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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-3247
Plant ID No.: 099-00120
Applicant: Everett Energy LLC
Facility Name: Powdermill Coal Separation Facility
Location: Fort Gay, Wayne County
SIC Code: 1221 (Bituminous Coal & Lignite - Surface)
NAICS Code: 212111 (Bituminous Coal and Lignite Surface Mining)
Application Type: Construction
Received Date: April 30, 2015
Engineer Assigned: Dan Roberts
Fee Amount: \$2,000
Date Received: May 1, 2015
Applicant Ad Date: April 29, 2015
Complete Date: June 15, 2015
Newspaper: *The Wayne County News*
UTM Coordinates: Easting: 367.03896 km Northing: 4211.79715 km NAD Zone 17N
Lat/Lon Coordinates: Latitude: 38.044149 Longitude: -82.515275 NAD83
Description: Construction of a 120 TPH and 1,051,200 TPY screening facility with a stationary FGX Mineral Separation Unit to be used in the recovery and separation of raw coal.

BACKGROUND

Everett Energy LLC has applied for a permit to construct a 120 TPH and 1,051,200 TPY screening facility with a stationary FGX Mineral Separation Unit to be used in the recovery and separation of raw coal without the use of water. The FGX technology provides an innovative and cost-effective dry coal processing process that integrates the separation principles of an autogenous medium separator and a conventional table concentrator. Applying density-based air-table technology, air enters through the table and creates a fluidized bed of particles comprised of mostly fine, high density particles. The high density particle bed lifts the low density coal particles to the top of the bed. The low-density coal moves toward the front of the table due to mass action and the downward slope of the table. The high density particles settle through the fluidized bed and, upon making contact with the table, moves, toward the back of the table with the assistance of table

vibration. As a result, the low density coal particles exit the front of the table closest to the feed whereas the high-density, high-ash content particles leave on the side and front of the table located at the farthest from the feed entry.

40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation and Processing Plants defines "pneumatic coal-cleaning equipment" for units constructed, reconstructed or modified after May 27, 2009 as any facility which classifies coal by size or separates coal from refuse by application of air stream(s).

Section 2.3.1.e. of General Permit G10-D excludes eligibility for any coal preparation and processing plant or coal handling operation which incorporates a thermal dryer or an air table. Therefore, by definition, the proposed FGX Mineral Separation Unit is not eligible for a General Permit G10-D Registration.

DESCRIPTION OF PROCESS

The FGX Material Separation Unit will be located in a remote area of the Powder Mill Surface Mine in Wayne County, WV. The 120TPH system will include a feed bin, raw coal feed belt, a FGX-12 separation unit that is essentially a screen and 6 reclaim belts for stockpile storage. The separation unit will produce three products: clean raw coal, middlings, and refuse or rock. Four baghouses will be employed to filter dust from the separation unit.

Raw coal will be delivered to open stockpile OS-01 @ TP-01(UL-MDH); transfer by front-end loader to feed bin BS-01(PE) @ TP-02(UD-MDH); discharge to belt conveyor BC-01(NC) @ TP-03(TC-FE); to the feed bin for the separation unit BS-02(PE) @ TP-04(TC-MDH). Material will be fed @ TP-05(TC-BH) to the 120 TPH triple deck screen SS-01(FE/BH) for air separation. Raw clean coal will discharge to belt conveyor BC-02(NC) @ TP-06(TC-FE); transfer to stacker belt BC-03(NC) @ TP-07(TC-MDH); to open stockpile OS-02(SW-WS) @ TP-08(TC-MDH); and loadout to truck for delivery @ TP-09(LO-MDH). Middlings coal will discharge to belt conveyor BC-04(NC) @ TP-10(TC-FE); transfer to stacker belt BC-05(NC) @ TP-11(TC-MDH); to open stockpile OS-03(SW-WS) @ TP-12(TC-MDH); and loadout to truck for delivery @ TP-13(LO-MDH). Refuse will discharge to belt conveyor BC-06(NC) @ TP-14(TC-FE); transfer to stacker belt BC-07(NC) @ TP-15(TC-MDH); to open stockpile OS-04(SW-WS) @ TP-16(TC-MDH); and loadout to truck @ TP-17(LO-MDH) for delivery to the disposal area @ TP-18(UL-MDH).

