	400	1,375,000	FE
BC38	2008	Crusher Belt Conveyor - receives sized coal from CR6 and transfers to BC37	400	1,375,000	N
BC37	2008	Secondary Belt Conveyor - receives sized coal from S5 and BC38 and transfers to S6	400	1,375,000	N
S6	2008	Triple Deck Screen (Secondary Screen) - receives sized coal (6"X0) from BC37, classifies it and drops oversize (6"X0) to BC40, secondary (2"X0) to BC39 and fines (1/4"X0) to BC36	400	1,375,000	PE, WS
BC40	2008	Oversize Stacker Belt Conveyor - receives oversize coal from S6 and transfers to stockpile area or back to CR6 (see above)	400	125,000	N
BC39	2008	Stoker Stacker Belt Conveyor - receives secondary coal from S6 and midget coal from BC41 (see below) and transfers to the stockpile area	400	2,500,000	N
BC36	2008	Fines Belt Conveyor - receives fine coal from S5 and S6 and transfers to S7	400	1,875,000	N
S7	2008	Double Deck Screen (Power Screen) - receives fine coal from BC36, classifies it and drops midget coal to BC42 and fine coal to BC44	400	1,875,000	PE, WS
BC44	2008	Fines Under Flow Belt Conveyor - receives fine coal from S7 and transfers it to BC45	400	1,875,000	N
BC45	2008	Fines Stacker Belt Conveyor - receives fine coal from BC44 and transfers it to the stockpile area	400	1,875,000	N
BC42	2008	Midget Belt Conveyor - receives midget coal from S7 and transfers to BC41 or BC43	400	1,875,000	N
BC43	2008	Midget Stacker Belt Conveyor - receives midget coal from BC42 and transfers to the stockpile area	400	1,875,000	N
BC41	2008	Recombined Belt Conveyor - receives midget coal from BC43 and transfers to BC39 (see above)	400	1,875,000	N
Barge Off-Loading - Ammonium Nitrate					
H11	1983	30 ton Ammonium Nitrate Hopper - receives ammonium nitrate from barge via a clamshell and drops to BC33	300	300,000	PE
BC33	1983	Belt Conveyor - receives ammonium nitrate from H11 and transfers to B1 or B2	300	300,000	FE
B1	1983	175 ton Ammonium Nitrate Bin - receives ammonium nitrate from BC33 and drops to trucks to BC34	-----	300,000 combined	PE
B2	1983	175 ton Ammonium Nitrate Bin - receives ammonium nitrate from BC33 and drops to trucks to BC34	-----		PE
BC34	1983	Belt Conveyor - receives ammonium nitrate from B1 and B2 and transfers to SP18 inside a concrete bin	200	300,000	FE
SP18	1983	36,820 ft ² Ammonium Nitrate storage building - 30,000 tons - receives ammonium nitrate from BC34 and it is reclaimed by front endloader to H12	-----	300,000	FE
H12	1983	10 ton Ammonium Nitrate Hopper - receives ammonium nitrate from front endloader and drops to BC34A	200	300,000	FE

Equipment ID #	Date of Manufacture ¹	Emission Unit Description	Design Capacity		Control Device(s) ²
			lb/hour	TPY	
BC34A	1983	Belt Conveyor - receives ammonium nitrate from H12 and transfers back to B1 or B2	200	300,000	FE
Barge Off-Loading - Sand, Gravel and Magnetite (Stockpiles located in North Yard)					
SP15	2001	43,560 ft ² Magnetite Open Stockpile - 30,000 tons - receives magnetite from barge via a clamshell and is reclaimed by front endloader to truck	-----	200,000 ⁵	N
SP16	1983	43,560 ft ² Gravel Open Stockpile - 30,000 tons - receives gravel from barge via a clamshell and is reclaimed by front endloader to truck	-----	150,000 ⁵	N
SP17	1983	43,560 ft ² Sand Open Stockpile - 30,000 ton - receives sand from barge via a clamshell and is reclaimed by front endloader to truck	-----	500,000 ⁵	N

¹ Permit R13-0739A was approved on May 30, 2001, which included equipment which had been already been installed. Therefore, the date of installation was assumed to be 2001.

² FE - Full Enclosure; PE - Partial Enclosure; ST - Stacking Tube; WS - Water Sprays; N - None.

³ The total combined annual throughput through screens S1, S2 and S5 shall not exceed 6,000,000 TPY.

⁴ Hopper HA and conveyor BC-32 were originally installed in 1982, but were relocated to another area of the facility in 2008. Hopper HB, conveyor BC-31 and crusher CR-4 were also removed at that same time.

⁵ The maximum total annual throughput for stockpiles SP15, SP16 and SP17 shall not exceed 500,000 tons.

SITE INSPECTION

Eric Ray and of the DAQ's Compliance and Enforcement Section performed an unannounced site inspection on October 15, 2008. Mr. Ray stated that the facility was found to be in compliance at the time of the inspection. This facility has a long history of compliance through self inspections and DAQ inspections.

Directions from Charleston are to take I-64 East past Huntington, take Exit 1 and proceed on U.S. Route 52 South for approximately five (5) miles and the facility will be on the right.

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 "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 emission factor for crushing/breaking operations was obtained from the National Emissions Data System. The estimated increase in emissions calculations were performed by the applicant's consultant and were checked for accuracy and completeness by the writer.

Dock's Creek proposed modification of their existing coal preparation plant will result in an increase in their potential to discharge controlled emissions of 6.79 TPY of particulate matter (PM), of which 2.03 TPY will be particulate matter less than 10 microns in diameter (PM₁₀).

