MARYLAND DEPARTMENT OF ENVIRONMENT
AIR AND RADIATION MANAGEMENT ADMINISTRATION

FACT SHEET AND TENTATIVE DETERMINATION
BARDON, INC. DBA AGGREGATE INDUSTRIES AT SHERIFF ROAD

PROPOSED INSTALLATION OF A RECLAIMED ASPHALT PAVEMENT (RAP) CRUSHING, SCREENING AND FRACTIONATION PLANT

I. INTRODUCTION

The Maryland Department of the Environment (the "Department") received an application from Bardon, Inc. dba Aggregate Industries at Sheriff Road (Aggregate Industries @Sheriff Road) on January 5, 2015 with amendments received on January 9, 2015 and August 6, 2015 for a Permit to Construct for the installation of a RAP crushing, screening, and fractionation plant. The facility will be located at 5850 Sheriff Road, Capitol Heights, MD 20743.

A notice was placed in The Washington Times on March 25, 2015 and April 1, 2015 announcing a scheduled informational meeting to discuss the permit to construct application. The informational meeting was held on April 15, 2015 at Prince George's Ballroom located at 2411 Pinebrook Avenue, Landover, MD 20743.

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 October 26, 2015 at 6:30 p.m. at Prince George's Ballroom located at 2411 Pinebrook Avenue, Landover, MD 20785 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

Aggregate Industries @Sheriff Road proposes to install a Reclaimed Asphalt Pavement (RAP) crushing, screening, and fractionation plant powered by on-grid electricity at 5850 Sheriff Road, Capitol Heights, MD 20743. The plant will include the following:

- one (1) 300 tph Kobelco Model 1315 impact crusher;
- one (1) 300 tph Thunderbird 6' x 16' triple deck screen;
- one (1) 350 tph Astec 6' x 18' Model PSP 2618 VM mobile high frequency double deck screen;
- fifteen (15) conveyors; and
- two (2) hoppers.

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 26.11.06.12, which states that a person may not construct modify, or operate, or cause to be constructed, modified, or operated, a New Source Performance Standard (NSPS) source in a manner which results or will result in violation of the provisions of 40 CFR, Part 60.

(g) 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.

(h) 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 Prince George's 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 Washington 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. Prince George's County is included in the non-attainment area for ozone. The proposed installation will not be a source of oxides of nitrogen or VOC and will not affect the ground level ozone concentration in the area.

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

[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.

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 particulate matter (as PM-10), the air pollutant 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 PM-10 based on the emissions from the proposed installation are listed in column 2 of Table II. The combined impact of the projected installation and the ambient background concentration for PM-10 shown in column 3 of Table II is less than the NAAQS for PM-10 shown in column 4.

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 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	MAXIMUM PROJECTED EMISSION FROM PROPOSED INSTALLATION* (lbs/day)	MAXIMUM PROJECTED EMISSION FROM PROPOSED INSTALLATION* (tons/year)
Particulate Matter (PM_{10})	65	11.86

*Based on a 24 hour per day, 365 days per year schedule.

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 ($\mu g/m^3$)	BACKGROUND AMBIENT AIR CONCENTRATIONS ($\mu g/m^3$)*	NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS) ($\mu g/m^3$)
Particulate Matter (PM_{10})	24-hr max → 83	24-hr max.→ 43	24-hr max.→ 150

*Background concentration was obtained from the Baltimore City Fire Dept. – Truck Company 20, 5714 Eastern Ave in Baltimore City.

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

TOXIC AIR POLLUTANTS	SCREENING LEVELS ($\mu g/m^3$)	PROJECTED WORST-CASE FACILITY-WIDE EMISSIONS (lbs/hr)	PREDICTED MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS ($\mu g/m^3$)
Crystalline Silica	1-hour→ None 8-hour→ 0.25 Annual→ None	0.00027	1-hour→ None 8-hour→ 0.015 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.