



west virginia department of environmental protection

Division of Air Quality
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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.:	G40-C038B
Plant ID No.:	777-00129 (formerly 053-00073)
Applicant:	Bizzack Construction, LLC
Facility Name:	Fraziers Bottom
Location:	Logan County
SIC Code:	1429 (Crushed and Broken Limestone)
Application Type:	Relocation
Received Date:	July 05, 2016
Engineer Assigned:	Thornton E. Martin Jr.
Fee Amount:	\$1,500
Date Received:	July 06, 2016
Complete Date:	August 03, 2016
Applicant Ad Date:	July 08, 2016
Newspaper:	<i>Charleston Gazette Mail</i>
UTM's:	Easting: 414.27302 km Northing: 4277.04180 km Zone: 17
Description:	Relocation of a portable (Extec Megabite C12 Tracked) jaw crusher to use in Mason and Putnam Counties, West Virginia on a Department of Transportation project to construct a portion of US-35.

PROCESS DESCRIPTION

This application is for the relocation of a portable rock crusher to crush rock from the roadway excavation of US-35, in Putnam and Mason County, West Virginia. This processed rock will then be used on the project as subgrade and / or backfill for paving activities.

The process will begin with a dozer pushing the roadway excavation to the surge pile (1). A water truck will provide dust suppressions for the haul road and surge pile. A hydraulic excavator will transfer the rock from the surge pile to the portable crusher feeder hopper (2). The vibrating grizzly feeder hopper feeds the rock to the jaw crusher (3). The material will go from the Jaw crusher onto the main product conveyor (4) or onto a vibrating screen and then to the main product

conveyor and the side conveyor (7). A factory installed water spray bar will provide dust suppression for the main product conveyor. From the conveyors the processed rock will go to stockpiles (5 & 8). A water truck will provide dust suppression for the stockpiles. The processed rock will be stockpiled for use in paving activities for the project at a later date.

The portable unit to be utilized is a Extec Megabite C12 Tracked Jaw Crusher. The unit has a Deutz AG, Model #BF6M1015C diesel engine, (ENG), manufacture date of 2002, to operate the systems for both movement around the site and rock processing.

There are no VOC's or HAP's associated with this process.

The facility shall be constructed and operated in accordance with the following equipment and control device information taken from registration application G40-C038B:

Equipment ID No.	Date of Manufacture	Description	Maximum Capacity		Control Equipment ¹
			TPH	TPY	
OS-1	2002	15,000 ton Surge pile - receives +24"/-3" rock from roadway excavation, hydraulic excavator will transfer the rock from the surge pile to the portable crusher feeder hopper	----	130,000	SW-WS
CR-1	2002	Jaw Crusher - receives rock from OS-1, crushes it from +24"/-3" to -3"/-1" and onto main product conveyor BC-1 or vibrating screen S-1	300	130,000	CS-FE
S-1	2002	Single Deck Screen - receives crushed rock from CR-1, sizes it and drops to BC-1 and BC-2	200	87,000	CS-FE
BC-1	2002	Main Product Conveyor - transfers crushed rock from CR-1/S-1 to OS-2	300	130,000	TC-WS
OS-2	2002	15,000 ton Open Stockpile - receives processed rock from BC-1 and a hydraulic excavator or front end loader transfers to trucks	----	130,000	SW-WS
BC-2	2002	Side Conveyor - transfers oversized rock from S-1 to OS-03	200	87,000	TC-N
OS-3	2002	10,000 ton Open Stockpile - receives processed rock from BC-2 and a hydraulic excavator or front end loader transfers to trucks	----	87,000	SW-WS

¹ CS-FE - Full Enclosure, SW-WS - Water Sprays, TC-N - Transfer Point/No Control; TC-WS - Transfer Point/water spray; N - None

DESCRIPTION OF FUGITIVE EMISSIONS

The sources and potential sources of fugitive emissions are as follows:

