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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	R13-2965A
Plant ID No.:	055-00107
Applicant:	Pounding Mill Quarry Corp.
Facility Name:	Princeton Facility
Location:	Mercer County
NAICS Code:	212319
Application Type:	Modification
Received Date:	09-19-13
Engineer Assigned:	Steven R. Pursley, PE
Fee Amount:	$2,000.00
Date Received:	09-23-13 & 11-4-13
Complete Date:	December 2, 2013
Due Date:	February 28, 2014
Applicant Ad Date:	September 30, 2013
Newspaper:	*Bluefield Daily Telegraph*
UTM's:	Easting: 492.24 km Northing: 4,136.24 km Zone: 17
Description:	Modification to add transfer points.

DESCRIPTION OF PROCESS

Pounding Mill Quarry Corporation (Pounding Mill) proposes the construction and operation of a gravel loadout facility located in Princeton, Mercer County, West Virginia. Pounding Mill currently operates a loadout facility (permit G40-B022A) near the proposed location. This permit will remain active.

Crushed rock (3/4 inch minus) from a local quarry approximately five (5) miles away will be delivered to the loadout facility via public highway and other public, paved roads. The material will be stockpiled at the facility for loading to rail cars.

Approximately 4,000 tons per day of crushed rock will be delivered to the facility and placed into open stockpiles OS-1 and OS-2. From the stockpiles, loaders will transfer the

material to each of two (2) 50-ton hoppers H-1 and H-2. Material will then drop to an enclosed belt conveyor BC-1 via a feeder at each hopper. BC-1 will transfer material into a covered 400-ton dump bin DB-1. Material will drop to open conveyor BC-2, then to open conveyor BC-3, and then into rail cars. Each rail car will transport approximately 7,500 tons of crushed rock. Pounding Mill will loadout a maximum of 1,000,000 tons of crushed rock per year.

SITE INSPECTION

A full on site inspection of the existing facility permitted under G40-B022A was performed by Eric Ray of the DAQ Compliance and Enforcement Section on August 25, 2011. The facility was found to be in compliance. Directions from application: From Highway 460, turn north on Locust St. Travel 0.2 miles to State Roud 104/Rogers St. And turn west (left). After approximately 0.3 miles the road will split: take Brick St. Northwest (to the right) a short distance. Then turn north (right) onto S. 2nd St. Turn right after 0.2 miles onto Virginian Industrial Park Road. Follow the road north approximately 0.5 miles to the facility.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

The Pounding Mill Princeton Loadout Facility will process crushed stone at a maximum rate of 2,000 tons per hour and 1,000,000 tons per year. Emissions were calculated by Cardno MM&A. on behalf of Pounding Mill.

Fugitive emissions from stockpiles were calculated using emission factor equation from Air Pollution Engineering Manual -Storage Pile Wind Erosion (Active Storage). Water sprays will be utilized to minimize fugitive emissions from the stockpiles.

AP-42 Section 13.2.4 (Miscellaneous Sources: Aggregate Handling and Storage Piles) was used to obtain emission factors for facility transfer points. Belt BC-1 will utilize a full enclosure.

Table 2a: Proposed Emissions (13-2965A):

Emissions Summary - Pounding Mill Quarry Corporation Princeton Loadout Facility 13-2965A	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.93	4.06	0.44	1.91
Fugitive Emissions Total	*0.93*	*4.06*	*0.44*	*1.91*
Point Source Emissions				
Transfer Point Emissions	14.54	5.32	6.88	2.52
Point Source Emissions Total (PTE)	*14.54*	*5.32*	*6.88*	*2.52*
EMISSIONS TOTAL	**15.47**	**9.38**	**7.32**	**4.43**

Table 2b: Existing Facility Emissions (taken directly from permit application 13-2965 table 2a):

Emissions Summary - Pounding Mill Quarry Corporation Princeton Loadout Facility 13-2965	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.93	4.06	0.44	1.91
Fugitive Emissions Total	*0.93*	*4.06*	*0.44*	*1.91*
Point Source Emissions				
Transfer Point Emissions	5.01	2.93	2.37	1.39
Point Source Emissions Total (PTE)	*5.01*	*2.93*	*2.37*	*1.39*
EMISSIONS TOTAL	**5.94**	**6.99**	**2.80**	**3.29**

Table 2c: Increase in Emissions:

	Controlled PM Emissions		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
Emissions Increase	**9.53**	**2.39**	**4.52**	**1.14**

Table 2d: New PTE from entire Facility (including emissions from G40-B022A):

