

MARYLAND DEPARTMENT OF THE ENVIRONMENT

**AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT**

DOCKET #17-21 INITIAL AND SUPPLEMENT

COMPANY: York Building Products Co., Inc.
LOCATION: One (1) Hot Mix Asphalt Plant
APPLICATION: 1079 Belvidere Road, Port Deposit, MD 21904

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Notice of Application and Opportunity to Request an Informational Meeting
2	Permit to Construct Application Forms
3	Plant Designs
4	Safety Data Sheets
5	Zoning Approval
6	Site Plan

SUPPLEMENT FOLLOWS

**DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION**

**NOTICE OF APPLICATION AND
OPPORTUNITY TO REQUEST AN INFORMATIONAL MEETING**

The Maryland Department of the Environment, Air and Radiation Administration (ARA) received a permit-to-construct application from York Building Products Co., Inc. on July 20, 2021 for the installation of one (1) hot mix asphalt plant. The proposed installation will be located at 1079 Belvidere Road, Port Deposit, MD 21904.

The application and other supporting documents are available for public inspection on the Department's website. Look for Docket #17-21 at the following link:

<https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx>

Pursuant to the Environment Article, Section 1-603, Annotated Code of Maryland, the Department will hold an informational meeting to discuss the application and the permit review process if the Department receives a written request for a meeting within 10 working days from the date of the second publication of this notice. All requests for an informational meeting should be emailed to Ms. Shannon Heafey at shannon.heafey@maryland.gov.

Further information may be obtained by contacting Ms. Shannon Heafey by email at shannon.heafey@maryland.gov or by phone at (410) 537-4433.

George S. Aburn, Jr., Director
Air and Radiation Administration



950 Smile Way, York, PA 17405 | Ph: 717.848.2831 | Fax: 717.854.9156 | www.yorkbuilding.com

July 20, 2021

Suna Yi Sariscak
Air Quality Permits Program
Maryland Department of Environment
Air and Radiation Management Administration
1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

REF: Air Quality Permit Application
York Building Products Co., Inc.
Principio Asphalt Plant
Cecil County, Port Deposit, MD

Dear Suna,

Please find attached (in triplicate) our application for the operation of an asphalt plant. The capacity of the plant will be 400 tons per hour with an average production rate of 250 tons per hour. The most that this plant will produce in any given year is 500,000 tons but our expected average annual tonnage will be closer to 250,000 tons. We have included emission figures for both of these tonnages for your use. It will be powered by the electric grid.

Feel free to contact me with any questions regarding this permit request.

Best Regards,

James N. Gawthrop, P.E.
Vice President, Engineering
York Building Products Co., Inc. - A Stewart Company
(443) 907-2406
jgawthrop@yorkbuilding.com
www.yorkbuilding.com



AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST

OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	York Building Products Co Inc
COMPANY ADDRESS:	950 Smile Way, York PA 17404
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	Principio Asphalt LLC
PREMISES ADDRESS:	1079 Belvidere Rd, Port Deposit MD 21904
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Jim Gawthrop
JOB TITLE:	Vice President, Engineering
PHONE NUMBER:	443-907-2406
EMAIL ADDRESS:	jpgawthrop@yorkbuilding.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
Asphalt plant	

Application is hereby made to the Department of the Environment for a Permit to Construct for the following equipment or process as required by the State of Maryland Air Quality Regulation, COMAR 26.11.02.09.

Check each item that you have submitted as part of your application package.

- Application package cover letter describing the proposed project
- Complete application forms (Note the number of forms included or NA if not applicable.)

No. <u>1</u> Form 5	No. <u>2</u> Form 11
No. <u>1</u> Form 5T	No. <u>N/A</u> Form 41
No. <u>2</u> Form 5EP	No. <u>N/A</u> Form 42
No. <u>1</u> Form 6	No. <u>N/A</u> Form 44
No. <u>N/A</u> Form 10	
- Vendor/manufacturer specifications/guarantees
- Evidence of Workman's Compensation Insurance
- Process flow diagrams with emission points
- Site plan including the location of the proposed source and property boundary
- Material balance data and all emissions calculations
- Material Safety Data Sheets (MSDS) or equivalent information for materials processed and manufactured.
- Certificate of Public Convenience and Necessity (CPCN) waiver documentation from the Public Service Commission ⁽¹⁾
- Documentation that the proposed installation complies with local zoning and land use requirements ⁽²⁾

⁽¹⁾ Required for emergency and non-emergency generators installed on or after October 1, 2001 and rated at 2001 kW or more.

⁽²⁾ Required for applications subject to Expanded Public Participation Requirements.

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APPLICATION FOR FUEL BURNING EQUIPMENT

Information Regarding Public Outreach

For Air Quality Permit to Construct applications subject to public review, applicants should consider the following information in the initial stages of preparing a permit application.

If you are not sure at the time you are applying for a permit whether public review of your application is required or for information on steps you can take to engage the surrounding community where your planned project will be located, please contact the Air Quality Permits Program at 410-537-3225 and seek their advice.

Communicating and engaging the local community as early as possible in your planning and development process is an important aspect of your project and should be considered a priority. Environmental Justice or "EJ" is a movement to inform, involve, and engage communities impacted by potential and planned environmental projects by affording citizens opportunities to learn about projects and discuss any concerns regarding impacts.

Although some permit applications are subject to a formal public review process prescribed by statute, the Department strongly encourages you to engage neighboring communities separate from and well ahead of the formal permitting process. Sharing your plans by way of community meetings, informational outreach at local gatherings or through local faith-based organizations can initiate a rewarding and productive dialogue that will reduce anxiety and establish a permanent link with your neighbors in the community.

All parties benefit when there is good communication. The Department can assist applicants in developing an outreach plan that fits the needs of both the company and the public.

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Air and Radiation Management Administration ▪ Air Quality Permits Program

APPLICATION FOR PROCESSING/MANUFACTURING EQUIPMENT

Permit to Construct

Registration Update

Initial Registration

1A. Owner of Equipment/Company Name

York Building Products Co Inc

Mailing Address

950 Smile Way

Street Address

York

PA

17404

City

State

Zip

Telephone Number

(443) 907-2406

Signature

James Gauthier

JAMES GAUTHIER VICE PRES. GEN

Print Name and Title

DO NOT WRITE IN THIS BLOCK

2. REGISTRATION NUMBER

County No.

Premises No.

1-2

3-6

Registration Class

Equipment No.

7

8-11

Data Year

12-13

Application Date

7/19/21
Date

1B. Equipment Location and Telephone Number (if different from above)

1079 Belvidere Rd

Street Number and Street Name

Port Deposit

MD

21904

(410)

378-4477

City/Town

State

Zip

Telephone Number

Principio Asphalt LLC

Premises Name (if different from above)

3. Status (A= New, B= Modification to Existing Equipment, C= Existing Equipment)

Status

New Construction Begun (MM/YY)

New Construction Completed (MM/YY)

Existing Initial Operation (MM/YY)

A

16-19

20-23

20-23

15

16-19

20-23

20-23

4. Describe this Equipment: Make, Model, Features, Manufacturer (include Maximum Hourly Input Rate, etc.)

Please see attached equipment list

5. Workmen's Compensation Coverage

WC348639120

4/1/22

Company American Zurich Ins Co

Binder/Policy Number

Expiration Date

NOTE: Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of worker's compensation coverage as required under Section 1-202 of the Worker's Compensation Act.

6A. Number of Pieces of Identical Equipment Units to be Registered/Permitted at this Time

6B. Number of Stack/Emission Points Associated with this Equipment

2



7. Person Installing this Equipment (if different from Number 1 on Page 1)

Name _____ Title _____

Company _____

Mailing Address/Street _____

City/Town _____ State _____ Telephone (____) _____

8. Major Activity, Product or Service of Company at this Location

Asphalt production

9. Control Devices Associated with this Equipment

None

24-0

Simple/Multiple Cyclone

24-1

Spray/Adsorb Tower

24-2

Venturi Scrubber

24-3

Carbon Adsorber

24-4

Electrostatic Precipitator

24-5

Baghouse

24-6

Thermal/Catalytic Afterburner

24-7

Dry Scrubber

24-8

Other

Describe _____

24-9

10. Annual Fuel Consumption for this Equipment

OIL-1000 GALLONS

26-31

SULFUR % GRADE

32-33

GRADE

34

NATURAL GAS-1000 FT³

120,500

35-41

LP GAS-100 GALLONS

14,000

42-45

GRADE

COAL - TONS

46-52

SULFUR %

53-55

ASH%

56-58

WOOD-TONS

59-63

MOISTURE %

64-65

OTHER FUELS

ANNUAL AMOUNT CONSUMED

OTHER FUEL

ANNUAL AMOUNT CONSUMED

(Specify Type)

66-1

(Specify Units of Measure)

(Specify Type)

66-2

(Specify Units of Measure)

1= Coke 2= COG 3=BFG 4=Other

11. Operating Schedule (for this Equipment)

Continuous Operation

67-1

Batch Process

67-2

Hours per Batch

68-69

Batch per Week

Hours per Day

8

70-71

Days Per Week

5

72

Days per Year

160

73-75

Seasonal Variation in Operation:

No Variation

76

Winter Percent

0

77-78

Spring Percent

33

79-80

Summer Percent

34

81-82

Fall Percent

33

83-84

(Total Seasons= 100%)



12. Equivalent Stack Information- is Exhaust through Doors, Windows, etc. Only? (Y/N) 85

If not, then

Height Above Ground (FT)	Inside Diameter at Top	Exit Temperature (°F)	Exit Velocity (FT/SEC)
30	50	240	93
86-88	89-91	92-95	96-98

NOTE:

Attach a block diagram of process/process line, indicating new equipment as reported on this form and all existing equipment, including control devices and emission points.

13. Input Materials (for this equipment only)
Is any of this data to be considered confidential? (Y or N)

NAME	CAS NO. (IF APPLICABLE)	PER HOUR	INPUT RATE		
			UNITS	PER YEAR	UNITS
1. Virgin Aggregate		190	tons	178125	tons
2. Recycled Aggregate		200	tons	62500	tons
3. Liquid AC		10	tons	9375	tons
4.					
5.					
6.					
7.					
8.					
9.					