A water truck equipped with pumps and sprays sufficient to control fugitive dust will be used to control stockpile emissions.

The facility shall be constructed and operated in accordance with the following equipment and control device information taken from permit application R13-3247 and any amendments thereto:

Equipment ID No.	Date of Construction, Reconstruction or Modification ¹	Description	Maximum Capacity		Control Device ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID. No.	Control Device ²
Dry Coal and Mineral Separation Unit								
OS-01	C 2015	Raw Refuse Open Storage Pile - maximum 25,000 ton capacity, base area of 38,869 ft ² and 50 ft height - receives raw coal from trucks, stores it and then a front end loader transfers it to BS-01	120	1,051,200	WS	B A	TP-01 TP-02	UL-MDH UD-MDH
BS-01	C 2015	Receiving Bin - 10 ton capacity - receives raw coal from OS-01 via a front end loader, stores it temporarily and then drops it onto BC-01	120	1,051,200	PE	B A	TP-02 TP-03	UD-MDH TC-FE
BC-01	C 2015	Raw Coal Conveyor - receives raw coal from BS-01 and transfers it to BS-02	120	1,051,200	NC	B A	TP-03 TP-04	TC-FE TC-MDH
BS-02	C 2015	Receiving Bin - 5 ton capacity - receives raw coal from BC-01, stores it temporarily and then feeds it into SS-01	120	1,051,200	PE	B A	TP-04 TP-05	TC-MDH TC-BH
SS-01	C 2015	FGX Material Separation Unit - receives raw coal from BS-02, uses air separation to classify it and then discharges the clean raw coal 4" x 0 onto BC-02, middlings coal 2" x 0 onto BC-04 and the refuse <1" x 0 onto BC-06	120	1,051,200	FE/BH	B A A A	TP-05 TP-06 TP-10 TP-14	TC-BH TC-FE TC-FE TC-FE
BH	C 2015	Baghouse - FGX-12-4 - Tangshan Shengzhou Manufacturing Co., Ltd. China (TSM), Model ID LHF-144 610/530 - contains four baghouses which run at the same time - 99% control efficiency	N/A	N/A	FE	B A	TP-05 N/A	TC-BH N/A
BC-02	C 2015	Raw Coal Conveyor - receives clean raw coal 4" x 0 from SS-01 and transfers it to BC-03	120	1,051,200	NC	B A	TP-06 TP-07	TC-FE TC-MDH
BC-03	C 2015	Raw Coal Conveyor - receives clean raw coal 4" x 0 from BC-02 and transfers it to OS-02	120	1,051,200	NC	B A	TP-07 TP-08	TC-MDH TC-MDH
OS-02	C 2015	Clean Raw Coal Open Storage Pile - maximum 10,000 ton capacity, base area of 18,869 ft ² and 40 ft height - receives clean raw coal 4" x 0 from BC-03, stores it and then a front end loader transfers it to trucks for shipment from the facility	120	1,051,200	WS	B A	TP-08 TP-09	TC-MDH LO-MDH
BC-04	C 2015	Middlings Coal Conveyor - receives middlings coal 2" x 0 from SS-01 and transfers it to BC-05	120	1,051,200	NC	B A	TP-10 TP-11	TC-FE TC-MDH
BC-05	C 2015	Middlings Coal Conveyor - receives middlings coal 2" x 0 from BC-04 and transfers it to OS-03	120	1,051,200	NC	B A	TP-11 TP-12	TC-MDH TC-MDH
OS-03	C 2015	Middlings Coal Open Storage Pile - maximum 10,000 ton capacity, base area of 18,869 ft ² and 40 ft height - receives middlings coal 2" x 0 from BC-05, stores it and then a front end loader transfers it to trucks for shipment from the facility	120	1,051,200	WS	B A	TP-12 TP-13	TC-MDH LO-MDH
BC-06	C 2015	Refuse Conveyor - receives refuse <1" x 0 from SS-01 and transfers it to BC-07	120	1,051,200	NC	B A	TP-14 TP-15	TC-FE TC-MDH
BC-07	C 2015	Refuse Conveyor - receives refuse <1" x 0 from BC-06 and transfers it to OS-04	120	1,051,200	NC	B A	TP-15 TP-16	TC-MDH TC-MDH
OS-04	C 2015	Refuse Open Storage Pile - maximum 5,000 ton capacity, base area of 8,869 ft ² and 40 ft height - receives refuse <1" x 0 from BC-07, stores it and then a front end loader transfers it to trucks for shipment to the disposal area	120	1,051,200	WS	B A	TP-16 TP-17	TC-MDH LO-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 Control Device Abbreviations: FE - Full Enclosure; PE - Partial Enclosure; WS - Water Sprays; BH - Baghouse; MDH - Minimize Drop Height; and NC - No Controls.