The proposed modification will result in the following estimated potential to discharge controlled emissions:

<i>Emissions Summary - Dock's Creek, LLC Kenova Facility R13-0739G</i>	Controlled PM Emissions		Controlled PM ₁₀ Emissions		Change in PM Emissions		Change in PM ₁₀ Emissions	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Fugitive Emissions								
Unpaved Haulroad Emissions	94.22	365.37	27.84	108.01	8.24	4.37	2.43	1.30
Paved Haulroad Emissions	75.76	296.27	14.81	57.85	4.19	0.08	0.84	0.02
Fugitive Emissions Total	<i>169.98</i>	<i>661.64</i>	<i>42.65</i>	<i>165.86</i>	<i>12.43</i>	<i>4.45</i>	<i>3.27</i>	<i>1.32</i>
Point Source Emissions								
Stockpile Emissions ^{1,2}	5.24	22.95	2.49	10.93	0.00	0.00	0.00	0.00
Equipment Emissions	64.40	95.75	30.66	45.59	0.00	0.00	0.00	0.00
Transfer Point Emissions	119.01	86.91	65.10	40.97	4.52	2.34	2.10	0.71
Point Source Emissions Total	<i>188.65</i>	<i>205.61</i>	<i>98.25</i>	<i>97.49</i>	<i>4.52</i>	<i>2.34</i>	<i>2.10</i>	<i>0.71</i>
FACILITY EMISSIONS TOTAL								
	358.63	867.25	140.91	263.35	16.95	6.79	5.37	2.03

¹ Stockpiles existing prior to May 27, 2009 with no Modification - SP15(Magnetite), SP16 (Gravel), SP17 (Sand), SP18 (Ammonium Nitrate)

² Stockpiles Modified after May 27, 2009 - SP1 (North Yard - SP1 - SP11 combined, SP12, SP13, SP14), SP2 (South Yard)

The applicants published notice states the applicant estimates the increased potential to discharge the following Regulated Air Pollutants will be:

PM - 6.79 TPY of which 4.45 TPY are fugitive
 PM₁₀ - 2.03 TPY of which 1.32 TPY are fugitive
 PM_{2.5} - 0.30 TPY of which 0.15 TPY are fugitive

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the modified facility. The proposed modification of Dock's Creek coal preparation plant is subject to the following state and federal rules:

45CSR5 To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas

The facility is subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity), Section 4 (thermal dryer and stack requirements), 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

permit applications R13-0739G, R13-0739F, R13-0739E, R13-0739D, R13-0739C, R13-0739B, R13-0739A and R13-0739 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 potential controlled emissions greater than one hundred forty four (144) pounds per day of a regulated air pollutant (PM). Therefore, the proposed changes requires a modification permit. The applicant published a Class I legal advertisement in the *Wayne County News* on February 16, 2013 and submitted \$2,000 for the application fee and NSPS fee.

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

This facility is subject to 40 CFR 60 Subpart Y because it was constructed/modified after October 24, 1974 and will process more than 200 tons of coal per day. The proposed modification of a wet wash coal preparation plant will include an addition of five (5) CKD Silos, one (1) hopper, five (5) tube conveyors and two (2) belt conveyors which 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. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation Plants. With this application there will be an increase in fugitive emissions from the proposed stockpile increases. The facility will submit a fugitive coal dust emissions control plan as required by 40CFR§60.254(c)(2).

45CSR30 Requirements for Operating Permits

The facility's potential to emit will be 97.49 TPY of a regulated air pollutant (PM₁₀), not including fugitive emissions from haulroads, which is less than the 45CSR30 threshold of 100 TPY for a major source. However, the facility is subject to 40 CFR 60 Subpart Y. Therefore, the facility is still subject to 45CSR30 and remains classified as a Title V deferred non-major source.

The proposed modification of Dock's Creek coal preparation plant is not subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, the proposed facility is not listed in Table 1. The facility will have the potential to emit 205.61 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 being 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 proposed location of this facility. This facility will be located in Wayne County, WV, which is currently designated as non-attainment for PM_{2.5} (particulate matter less than 2.5 microns in diameter). According to 45CSR19, Section 3.7.b., fugitive emissions from haulroads should be excluded when considering the Potential to Emit (PTE) of a major source. The definition of a major source of PM_{2.5} is, not including fugitive emissions from haulroads, a PTE at or above 100 TPY. The estimated PTE for PM₁₀ is 97.49 TPY. Since PM_{2.5} is a subset of PM₁₀, PM_{2.5} is less than the 100 TPY limit for a major source.

MONITORING OF OPERATIONS

For the purposes of determining compliance with maximum throughput limits, the applicant shall maintain certified daily and monthly records. Example forms are included as Appendices A through D to Permit R13-0739G. Example forms for tracking the amount of water applied through fixed water sprays and the water truck are included as Appendices E and F to Permit R13-0739G. An example form for the Monthly Opacity Testing is included as Appendix G to Permit R13-0739G. The Certification Of Data Accuracy statement shall be completed within fifteen (15) days of the end of the reporting period. These records shall be maintained on-site for at least five (5) years and be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

CHANGES TO CURRENT PERMIT R13-0739F

- Incorporate the temporary operating cement kiln dust coal enhancement system (R13-2899T) registered under River Trading Refined Coal, LLC, a subsidiary of Dock's Creek, LLC into their current plant operating permit (R13-0739F)

RECOMMENDATION TO DIRECTOR

The information contained in this permit 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. Therefore, the granting of a permit to Dock's Creek, LLC for the modification of an existing coal preparation plant located adjacent to U.S. Route 52 approximately five (5) miles south of Kenova, Wayne County, WV is hereby recommended.

Thornton E. Martin Jr.
Permit Engineer

March 26, 2013
Date