

PA DEP SOUTHWEST REGIONAL OFFICE

MEMO

TO Air Quality Permit File: OP-56-00166
PBS Coals, Inc. / Shade Creek Coal Preparation Plant

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DATE August 26, 2014

RE Review of Application for Renewed State Only Operating Permit
PBS Coals, Inc. / Shade Creek Coal Preparation Plant
Shade Township, Somerset County
APS #743478; AUTH #869866; PF #244773

Background:

Some equipment at the Shade Creek Coal Preparation Plant was constructed as early as 1965. This included a 65 MMBtu per hour, Heyl and Paterson Fluidized Bed Thermal Dryer, (Source ID 101) which has now been taken out of service. The application for an initial facility-wide Operating Permit was received by the Department on November 27, 1995 and Title V Operating Permit TVOP-56-00166 was issued on November 8, 2001 for a five-year term. The permit was modified on January 11, 2005 to add the source Diethylene Glycol Deicer (Source 118). Source 118 is now considered to be insignificant.

TVOP-56-00166 was renewed on February 13, 2007 with an expiration date of February 13, 2012. An application to again renew the TVOP was received by the Department on February 23, 2011. This document is a review of that application. In addition, the Fluidized Bed Thermal Dryer (Source ID 101) was permanently taken out of service on April 21, 2011.

Sources, Control Devices, and Emissions:

The Shade Creek Coal Preparation Plant is a coal preparation plant. Coal is blended and crushed at this facility. The applicant can process bituminous coal through each of the processes at the maximum rates listed below. Coal brought to the site for processing is off-loaded from trucks. There are storage piles for coal refuse, as well as run of mine (ROM) and processed coal. These

PBS Coals, Inc.
 Shade Creek Coal Preparation Plant
 TVOP-56-00166

throughput rates are physical, not permit limitations. The coal throughput of the plant is both mined at the site and delivered to the facility for processing from other sites. Raw coal transfer points are totally enclosed and processed coal transfer points are partially enclosed. Breakers and screens are enclosed and electrically driven. The facility is powered by electricity supplied by a public utility and no diesel engines are utilized to generate mechanical or electrical power for stationary sources at the site. Plant roads are watered and swept.

Emission processes at the Shade Creek Coal Preparation Plant and their control are listed in Table 1:

Table 1
Emission Sources and Control
PBS Coals, Inc.
Shade Creek Coal Preparation Plant (TVOP-56-00166)

Source ID	Source and Control	SCC	Maximum	Installation
102	Raw Coal Handling/Transfer (Enclosure of Transfer Points)	3-05-010-11	475 TPH	1/1/1995
103	Raw Coal Storage Piles (High Moisture Content)	3-05-010-09	12 Acres	1/1/1995
104	Bradford Breaker (Enclosed)	3-05-010-10	475 TPH	1/1/1995
105	Midwestern Dry Screens A&B (Enclosure)	3-05-010-12	475 TPH	1/1/1995
106	Product Coal Handling/Transfer (Partial Enclosure of Transfer Points)	3-05-010-11	375 TPH	1/1/1995
107	Coal Refuse Handling/Transfer (Enclosure)	3-05-010-11	100 TPH	1/1/1995
108	Temporary Refuse Storage Piles (High Moisture Content)	3-05-010-09	0.5 Acres	1/1/1987
109	Upper Plant Breaker (Enclosed)	3-05-010-10	300 TPH	1/1/1987
110	Upper Plant Screen (Enclosure)	3-05-010-12	300 TPH	1/1/1995
111	Coal Truck Haul Roads (Paved) (Watered & Swept)	3-05-010-50	312,534 Miles	1/1/1995
112	Refuse Area Haul Roads (Unpaved) (Watered & Swept)	3-05-010-50	100,000 Miles	1/1/1995
114	Coal Refuse Area (Earthmoving Eq.) (High Moisture Content)	3-05-010-45		1/1/1995
115	Product Coal Storage (4-2,000 ton silos) (Enclosure)	3-05-010-14	6 Acres	Unknown
119	Coal Sizer (Enclosure)	3-05-010-10	600 TPH	10/1/2004

Total annual emissions from the site are listed in the following table as estimated by the applicant based on EPA AP-42 and FIRE emission factors and discussed emission controls:

PBS Coals, Inc.
 Shade Creek Coal Preparation Plant
 TVOP-56-00166

**Table 2: Facility Emissions
 PBS Coals, Inc.
 Shade Creek Coal Preparation Plant (TVOP-56-00166)**

Source ID	Source	PM ₁₀ Emission Factor	PM ₁₀ Emissions	
			Lb/Hr	Ton/Yr
102	Raw Coal Handling/Transfer	0.014 Lb/Ton	6.7	29.13
103	Raw Coal Storage Piles	0.000159 Tons/Acre-Hr	3.8	16.71
104	Bradford Breaker	0.01 Lb/Ton	4.8	20.81
105	Midwestern Dry Screens A&B	0.007 Lb/Ton	3.3	14.56
106	Product Coal Handling/Transfer	0.0049 Lb/Ton	1.8	8.05
107	Coal Refuse Handling/Transfer	0.002 Lb/Ton	0.2	0.88
108	Temporary Refuse Storage Piles	0.00016 Tons/Acre-Hr	0.2	0.70
109	Upper Plant Breaker	0.01 Lb/Ton	3.0	13.14
110	Upper Plant Screen	0.024 Lb/Ton	7.2	31.54
111	Coal Truck Haul Roads (Paved)	0.788 Lb/VMT	28	123.14
112	Refuse Area Haul Roads (Unpaved)	1.36 Lb/VMT	15.5	68.00
114	Coal Refuse Area (Earthmoving Eq.)	1.6 Lb/Hr	1.6	7.01
115	Product Coal Storage (4-2,000 ton silos)	0.000159 Tons/Acre-Hr	1.9	8.36
119	Coal Sizer	0.01 Lb/Ton	6.0	26.28
Facility Total			84.1	368.30

Activity throughputs and emission factors were contained in Operating Permit applications.
 All annual emissions are based on 24 hour x 365 days of operation.