Reciprocating Internal Combustion Engines (R.I.C.E.) Information

Emission Unit ID No.	Emission Unit Description (Make, Model, Serial No., etc.)	Year Manufactured/ Year Installed	Design Capacity (Bhp/rpm)
Gen Set	Caterpillar CAT C15 ATAAC Diesel Engine Model DM8148	2014 / 2015	450 bhp / 1,800 rpm

Emission Unit ID No.	Subject to 40CFR60 Subpart III?	Subject to 40CFR60 Subpart JJJJ?	Subject to Sections 9.1.4/9.2.1 (Catalytic Reduction Device)
Gen Set	Yes	No	No

Storage Tanks

Source ID No.	Status	Content	Design Capacity			Orientation	Liquid Height
			Volume	Diameter	Throughput		
T1	NEW	#2FO	2,000 gal	5'	70,000 gal	HORZ	4'

SITE INSPECTION

A site inspection was not deemed to be required at this time due to location proposed and the size and scope of the proposed facility. However, after construction is completed, the facility will be inspected on a predetermined schedule by the DAQ's Compliance and Enforcement Section.

Directions to the facility from Charleston are to take I-64 West towards Huntington and travel 56.4 miles, keep right and take Exit 1 for US-52 South toward Kenova/Ceredo and travel 0.2 miles, turn left onto US-52 South/WV-75/Route 75 and travel 1.9 miles, turn right onto US-52 South and travel 0.08 miles, turn left to stay on US-52 South and travel approximately 26 miles, turn left onto Montgomery Ridge which follows Powdermill Branch Creek and travel approximately 1 mile to the proposed 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, Volume I "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 factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. Emission factors for the diesel engines were taken from AP 42, Fifth Edition, Volume I, Chapter 3: Stationary Internal Combustion Sources, Section 3: Gasoline and Diesel Industrial Engines (10/96). The emission 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 FGX Separator will be powered by a Caterpillar CAT C15 diesel engine model DM8148 labeled Gen Set and rated for 450 hp (336 kW) at 1,800 rpm. Engine Gen Set is a LC6114B frame size diesel lean burn 4 stroke engine and is EPA Tier 3 certified. Engine Gen Set shall not exceed 2,500 hours of operation per year.

The FGX Separator will utilize a FGX-12-4 baghouse model ID LHF-11 610/530 manufactured by Tangshan Shengzhou Manufacturing Co., Ltd. In China. This baghouse has a total of four baghouses in the baghouse, and no compartments. All four baghouses run at the same time. The total cloth area is 26,288 ft² and the operating air to cloth ratio is 3.35 ft/min. The guaranteed minimum baghouse collection efficiency is 99%.