- Pushing to Surge Pile
- Surge Pile
- Feeding Vibrating Grizzly Feeder Hopper
- Vibrating Grizzly Feeder Hopper

- Jaw Crusher
- Main Product Conveyor
- Side Conveyor
- Dumping from Conveyors to Stockpiles
- Stockpiles
- Loading from Stockpiles to Trucks

The primary fugitive dust control equipment will be a 2,000 gallon water truck. The water truck will be used primarily to control fugitive particulate emissions on the haul roads, surge pile and stockpiles. By wetting the material in the surge pile and stockpiles, fugitive particulate emissions will also be controlled at the feeder hopper, jaw crusher and conveyors by moisture carry over. The water truck has a maximum application rate of approximately 150 gallons per hour and the application frequency will depend on environmental conditions. The frequency will vary from zero during rainy conditions to approximately four or five applications per day during extremely dry conditions. In addition to the water truck, a factory installed spray bar on the main product conveyor will also be used. This spray system has a maximum application rate of approximately 26 gallons per hour. Again the frequency rate will vary depending upon environmental conditions. The spray bar will be used continuously during operation.

SITE INSPECTION

Bizzack Construction has a contract with the West Virginia Department of Transportation to construct a portion of US-35 in Putnam and Mason County. The proposed site is within the right-of-way limits of this construction project, therefore, a site inspection was not deemed necessary at this time in conjunction with this permitting action.

Directions: The location of the crusher will vary between Putnam and Mason County along the 15 miles of US-35 construction.

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 haul roads are based on AP-42 "Compilation of Air Pollution Emission Factors." Control efficiencies were applied based on the Reference Document for General Permit G40-C. The estimated emission calculations were performed by the applicant using the General Permit G40-C Excel emission calculation spreadsheet for the transfer points and stockpiles. There are no haulroad emissions associated with this application based on the scope of the project. Crushing and screening emissions are controlled by full enclosures by design.

The proposed relocation will result in the estimated potential to discharge controlled emissions of 1.15 TPY of PM (particulate matter), of which 0.54 TPY are PM₁₀ (particulate matter less than 10 microns in diameter); 4E-06 TPY of Nitrogen Oxides (NO_x) and 1E-06 TPY of Carbon Monoxide (CO). Refer to the following table for a complete summary of the proposed facility's emissions:

Emissions Summary - Bizzack Construction, LLC Fraziers Bottom Site	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.14	0.61	0.06	0.28
Unpaved Haulroad Emissions	0.00	0.00	0.00	0.00
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	<i>0.14</i>	<i>0.61</i>	<i>0.06</i>	<i>0.28</i>
Point Source Emissions				
Equipment Emissions	0.56	0.12	0.20	0.04
Transfer Point Emissions	0.77	0.13	0.36	0.06
Point Source Emissions Total	<i>1.33</i>	<i>0.25</i>	<i>0.56</i>	<i>0.10</i>
FACILITY EMISSIONS TOTAL				
	1.47	0.86	0.62	0.38

Engine emissions are estimated to be:

PM - 0.29 TPY
PM₁₀ - 0.16 TPY
NOx - 4E-06 TPY
CO - 1E-06 TPY

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the proposed facility. The proposed relocation of an aggregate processing facility is subject to the following state and federal rules:

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

The facility is subject to the requirements of 45CSR7 because it meets the definition of "Manufacturing Process" found in subsection 45CSR7.2.20. The facility should be in compliance with Subsection 3.1 (no greater than 20% opacity), Subsection 3.7 (no visible emissions from any storage structure pursuant to subsection 5.1 which is required to have a full enclosure and be equipped with a control device), Subsection 4.1 (PM emissions shall not exceed those allowed under Table 45-7A), Subsection 5.1 (manufacturing process and storage structures must be equipped with a system to minimize emissions), Subsection 5.2 (minimize PM emissions from haulroads and plant premises) when the particulate matter control methods and devices proposed within application G40-C038B are in operation.