TOTAL

14. Output Materials (for this equipment)
Process/Product Stream

NAME	CAS NO. (IF APPLICABLE)	PER HOUR	OUTPUT RATE		
			UNITS	PER YEAR	UNITS
1. Hot Mix Asphalt		400	tons	250000	tons
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

TOTAL

15. Waste Streams- Solid and Liquid

NAME	CAS NO. (IF APPLICABLE)	PER HOUR	OUTPUT RATE		
			UNITS	PER YEAR	UNITS
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

TOTAL

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FORM 5T: Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration

Applicant Name: York Building Products Co Inc

Step 1: Quantify premises-wide emissions of Toxic Air Pollutants (TAP) from new and existing installations in accordance with COMAR 26.11.15.04. Attach supporting documentation as necessary.

Toxic Air Pollutant (TAP)	CAS Number	Class I or Class II?	Screening Levels (µg/m ³)			Estimated Premises Wide Emissions of TAP			
			1-hour	8-hour	Annual	Actual Total Existing TAP Emissions (lb/hr)	Projected TAP Emissions from Proposed Installation (lb/hr)	Premises Wide Total TAP Emissions (lb/hr)	
ex. ethanol	64175	II	18843	3789	N/A	0.60	0.15	0.75	1500
ex. benzene	71432	I	80	16	0.13	0.5	0.75	1.00	400
<i>PLEASE SEE attached spreadsheet</i>									

(attach additional sheets as necessary.)

Note: Screening levels can be obtained from the Department's website (<http://www.mde.maryland.gov>) or by calling the Department.

Step 2: Determine which TAPs are exempt from further review. A TAP that meets either of the following Class I or Class II small quantity emitter exemptions is exempt from further TAP compliance demonstration requirements under Step 3 and Step 4.

Class II TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(a))

A Class II TAP is exempt from Step 3 and Step 4 if the Class II TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour, and any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m³.

Class I TAP Small Quantity Emitter Exemption Requirements (COMAR 26.11.15.03B(3)(b))

A Class I TAP is exempt from Step 3 and Step 4 if the Class I TAP meets the following requirements: Premises wide emissions of the TAP shall not exceed 0.5 pounds per hour and 350 pounds per year, any applicable 1-hour or 8-hour screening level for the TAP must be greater than 200 µg/m³, and any applicable annual screening level for the TAP must be greater than 1 µg/m³.

If a TAP meets either the Class I or Class II TAP Small Quantity Emitter Exemption Requirements, no further review under Step 3 and Step 4 are required for that specific TAP.

FORM 5T: Toxic Air Pollutant (TAP) Emissions Summary and Compliance Demonstration

Step 3: Best Available Control Technology for Toxics Requirement (T-BACT, COMAR 26.11.15.05)

In the following table, list all TAP emission reduction options considered when determining T-BACT for the proposed installation. The options should be listed in order beginning with the most effective control strategy to the least effective strategy. Attach supporting documentation as necessary.

Target Pollutants	Emission Control Option	% Emission Reduction	Costs		T-BACT Option Selected? (yes/no)
			Capital	Annual Operating	
ex. ethanol and benzene	Thermal Oxidizer	99	\$50,000	\$100,000	no
ex. ethanol and benzene	Low VOC materials	80	0	\$100,000	yes

(attach additional sheets as necessary)

Step 4: Demonstrating Compliance with the Ambient Impact Requirement (COMAR 26.11.15.06)

Each TAP not exempt in Step 2 must be individually evaluated to determine that the emissions of the TAP will not adversely impact public health. The evaluation consists of a series of increasingly non-conservative (and increasingly rigorous) tests. Once a TAP passes a test in the evaluation, no further analysis is required for that TAP. "Demonstrating Compliance with the Ambient Impact Requirement under the Toxic Air Pollutant (TAP) Regulations (COMAR 26.11.15.06)" provides guidance on conducting the evaluation. Summarize your results in the following table. Attach supporting documentation as necessary.

Toxic Air Pollutant (TAP)	CAS Number	Screening Levels (µg/m ³)			Premises Wide Total TAP Emissions		Allowable Emissions Rate (AER) per COMAR 26.11.16.02A		Off-site Concentrations per Screening Analysis (µg/m ³)			Compliance Method Used?
		1-hour	8-hour	Annual	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	1-hour	8-hour	Annual	
ex. ethanol	64175	18843	3769	N/A	0.75	1500	0.89	N/A	N/A	N/A	N/A	AER
ex. benzene	71432	80	16	0.13	1.00	400	0.04	36.52	1.5	1.05	0.12	Screen

(attach additional sheets as necessary)

If compliance with the ambient impact requirement cannot be met using the allowable emissions rate method or the screening analysis method, refined dispersion modeling techniques may be required. Please consult with the Department's Air Quality Permit Program prior to conducting dispersion modeling methods to demonstrate compliance.

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FORM 5EP: Emission Point Data

Complete one (1) Form 5EP for EACH emission point (stack or fugitive emissions) related to the proposed installation.

Applicant Name: York Building Products Co Inc

1. Emission Point Identification Name/Number

List the applicant assigned name/number for this emission point and use this value on the attached required plot plan:

CD-1

2. Emission Point Description

Describe the emission point including all associated equipment and control devices:

BH-77-18 Stationary 76,718 acfm Pulse Jet Baghouse

3. Emissions Schedule for the Emission Point

Continuous or Intermittent (C/I)?	<u>I</u>	Seasonal Variation Check box if none: <input type="checkbox"/> Otherwise estimate seasonal variation:	
Minutes per hour:	<u>60</u>	Winter Percent	<u>0</u>
Hours per day:	<u>8</u>	Spring Percent	<u>33</u>
Days per week:	<u>5</u>	Summer Percent	<u>34</u>
Weeks per year:	<u>32</u>	Fall Percent	<u>33</u>

4. Emission Point Information

Height above ground (ft):	<u>30</u>	Length and width dimensions at top of rectangular stack (ft):	Length:	Width:	
Height above structures (ft):					
Exit temperature (°F):	<u>240</u>	Inside diameter at top of round stack (ft):	<u>4.1875</u>		
Exit velocity (ft/min):	<u>5570.5</u>	Distance from emission point to nearest property line (ft):	<u>500</u>		
Exhaust gas volumetric flow rate (acfm):	<u>76,718</u>	Building dimensions if emission point is located on building (ft)	Height	Length	Width

5. Control Devices Associated with the Emission Point

Identify each control device associated with the emission point and indicate the number of devices. **A Form 6 is also required for each control device.** If none check none:

- | | | |
|---|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Thermal Oxidizer | No. _____ |
| <input checked="" type="checkbox"/> Baghouse | <input type="checkbox"/> Regenerative | No. <u>1</u> |
| <input type="checkbox"/> Cyclone | <input type="checkbox"/> Catalytic Oxidizer | No. _____ |
| <input type="checkbox"/> Elec. Precipitator (ESP) | <input type="checkbox"/> Nitrogen Oxides Reduction | No. _____ |
| <input type="checkbox"/> Dust Suppression System | <input type="checkbox"/> Selective | <input type="checkbox"/> Non-Selective |
| <input type="checkbox"/> Venturi Scrubber | <input type="checkbox"/> Catalytic | <input type="checkbox"/> Non-Catalytic |
| <input type="checkbox"/> Spray Tower/Packed Bed | <input type="checkbox"/> Other | No. _____ |
| <input type="checkbox"/> Carbon Adsorber | Specify: | |
| <input type="checkbox"/> Cartridge/Canister | | |
| <input type="checkbox"/> Regenerative | | |

FORM 5EP: Emission Point Data

6. Estimated Emissions from the Emission Point

Criteria Pollutants	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Particulate Matter (filterable as PM10)	1.568	0.781	6.25	0.5
Particulate Matter (filterable as PM2.5)	1.168	0.625	5.00	0.4
Particulate Matter (condensables)	13.392	7.031	56.25	4.5
Volatile Organic Compounds (VOC)	12.800	9.844	78.75	6.3
Oxides of Sulfur (SOx)	1.632	0.625	5.00	0.4
Oxides of Nitrogen (NOx)	12.800	6.719	53.75	4.3
Carbon Monoxide (CO)	52.000	26.563	212.5	17.0
Lead (Pb)				
Greenhouse Gases (GHG)	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Carbon Dioxide (CO ₂)				
Methane (CH ₄)				
Nitrous Oxide (N ₂ O)				
Hydrofluorocarbons (HFCs)				
Perfluorocarbons (PFCs)				
Sulfur Hexafluoride (SF ₆)				
Total GHG (as CO ₂ e)				
List individual federal Hazardous Air Pollutants (HAP) below:	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Total HAPS <i>please see attached spreadsheet</i>	2.128	1.094	8.75	0.7

(Attach additional sheets as necessary.)