The maximum permitted emission rates for Engine Gen Set shall not exceed the following base on a maximum of 2,500 hours of operation per year:

Pollutant	Emission Factor (lb/hp-hr) ¹	Source for Emission Factor	Engine Gen Set	
			Hourly Emissions (lb/hour)	Annual Emissions (TPY)
NO _x	2.96 g/hp-hr	Manufacturer ¹	2.94	3.67
CO	0.54 g/hp-hr	Manufacturer ¹	0.54	0.67
SO ₂	0.00205 lb/hp-hr	AP 42 ²	0.92	1.15
PM ₁₀	2.96 g/hp-hr	Manufacturer ¹	0.04	0.05
HC	2.96 g/hp-hr	Manufacturer ¹	0.05	0.06
Total HAPs	various	AP 42 ³	0.007	0.009

¹ Emission factors were taken from Manufacturer's Technical Data based on steady state operating conditions of 77°F, 28.42 in HG and number 2 diesel fuel with 35° API and LHV of 18,390 btu/lb. Emissions data is based on 100% load.

² Emission factors were taken from AP 42, Fifth Edition, Volume I, Chapter 3: Stationary Internal Combustion Sources, Section 3: Gasoline and Diesel Industrial Engines (10/96), Table 3.3-1. Emission Factors for Uncontrolled Gasoline and Diesel Industrial Engines.

³ Emission factors were taken from AP 42, Fifth Edition, Volume I, Chapter 3: Stationary Internal Combustion Sources, Section 3: Gasoline and Diesel Industrial Engines (10/96), Table 3.3-2. Speciated Organic Compound Emission Factors for Uncontrolled Diesel Engines.

The proposed construction will result in a potential to discharge controlled emissions of 47.26 pounds per hour (PPH) and 206.86 tons per year (TPY) of particulate matter (PM), of which 14.04 PPH and 61.38 TPY will be particulate matter less than 10 microns in diameter (PM₁₀). Refer to the following table for a summary of the proposed potential to discharge controlled emissions of PM and PM₁₀:

<i>- Proposed Facility-wide Emissions - Everett Energy LLC - R13-3247</i>	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Open Storage Pile Emissions	0.14	0.60	0.06	0.28
Unpaved Haulroad Emissions	45.28	198.31	13.08	57.31
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
<i>Fugitive Emissions Total</i>	<i>45.41</i>	<i>198.91</i>	<i>13.15</i>	<i>57.59</i>
Point Source Emissions				
Equipment Emissions	0.12	0.53	0.06	0.25
Transfer Point Emissions	1.69	7.38	0.08	3.49
Engine Gen Set	0.04	0.05	0.04	0.05
<i>Point Source Emissions Total (PTE)</i>	<i>1.85</i>	<i>7.96</i>	<i>0.89</i>	<i>3.79</i>
FACILITY EMISSIONS TOTAL	47.26	206.86	14.04	61.38

REGULATORY APPLICABILITY

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

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

The proposed facility will be subject to the requirements of 45CSR5 because it will meet the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed 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 construction is subject to the requirements of 45CSR13 because it will result in a potential to discharge controlled emissions greater than six (6) pounds per hour and ten (10) tons per year of a regulated air pollutant (PM and PM₁₀) and involve the construction of equipment and open storage piles subject to NSPS Subpart Y and Subpart III. The applicant has submitted an application for a construction permit. The applicant published a Class I legal advertisement in *The Wayne County News* on April 29, 2015 and submitted \$1,000 for the application fee and \$1,000 for the NSPS fee.

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

This proposed coal preparation plant will be subject to 40 CFR 60 Subpart Y because it will be constructed after October 24, 1974 and will process more than 200 tons of coal per day. The facility should be in compliance with Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage systems, or coal transfer and loading systems processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart III: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The provisions of Subpart III are applicable to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) which are manufactured after April 1, 2006, are not fire pump engines and commence construction after July 11, 2005. For the purposes of Subpart III, the date that construction commences is the date the engine is ordered by the owner or operator.

Caterpillar CAT C15 diesel engine model DM8148 labeled Gen Set and rated for 450 hp (336 kW) at 1,800 rpm. Engine Gen Set is a LC6114B frame size diesel lean burn 4 stroke engine and is EPA Tier 3 certified. Engine Gen Set shall not exceed 2,500 hours of operation per year. In accordance with § 60.4200 (2), this engine is subject to Subpart III because it was manufactured after April 1, 2006 and will commence construction after July 11, 2005.

In accordance with § 60.4207(b), "Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel."

