

**MARYLAND DEPARTMENT OF ENVIRONMENT
AIR AND RADIATION MANAGEMENT ADMINISTRATION**

**FACT SHEET AND TENTATIVE DETERMINATION
ALLAN MYERS MD, INC**

**PROPOSED INSTALLATION OF A 300 TON PER HOUR CRUSHING AND SCREENING
PLANT**

I. INTRODUCTION

The Maryland Department of the Environment (the "Department") received an application from Allan Myers MD, Inc. (Allan Myers) on January 24, 2017 with amendments received on February 21, 2017, March 23, 2017 and April 14, 2017 for a Permit to Construct for the installation of a 300 ton per hour crushing, and screening plant. The facility will be located at 2216 Old Mountain Road, Joppa, MD 21085.

A notice was placed in The Aegis on March 1, 2017 and March 8, 2017 announcing a scheduled informational meeting to discuss the permit to construct application. The informational meeting was held on March 15, 2017 at the Abingdon Branch Library located at 2510 Tollgate Road, Abingdon, Maryland 21009.

As required by law, all public notices were also provided to elected officials in all State, county, and municipality legislative districts located within a one mile radius of the facility's property boundary.

The Department has reviewed the application and has made a tentative determination that the proposed facility is expected to comply with all applicable air quality regulations. A public hearing has been scheduled for June 7, 2017 at 6:30 P.M. at the Abingdon Branch of the Harford County Public Library located at 2510 Tollgate Road, Abingdon, Maryland 21009 to provide interested parties an opportunity to comment on the Department's tentative determination and draft permit conditions, and/or to present other pertinent concerns about the proposed facility. Notices concerning the date, time and location of the public hearing will be published in the legal section of a newspaper with circulation in general area of the proposed facility. Interested parties may also submit written comments.

If the Department does not receive any comments that are adverse to the tentative determination, the tentative determination will automatically become a final determination. If adverse comments are received, the Department will review the comments, and will then make a final determination with regard to issuance or denial of the permit. A notice of final determination will be published in a newspaper of general circulation in the affected area. The final determination may be subject to judicial review pursuant to Section 1-601 of the Environment Article, Annotated Code of Maryland.

II. CURRENT STATUS AND PROPOSED INSTALLATION

A. Current Status

Allan Myers currently has an existing surface mine at 2216 Old Mountain Road.

B. Proposed Installation

Allan Myers has applied for a permit to construct for a 300 ton per hour crushing and screening plant for the processing of waste concrete and recycled asphalt pavement. The plant will include up to one (1) crusher and one (1) screen from the following list of permitted equipment:

- one (1) Terex Pegson 428 Trakpactor crusher powered by one (1) 300 horsepower, Tier III diesel engine; or
- one (1) Premiertrak 300 crusher powered by one (1) 275 horsepower, Tier III diesel engine; and
- one (1) Sandvik QE341 4.7mx1.446m screen powered by one (1) 100 horsepower, Tier III diesel engine; or
- one (1) Sandvik QA330 3.65mx1.5m screen powered by one (1) 99 horsepower, Tier III diesel engine.

Note: Conveyors are part of the crushing and screening units.

The plant will be equipped with wet suppression systems to minimize dust emissions.

III. APPLICABLE REGULATIONS

The proposed installation is subject to all applicable Federal and State air quality control regulations, including, but not limited to the following:

- (a) All applicable terms, provisions, emissions standards, testing, monitoring, record keeping, and reporting requirements included in federal New Source Performance Standards (NSPS) promulgated under 40 CFR 60, Subparts A (General Provisions) and Subpart OOO for Nonmetallic Mineral Processing Plants.
- (b) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
- (c) COMAR 26.11.02.19C & D, which require that the Permittee submit to the Department annual certifications of emissions, and that the Permittee maintain sufficient records to support the emissions information presented in the submittals.