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Air and Radiation Management Administration ▪ Air Quality Permits Program

APPLICATION FOR PERMIT TO CONSTRUCT
GAS CLEANING OR EMISSION CONTROL EQUIPMENT

1. Owner of Installation York Building Products Co Inc		Telephone No. 443-907-2406	Date of Application
2. Mailing Address 950 Smile Way		City York	Zip Code 17404
3. Equipment Location 1579 Belvidere Rd		City/Town or P.O. Port Deposit	County Cecil
4. Signature of Owner or Operator <i>James Gawthrop</i>		Title Vice President	Print or Type Name James Gawthrop
5. Application Type:		Alteration <input type="checkbox"/>	New Construction <input checked="" type="checkbox"/>
6. Date Construction is to Start: Jan 1 2022		Completion Date (Estimate): March 15 2022	
7. Type of Gas Cleaning or Emission Control Equipment:			
Simple Cyclone <input type="checkbox"/> Multiple Cyclone <input type="checkbox"/> Afterburner <input type="checkbox"/> Electrostatic Precipitator <input type="checkbox"/>			
Scrubber <input type="checkbox"/> _____ (type) Other <input checked="" type="checkbox"/> Baghouse _____ (type)			
8. Gas Cleaning Equipment Manufacturer		Model No.	Collection Efficiency (Design Criteria)
BH-77-18 Stationary		76718 acfm Pulse Jet Baghouse	99.96%
9. Type of Equipment which Control Equipment is to Service:			
10. Stack Test to be Conducted:			
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <u>Pace Environmental</u> <u>TBD</u> (Stack Test to be Conducted By) (Date)			
11. Cost of Equipment <u>\$6.9 mil</u>			
Estimated Erection Cost <u>\$750,000</u>			

12. The Following Shall Be Design Criteria:

	<u>INLET</u>		<u>OUTLET</u>	
Gas Flow Rate	<u>76,718</u>	ACFM*	<u>76,718</u>	ACFM*
Gas Temperature	<u>200-375</u>	°F	<u>200-375</u>	°F
Gas Pressure	<u>up to 11"</u>	INCHES W.G.	<u>up to 28"</u>	INCHES W.G.
	PRESSURE DROP <u>up to 17"</u>			
Dust Loading	<u>107.5</u>	GRAINS/ACFD** <i>dscf</i>	<u>0.04</u>	GRAINS/ACFD** <i>dscf</i>
Moisture Content OR	<u>30-35</u>	%	<u>30-35</u>	%
Wet Bulb Temperature	_____	°F	_____	°F
Liquid Flow Rate (Wet Scrubber)	_____	GALLONS/MINUTE		
(WHEN SCRUBBER LIQUID OTHER THAN WATER INDICATE COMPOSITION OF SCRUBBING MEDIUM IN WEIGHT %)				
* = ACTUAL CUBIC FEET PER MINUTE		** = ACTUAL CUBIC FEET DRY		

WHEN APPLICATION INVOLVES THE REDUCTION OF GASEOUS POLLUTANTS, PROVIDE THE CONCENTRATION OF EACH POLLUTANT IN THE GAS STREAM IN VOLUME PERCENT. INCLUDE THE COMPOSITION OF THE GASES ENTERING THE CLEANING DEVICE AND THE COMPOSITION OF EXHAUSTED GASES BEING DISCHARGED INTO THE ATMOSPHERE. USE AVAILABLE SPACE IN ITEM 15 ON PAGE 3.

13. Particle Size Analysis

<u>Size of Dust Particles Entering Cleaning Unit</u>	<u>% of Total Dust</u>	<u>% to be Collected</u>
0 to 10 Microns	<u>8</u>	<u>99.4</u>
10 to 44 Microns	<u>92</u>	<u>99.96</u>
Larger than 44 Microns	<u>minimal</u>	<u>99.96</u>

14. For Afterburner Construction Only:

Volume of Contaminated Air _____ CFM (DO NOT INCLUDE COMBUSTION AIR)

Gas Inlet Temperature _____ °F

Capacity of Afterburner _____ BTU/HR

Diameter (or area) of Afterburner Throat _____

Combustion Chamber _____ (diameter) _____ (length) Operating Temperature at Afterburner _____ °F

Retention Time of Gases _____

15. Show Location of Dust Cleaning Equipment in the System. Draw or Sketch Flow Diagram Showing Emission Path from Source to Exhaust Point to Atmosphere.

Please see attached flow diagram

Date Received: Local _____ State _____

Acknowledgement Date: _____

By _____

Reviewed By:

Local _____

State _____

Returned to Local:

Date _____

By _____

Application Returned to Applicant:

Date _____

By _____

REGISTRATION NUMBER OF ASSOCIATED EQUIPMENT:

PREMISES NUMBER:

Emission Calculations Revised By _____ Date _____

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Air and Radiation Management Administration ▪ Air Quality Permits Program
APPLICATION FOR FUEL BURNING EQUIPMENT

Permit to Construct Registration Update Initial Registration

<p>1A. Owner of Equipment/Company Name York Building Products Co Inc</p> <p>Mailing Address/Street 950 Smile Way</p> <p>City York State PA Zip Code 17404</p> <p>Telephone Number 443-907-2406</p> <p>Print Name/Title James Gawthrop Vice President</p> <p>Signature: <i>James Gawthrop</i> Date: 7/19/21</p>	<p align="center">DO NOT WRITE IN THIS BOX</p> <p>2. Registration Number</p> <p>County No. <input type="text"/> <input type="text"/> Premises No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p align="center">1-2 3-6</p> <p>Registration Class <input type="checkbox"/> Equipment No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p align="center">7 6-11</p> <p>Data Year <input type="text"/> <input type="text"/> Application Date</p> <p align="center">12-13</p>																
<p>1B. Equipment Location (if different from above give Street Number and Name, City, State, Zip and Telephone Number): Principio Asphalt LLC</p> <p>Premises Name (if different from above):</p>																	
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<p>4. Describe this Equipment (Make, Model, Features, Manufacturer, etc.): Heatec HC-200AS 2.0 MMBTU Hot Oil Heater</p>																	
<p>5. Workmen's Compensation Coverage: Binder/Policy Number: WC 348639120</p> <p>Company Name: American Zurich Insurance Co. Expiration Date 4/1/22</p> <p>NOTE: Before a Permit to Construct may be issued by the Department, the applicant must provide the Department with proof of worker's compensation coverage as required under Section 1-202 of the Worker's Compensation Act.</p>																	
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10. Annual Fuel Consumption for this Equipment Only

OIL-1000 GALLONS 26-31	SULFUR % 32-33	GRADE 34	NATURAL GAS-1000 FT ³ 35-41	LP GAS-100 GALLONS 42-45	GRADE
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="22800"/>	<input type="text"/>	<input type="text"/>
COAL- TONS 46-52	SULFUR % 53-55	ASH% 56-58	WOOD-TONS 59-63	MOISTURE % 64-65	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	
OTHER FUELS (Specify Type)	ANNUAL AMOUNT CONSUMED (Specify Units of Measure)	OTHER FUEL (Specify Type)	ANNUAL AMOUNT CONSUMED (Specify Units of Measure)		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		

1=Coke 2= COG 3=BFG 4=Other

11. Operating Schedule (for this equipment)

Comfort/Space Heating Only 67-1	Process Heat Only 67-2	Percent Process Heat 68-69	Oil Burner Type 70	Coal Burner Type 71		
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text" value="2"/>	<input type="text"/>		
			1=Pressure Gun 2=Air Atomizer 3=Steam Atomizer 4=Rotary Cup	1=Cyclone 2=Stoker 3=Pulverized 4=Hand Fired		
SEASONAL VARIATION IN OPERATION (PERCENT):						
Days Per Week 72	Days Per Year 73-75	None 76	Winter 77-78	Spring 79-80	Summer 81-82	Fall 83-84
<input type="text" value="5"/>	<input type="text" value="160"/>	<input type="text"/>	<input type="text" value="0"/>	<input type="text" value="33"/>	<input type="text" value="34"/>	<input type="text" value="33"/>

12. Exhaust Stack Information

Height Above Ground (ft) 86-88	Inside Diameter at Top (inches) 89-91	Exit Temperature (°F) 92-95	Exit Velocity (ft/sec) 96-98
<input type="text" value="941"/>	<input type="text" value="12"/>	<input type="text" value="400"/>	<input type="text" value="29"/>

13. Total Stack Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter 99-104	Oxides of Sulfur 105-110	Oxides of Nitrogen 111-116
<input type="text" value="0.75"/>	<input type="text" value="0.25"/>	<input type="text" value="13.75"/>
Carbon Monoxide 117-122	Volatile Organic Compounds 123-128	PM-10 129-134
<input type="text" value="5.5"/>	<input type="text" value="3.75"/>	<input type="text" value="0"/>

14. Method Used to Determine Emissions (1=Estimate, 2=AP42, 3=Stack Test, 4=Other Emission Factor)

TSP 165	SOx 166	NOx 167	CO 168	VOC 169	PM10 170
<input type="text"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>	<input type="text" value="2"/>

15. What is the Maximum Rated Heat Input of this Unit (Million Btu/hr)?

Air and Radiation Management Administration Use Only

16. Date Rec'd Local _____ Date Rec'd State _____

Return to Local Jurisdiction Date _____ By _____

Rev'd by Local Jurisdiction: Date _____ By _____ Rev'd by State: Date _____ By _____

Acknowledgement Sent by State: Date _____ By _____

17. Inventory Date (MM/YY)

<input type="text"/>	SCC Code <input type="text"/>
171-174	178-185

18. Annual Operating Rate

<input type="text"/>	Maximum Design Hourly Rate <input type="text"/>
186-192	193-199

Permit to Operate Month

<input type="text"/>	Transaction Date <input type="text"/>
200-201	202-207

Staff Code

<input type="text"/>	VOC 211 212	SIP Code <input type="text"/>
208-210		213 214

Regulation Code

<input type="text"/>	Confidentiality <input type="text"/>
215-218	219

Point Description

<input type="text"/>	Action <input type="text"/>	A: Add C: Change
220-238	239	



MARYLAND DEPARTMENT OF THE ENVIRONMENT

1800 Washington Blvd ▪ Baltimore, Maryland 21230
 (410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us

Air and Radiation Management Administration ▪ Air Quality Permits Program
APPLICATION FOR FUEL BURNING EQUIPMENT

Permit to Construct Registration Update Initial Registration

<p>1A. Owner of Equipment/Company Name York Building Products Co Inc</p> <p>Mailing Address/Street 950 Smile Way</p> <p>City York State PA Zip Code 17404</p> <p>Telephone Number 443-907-2406</p> <p>Print Name/Title James Gawthrop, Vice President</p> <p>Signature <i>James Gawthrop</i> Date: 7/19/21</p>	<p>DO NOT WRITE IN THIS BOX</p> <p>2. Registration Number</p> <p>County No. <input type="text"/> <input type="text"/> Premises No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>1-2 3-6</p> <p>Registration Class <input type="text"/> Equipment No. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/></p> <p>7 6-11</p> <p>Data Year <input type="text"/> <input type="text"/> Application Date</p> <p>12-13</p>															
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<p>4. Describe this Equipment (Make, Model, Features, Manufacturer, etc.): DB-9640 Stationary 8'x40' Double Barrel Dryer Drum Mixer</p>																
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MARYLAND DEPARTMENT OF THE ENVIRONMENT
 Air and Radiation Management Administration • Air Quality Permits Program
 1800 Washington Boulevard • Baltimore, Maryland 21230
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FORM 5EP: Emission Point Data

Complete one (1) Form 5EP for EACH emission point (stack or fugitive emissions) related to the proposed installation.

