



west virginia department of environmental protection

Division of Air Quality
601 57th Street, SE
Charleston, WV 25304
Phone: (304) 926-0475 • Fax: (304) 926-0479

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2964 *After-the-Fact*
Plant ID No.: 051-00147
Applicant: Ohio River Aggregate Inc.
Facility Name: Moundsville Facility
Location: Moundsville, Marshall County, WV
SIC Code: 5032 (Brick, Stone and Related Construction Material Merchant Wholesalers)
Application Type: Construction
Received Date: July 18, 2012
Engineer Assigned: Thornton E. Martin Jr.
Fee Amount: \$1,000
Date Received: July 19, 2012
Complete Date: March 11, 2013
Applicant's Ad Date: July 16, 2012
Newspaper: *Intelligencer*
UTM's: Easting: 521.095 km Northing: 4417.637 km Zone: 17
Description: This is an *After-the-fact* application to construct an aggregate loading and unloading facility. Application states that the facility has been in operation since January 01, 1995.

DESCRIPTION OF PROCESS

Ohio River Aggregate Inc. is an existing limestone loading operation consisting of barges unloading limestone (1S), a front end loader moving the limestone into fourteen stockpiles (2S) and the front end loader loading trucks (3S) with limestone. This facility does not utilize screens or crushers for processing the aggregate. Facility is comprised of fourteen (14) stockpiles, each containing a specific size aggregate. Operations consist of unloading from barge, storage and loading into trucks. The facility operates 12 hours/day, 6 days/week and 52 weeks/year. Maximum throughputs for the facility are estimated to be 100 tons per hour (TPH) and 1,000,000 tons per year (TPY).

The facility has been constructed and operates in accordance with the following equipment and control device information taken from permit application R13-2964:

Promoting a healthy environment.

Equipment ID No.	Date of Manufacture	Description	Maximum Capacity		Control Equipment ¹
			TPH	TPY	
OS-1	1995	7,000 ft ² Raw Limestone Stockpile - receives 6" - 9" limestone from barges, front endloader will place the limestone in open stockpile OS-1. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-2	1995	7,000 ft ² Raw Limestone Stockpile - receives 3" limestone from barges, front endloader will place the limestone in open stockpile OS-2. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-3	1995	7,000 ft ² Raw Limestone Stockpile - receives 2.5" limestone from barges, front endloader will place the limestone in open stockpile OS-3. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-4	1995	7,000 ft ² Raw Limestone Stockpile - receives 2" limestone from barges, front endloader will place the limestone in open stockpile OS-4. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-5	1995	7,000 ft ² Raw Limestone Stockpile - receives 1.5" limestone from barges, front endloader will place the limestone in open stockpile OS-5. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-6	1995	7,000 ft ² Raw Limestone Stockpile - receives 1" limestone from barges, front endloader will place the limestone in open stockpile OS-6. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-7	1995	7,000 ft ² Raw Limestone Stockpile - receives 3/4" limestone from barges, front endloader will place the limestone in open stockpile OS-7. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-8	1995	7,000 ft ² Raw Limestone Stockpile - receives 1/2" limestone from barges, front endloader will place the limestone in open stockpile OS-8. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-9	1995	7,000 ft ² Raw Limestone Stockpile - receives 1/4" limestone from barges, front endloader will place the limestone in open stockpile OS-9. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-10	1995	7,000 ft ² Raw Limestone Stockpile - receives 1/8" limestone from barges, front endloader will place the limestone in open stockpile OS-10. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-11	1995	7,000 ft ² Raw Limestone Stockpile - receives run of mill limestone from barges, front endloader will place the limestone in open stockpile OS-11. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-12	1995	7,000 ft ² Raw Limestone Stockpile - receives limestone gravel from barges, front endloader will place the limestone in open stockpile OS-12. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-13	1995	7,000 ft ² Raw Limestone Stockpile - receives limestone fines+ from barges, front endloader will place the limestone in open stockpile OS-13. Limestone will be loaded out to trucks via front endloader.	----	62,500	N
OS-14	1995	7,000 ft ² Raw Limestone Stockpile - receives limestone fines from barges, front endloader will place the limestone in open stockpile OS-14. Limestone will be loaded out to trucks via front endloader.	----	62,500	N

¹ FE - Full Enclosure; PE - Partial Enclosure; WS - Water Spray; N - None.

SITE INSPECTION

This facility will be inspected by our Northern Panhandle Regional Office. A copy of the application has been forwarded to the regional office and the facility will be entered into our database for future inspections. Mr. Alfred Carducci of the Compliance and Enforcement Section at our Northern Panhandle Regional Office has inspected the facility at the writer's request. Prior to his inspection, he noted that many complaints have come in regarding the dust issue on the section of State Route 2 adjacent to Ohio River Aggregate Inc. and that he has notified them to control the dirt being drug out onto the highway by their truck traffic. To date, the Applicant has been reluctant to implement controls to suppress the emissions coming from their roadways.

On March 7, 2013, Mr. Carducci performed a site visit of the Ohio River Aggregate facility. He stated that 5 mph signs are posted and the unpaved haulroads were saturated with water. The water truck was parked onsite. The Quality Control Manager (Mr. Steve Looney) stated that they have been using an asphalt base and #57 gravel but it doesn't take long to get converted to dirt. Applicant is investigating alternative methods including paving the entrance and the track leading around the scales to minimize the dirt being drug onto the State Highway Rt. 2.

Directions from Moundsville are to take Rt. 2 South to 1601 Lafayette Avenue. Facility is between the Ohio River and Rt. 2.