Combined Emissions Summary - Pounding Mill Quarry Corporation Princeton Loadout Facility G40-B022A and 13-2965	**Controlled PM Emissions**		**Controlled PM_{10} Emissions**	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	1.05	4.56	0.49	2.15
Unpaved Haulroad Emissions	14.09	21.98	2.75	4.29
Fugitive Emissions Total	*15.14*	*26.54*	*3.24*	*6.44*
Point Source Emissions				
Transfer Point Emissions	14.64	5.42	6.98	2.62
Point Source Emissions Total (PTE)	*14.64*	*5.42*	*6.98*	*2.62*
EMISSIONS TOTAL	**29.78**	**31.96**	**10.22**	**9.06**

REGULATORY APPLICABILITY

STATE RULES

45CSR7 To Prevent and Control Particulate Matter Air Pollution from Manufacturing Processes and Associate Operations

The purpose of this rule is to prevent and control particulate matter air pollution from manufacturing processes and associated operations. The facility is subject to the requirements of this rule because it meets the definition of "Manufacturing Process" found in Section 2.20 of this rule. The facility will need to be in compliance with Subsection 3.1 – no greater than 20% opacity (opacity monitoring, recordkeeping, and reporting requirements are included in permit 13-296); Subsection 4.1 – PM emissions shall not exceed those under Table 45-7A (see paragraph below); Subsection 5.1 – manufacturing process and storage structures must be equipped with a system to minimize emissions (water sprays will be utilized when transferring material to hoppers H-1 and H-2 ; dump bin D-1 will be fully enclosed); Subsection 5.2 – minimize PM emissions from plant premises (water sprays will be utilized).

According to Table 45-7A, for a type ‘a' source with a maximum process weight rate of 4,000,000 lb/hr (1,800,000 lb/hr and over), the maximum allowable emission rate is 50 lb/hr of particulate matter. The proposed maximum point source emission rate at the facility is 14.64 lb/hr of particulate matter according to calculated emissions in permit application R13-2965A.

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 purpose of this rule is to set forth the procedures for stationary source reporting, and the criteria for obtaining a permit to construct and operate a new stationary source which is not a major stationary source, to modify a non-major stationary source, to make modifications which are not major modifications to an existing major stationary source and to relocate non-major stationary sources within the state of West Virginia.

The applicant is applying for a Rule 13 modification permit for the Princeton Loadout Facility. The facility is subject to the following sections of this rule: reporting requirements, requirements for modifications of stationary sources, demonstrating compliance with stationary sources, public review procedures, and permit application fees. The facility will demonstrate compliance by following all the applicable rules and regulations that apply to the facility. They will also follow the terms and conditions set forth in permit R13-2965A. The permittee published a Class I legal advertisement in Bluefield Daily Telegraph on September 30, 2013 and submitted an application fee of $2,000.00.

45CSR16 Standards of Performance for New Stationary Sources.

The facility is subject to 45CSR16 because it is subject to 40 CFR 60 Subpart OOO.

45CSR30 Requirements for Operating Permits.

The facility is subject to 45CSR30 because it is subject to 40 CFR 60 Subpart OOO. However, the facility remains a minor source of PM_{10} and therefore will remain a deferred source under Title V.

FEDERAL REGULATIONS:

40 CFR 60 Subpart OOO Standards of Performance for Nonmetallic Mineral Processing Plants.

The applicant indicated in it's application that it is subject to 45 CFR 60 Subpart OOO. Since there are no screens or crushers associated with the part of the facility covered by this permit, the primary applicable requirements of Subpart OOO are opacity limits. The applicants proposed use of water sprays and enclosures should ensure that the limits are met.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

No non-criteria regulated pollutants are expected to be emitted due to this modification.

AIR QUALITY IMPACT ANALYSIS

Because this is a minor modification to an existing minor source, no modeling was performed.

MONITORING OF OPERATIONS

No additional monitoring above that already required in R13-2965 is required.

CHANGES TO PERMIT R13-2965

The following changes will be made to R13-2965:

* Page 2 was changed to reflect that the facility is subject to 45CSR30
* Table 1.0 was updated to reflect the equipment changes
* Condition 2.5.1 was changed to add the current application
* Condition 3.5.4.1 and 3.5.4.2 were changed to reflect the change in Title V status
* Condition 4.1.2 was changed to reflect the higher emission rates
* Condition 4.2.1 was changed to reference belt conveyor BC-3 instead of radial stacking conveyor BC-4 (which was apparently never installed).
* Appendices A, B and C were changed to reference the current permit number (R13-2965A).

RECOMMENDATION TO DIRECTOR

Information supplied in the application indicates that compliance with all applicable regulations will be achieved. Therefore it is the recommendation of the writer that permit R13-2965A for the modification of the Princeton Loadout Facility in, Princeton, Mercer County, be granted to Pounding Mill Quarry Corp.

Steven R. Pursley, PE
Engineer

February 4, 2014