



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2139D
Plant ID No.: 025-00004
Applicant: RBS Inc.
Facility Name: Greystone Quarry
Location: Greenbrier County
NAICS Code: 212312
Application Type: Modification
Received Date: March 1, 2011
Engineer Assigned: David Keatley
Fee Amount: \$2,000
Date Fee Received: March 3, 2011
Complete Date: August 9, 2011
Due Date: November 7, 2011
Applicant Ad Date: March 2, 2011
Newspaper: *The West Virginia Daily news*
UTM's: Easting: 548.8 km Northing: 4,192.5 km Zone: 17
Description: The applicant seeks a modification permit to allow the existing crushing/screening process at the quarry to enable the production of agricultural limestone.

DESCRIPTION OF PROCESS

An existing 4 1/4 cone crusher will be replaced with a new Hazemag Impactor. The impactor will have a capacity of 300 tph versus the existing crusher's 250 tph rating. The overall amount of stone (yearly) processed through the plant will remain the same.

An additional 4' x 10' deck screen will be added to the existing single deck screen (S5) in order to improve performance of the existing screen.

Two new belts will be added to the process as well as a proportional chute. A Metso AC-27 (GI-108) Classification System will be added to the process. This classification

system will allow for the separation and production of agricultural lime.

The anticipated increase in emissions associated with the changes are 1.304 tons per year for PM and 0.444 tons per year of PM-10.

SITE INSPECTION

Andy Grimm of the Enforcement and Compliance Section performed a site inspection of April 18, 2007.

Directions from Application: From the US219/US Route 60 intersection, travel west on US 60 6.8 miles. Take a right on Unus Road and travel approximately 3 miles. Facility is off Unus Road on the right.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions from rock processing facility are summarized in the tables below. The emissions in the tables represent the maximum emissions based on the maximum design throughput and equipment capacities. Emission factors from AP-42 were used in calculating emissions.

Net Increase in Emissions from Proposed Modification

TSP Emissions:

Source	Uncontrolled		Controlled	
	lb/hr	ton/yr	lb/hr	ton/yr
Stockpile Emissions	0.06	0.28	0.00	0.01
Equipment Emissions	6.00	4.25	1.25	0.89
Transfer Point Emissions	3.21	1.54	1.29	0.63
Total:	9.27	6.07	2.55	1.53

PM10 Emissions:

Source	Uncontrolled		Controlled	
	lb/hr	ton/yr	lb/hr	ton/yr
Stockpile Emissions	0.03	0.13	0.00	0.01
Equipment Emissions	2.24	1.63	0.48	0.36
Transfer Point Emissions	1.52	0.73	0.61	0.30
Total:	3.79	2.49	1.10	0.66

REGULATORY APPLICABILITY

Fact Sheet R13-2139D
RBS Inc.
Greystone Quarry

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

The purpose of this rule is to prevent and control particulate matter air pollution from manufacturing processes and associated operations.

The facility is defined by this rule as a Type 'a' source operation subject to the 20% opacity limit, the weight emission standards, and fugitive particulate control operating practices.

The facility will demonstrate compliance with this rule by conducting visual checks according to Method 22. If problems persist, the facility will be required to conduct opacity checks in accordance with Method 9. Since the facility is not increasing the hourly throughput at the facility, the weight emission standards for the existing equipment will be in compliance. The portable crushing unit has the potential to emit 18.85 pounds of particulate matter from the transfer points and crushing and screening operations (point source operations). The allowable limit from Table 45-7A is 50 pounds of particulate matter per hour. Therefore the facility is in compliance with this rule. The facility will also demonstrate compliance with this rule by maintaining the throughput of material in the portable crushing unit and the hours of operation of the portable unit. The facility shall demonstrate good operating practices by maintaining and operating all water sprays to maximize control efficiency at the facility during operation.

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

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.

45CSR16 *Standards of Performance for New Stationary Sources*

45CSR16 incorporates by reference the standards of performance for new stationary sources (40CFR60). Greystone Quarry is subject to 40CFR60 Subpart OOO and is therefore subject to this rule.

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

Fact Sheet R13-2139D
RBS Inc.
Greystone Quarry

This subpart applies to this facility, because the facilities initial crusher has the capability to process 150 tons of material per hour or greater (initial crusher capability 300 TPH).

The provisions of this subpart are applicable to the following affected facilities in fixed or portable nonmetallic mineral processing plants: each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, enclosed truck or railcar loading station.

The facility will be subject to the mass particulate matter emission standards and the opacity limits set forth in this rule.

The facility will demonstrate compliance with the opacity limits set forth in this rule by conducting Method 9 opacity checks. The facility will also record and report the applicable information set forth in section 60.676.

AIR QUALITY IMPACT ANALYSIS

Based on the annual emission rates this facility will not be a major source as defined by 45CSR14 and considering the nature of the emissions no air quality impact analysis was performed.

CHANGES TO PERMIT R13-2139C

An existing cone crusher will be replaced with a new Hazemag Impactor (C2). An additional 4' x 10' deck screen will be added to the existing single deck screen (S5). Two new belts (BC15 and BC16) will be added to the process as well as a proportioning chute (PC1). An additional stockpile (SP18) and baghouse (S8) will also be added.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates RBS Inc.'s mineral processing plant meets all the requirements of applicable rules and applicable regulations. Therefore, impact on the surrounding area should be minimized and it is recommended that the Greenbrier County location should be granted a 45CSR13 modification permit for their Greystone Quarry.

David Keatley
Permit Writer

Date