



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G10-D035E
Plant ID No.: 025-00060
Applicant: Midland Trail Resources, LLC
Facility Name: No. 2 Deep Mine Screening Facility
Location: Rupert, McDowell County, WV
SIC Code: 1222 (Bituminous Coal & Lignite - Underground)
NAICS Code: 212112 (Bituminous Coal Underground Mining)
Application Type: Class I Administrative Update
Received Date: August 19, 2015
Engineer Assigned: Dan Roberts
Fee Amount: N/A
Date Received: N/A
Applicant's Ad Date: N/A
Newspaper: N/A
Complete Date: August 21, 2015
UTM Coordinates: Easting: 539.076 km Northing: 4208.146 km NAD83 Zone 17N
Lat/Lon Coordinates: Latitude: 38.020167 Longitude: -80.554808 NAD83
Description: Class I administrative update to remove the facility's Caterpillar 3512B emergency generator.

BACKGROUND

Midland Trail Resources, LLC owns and operates the existing No. 2 Deep Mine Screening Facility under current permit G10-D035D, which was approved on July 16, 2014. This facility was sold to a new ownership group in the spring of 2013.

DESCRIPTION OF PROCESS

Raw coal from the No. 2 Deep Mine will transfer to SS-01(FE) via belt conveyor BC-01(PE) @ TP-01(TC-FE) and TP-02(TC-FE). The screen will separate the coal and waste products; send coal to belt conveyor BC-02(PE) @ TP-03(TC-FE); to stockpile OS-01(SW-WS) @ TP-04(TC-MDH); and to truck for delivery @ TP-05(LO-MDH). The screen will also discharge the refuse material to belt conveyor BC-03(PE) @ TP-06(TC-FE); to stockpile OS-02(SW-WS) @ TP-07(TC-MDH).

The refuse material from stockpile OS-02 will be re-screened thru screen SS-02(PW). Refuse material will be transferred to feed bin BS-01(PW) @ TP-08(UD-PW); to belt conveyor BC-04(PE) @ TP-09(TC-PE); to screen SS-02(PW) @ TP-10(TC-PE). The screen will re-separate the coal and waste products. Coal will transfer from the screen to belt conveyor BC-05(NC) @ TP-11(TC-PE); to stockpile OS-03(SW-WS) @ TP-12(TC-MDH); and to truck for delivery @ TP-13(LO-MDH). Refuse will transfer from the screen to belt conveyor BC-06(NC) @ TP-14(TC-PE); to stockpile OS-04(SW-WS) @ TP-15(TC-MDH); and to truck for delivery off-site @TP-16(LO-MDH).

The facility shall be modified and operated in accordance with the following equipment and control device information taken from registration applications G10-D035E, G10-D035D, G10-D035C and G10-D035B and any amendments thereto:

| Equipment ID No. | Date of Construction, Reconstruction or Modification ¹ | G10-D Applicable Sections ² | Emission Unit Description | Maximum Permitted Throughput | | Control Device ³ | Associated Transfer Points | | |
|---|---|--|---|------------------------------|-----------|-----------------------------|------------------------------|-------------------------|-----------------------------|
| | | | | TPH | TPY | | Location: B -Before A -After | ID No. | Control Device ³ |
| Primary Coal Screening Circuit | | | | | | | | | |
| BC-01 | C 2008 ⁴ | 5 and 7 | Feed Conveyor - receives raw material from No. 2 Deep Mine and transfers it to screen SS-01 | 800 | 7,008,000 | PE | B A | TP-01 TP-02 | FE FE |
| SS-01 | C 2008 ⁴ | 5 and 7 | Single Deck Raw Coal Screen - receives raw material from feed conveyor BC-01, screens it and sized coal 2" x 0 transfers onto stacker conveyor BC-02 while oversize 4"+ material transfers onto stacker conveyor BC-03 | 800 | 7,008,000 | FE | B A A | TP-02 TP-03 TP-06 | FE FE FE |
| BC-02 | C 2008 ⁴ | 5 and 7 | Stacker Conveyor - receives sized coal 2" x 0 from screen SS-01 and transfers it onto open storage pile OS-01 | 800 | 7,008,000 | PE | B A | TP-03 TP-04 | FE MDH |
| OS-01 | C 2008 ⁴ | 5 and 7 | Sized Raw Coal Open Storage Pile - 40,000 ton capacity - 88,869 ft ² base area - 50' height - receives sized coal 2" x 0 from belt conveyor BC-02, stores it, and then an endloader loads it to trucks | 800 in 800 out | 7,008,000 | WS | B A | TP-04 TP-05 | MDH MDH |
| BC-03 | C 2008 ⁴ | 5 and 7 | Stacker Conveyor - receives oversize +4" material from screen SS-01 and transfers it onto stockpile open storage pile OS-02 | 800 | 7,008,000 | PE | B A | TP-06 TP-07 | FE MDH |
| OS-02 | C 2010 ⁵ | 5 and 8 | Oversize Material Open Storage Pile - 40,000 ton capacity - 88,869 ft ² base area - 50' height - receives oversize +4" material from belt conveyor BC-03, stores it, and then an endloader loads it to dump bin BS-01 (see Secondary Coal Screening Circuit below) | 800 in 800 out | 7,008,000 | WS | B A | TP-07 TP-08 | MDH PW |
| Secondary Coal Screening Circuit | | | | | | | | | |