Applicant Name: York Building Products Co Inc

1. Emission Point Identification Name/Number

List the applicant assigned name/number for this emission point and use this value on the attached required plot plan:
ES-1

2. Emission Point Description

Describe the emission point including all associated equipment and control devices:

Heatec HC-200AS 2.0 MMBTU Hot Oil Heater

3. Emissions Schedule for the Emission Point

Continuous or Intermittent (C/I)?	<u>I</u>	Seasonal Variation Check box if none: <input type="checkbox"/> Otherwise estimate seasonal variation:	
Minutes per hour:	<u>60</u>	Winter Percent	<u>0</u>
Hours per day:	<u>8</u>	Spring Percent	<u>33</u>
Days per week:	<u>5</u>	Summer Percent	<u>34</u>
Weeks per year:	<u>32</u>	Fall Percent	<u>33</u>

4. Emission Point Information

Height above ground (ft):	<u>9.41</u>	Length and width dimensions at top of rectangular stack (ft):	Length:	Width:	
Height above structures (ft):	<u>0</u>				
Exit temperature (°F):	<u>400</u>	Inside diameter at top of round stack (ft):	<u>1</u>		
Exit velocity (ft/min):	<u>1739.2</u>	Distance from emission point to nearest property line (ft):	<u>500</u>		
Exhaust gas volumetric flow rate (acfm):	<u>1366</u>	Building dimensions if emission point is located on building (ft)	Height	Length	Width

5. Control Devices Associated with the Emission Point

Identify each control device associated with the emission point and indicate the number of devices. **A Form 6 is also required for each control device.** If none check none:

- | | | | |
|---|-----------|--|--|
| <input type="checkbox"/> None | | <input type="checkbox"/> Thermal Oxidizer | No. _____ |
| <input type="checkbox"/> Baghouse | No. _____ | <input type="checkbox"/> Regenerative | |
| <input type="checkbox"/> Cyclone | No. _____ | <input type="checkbox"/> Catalytic Oxidizer | No. _____ |
| <input type="checkbox"/> Elec. Precipitator (ESP) | No. _____ | <input type="checkbox"/> Nitrogen Oxides Reduction | No. _____ |
| <input type="checkbox"/> Dust Suppression System | No. _____ | <input type="checkbox"/> Selective | <input type="checkbox"/> Non-Selective |
| <input type="checkbox"/> Venturi Scrubber | No. _____ | <input type="checkbox"/> Catalytic | <input type="checkbox"/> Non-Catalytic |
| <input type="checkbox"/> Spray Tower/Packed Bed | No. _____ | <input type="checkbox"/> Other | No. _____ |
| <input type="checkbox"/> Carbon Adsorber | No. _____ | Specify: | |
| <input type="checkbox"/> Cartridge/Canister | | | |
| <input type="checkbox"/> Regenerative | | | |

FORM 5EP: Emission Point Data

6. Estimated Emissions from the Emission Point

Criteria Pollutants	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Particulate Matter (filterable as PM10)	0	0	0	0
Particulate Matter (filterable as PM2.5)	0	0	0	0
Particulate Matter (condensables)	0.096	0.093	0.75	0.06
Volatile Organic Compounds (VOC)	0.48	0.468	3.75	0.30
Oxides of Sulfur (SOx)	0.032	0.031	0.25	0.02
Oxides of Nitrogen (NOx)	1.76	1.719	13.75	1.1
Carbon Monoxide (CO)	0.704	0.688	5.5	0.44
Lead (Pb)				
Greenhouse Gases (GHG)	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Carbon Dioxide (CO ₂)				
Methane (CH ₄)				
Nitrous Oxide (N ₂ O)				
Hydrofluorocarbons (HFCs)				
Perfluorocarbons (PFCs)				
Sulfur Hexafluoride (SF ₆)				
Total GHG (as CO ₂ e)				
List individual federal Hazardous Air Pollutants (HAP) below:	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Total HAPs	4.75E-04	4.64E-04	3.71E-03	2.97E-04
<i>please see attached spreadsheet</i>				

(Attach additional sheets as necessary.)

Facility Name
Facility Location

Diamond Materials

Design Capacity

Dryer / Drum Mixer
Drum Burner
Asphalt Mixer
Particulate Control
Hot Oil Heater
Heater Burner

DB-9640 Stationary 8' x 40' Double Barrel® Dryer Drum Mixer
Phoenix Talon PT-100-O 100 MMBTU Oil Burner with NG train
D-DD-400TPH2TIRE 400 TPH 9025 DuoDrum™ Drum Mixer
BH-77-18 Stationary 76,718 ACFM Pulse Jet Baghouse
Heatec HC-200AS 2.0 MMBTU Hot Oil Heater
Powerflame C2-GO-20B 2.7 MMBTU Gas/Oil Burner

OPERATIONAL PARAMETERS

Production Capacity	400	ton/hr	Stack Exit Height	30	ft
Annual Production	500000	ton/yr	Stack Diameter (ID)	50.25	in
Max RAP per mix	50	%	Stack Area	13.77	ft ²
RAP Usage per yr	50	%	Stack Velocity	92.8	ft/sec
Avg AC per mix	5	%		5570.5	ft/min
Exhaust Flow Rate	76718	ACFM			
Standard Flow Rate	39060	DSCFM			
Maximum Heat Input	100	MMBTU			
Exhaust Temperature	240	F	<i>Typical exhaust temperature range: 200 - 375 °F</i>		
Exhaust Moisture	32.5	%	<i>Typical stack moisture range: 30 - 35 %</i>		

PRODUCTION NOTES	BAGHOUSE SPECIFICATIONS
Plant's rated capacity based on production of 300F conventional-type virgin surface mix with 5% composite aggregate moisture removal at sealevel.	* BCS490 exhaust fan with 300hp VFD direct drive
ACFM - airflow in ft ³ /min at temperature DSCFM = dry standard airflow in ft ³ /min (corrected to 68F, 1 atm, dry)	* Pulse Jet cleaning system with self-adjusting frequency to maintain 2 - 6 inWC differential pressure (ΔP) across filter media
Heat input based on firing rate required for given production rate @ design conditions	* Inertial separator located at inlet for coarse particle collection
	* (1152) 4-5/8" dia X 10' long 14-oz Aramid fiber felt bags contained in one compartment
	* 13,950 sq.ft. of cloth @ 5.5 fpm filtering velocity (air/cloth)
	* Vertical exhaust stack with unobstructed opening

Raw Material Usage Rates

	lb/hr	ton/hr	gal/hr	ton/yr	gal/yr	
Virgin Aggregate	760000	380		475000		(NO RAP)
Liquid AC (8.5 lb/gal)	40000	20	4706	25000	5.9E+6	
Recycled material	400000	200		125000		(RAP)
Virgin aggregate	380000	190		356250		
Liquid AC (8.5 lb/gal)	20000	10	2353	18750	4.4E+6	

Filterable Particulate Emissions (AP-42 Table 11.1-3)

	%	gr/dscf	lb/hr	ton/yr
Uncontrolled Filterable PM *		107.5	36000	20000
Controlled Filterable PM		0.04	13.39	8.37
Control Efficiency	99.96	<i>* Filterable PM inlet loading based on Manufacturer Data</i>		
Uncontrolled Filterable PM-10		7.6	2560	1600
Controlled Filterable PM-10		0.005	1.56	0.98
PM-10 Control Efficiency	99.94			
Uncontrolled PM-2.5		1.8	600	375
Controlled PM-2.5		0.003	1.16	0.73
PM-2.5 Control Efficiency	99.81			

Condensable Particulate Emissions (AP-42 Table 11.1-3)

	%	gr/dscf	lb/hr	ton/yr
Uncontrolled Inorganic PM		0.009	2.96	1.85
Uncontrolled Organic PM		0.069	23	15
Controlled Organic PM		0.014	4.80	30.00
Organic PM Control Efficiency	79.31			

The following charts are the projected annual facility emissions assuming exclusive use of the listed fuel.

Annual LPG Emission Rates (ton/yr)*

POLLUTANTS	Dryer / Baghouse	Heater	Silo Filling	Truck Loadout	TOTALS
Filterable PM	8.37	0.17	0.15	0.13	8.8
PM10	0.98				1.0
PM2.5	0.73				0.7
GHGs - CO2e	8325				8325.0
Sulfur Dioxide	1.02	3.10			4.1
Carbon Monoxide	32.5	0.44	0.29	0.34	33.6
Oxides of Nitrogen	8	1.7			9.7
Volatile Organics	8	0.45	3.05	0.98	12.5
HAPS	1.33	0.00E+00	4.68E-02	2.07E-02	1.4

Annual Natural Gas Emission Rates (ton/yr)*

POLLUTANTS	Dryer / Baghouse	Heater	Silo Filling	Truck Loadout	TOTALS
Filterable PM	8.37	0.06	0.15	0.13	8.7
PM10	0.98				1.0
PM2.5	0.73				0.7
GHGs - CO2e	8325				8325.0
Sulfur Dioxide	0.85	0.02			0.9
Carbon Monoxide	32.5	0.44	0.29	0.34	33.6
Oxides of Nitrogen	6.5	1.1			7.6
Volatile Organics	8	0.30	3.05	0.98	12.3
HAPS	1.33	2.97E-04	4.68E-02	2.07E-02	1.4

* The facility will combust propane in the main dum mix burner until natural gas is available at the site. At that time, the burner will switch to natural gas as the primary fuel source. The hot oil heater will start out firing on No. 2 fuel oil. It will switch to NG combustion once that fuel is available.