40 CFR 89 Control of Emissions From New and In-use Nonroad Compression-Ignition Engines

This part applies to all compression-ignition nonroad engines except those specified in paragraph (b) of this section. This means that the engines for which this part applies include but are not limited to compression-ignition engines exempted from the requirements of 40

CFR Part 92 by 40 CFR 92.207 or 40 CFR Part 94 by 40 CFR 94.907. This part applies as specified in 40 CFR part 60 subpart III, to compression-ignition engines subject to the standards of 40 CFR part 60, subpart III.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, this proposed coal preparation plant 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 new potential to emit will be 4.27 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 will be subject to 45CSR30 and remain classified as a Title V deferred non-major source.

The proposed construction of a coal preparation plant will not be subject to the following state and federal rules:

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

In accordance with 45CSR14 Major Source Determination, this coal preparation plant 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 new potential to emit will be 8.98 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 construction is not subject to the requirements set forth within 45CSR14.

45CSR19 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution Which Cause or Contribute to Nonattainment

This proposed facility will be located in Wayne County, WV, which was changed to a status of attainment for PM_{2.5} (particulate matter less than 2.5 microns in diameter) in the Federal Register /Vol. 77, No. 249 / Friday, December 28, 2012 /Rules and Regulations on page 76415. Therefore, the proposed facility does not trigger Major Non-Attainment NSR Review under 45CSR19.

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

The proposed storage tank T1 will not be subject to 40 CFR 60 Subpart Kb. Subpart Kb applies to each storage vessel with a capacity greater than or equal to 75 cubic meters (m³) (19,813 gallons) that is used to store volatile organic liquids (VOL) for which construction, reconstruction, or modification commenced after July 23, 1984. The application indicates that proposed storage tank T1 will have a capacity less than 7.57 cubic meters (m³) (2,000 gallons), and therefore is exempt from the General Provisions (part 60, subpart A) and from the provisions of Subpart Kb.

40 CFR 63 *Subpart ZZZZ: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines*

According to the RICE NESHAP Summary of Requirements, new and reconstructed stationary non-emergency compression ignition engine constructed on or after June 12, 2006 and located at an area source of HAP are subject to 40 CFR part 60, subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines).

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Other than particulate matter and particulate matter less than 10 microns in diameter, which are non-toxic pollutants, the only non criteria regulated pollutants that are addressed by this permit application are the very small amount of Hazardous Air Pollutants that are the normal byproduct of diesel combustion.

Acetaldehyde:

Acetaldehyde is mainly used as an intermediate in the synthesis of other chemicals. It is ubiquitous in the environment and may be formed in the body from the breakdown of ethanol. Acute (short-term) exposure to acetaldehyde results in effects including irritation of the eyes, skin, and respiratory tract. Symptoms of chronic (long-term) intoxication of acetaldehyde resemble those of alcoholism. Acetaldehyde is considered a probable human carcinogen (Group B2) based on inadequate human cancer studies and animal studies that have shown nasal tumors in rats and laryngeal tumors in hamsters.

Acrolein:

Acrolein is primarily used as an intermediate in the synthesis of acrylic acid and as a biocide. It may be formed from the breakdown of certain pollutants in outdoor air or from the burning of organic matter including tobacco, or fuels such as gasoline or oil. It is toxic to humans following inhalation, oral or dermal exposures. Acute (short-term) inhalation exposure may result in upper respiratory tract irritation and congestion. No information is available on its reproductive, developmental, or carcinogenic effects in humans, and the existing animal cancer data are considered inadequate to make a determination that acrolein is carcinogenic to humans.

Benzene:

Benzene is found in the air from emissions from burning coal and oil, gasoline service stations, and motor vehicle exhaust. Acute (short-term) inhalation exposure of humans to benzene may cause drowsiness, dizziness, headaches, as well as eye, skin, and respiratory tract irritation, and, at high levels, unconsciousness. Chronic (long-term) inhalation exposure has caused various disorders in the blood, including reduced numbers of red blood cells and aplastic anemia, in occupational settings. Reproductive effects have been reported for women exposed by inhalation to high levels, and adverse effects on the developing fetus have been observed in animal tests. Increased incidence of leukemia (cancer of the tissues that form white blood cells) have been observed in humans occupationally exposed to benzene. EPA has classified benzene as a Group A, human carcinogen.