DESCRIPTION OF FUGITIVE EMISSIONS

Potential sources of fugitive particulate emissions for this facility include emissions that emanate from the transfer point between the barge-mounted conveyor and the ground on-site (1E), the storage piles (2E) and the roads traveled upon by truck and light duty vehicle traffic (3E).

Precautionary measures such as reduced drop heights (1E and 2E), maintaining low stockpile heights (2E) and reducing the speed of truck traffic (3E) will be utilized to minimize fugitive dust emissions.

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 applicants' consultant and were checked for accuracy and completeness by the writer.

Ohio River Aggregate Inc.'s proposed after-the -fact construction of their aggregate loading/unloading facility will result in a potential to discharge controlled emissions (not including fugitive emissions from haulroads) of 1.85 TPY of particulate matter (PM), of which 0.87 TPY will be particulate matter less than 10 microns in diameter (PM₁₀).

The proposed facility will result in the following estimated potential to discharge controlled emissions:

Table 1: Ohio River Aggregate Inc. (R13-2964) emissions summary:

<i>Emissions Summary - Ohio River Aggregate Inc. Moundsville Facility R13-2964</i>	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hr	TPY	lb/hr	TPY
Fugitive Emissions				
Stockpile Emissions	0.35	1.54	0.17	0.72
Unpaved Haulroad Emissions	10.03	14.06	2.96	4.15
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	<i>10.38</i>	<i>15.60</i>	<i>3.13</i>	<i>4.87</i>
Point Source Emissions				
Equipment Emissions	0.00	0.00	0.00	0.00
Transfer Point Emissions	1.00	0.31	0.47	0.15
Point Source Emissions Total	<i>1.00</i>	<i>0.31</i>	<i>0.47</i>	<i>0.15</i>
FACILITY EMISSIONS TOTAL				
	11.38	15.91	3.60	5.02

The applicants published notice states the applicant estimates the potential to discharge the following Regulated Air Pollutants will be:

PM - 40.5 TPY
 PM₁₀ - 19.3 TPY

PM and PM₁₀ were published incorrectly in the applicants notice. Since this application is for permit to construct, DAQ is required to publish a notice of intent to approve and will publish the correct values for total PM and PM₁₀ as:

PM - 15.91 TPY of which 14.06 TPY are fugitive
 PM₁₀ - 5.02 TPY of which 4.15 TPY are fugitive

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the existing facility. The existing aggregate unloading /loading operations, properties and equipment that constitute the Ohio River Aggregate Inc., Moundsville facility is subject to the following state and federal rules:

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 Moundsville facility is subject to the requirements of 45CSR13 because it will result in the potential to discharge 11.38 pounds per hour and 15.91 TPY of PM (particulate matter), of which 3.60 pounds per hour and 5.02 TPY will be PM₁₀ (particulate matter less than 10 microns in diameter). Since the calculated potential to discharge is greater than six (6) pounds per hour and ten (10) tons per year, and 144 pounds per day of a regulated air pollutant (PM and PM₁₀), the proposed *after-the-fact* facility will require a permit to construct. The applicant published a Class I legal advertisement in the *Intelligencer* on July 16, 2012 and submitted \$1,000 for the application fee.

45CSR17 To Prevent and Control Particulate Matter Air Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter

The Moundsville facility is subject to the requirements of 45CSR17 and does not meet the exemption criteria outlined in Section 6. In addition, based on the information provided in the *after-the-fact* initial permit application, the more stringent requirements of 45CSR17 should be exercised to meet the requirements of Section 3.1.

45CSR22 Air Quality Management Fee Program

This rule establishes a program to collect fees for certificates to operate and for permits to construct, modify or relocate sources of air pollution. Funds collected from these fees will be used to supplement the Director's budget for the purpose of maintaining an effective air quality management program. An Application for a Certificate to Operate (CTO) will be enclosed with the permit at time of issuance as this will be an *after-the-fact* construction.

The proposed *after-the-fact* construction of Ohio River Aggregate Inc. unloading/loading facility is not subject to the following state and federal 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 Moundsville facility is not subject to the requirements of this rule because it does not meet the definition of "Manufacturing Process" found in Section 2.20 of this rule.

40 CFR 60 Subpart 000: Standards of Performance for Nonmetallic Mineral Processing Plants

The proposed construction is not subject to 40 CFR 60 Subpart 000 because the facility consists entirely of stockpiles without any type of crusher or grinding mill above ground. Stockpiles are not defined as an affected facility.

§ 60.670 (a) (2)

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), which are non-toxic pollutants.

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 Marshall County, WV, which is currently designated as non-attainment for PM_{2.5} (particulate matter less than 2.5 microns in diameter). According to 45CSR19, Section 3.7.b., fugitive emissions from haulroads should be excluded when considering the Potential to Emit (PTE) of a major source. The definition of a major source of PM_{2.5} is, not including fugitive emissions from haulroads, a PTE at or above 100 TPY. The estimated PTE for PM₁₀ is 0.87 TPY. Since PM_{2.5} is a subset of PM₁₀, PM_{2.5} is less than the 100 TPY limit for a major source.

MONITORING OF OPERATIONS

For the purposes of determining compliance with maximum throughput limits, the applicant shall maintain certified daily and monthly records. An example form is included as Appendix A to Permit R13-2964. Example form for tracking the amount of water applied through the water truck are included as Appendix B to Permit R13-2964. An example form for the Visible Emissions Check is included as Appendix C to Permit R13-2964. 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 for at least five (5) years and 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 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

Ohio River Aggregate Inc. for an aggregate loading/unloading facility located between the Ohio River and Route 2, near Moundsville, Marshall County, WV is hereby recommended.

Thornton E. Martin Jr.
Permit Engineer

March 11, 2013
Date