Facility Name **Diamond Materials**
 Facility Location **0**

Burner Fuels - Net Heating Values & Usage Rates

Natural Gas	BTU/unit	Sulfur	scf/hr	scf/yr	therm/yr
	1037	0.0017			

Greenhouse Gases AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Carbon Dioxide	124-38-9	44.01	33	57816	13200	8250
Methane	74-82-8	16.04	0.012	21.02	4.8	3.0
Total CO2e			33.3	58342	13320	8325

Criteria Pollutants AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Sulfur Dioxide	7446-09-5	64.06	0.0034	5.96	1.4	0.9
Carbon Monoxide	630-08-0	28.01	0.13	227.76	52.0	32.5
Oxides of Nitrogen	10102-44-0	46.0	0.026	45.55	10.4	6.5
Volatile Organics	74-98-6	44.1	0.032	56.06	12.8	8.0

NON-HAP Organics AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Butane	106-97-8	58.1	0.00067	1.17	0.268	0.1675
Ethylene	74-85-1	28.05	0.007	12.26	2.80	1.75
Heptane	142-82-5	100.2	0.0094	16.47	3.76	2.35
2-Methyl-1-pentane	763-29-1	84.2	0.004	7.01	1.60	1.00
2-Methyl-2-butene	513-35-9	70.1	0.00058	1.02	0.232	0.145
3-Methylpentane	96-14-0	86.2	0.00019	0.33	0.076	0.0475
l-pentene	109-67-1	70.13	0.0022	3.85	0.880	0.550
n-Pentane	109-66-0	72.15	0.00021	0.37	0.084	0.0525
TOTAL NON-HAP ORGANICS			0.024	42.05	9.60	6.00

NON-PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Benzene	71-43-2	78.11	0.00039	0.683	0.156	0.098
Ethylbenzene	100-41-4	106.17	0.00024	0.420	0.096	0.060
Formaldehyde	50-00-0	30.03	0.0031	5.43	1.24	0.775
Hexane	110-54-3	86.18	0.00092	1.61	0.368	0.230
Methyl Chloroform	71-55-6	133.4	4.80E-05	0.084	0.019	0.012
Xylene	1330-20-7	106.17	0.0002	0.350	0.080	0.050
Isooctane	540-84-1	114.23	4.00E-05	0.070	0.016	0.010
Toluene	108-88-3	92.14	0.00015	0.263	0.060	0.038
TOTAL NON-PAH HAPS			0.0051	8.94	2.04	1.28

Facility Name **Diamond Materials**
 Facility Location **0**

PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Acenaphthene	83-32-9	154.21	1.40E-06	2.45E-03	5.60E-04	3.50E-04
Acenaphthylene	208-96-8	152.2	8.60E-06	1.51E-02	3.44E-03	2.15E-03
Anthracene	120-12-7	178.23	2.20E-07	3.85E-04	8.80E-05	5.50E-05
Benzo(a)anthracene	56-55-3	228.3	2.10E-07	3.68E-04	8.40E-05	5.25E-05
Benzo(a)pyrene	50-32-8	176.5	9.80E-09	1.72E-05	3.92E-06	2.45E-06
Benzo(b)fluoranthene	205-99-2	252.3	1.00E-07	1.75E-04	4.00E-05	2.50E-05
Benzo(e)pyrene	192-97-2	252.3	1.10E-07	1.93E-04	4.40E-05	2.75E-05
Benzo(g,h,i)perylene	191-24-2	276.3	4.00E-08	7.01E-05	1.60E-05	1.00E-05
Benzo(k)fluoranthene	207-08-9	252.3	4.10E-08	7.18E-05	1.64E-05	1.03E-05
Chrysene	218-01-9	228.3	1.80E-07	3.15E-04	7.20E-05	4.50E-05
Fluoranthene	206-44-0	202.3	6.10E-07	1.07E-03	2.44E-04	1.53E-04
Fluorene	86-73-7	166.2	3.80E-06	6.66E-03	1.52E-03	9.50E-04
Indeno(1,2,3-cd)pyrene	193-39-5	276.3	7.00E-09	1.23E-05	2.80E-06	1.75E-06
2-Methylnaphthalene	91-57-6	142.2	7.40E-05	1.30E-01	2.96E-02	1.85E-02
Naphthalene	91-20-3	127.17	9.00E-05	1.58E-01	3.60E-02	2.25E-02
Perylene	198-55-0	252.1	8.80E-09	1.54E-05	3.52E-06	2.20E-06
Phenanthrene	85-01-8	178.2	7.60E-06	1.33E-02	3.04E-03	1.90E-03
Pyrene	129-00-0	202.3	5.40E-07	9.46E-04	2.16E-04	1.35E-04
TOTAL PAH HAPS			0.00019	0.333	7.60E-02	4.75E-02
TOTAL HAPS			0.0053	9.29	2.12	1.33

Trace Metals AP-42 Table 11.1-12

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Antimony	7440-36-0	121.8	1.80E-07	3.15E-04	7.20E-05	4.50E-05
Arsenic	7440-38-2	74.9	5.60E-07	9.81E-04	2.24E-04	1.40E-04
Barium	7440-39-3	137.3	5.80E-06	1.02E-02	2.32E-03	1.45E-03
Cadmium	7440-43-9	112.4	4.10E-07	7.18E-04	1.64E-04	1.03E-04
Chromium	7440-47-3	52.0	5.50E-06	9.64E-03	2.20E-03	1.38E-03
Cobalt	7440-48-4	58.9	2.60E-08	4.56E-05	1.04E-05	6.50E-06
Copper	7440-50-8	63.5	3.10E-06	5.43E-03	1.24E-03	7.75E-04
Hexavalent Chromium	18540-29-9	52.0	4.50E-07	7.88E-04	1.80E-04	1.13E-04
Lead	7439-92-1	207.2	6.20E-07	1.09E-03	2.48E-04	1.55E-04
Manganese	7439-96-5	54.9	7.70E-06	1.35E-02	3.08E-03	1.93E-03
Mercury	7439-97-6	200.6	2.40E-07	4.20E-04	9.60E-05	6.00E-05
Nickel	7440-02-0	58.7	6.30E-05	1.10E-01	2.52E-02	1.58E-02
Phosphorus	7723-14-0	31.0	2.80E-05	4.91E-02	1.12E-02	7.00E-03
Selenium	7782-49-2	79.0	3.50E-07	6.13E-04	1.40E-04	8.75E-05
Silver	7440-22-4	107.9	4.80E-07	8.41E-04	1.92E-04	1.20E-04
Thallium	7440-28-0	204.4	4.10E-09	7.18E-06	1.64E-06	1.03E-06
Zinc	7440-66-6	65.4	6.10E-05	1.07E-01	2.44E-02	1.53E-02

Facility Name **Diamond Materials**
 Facility Location **0**

Burner Fuels - Net Heating Values & Usage Rates					
	BTU/unit	Sulfur		gal/hr	gal/yr
Liquid Propane Gas (LPG)	91500	15	gr/ft ³	1093	1.4E+6

Greenhouse Gases AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Carbon Dioxide	124-38-9	44.01	33	57816	13200	8250
Methane	74-82-8	16.04	0.012	21.02	4.8	3.0
Total CO₂e			33.3	58342	13320	8325

Criteria Pollutants AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton*	ton/yr	lb/hr	ton/yr
Sulfur Dioxide	7446-09-5	64.06	0.1*S/1000	7.2	1.6	1.0
Carbon Monoxide	630-08-0	28.01	0.13	227.76	52.0	32.5
Oxides of Nitrogen	10102-44-0	46.0	0.032	56.06	12.8	8.0
Volatile Organics	74-98-6	44.1	0.032	56.06	12.8	8.0

* SO₂ based on fuel usage and sulfur content with documented scrubbing effect by fabric filter applied. Nox based on AP-42 Ch 11.1 Background Ref #209

NON-HAP Organics AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Butane	106-97-8	58.1	0.00067	1.17384	0.268	0.1675
Ethylene	74-85-1	28.05	0.007	12.264	2.80	1.75
Heptane	142-82-5	100.2	0.0094	16.4688	3.76	2.35
2-Methyl-1-pentane	763-29-1	84.2	0.004	7.008	1.60	1.00
2-Methyl-2-butene	513-35-9	70.1	0.00058	1.01616	0.232	0.145
3-Methylpentane	96-14-0	86.2	0.00019	0.33288	0.076	0.0475
l-pentene	109-67-1	70.13	0.0022	3.8544	0.880	0.550
n-Pentane	109-66-0	72.15	0.00021	0.36792	0.084	0.0525
TOTAL NON-HAP ORGANICS			0.024	42.05	9.60	6.00

NON-PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Benzene	71-43-2	78.11	0.00039	0.683	0.156	0.098
Ethylbenzene	100-41-4	106.17	0.00024	0.420	0.096	0.060
Formaldehyde	50-00-0	30.03	0.0031	5.43	1.24	0.775
Hexane	110-54-3	86.18	0.00092	1.61	0.368	0.230
Methyl Chloroform	71-55-6	133.4	4.80E-05	0.084	0.019	0.012
Xylene	1330-20-7	106.17	0.0002	0.350	0.080	0.050
Isooctane	540-84-1	114.23	4.00E-05	0.070	0.016	0.010
Toluene	108-88-3	92.14	0.00015	0.263	0.060	0.038
TOTAL NON-PAH HAPS			0.0051	8.94	2.04	1.28

Facility Name **Diamond Materials**
 Facility Location **0**

PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Acenaphthene	83-32-9	154.21	1.40E-06	2.45E-03	5.60E-04	3.50E-04
Acenaphthylene	208-96-8	152.2	8.60E-06	1.51E-02	3.44E-03	2.15E-03
Anthracene	120-12-7	178.23	2.20E-07	3.85E-04	8.80E-05	5.50E-05
Benzo(a)anthracene	56-55-3	228.3	2.10E-07	3.68E-04	8.40E-05	5.25E-05
Benzo(a)pyrene	50-32-8	176.5	9.80E-09	1.72E-05	3.92E-06	2.45E-06
Benzo(b)fluoranthene	205-99-2	252.3	1.00E-07	1.75E-04	4.00E-05	2.50E-05
Benzo(e)pyrene	192-97-2	252.3	1.10E-07	1.93E-04	4.40E-05	2.75E-05
Benzo(g,h,i)perylene	191-24-2	276.3	4.00E-08	7.01E-05	1.60E-05	1.00E-05
Benzo(k)fluoranthene	207-08-9	252.3	4.10E-08	7.18E-05	1.64E-05	1.03E-05
Chrysene	218-01-9	228.3	1.80E-07	3.15E-04	7.20E-05	4.50E-05
Fluoranthene	206-44-0	202.3	6.10E-07	1.07E-03	2.44E-04	1.53E-04
Fluorene	86-73-7	166.2	3.80E-06	6.66E-03	1.52E-03	9.50E-04
Indeno(1,2,3-cd)pyrene	193-39-5	276.3	7.00E-09	1.23E-05	2.80E-06	1.75E-06
2-Methylnaphthalene	91-57-6	142.2	7.40E-05	1.30E-01	2.96E-02	1.85E-02
Naphthalene	91-20-3	127.17	9.00E-05	1.58E-01	3.60E-02	2.25E-02
Perylene	198-55-0	252.1	8.80E-09	1.54E-05	3.52E-06	2.20E-06
Phenanthrene	85-01-8	178.2	7.60E-06	1.33E-02	3.04E-03	1.90E-03
Pyrene	129-00-0	202.3	5.40E-07	9.46E-04	2.16E-04	1.35E-04
TOTAL PAH HAPS			0.00019	0.333	7.60E-02	4.75E-02
TOTAL HAPS			0.0053	9.29	2.12	1.33