- (d) COMAR 26.11.06.03C & D, which requires that the Permittee take reasonable precautions to prevent particulate matter from unconfined sources and materials handling and construction operations from becoming airborne.
- (e) COMAR 26.11.06.08 and 26.11.06.09, which generally prohibit the discharge of emissions beyond the property line in such a manner that a nuisance or air pollution is created.
- (f) COMAR 26.11.09.05E, which limits visible emissions from the diesel engines to 10% and 40% opacity during idle and operating modes, respectively.
- (g) COMAR 26.11.09.07A(2), which limits the sulfur content of distillate fuel oils to not more than 0.3 percent by weight.
- (h) COMAR 26.11.15.05, which requires that the Permittee implement “Best Available Control Technology for Toxics” (T – BACT) to control emissions of toxic air pollutants.
- (i) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions will unreasonably endanger human health.

IV. GENERAL AIR QUALITY

The U.S. Environmental Protection Agency (EPA) has established primary and secondary National Ambient Air Quality Standards (NAAQS) for six (6) criteria pollutants, i.e., sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide, ozone, and lead. The primary standards were established to protect public health, and the secondary standards were developed to protect against non-health effects such as damage to property and vegetation.

The Department utilizes a statewide air monitoring network, operated in accordance with EPA guidelines, to measure the concentrations of criteria pollutants in Maryland’s ambient air. The measurements are used to project statewide ambient air quality, and currently indicate that Harford County complies with the NAAQS for sulfur dioxide, particulate matter, carbon monoxide, nitrogen dioxide and lead.

Ground level ozone continues to present a problem for the entire Baltimore metropolitan area, which is classified as a non-attainment area for ozone. The primary contributors to the formation of ozone are emissions of oxides of nitrogen, primarily from combustion equipment, and emissions of Volatile Organic Compounds (VOC) such as paint solvents and gasoline vapors. Harford County is included in the non-attainment area for ozone.

With regard to toxic air pollutants (TAPs), screening levels (i.e., acceptable ambient concentrations for toxic air pollutants) are generally established at 1/100 of allowed worker

exposure levels (TLVs)¹. The Department has also developed additional screening levels for carcinogenic compounds. The additional screening levels are established such that continuous exposure to the subject TAP at the screening level for a period of 70 years is expected to cause an increase in lifetime cancer risk of no more than 1 in 100,000.

V. COMPLIANCE DEMONSTRATION AND ANALYSIS

The proposed installation must comply with all State imposed emissions limitations and screening levels, as well as the NAAQS. The Department has conducted an engineering and air quality review of the application. The emissions were projected based on U.S. EPA established emissions factors for crushing and screening plants. The conservative U.S. EPA's SCREEN3 model was also used to project the maximum ground level concentrations from the proposed facility, which was then compared to the screening levels and the NAAQS.

- A. **Estimated Emissions** - The maximum emissions of air pollutants of concern from the proposed installation are listed in Table I.
- B. **Compliance with National Ambient Air Quality Standards** - The maximum ground level concentrations for nitrogen dioxide, sulfur dioxide, carbon monoxide, and particulate matter (as PM₁₀) based on the emissions from the proposed plant are listed in column 2 of Table II. The combined impact of the projected installation and the ambient background concentration for each pollutant shown in column 3 of Table II is less than the NAAQS for each pollutant shown in column 4.

The maximum emissions from the installation, based on continuous operation of 24 hours per day and 365 days per year, from the proposed installation comply with the NAAQS for nitrogen dioxide, carbon monoxide, and sulfur dioxide. However, the facility would not be in compliance with the 24-hour average NAAQS for particulate matter (as PM-10), if the installation operates continuously 24 hours per day. Therefore, the installation will be limited to operating no more than 8 hours per day so that the 24-hour average impact is lower.

Emissions of both oxides of nitrogen and volatile organic compounds from the proposed plant are less than the 25 ton per year major source threshold for each pollutant and therefore, the proposed plant will not significantly affect local ground level ozone concentrations.