| Equipment ID No. | Date of Construction, Reconstruction or Modification ¹ | G10-D Applicable Sections ² | Emission Unit Description | Maximum Permitted Throughput | | Control Device ³ | Associated Transfer Points | | |
|------------------|---|--|--|------------------------------|-----------|-----------------------------|------------------------------|-------------------------|-----------------------------|
| | | | | TPH | TPY | | Location: B -Before A -After | ID No. | Control Device ³ |
| BS-01 | C 2010 ⁵ | 5 and 8 | Endloader Dump Bin - 5 ton capacity - receives oversize +4" material from open storage pile OS-02 and drops it onto belt conveyor BC-04 | 500 | 4,380,000 | PW | B A | TP-08 TP-09 | PW PE |
| BC-04 | C 2010 ⁵ | 5 and 8 | Feed Conveyor - receives oversize +4" material from dump bin BS-01 and transfers it to screen SS-02 | 500 | 4,380,000 | PE | B A | TP-09 TP-10 | PE PE |
| SS-02 | C 2010 ⁵ | 5 and 8 | Single Deck Raw Coal Screen - receives oversize +4" material from feed conveyor BC-04, screens it and sized coal transfers onto stacker conveyor BC-05 while oversize refuse material transfers onto stacker conveyor BC-06 | 500 | 4,380,000 | PW | B A A | TP-10 TP-11 TP-14 | PE PE PE |
| BC-05 | C 2010 ⁵ | 5 and 8 | Stacker Conveyor - receives sized coal from screen SS-02 and transfers it onto open storage pile OS-03 | 500 | 4,380,000 | PE | B A | TP-11 TP-12 | PE MDH |
| OS-03 | C 2010 ⁵ | 5 and 8 | Sized Raw Coal Open Stock Pile - 10,000 ton capacity - 28,869 ft ² base area - 50' height - receives sized coal from belt conveyor BC-05, stores it, and then an endloader loads it to trucks | 500 in 500 out | 4,380,000 | WS | B A | TP-12 TP-13 | MDH MDH |
| BC-06 | C 2010 ⁵ | 5 and 8 | Stacker Conveyor - receives oversize refuse material from screen SS-02 and transfers it onto open storage pile OS-04 | 500 | 4,380,000 | PE | B A | TP-14 TP-15 | PE MDH |
| OS-04 | C 2010 ⁵ | 5 and 8 | Oversize Refuse Material Open Storage Pile - 10,000 ton capacity - 28,869 ft ² base area - 50' height - receives oversize refuse material from belt conveyor BC-06, stores it, and then an endloader loads it to trucks | 500 in 500 out | 4,380,000 | WS | B A | TP-15 TP-16 | MDH 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 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 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; MDH - Minimize Drop Height; and NC - No Control.

⁴ This equipment was constructed at the facility in 2008, but was not permitted until 2011 under registration G10-D035B.

⁵ This equipment was constructed at the facility in 2010, but was not permitted until 2014 under registration G10-D035C.