Trace Metals AP-42 Table 11.1-12

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Antimony	7440-36-0	121.8	1.80E-07	3.15E-04	7.20E-05	4.50E-05
Arsenic	7440-38-2	74.9	5.60E-07	9.81E-04	2.24E-04	1.40E-04
Barium	7440-39-3	137.3	5.80E-06	1.02E-02	2.32E-03	1.45E-03
Cadmium	7440-43-9	112.4	4.10E-07	7.18E-04	1.64E-04	1.03E-04
Chromium	7440-47-3	52.0	5.50E-06	9.64E-03	2.20E-03	1.38E-03
Cobalt	7440-48-4	58.9	2.60E-08	4.56E-05	1.04E-05	6.50E-06
Copper	7440-50-8	63.5	3.10E-06	5.43E-03	1.24E-03	7.75E-04
Hexavalent Chromium	18540-29-9	52.0	4.50E-07	7.88E-04	1.80E-04	1.13E-04
Lead	7439-92-1	207.2	6.20E-07	1.09E-03	2.48E-04	1.55E-04
Manganese	7439-96-5	54.9	7.70E-06	1.35E-02	3.08E-03	1.93E-03
Mercury	7439-97-6	200.6	2.40E-07	4.20E-04	9.60E-05	6.00E-05
Nickel	7440-02-0	58.7	6.30E-05	1.10E-01	2.52E-02	1.58E-02
Phosphorus	7723-14-0	31.0	2.80E-05	4.91E-02	1.12E-02	7.00E-03
Selenium	7782-49-2	79.0	3.50E-07	6.13E-04	1.40E-04	8.75E-05
Silver	7440-22-4	107.9	4.80E-07	8.41E-04	1.92E-04	1.20E-04
Thallium	7440-28-0	204.4	4.10E-09	7.18E-06	1.64E-06	1.03E-06
Zinc	7440-66-6	65.4	6.10E-05	1.07E-01	2.44E-02	1.53E-02

Pollutant Emission Rates

Facility Name **Diamond Materials**
Facility Location **0**

Unit **HC-200SP** 2.0 MMBTU Hot oil Heater with StackPack™ Heat Exchanger
Burner **C2-GO-20B** Nominal 2.7 MMBTU Gas/Oil Burner

Total Airflow	1366	ACFM	Stack Height	9.41	ft in sq.ft. ft/sec ft/min
Standard Airflow	755	DSCFM	Stack Diameter	12	
Heat Input	2.7	MMBTU	Stack Area	0.79	
Stack Temperature	400	F	Stack Velocity	29.0	
Stack Moisture	10	%		1739.2	

Burner Fuels - Net Heating Values & Usage Rates *

	BTU/unit	Sulfur		ft ³ /hr	ft ³ /yr
Natural Gas	1037	0.0017	gr/scf	2.60E+03	22.8E+6
	BTU/unit	Sulfur		gal/hr	gal/yr
No. 2 Fuel Oil	141000	0.25	%	19.1	167.7E+3

** Usage rates based on exclusive use of each fuel annually (8760 hrs)*

Criteria Pollutants - NATURAL GAS Mfr. Data

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Particulates			0.0048	0.013	0.057
Sulfur Dioxide	7446-09-5	64.06	1.05 * S	0.005	0.021
Carbon Monoxide	630-08-0	28.01	0.037	0.100	0.438
Oxides of Nitrogen	10102-44-0	46.05	0.092	0.248	1.09
Volatile Organics	74-98-6	44.1	0.025	0.068	0.296

HAPS - NATURAL GAS AP-42 Table 11.1-13

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Formaldehyde	50-00-0	30.03	2.60E-08	6.8E-05	3.0E-04

Pollutant Emission Rates

Criteria Pollutants - No2 Oil Mfr. Data

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Particulates			0.0143	0.039	0.169
Sulfur Dioxide	7446-09-5	64.06	1.05 * S	0.71	3.10
Carbon Monoxide	630-08-0	28.01	0.037	0.100	0.438
Oxides of Nitrogen	10102-44-0	46.05	0.14	0.378	1.66
Volatile Organics	74-98-6	44.1	0.038	0.103	0.449

HAPS - No2 Oil AP-42 Table 11.1-13

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Formaldehyde	50-00-0	30.03	3.50E-06	6.7E-05	2.9E-04
Acenaphthene	83-32-9	154.21	5.30E-07	1.0E-05	4.4E-05
Acenaphthylene	208-96-8	152.2	2.00E-07	3.8E-06	1.7E-05
Anthracene	120-12-7	178.23	1.80E-07	3.4E-06	1.5E-05
Benzo(b)fluoranthene	205-99-2	252.3	1.00E-07	1.9E-06	8.4E-06
Fluoranthrene	206-44-0	202.3	4.40E-08	8.4E-07	3.7E-06
Fluorene	86-73-7	166.2	3.20E-08	6.1E-07	2.7E-06
Naphthalene	91-20-3	127.17	1.70E-05	3.3E-04	1.4E-03
Phenanthrene	85-01-8	178.2	4.90E-06	9.4E-05	4.1E-04
Pyrene	129-00-0	202.3	3.20E-08	6.1E-07	2.7E-06

Blue Smoke Emissions - Silo Filling & Truck Loading

Facility Name Diamond Materials
Facility Location 0

Asphalt Volatility (V) -0.50
Mix Temp 325 deg F

Silo Filling Emission Factors AP-42 Table 11.1-14

Total PM $EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$
Organic PM $EF = 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$
TOC $EF = 0.0504(-V)e^{((0.0251)(T+460)-20.43)}$
CO $EF = 0.00488(-V)e^{((0.0251)(T+460)-20.43)}$

Silo Filling Emission Rates

POLLUTANT	FACTOR	PTE		EMISSION RATES			
	lb/ton	lb/yr	ton/yr	lb/hr	lb/yr	ton/yr	
Total PM	0.000586	2053	1.03	0.234	292.9	0.15	uncontrolled rates
Organic PM	0.000254	890	0.44	0.102	126.9	0.06	see below
TOC	0.012187	42702	21.35	4.875	6093.3	3.05	see below
CO	0.001180	4135	2.07	0.472	590.0	0.29	uncontrolled

Plant Load-out Emission Factors AP-42 Table 11.1-14

Total PM $EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$
Organic PM $EF = 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$
TOC $EF = 0.0172(-V)e^{((0.0251)(T+460)-20.43)}$
CO $EF = 0.00558(-V)e^{((0.0251)(T+460)-20.43)}$

Plant Load-out Emission Rates

POLLUTANT	FACTOR	PTE		EMISSION RATES			
	lb/ton	lb/yr	ton/yr	lb/hr	lb/yr	ton/yr	
Total PM	0.000522	1829	0.91	0.209	261.0	0.13	uncontrolled rates
Organic PM	0.000341	1195	0.60	0.136	170.5	0.09	see below
TOC	0.004159	14573	7.29	1.664	2079.5	1.04	see below
CO	0.001349	4728	2.36	0.540	674.6	0.34	uncontrolled

Blue Smoke Emissions - Silo Filling & Truck Loading

Facility Name **Diamond Materials**
Facility Location **0**

		Uncontrolled Emissions AP-42 Table 11.1-15							
Pollutant	CAS #	Silo Filling				Load-out			
		EF (%)	lb/ton	lb/hr	ton/yr	EF (%)	lb/ton	lb/hr	ton/yr
Acenaphthene	83-32-9	0.47	1.19E-06	4.77E-04	2.98E-04	0.26	8.86E-07	3.55E-04	2.22E-04
Acenaphthylene	208-96-8	0.014	3.55E-08	1.42E-05	8.89E-06	0.028	9.55E-08	3.82E-05	2.39E-05
Anthracene	120-12-7	0.13	3.30E-07	1.32E-04	8.25E-05	0.07	2.39E-07	9.55E-05	5.97E-05
Benzo(a)anthracene	56-55-3	0.056	1.42E-07	5.69E-05	3.55E-05	0.019	6.48E-08	2.59E-05	1.62E-05
Benzo(b)fluoranthene	205-99-2	Not Detected				0.0076	2.59E-08	1.04E-05	6.48E-06
Benzo(k)fluoranthene	207-08-9	Not Detected				0.0022	7.50E-09	3.00E-06	1.88E-06
Benzo(g,h,i)perylene	191-24-2	Not Detected				0.0019	6.48E-09	2.59E-06	1.62E-06
Benzo(a)pyrene	50-32-8	Not Detected				0.0023	7.84E-09	3.14E-06	1.96E-06
Benzo(e)pyrene	192-97-2	0.0095	2.41E-08	9.65E-06	6.03E-06	0.0078	2.66E-08	1.06E-05	6.65E-06
Chrysene	218-01-9	0.21	5.33E-07	2.13E-04	1.33E-04	0.103	3.51E-07	1.40E-04	8.78E-05
Dibenz(a,h)anthracene	53-40-3	Not Detected				0.00037	1.26E-09	5.05E-07	3.15E-07
Fluoranthene	206-44-0	0.15	3.81E-07	1.52E-04	9.52E-05	0.05	1.70E-07	6.82E-05	4.26E-05
Fluorene	86-73-7	1.01	2.56E-06	1.03E-03	6.41E-04	0.77	2.63E-06	1.05E-03	6.56E-04
Indeno(1,2,3-cd)pyrene	193-39-5	Not Detected				0.00047	1.60E-09	6.41E-07	4.01E-07
2-Methylnaphthalene	91-57-6	5.27	1.34E-05	5.35E-03	3.34E-03	2.38	8.11E-06	3.25E-03	2.03E-03
Naphthalene	91-20-3	1.82	4.62E-06	1.85E-03	1.16E-03	1.25	4.26E-06	1.70E-03	1.07E-03
Perylene	198-55-0	0.03	7.62E-08	3.05E-05	1.90E-05	0.022	7.50E-08	3.00E-05	1.88E-05
Phenanthrene	85-01-8	1.8	4.57E-06	1.83E-03	1.14E-03	0.81	2.76E-06	1.10E-03	6.90E-04
Pyrene	129-00-0	0.44	1.12E-06	4.47E-04	2.79E-04	0.15	5.11E-07	2.05E-04	1.28E-04
TOTAL PAH HAPs		11.4	2.89E-05	1.16E-02	7.24E-03	5.93	2.02E-05	8.09E-03	5.05E-03
Phenol	108-95-2	Not Detected				1.18	4.02E-06	1.61E-03	1.01E-03