- C. **Compliance with Air Toxics Regulations** – The toxic air pollutant of concern, crystalline silica, that would be emitted from this facility is listed in column 1 of Table III. The predicted maximum off-site ambient concentration of crystalline silica is shown in column 4 of Table III, and the maximum concentration is less than the

¹ TLVs are threshold limit values (exposure limits) established for toxic materials by the American Conference of Governmental Industrial Hygienists (ACGIH). Some TLVs are established for short-term exposure (TLV – STEL), and some are established for longer-term exposure (TLV – TWA), where TWA is an acronym for time-weight average.

corresponding screening level for the toxic air pollutant shown in column 2.

VI. TENTATIVE DETERMINATION

Based on the above information, the Department has concluded that the proposed installation will comply with all applicable Federal and State air quality control requirements. In accordance with the Administrative Procedure Act, Department has made a tentative determination to issue the Permit to Construct.

Enclosed with the tentative determination is a copy of the draft Permit to Construct.

**TABLE I
PROJECTED MAXIMUM EMISSIONS FROM THE PROPOSED INSTALLATION**

POLLUTANT	PROJECTED MAXIMUM EMISSIONS FROM PROPOSED INSTALLATION	
	(lbs/day)	(tons/year)
Nitrogen Dioxide (NO ₂)	65.89	12.03
Sulfur Dioxide (SO ₂)	19.62	3.58
Carbon Monoxide (CO)	60.60	11.06
Volatile Organic Compounds (VOC)	23.62	4.31
Particulate Matter (PM ₁₀)	25.52	4.66

**TABLE II
PROJECTED IMPACT OF EMISSIONS OF CRITERIA POLLUTANTS FROM THE PROPOSED INSTALLATION ON AMBIENT AIR QUALITY**

POLLUTANTS	MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS CAUSED BY EMISSIONS FROM PROPOSED PROCESS (µg/m ³)	BACKGROUND AMBIENT AIR CONCENTRATIONS (µg/m ³)*	NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) (µg/m ³)
Nitrogen Dioxide (NO ₂)	annual avg.→ 11	annual avg.→ 33	annual avg.→ 100
Carbon Monoxide (CO)	8-hour max→ 86.4 1-hour max → 123.4	8-hr max.→ 2176 1-hr max.→ 5267	8-hr max.→ 10,000 1-hr max.→ 40,000

Sulfur Dioxide (SO ₂)	24-hour avg. → 16 annual avg. → 3.2	24-hour avg. → 15 annual avg. → 3.7	24-hour avg. → 366 annual avg. → 78.5
Particulate Matter (PM ₁₀)	24-hr max → 62.3	24-hr max. → 58	24-hr max. → 150

*Background concentrations were obtained from Maryland air monitoring stations as follows:

- NO₂ Annual Avg. → Interstate 95 Welcome Center Howard County
- PM₁₀ → Glen Burnie Monitoring Station in Anne Arundel County
- CO 1-hr max and SO₂ Annual Avg. → 600 Dorsey Avenue in Baltimore County
- SO₂ 24-hr Avg. → Piney Run, Frostburg Reservoir Garrett County
- CO 8-hr max → Old town Fire Station 1100 Hillen Street Baltimore City
- PM₁₀ 24-hr max → Baltimore City Fire Dept.–Truck Company 20 Baltimore City

TABLE III
PREDICTED MAXIMUM OFF-SITE AMBIENT CONCENTRATIONS FOR TOXIC AIR POLLUTANTS EMITTED FROM THE PROPOSED INSTALLATION

TOXIC AIR POLLUTANTS	SCREENING LEVELS (µg/m³)	PROJECTED WORST-CASE FACILITY-WIDE EMISSIONS (lbs/hr)	PREDICTED MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS (µg/m³)
Crystalline Silica	1-hour → None 8-hour → 0.25 Annual → None	0.00009	1-hour → None 8-hour → 0.031 Annual → None

The values represent maximum facility-wide emissions of toxic air pollutants during any 1-hour period of facility operation.

The values are based on worst-case emissions from the proposed facility and were predicted by EPA's SCREEN3 model, which provides conservative estimations concerning the impact of pollutants on ambient air quality.