Regulatory Analysis:

The Shade Creek Coal Preparation Plant is a Title V source because its potential emissions of PM₁₀ from the facility are greater than the major source threshold of 100 tons per year, even though potential emissions of NO_x, SO_x, and CO are less than the major source threshold of 100 tons per year, potential emissions of VOC are less than 50 tons per year, and HAP emissions have an emission potential less than 10 TPY of any single HAP and 25 TPY of the sum of all emitted HAPs. A facility that does not emit HAPs of this amount is called an Area Source.

The facility was evaluated for applicability of New Source Performance Standards (NSPS), National Emission Standards for Hazardous Air Pollutants (NESHAP), other Federal Standards,

and applicable requirements of 25 Pa. Code Chapters 121 - 145 of the Commonwealth of Pennsylvania. The following standards were considered:

New Source Performance Standards (NSPS)

40 CFR Part 60, Subpart Y, Standards of Performance for Coal Preparation Plants. - As a coal preparation plant that processes more than 200 tons per day and commenced construction, or was modified, after October 27, 1974 and before April 28, 2008, the facility is subject to certain requirements of 40 CFR Part 60, Subpart Y, Standards of Performance for Coal Preparation Plants. All of the equipment presently comprising this coal preparation plant, with the possible exception of some of the haul roads, was constructed during this period. The processes at the Shade Creek Coal Preparation Plant have applicable requirements under this subpart.

Subpart Y, §60.254(a) limits the opacity of gases from coal processing and conveying of equipment, coal storage systems, coal transfer, and loading systems to less than 20 percent opacity. However, PA Code Title 25 § 123.1 is more restrictive, as it allows no fugitive emissions from these sources. Compliance with § 123.1 will ensure compliance with the 20% requirement of 40 CFR §60.254(a). Subpart Y does not specify monitoring, reporting, or record keeping requirements for coal prep plants without thermal dryers. However, the facility is subject to reporting and record keeping requirements in the General Provisions in Subpart A, most notably 40 CFR § 60.4 and 60.7. The first requires submittal of documents to the EPA and the Department. The latter requires EPA and DEP notification of construction and initial startup and records of startup, shutdown, or malfunction. The monitoring and record keeping conditions that demonstrate compliance with the Chapter 123 restrictions and the malfunction reporting condition shall ensure compliance with all NSPS requirements.

According to 40 CFR Part 60, Subpart Y, the opacity and testing requirements of § 60.8, § 60.254, and § 60.255 require testing between 60 and 180 days of startup. Demonstration of compliance with the opacity standard for coal processing and conveying equipment at the Shade Creek Coal Preparation Plant would require use of EPA Method 9 for Visual Observation of Opacity, with the procedure modified as described in § 60.257. However, PA DEP may grant a waiver of testing, providing the sources at the facility demonstrate ongoing compliance with 25 Pa. Code § 123.1. Therefore, sources at Shade Creek have not been and are not subject to performance testing under the Subpart, provided compliance with § 123.1 is demonstrated. The Department will send a notification to EPA that a performance test waiver has been granted to the operators of the Shade Creek Coal Preparation Plant.

PBS Coals, Inc.
 Shade Creek Coal Preparation Plant
 TVOP-56-00166

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

There are no NESHAPs that apply to this facility.

Pennsylvania Code Title 25

Chapter 123 emission standards and appropriate methods of compliance are included in the site level permit conditions. The objective of the majority of permit conditions is to limit fugitive dust emissions at the plant in accordance with 25 Pa. Code §123.1 and §123.2. The recommendations include work practice standards related to coal storage, conveying, screening, loading and unloading, and roadways.

Conclusions and Recommendations:

An inspection of the Shade Creek Coal Preparation Plant for a Full Compliance Evaluation was last conducted on September 12, 2013. Fred Walter, Air Quality Specialist of DEP determined that the plant met all requirements specified by the existing TVOP. Kim Betcher, Environmental Planning Manager of PBS Coals, Inc. and Fred Walter, Air Quality Specialist of DEP for the facility, have reviewed a copy of the draft permit.

PBS Coals, Inc. has proposed, in this application, to operate a coal preparation plant in Shade Township, Somerset County. I recommend the issuance of a five-year Operating Permit for this facility, subject to the conditions in the proposed Title V Operating Permit.

Permit Authorized by this Authorization					
Quantity	Facility Name			PF ID:	244773
1	PBS Coals, Inc. / Shade Creek Coal Preparation Plant (OP-56-00166)				
		APS ID:	743478	Auth. ID:	869866
Short Descr.	Operating Permit for a coal preparation plant.				
Permits Inactivated by this Authorization					
Permit #					
		APS ID		Auth. ID	