Blue Smoke Emissions - Silo Filling & Truck Loading

Facility Name **Diamond Materials**
Facility Location **0**

		Uncontrolled Emissions AP-42 Table 11.1-16							
Pollutant	CAS #	Silo Filling				Load-out			
		EF (%)	lb/ton	lb/hr	ton/yr	EF (%)	lb/ton	lb/hr	ton/yr
Volatile Organic Compounds		100	1.22E-02	4.87	3.05	94	3.91E-03	1.56	0.98
Methane	74-82-8	0.26	3.17E-05	1.27E-02	7.92E-03	6.5	2.70E-04	1.08E-01	6.76E-02
Acetone	67-64-1	0.055	6.70E-06	2.68E-03	1.68E-03	0.046	1.91E-06	7.65E-04	4.78E-04
Ethylene	74-85-1	1.1	1.34E-04	5.36E-02	3.35E-02	0.71	2.95E-05	1.18E-02	7.38E-03
Total non-VOC/non-HAPs		1.4	1.71E-04	6.82E-02	4.27E-02	7.3	3.04E-04	1.21E-01	7.59E-02
Benzene	71-43-2	0.032	3.90E-06	1.56E-03	9.75E-04	0.052	2.16E-06	8.65E-04	5.41E-04
Bromomethane	74-83-9	0.0049	5.97E-07	2.39E-04	1.49E-04	0.0096	3.99E-07	1.60E-04	9.98E-05
2-Butanone	78-93-3	0.039	4.75E-06	1.90E-03	1.19E-03	0.049	2.04E-06	8.15E-04	5.09E-04
Carbon Disulfide	75-15-0	0.016	1.95E-06	7.80E-04	4.87E-04	0.013	5.41E-07	2.16E-04	1.35E-04
Chloroethane	75-00-3	0.004	4.87E-07	1.95E-04	1.22E-04	0.00021	8.73E-09	3.49E-06	2.18E-06
Chloromethane	74-87-3	0.023	2.80E-06	1.12E-03	7.01E-04	0.015	6.24E-07	2.50E-04	1.56E-04
Cumene	92-82-8	Not Detected				0.11	4.57E-06	1.83E-03	1.14E-03
Ethylbenzene	100-41-4	0.038	4.63E-06	1.85E-03	1.16E-03	0.28	1.16E-05	4.66E-03	2.91E-03
Formaldehyde	50-00-0	0.69	8.41E-05	3.36E-02	2.10E-02	0.088	3.66E-06	1.46E-03	9.15E-04
n-Hexane	100-54-3	0.1	1.22E-05	4.87E-03	3.05E-03	0.15	6.24E-06	2.50E-03	1.56E-03
Isooctane	540-84-1	0.00031	3.78E-08	1.51E-05	9.44E-06	0.0018	7.49E-08	2.99E-05	1.87E-05
Methylene Chloride	75-09-2	0.00027	3.29E-08	1.32E-05	8.23E-06	Not Detected			
Styrene	100-42-5	0.0054	6.58E-07	2.63E-04	1.65E-04	0.0073	3.04E-07	1.21E-04	7.59E-05
Tetrachloroethane	127-184-4	Not Detected				0.0077	3.20E-07	1.28E-04	8.01E-05
Toluene	100-88-3	0.062	7.56E-06	3.02E-03	1.89E-03	0.21	8.73E-06	3.49E-03	2.18E-03
Trichlorofluoromethane	75-69-4	Not Detected				0.0013	5.41E-08	2.16E-05	1.35E-05
m-/p-Xylene	1330-20-7	0.2	2.44E-05	9.75E-03	6.09E-03	0.41	1.71E-05	6.82E-03	4.26E-03
o-Xylene	95-47-6	0.057	6.95E-06	2.78E-03	1.74E-03	0.08	3.33E-06	1.33E-03	8.32E-04
Total Volatile Organic HAPs		1.3	1.58E-04	6.34E-02	3.96E-02	1.5	6.24E-05	2.50E-02	1.56E-02

Facility Name
Facility Location

Diamond Materials

Anticipated Production

Dryer / Drum Mixer
Drum Burner
Asphalt Mixer
Particulate Control
Hot Oil Heater
Heater Burner

DB-9640 Stationary 8' x 40' Double Barrel® Dryer Drum Mixer
Phoenix Talon PT-100-O 100 MMBTU Oil Burner with NG train
D-DD-400TPH2TIRE 400 TPH 9025 DuoDrum™ Drum Mixer
BH-77-18 Stationary 76,718 ACFM Pulse Jet Baghouse
Heatec HC-200AS 2.0 MMBTU Hot Oil Heater
Powerflame C2-GO-20B 2.7 MMBTU Gas/Oil Burner

OPERATIONAL PARAMETERS

Production Capacity	400	ton/hr	Stack Exit Height	30	ft
Annual Production	250000	ton/yr	Stack Diameter (ID)	50.25	in
Max RAP per mix	50	%	Stack Area	13.77	ft ²
RAP Usage per yr	50	%	Stack Velocity	92.8	ft/sec
Avg AC per mix	5	%		5570.5	ft/min
Exhaust Flow Rate	76718	ACFM			
Standard Flow Rate	39060	DSCFM			
Maximum Heat Input	100	MMBTU			
Exhaust Temperature	240	F	<i>Typical exhaust temperature range: 200 - 375 °F</i>		
Exhaust Moisture	32.5	%	<i>Typical stack moisture range: 30 - 35 %</i>		

PRODUCTION NOTES	BAGHOUSE SPECIFICATIONS
Plant's rated capacity based on production of 300F conventional-type virgin surface mix with 5% composite aggregate moisture removal at sealevel.	* BCS490 exhaust fan with 300hp VFD direct drive
ACFM - airflow in ft ³ /min at temperature DSCFM = dry standard airflow in ft ³ /min (corrected to 68F, 1 atm, dry)	* Pulse Jet cleaning system with self-adjusting frequency to maintain 2 - 6 inWC differential pressure (ΔP) across filter media
Heat input based on firing rate required for given production rate @ design conditions	* Inertial separator located at inlet for coarse particle collection
	* (1152) 4-5/8" dia X 10' long 14-oz Aramid fiber felt bags contained in one compartment
	* 13,950 sq.ft. of cloth @ 5.5 fpm filtering velocity (air/cloth)
	* Vertical exhaust stack with unobstructed opening

Raw Material Usage Rates

	lb/hr	ton/hr	gal/hr	ton/yr	gal/yr	
Virgin Aggregate	760000	380		237500		(NO RAP)
Liquid AC (8.5 lb/gal)	40000	20	4706	12500	2.9E+6	
Recycled material	400000	200		62500		(RAP)
Virgin aggregate	380000	190		178125		
Liquid AC (8.5 lb/gal)	20000	10	2353	9375	2.2E+6	

Filterable Particulate Emissions (AP-42 Table 11.1-3)

	%	gr/dscf	lb/hr	ton/yr
Uncontrolled Filterable PM *		107.5	36000	10000
Controlled Filterable PM		0.04	13.39	4.19
Control Efficiency	99.96	<i>* Filterable PM inlet loading based on Manufacturer Data</i>		
Uncontrolled Filterable PM-10		7.6	2560	800
Controlled Filterable PM-10		0.005	1.56	0.49
PM-10 Control Efficiency	99.94			
Uncontrolled PM-2.5		1.8	600	188
Controlled PM-2.5		0.003	1.16	0.36
PM-2.5 Control Efficiency	99.81			

Condensable Particulate Emissions (AP-42 Table 11.1-3)

	%	gr/dscf	lb/hr	ton/yr
Uncontrolled Inorganic PM		0.009	2.96	0.93
Uncontrolled Organic PM		0.069	23	7
Controlled Organic PM		0.014	4.80	15.00
Organic PM Control Efficiency	79.31			

The following charts are the projected annual facility emissions assuming exclusive use of the listed fuel.

Annual LPG Emission Rates (ton/yr)*

POLLUTANTS	Dryer / Baghouse	Heater	Silo Filling	Truck Loadout	TOTALS
Filterable PM	4.19	0.17	0.07	0.07	4.5
PM10	0.49				0.5
PM2.5	0.36				0.4
GHGs - CO2e	4163				4162.5
Sulfur Dioxide	0.51	3.10			3.6
Carbon Monoxide	16.25	0.44	0.15	0.17	17.0
Oxides of Nitrogen	4	1.7			5.7
Volatile Organics	4	0.45	1.52	0.49	6.5
HAPS	0.66	0.00E+00	2.34E-02	1.03E-02	0.7

Annual Natural Gas Emission Rates (ton/yr)*

POLLUTANTS	Dryer / Baghouse	Heater	Silo Filling	Truck Loadout	TOTALS
Filterable PM	4.19	0.06	0.07	0.07	4.4
PM10	0.49				0.5
PM2.5	0.36				0.4
GHGs - CO2e	4163				4162.5
Sulfur Dioxide	0.425	0.02			0.4
Carbon Monoxide	16.25	0.44	0.15	0.17	17.0
Oxides of Nitrogen	3.25	1.1			4.3
Volatile Organics	4	0.30	1.52	0.49	6.3
HAPS	0.66	2.97E-04	2.34E-02	1.03E-02	0.7

* The facility will combust propane in the main dum mix burner until natural gas is available at the site. At that time, the burner will switch to natural gas as the primary fuel source. The hot oil heater will start out firing on No. 2 fuel oil. It will switch to NG combustion once that fuel is available.