According to Table 45-7B, for a type 'a' source with a maximum process weight rate of 600,000 lb/hour, the maximum allowable emission rate is 50 lb/hour of particulate matter.

The maximum emission rate is 1.33 lb/hour of particulate matter according to estimated emissions in fact sheet G40-C038B.

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 relocation for the portable aggregate processing is subject to the requirements of 45CSR13, Subsection 11. The applicant has submitted the proper application fee of \$1,500 and published a Class I legal advertisement in the *Charleston Gazette Mail* on July 08, 2016.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart OOO: Standards of Performance for Nonmetallic Mineral Processing Plants

The proposed relocation is subject to 40 CFR 60 Subpart OOO because it will occur after April 22, 2008 and the plant processes more than 25 tons of rock per hour. The proposed relocation will include one (1) crusher, (1) screen and two (2) belt conveyors, which are defined as affected facilities in 40 CFR 60 Subpart OOO. Therefore, the proposed relocation is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. The facility should be in compliance with 60.672 (b) no greater than 7% opacity from any transfer point on belt conveyors or from any other affected facility (as defined in 60.670 and 60.671) and no greater than 12% opacity from any crusher when the particulate matter control methods and devices proposed within application G40-C038B are in operation.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, the aggregate processing plant will be a non-major source which is subject to NSPS Subpart OOO. The facility's potential to emit will be 0.10 TPY of a regulated air pollutant (PM₁₀), not including fugitive emissions, which is less than the 45CSR30 threshold of 100 TPY. Therefore, the facility will be subject to 45CSR30 and classified as a Title V deferred non-major source.

40CFR63 Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Bizzack Construction, LLC is subject to 40CFR63 Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, because NR-ENG is considered a new area source of HAPs since the facility was constructed on or after June 12, 2006, however, the only requirements that apply are those required under 45CFR60 Subpart III.

The proposed relocation of Bizzack Construction, LLC's portable aggregate processing facility 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 proposed aggregate processing facility is not listed in Table 1. The facility will have a potential to emit 0.25 TPY of a regulated air pollutant (PM), not including fugitive emissions, which is less than the 45CSR14 threshold of 250 TPY. This facility is not listed in Table 2, and so fugitive emissions are not included when determining source applicability. Therefore, the proposed relocation is not subject to the requirements set forth within 45CSR14.

45CFR60 Subpart III—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Bizzack Construction, LLC is not subject to this subpart because the engine was manufactured prior to April 1, 2006 and there is no modification or reconstruction of the engine after July 11, 2005. The engine emissions for (ENG) is EPA Tier II Certified, (Certificate #: DZX-NR8-02-30).

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the pollutants being emitted from this facility are PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter).

AIR QUALITY IMPACT ANALYSIS

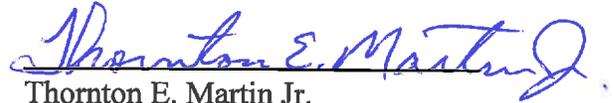
Air dispersion modeling was not performed due to the size and proposed location of this facility. This facility will be located in Putnam and Mason County, WV, which are currently in attainment for PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter). Putnam County is considered a maintenance area for PM_{2.5} (particulate matter less than 2.5 microns in diameter).

MONITORING OF OPERATIONS

For the purposes of determining compliance with maximum throughput limits, the applicant shall maintain certified daily records and monthly records of the amount of aggregate processed. Also, the applicant shall maintain certified maintenance records. Such records shall be retained 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.

RECOMMENDATION TO DIRECTOR

The information contained in this relocation application indicates that compliance with all applicable regulations should be achieved when all 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. Therefore, the granting of a General Permit to Relocate to Bizzack Construction, LLC for the relocation of their portable aggregate processing plant to be located near Fraziers Bottom, for US-35 construction in Putnam and Mason County, WV is hereby recommended.



Thornton E. Martin Jr.
Permit Engineer

August 03, 2016

Date