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.

SITE INSPECTION

On April 7, 2015, John Money Penny of the DAQ's Compliance and Enforcement Section performed a scheduled full on-site targeted inspection. Mr. Money Penny's notes from the inspection were as follows: "According to a guard, the site is in a long-term shutdown." At the time of the inspection, the facility was found to not be in operation and was given a status code of 41 - Temporarily Shutdown.

Directions to the facility from Charleston are to take I-77 South/I-64 East toward Beckley and travel 53.9 miles, keep left and take I-63 East toward Lewisburg and travel 37.0 miles, take Exit 156 for US-60/Midland Trail toward Sam Black Church and travel 0.3 miles, turn left onto US-60 and travel 6.0 miles to Rupert, turn right onto County Route CR1 (Anjean Road/Church Street) and travel 0.4 miles, Church Street becomes McClung Avenue and travel 0.4 miles, McClung Avenue becomes Anjean Road and travel approximately 5 miles to Anjean, WV, turn right onto Les McClung Road and travel approximately 250 feet, turn right onto Kyle Road and travel approximately 5.2 miles, bear right onto Lafayette Spes Road and travel approximately 1.1 miles to the site.

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 Class I Administrative Update will result in an decreased facility-wide potential to discharge controlled particulate matter emissions of 65.88 PPH and 290.04 TPY of particulate matter (PM), of which 24.70 PPH and 108.63 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 - Midland Trail Resources, LLC No. 2 Deep Mine Screening Facility | Controlled PM Emissions | | Controlled PM₁₀ Emissions | |
|--|------------------------------------|---------------|---|---------------|
| | lb/hour | TPY | lb/hour | TPY |
| Fugitive Emissions | | | | |
| Open Storage Pile Emissions | 0.38 | 1.65 | 0.18 | 0.78 |
| Unpaved Haulroad Emissions | 34.67 | 153.32 | 10.02 | 44.31 |
| Paved Haulroad Emissions | 0.00 | 0.00 | 0.00 | 0.00 |
| <i>Fugitive Emissions Total</i> | <i>35.04</i> | <i>154.97</i> | <i>10.20</i> | <i>45.09</i> |
| Point Source Emissions | | | | |
| Equipment Emissions | 26.00 | 113.88 | 12.22 | 53.52 |
| Transfer Point Emissions | 4.84 | 21.18 | 2.29 | 10.02 |
| <i>Point Source Emissions Total (PTE)</i> | <i>30.84</i> | <i>135.06</i> | <i>14.51</i> | <i>63.54</i> |
| FACILITY-WIDE EMISSIONS | 65.88 | 290.04 | 24.70 | 108.63 |

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the modified facility. The modification of Midland Trail Resources, LLC’s existing coal preparation plant is subject to the following state and federal rules:

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

The facility is subject to the requirements of 45CSR5 because it meets the definition of “Coal Preparation Plant” found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed are in operation.

45CSR13 Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed modification is subject to the requirements of 45CSR13 because it will result in a decrease in emissions with the removal of the emergency generator. The applicant has submitted an application for a Class I Administrative Update registration.

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 Class I

Administrative Update does not involve the construction or modification of any affected facilities as defined in 40 CFR 60 Subpart Y. Therefore, the proposed modification is not 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(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, reconstructed 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 64.32 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 Midland Trail Resources, LLC's coal preparation plant is not subject to the following state and federal rules:

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

In accordance with 45CSR14 Major Source Determination, the facility is not one of the 100 TPY stationary sources listed under the definition of "Major Stationary Source" in subsection 2.43.a. Therefore, it must have the potential to emit 250 TPY or more of any regulated pollutant to meet the definition of a major source in subsection 2.43.b. At the end of subsection 2.4.3, this facility is not listed in Table 1 - Source Categories Which Must Include Fugitive Emissions. So, fugitive emissions (from 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 136.71 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 Greenbrier 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 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 Class I administrative update application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. No comments were received during the comment period. Therefore, the granting of a General Permit G10-D registration to Midland Trail Resources, LLC for the modification of their existing coal preparation plant located near Rupert, Greenbrier County, WV is hereby recommended.



Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

August 21, 2015

Date