Formaldehyde:

Formaldehyde is used mainly to produce resins used in particle board products and as an intermediate in the synthesis of other chemicals. Exposure to formaldehyde may occur by breathing contaminated indoor air, tobacco smoke, or ambient urban air. Acute (short-term) and chronic (long-term) inhalation exposure to formaldehyde in humans can result in respiratory symptoms, and eye, nose, and throat irritation. Limited human studies have reported an association between formaldehyde exposure and lung and nasopharyngeal cancer. Animal inhalation studies have reported an increased incidence of nasal squamous cell cancer. EPA considers formaldehyde a probable human carcinogen (Group B1).

Naphthalene:

Naphthalene is used in the production of phthalic anhydride; it is also used in mothballs. Acute (short-term) exposure of humans to naphthalene by inhalation, ingestion, and dermal contact is associated with hemolytic anemia, damage to the liver, and neurological damage. Cataracts have also been reported in workers acutely exposed to naphthalene by inhalation and ingestion. Chronic (long-term) exposure of workers and rodents to naphthalene has been reported to cause cataracts and damage to the retina. Hemolytic anemia has been reported in infants born to mothers who "sniffed" and ingested naphthalene (as mothballs) during pregnancy. Available data are inadequate to establish a causal relationship between exposure to naphthalene and cancer in humans. EPA has classified naphthalene as a Group C, possible human carcinogen.

Toluene:

The acute toxicity of toluene is low. Toluene may cause eye, skin, and respiratory tract irritation. Short-term exposure to high concentrations of toluene (e.g., 600 ppm) may produce fatigue, dizziness, headaches, loss of coordination, nausea, and stupor; 10,000 ppm may cause death from respiratory failure. Ingestion of toluene may cause nausea and vomiting and central nervous system depression. Contact of liquid toluene with the eyes causes temporary irritation. Toluene is a skin irritant and may cause redness and pain when trapped beneath clothing or shoes; prolonged or repeated contact with toluene may result in dry and cracked skin. Because of its odor and irritant effects, toluene is regarded as having good warning properties. The chronic effects of exposure to toluene are much less severe than those of benzene. No carcinogenic effects were reported in animal studies. Equivocal results were obtained in studies to determine developmental effects in animals. Toluene was not observed to be mutagenic in standard studies.

Xylene:

Commercial or mixed xylene usually contains about 40-65% m-xylene and up to 20% each of o-xylene and p-xylene and ethyl benzene. Xylenes are released into the atmosphere as fugitive emissions from industrial sources, from auto exhaust, and through volatilization from their use as solvents. Acute (short-term) inhalation exposure to mixed xylenes in humans results in irritation of the eyes, nose, and throat, gastrointestinal effects, eye irritation, and neurological effects. Chronic (long-term) inhalation exposure of humans to mixed xylenes results primarily in central nervous system (CNS) effects, such as headache, dizziness, fatigue, tremors, and incoordination; respiratory, cardiovascular, and kidney effects have also been reported. EPA has classified mixed xylenes as a Group D, not classifiable as to human carcinogenicity.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the proposed size and location of this facility and the extent of the proposed construction. This facility will be located in Wayne County, WV, which is currently in attainment for PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter). This facility will be a minor source as defined by 45CSR14, therefore, an air quality impact analysis is not required.

MONITORING OF OPERATIONS

For the purposes of determining compliance with maximum throughput limits, the applicant shall maintain certified daily and monthly records with example forms included as Appendix A to Permit R13-3247. An example form for tracking the amount of water applied through the water truck is included as Appendix B to Permit R13-3247. 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 by the permittee for at least five (5) years and shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

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 construction 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 Everett Energy LLC for the construction of the Powdermill Coal Separation Facility to be located near Fort Gay, Wayne County, WV is hereby recommended.



Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

June 17, 2015

Date