Facility Name **Diamond Materials**
 Facility Location **0**

Burner Fuels - Net Heating Values & Usage Rates

Natural Gas	BTU/unit	Sulfur	scf/hr	scf/yr	therm/yr
	1037	0.0017			
			96.4E+3	60.3E+6	602.7E+0

Greenhouse Gases AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Carbon Dioxide	124-38-9	44.01	33	57816	13200	4125
Methane	74-82-8	16.04	0.012	21.02	4.8	1.5
Total CO2e			33.3	58342	13320	4163

Criteria Pollutants AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Sulfur Dioxide	7446-09-5	64.06	0.0034	5.96	1.4	0.4
Carbon Monoxide	630-08-0	28.01	0.13	227.76	52.0	16.3
Oxides of Nitrogen	10102-44-0	46.0	0.026	45.55	10.4	3.3
Volatile Organics	74-98-6	44.1	0.032	56.06	12.8	4.0

NON-HAP Organics AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Butane	106-97-8	58.1	0.00067	1.17	0.268	0.08375
Ethylene	74-85-1	28.05	0.007	12.26	2.80	0.88
Heptane	142-82-5	100.2	0.0094	16.47	3.76	1.175
2-Methyl-1-pentane	763-29-1	84.2	0.004	7.01	1.60	0.50
2-Methyl-2-butene	513-35-9	70.1	0.00058	1.02	0.232	0.0725
3-Methylpentane	96-14-0	86.2	0.00019	0.33	0.076	0.02375
l-pentene	109-67-1	70.13	0.0022	3.85	0.880	0.275
n-Pentane	109-66-0	72.15	0.00021	0.37	0.084	0.02625
TOTAL NON-HAP ORGANICS			0.024	42.05	9.60	3.00

NON-PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Benzene	71-43-2	78.11	0.00039	0.683	0.156	0.049
Ethylbenzene	100-41-4	106.17	0.00024	0.420	0.096	0.030
Formaldehyde	50-00-0	30.03	0.0031	5.43	1.24	0.388
Hexane	110-54-3	86.18	0.00092	1.61	0.368	0.115
Methyl Chloroform	71-55-6	133.4	4.80E-05	0.084	0.019	0.006
Xylene	1330-20-7	106.17	0.0002	0.350	0.080	0.025
Isooctane	540-84-1	114.23	4.00E-05	0.070	0.016	0.005
Toluene	108-88-3	92.14	0.00015	0.263	0.060	0.019
TOTAL NON-PAH HAPS			0.0051	8.94	2.04	0.64

Facility Name **Diamond Materials**
 Facility Location **0**

PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Acenaphthene	83-32-9	154.21	1.40E-06	2.45E-03	5.60E-04	1.75E-04
Acenaphthylene	208-96-8	152.2	8.60E-06	1.51E-02	3.44E-03	1.08E-03
Anthracene	120-12-7	178.23	2.20E-07	3.85E-04	8.80E-05	2.75E-05
Benzo(a)anthracene	56-55-3	228.3	2.10E-07	3.68E-04	8.40E-05	2.63E-05
Benzo(a)pyrene	50-32-8	176.5	9.80E-09	1.72E-05	3.92E-06	1.23E-06
Benzo(b)fluoranthene	205-99-2	252.3	1.00E-07	1.75E-04	4.00E-05	1.25E-05
Benzo(e)pyrene	192-97-2	252.3	1.10E-07	1.93E-04	4.40E-05	1.38E-05
Benzo(g,h,i)perylene	191-24-2	276.3	4.00E-08	7.01E-05	1.60E-05	5.00E-06
Benzo(k)fluoranthene	207-08-9	252.3	4.10E-08	7.18E-05	1.64E-05	5.13E-06
Chrysene	218-01-9	228.3	1.80E-07	3.15E-04	7.20E-05	2.25E-05
Fluoranthene	206-44-0	202.3	6.10E-07	1.07E-03	2.44E-04	7.63E-05
Fluorene	86-73-7	166.2	3.80E-06	6.66E-03	1.52E-03	4.75E-04
Indeno(1,2,3-cd)pyrene	193-39-5	276.3	7.00E-09	1.23E-05	2.80E-06	8.75E-07
2-Methylnaphthalene	91-57-6	142.2	7.40E-05	1.30E-01	2.96E-02	9.25E-03
Naphthalene	91-20-3	127.17	9.00E-05	1.58E-01	3.60E-02	1.13E-02
Perylene	198-55-0	252.1	8.80E-09	1.54E-05	3.52E-06	1.10E-06
Phenanthrene	85-01-8	178.2	7.60E-06	1.33E-02	3.04E-03	9.50E-04
Pyrene	129-00-0	202.3	5.40E-07	9.46E-04	2.16E-04	6.75E-05
TOTAL PAH HAPS			0.00019	0.333	7.60E-02	2.38E-02
TOTAL HAPS			0.0053	9.29	2.12	0.66

Trace Metals AP-42 Table 11.1-12

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Antimony	7440-36-0	121.8	1.80E-07	3.15E-04	7.20E-05	2.25E-05
Arsenic	7440-38-2	74.9	5.60E-07	9.81E-04	2.24E-04	7.00E-05
Barium	7440-39-3	137.3	5.80E-06	1.02E-02	2.32E-03	7.25E-04
Cadmium	7440-43-9	112.4	4.10E-07	7.18E-04	1.64E-04	5.13E-05
Chromium	7440-47-3	52.0	5.50E-06	9.64E-03	2.20E-03	6.88E-04
Cobalt	7440-48-4	58.9	2.60E-08	4.56E-05	1.04E-05	3.25E-06
Copper	7440-50-8	63.5	3.10E-06	5.43E-03	1.24E-03	3.88E-04
Hexavalent Chromium	18540-29-9	52.0	4.50E-07	7.88E-04	1.80E-04	5.63E-05
Lead	7439-92-1	207.2	6.20E-07	1.09E-03	2.48E-04	7.75E-05
Manganese	7439-96-5	54.9	7.70E-06	1.35E-02	3.08E-03	9.63E-04
Mercury	7439-97-6	200.6	2.40E-07	4.20E-04	9.60E-05	3.00E-05
Nickel	7440-02-0	58.7	6.30E-05	1.10E-01	2.52E-02	7.88E-03
Phosphorus	7723-14-0	31.0	2.80E-05	4.91E-02	1.12E-02	3.50E-03
Selenium	7782-49-2	79.0	3.50E-07	6.13E-04	1.40E-04	4.38E-05
Silver	7440-22-4	107.9	4.80E-07	8.41E-04	1.92E-04	6.00E-05
Thallium	7440-28-0	204.4	4.10E-09	7.18E-06	1.64E-06	5.13E-07
Zinc	7440-66-6	65.4	6.10E-05	1.07E-01	2.44E-02	7.63E-03

Facility Name **Diamond Materials**
 Facility Location **0**

Burner Fuels - Net Heating Values & Usage Rates					
	BTU/unit	Sulfur		gal/hr	gal/yr
Liquid Propane Gas (LPG)	91500	15	gr/ft ³	1093	683.1E+3

Greenhouse Gases AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Carbon Dioxide	124-38-9	44.01	33	57816	13200	4125
Methane	74-82-8	16.04	0.012	21.02	4.8	1.5
Total CO2e			33.3	58342	13320	4163

Criteria Pollutants AP-42 Tables 11.1-7 & 11.1-8

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton*	ton/yr	lb/hr	ton/yr
Sulfur Dioxide	7446-09-5	64.06	0.1*S/1000	7.2	1.6	0.5
Carbon Monoxide	630-08-0	28.01	0.13	227.76	52.0	16.3
Oxides of Nitrogen	10102-44-0	46.0	0.032	56.06	12.8	4.0
Volatile Organics	74-98-6	44.1	0.032	56.06	12.8	4.0

* SO2 based on fuel usage and sulfur content with documented scrubbing effect by fabric filter applied. Nox based on AP-42 Ch 11.1 Background Ref #209

NON-HAP Organics AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Butane	106-97-8	58.1	0.00067	1.17384	0.268	0.08375
Ethylene	74-85-1	28.05	0.007	12.264	2.80	0.88
Heptane	142-82-5	100.2	0.0094	16.4688	3.76	1.175
2-Methyl-1-pentane	763-29-1	84.2	0.004	7.008	1.60	0.50
2-Methyl-2-butene	513-35-9	70.1	0.00058	1.01616	0.232	0.0725
3-Methylpentane	96-14-0	86.2	0.00019	0.33288	0.076	0.02375
1-pentene	109-67-1	70.13	0.0022	3.8544	0.880	0.275
n-Pentane	109-66-0	72.15	0.00021	0.36792	0.084	0.02625
TOTAL NON-HAP ORGANICS			0.024	42.05	9.60	3.00

NON-PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Benzene	71-43-2	78.11	0.00039	0.683	0.156	0.049
Ethylbenzene	100-41-4	106.17	0.00024	0.420	0.096	0.030
Formaldehyde	50-00-0	30.03	0.0031	5.43	1.24	0.388
Hexane	110-54-3	86.18	0.00092	1.61	0.368	0.115
Methyl Chloroform	71-55-6	133.4	4.80E-05	0.084	0.019	0.006
Xylene	1330-20-7	106.17	0.0002	0.350	0.080	0.025
Isooctane	540-84-1	114.23	4.00E-05	0.070	0.016	0.005
Toluene	108-88-3	92.14	0.00015	0.263	0.060	0.019
TOTAL NON-PAH HAPS			0.0051	8.94	2.04	0.64

Facility Name **Diamond Materials**
 Facility Location **0**

PAH HAPS AP-42 Table 11.1-10

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Acenaphthene	83-32-9	154.21	1.40E-06	2.45E-03	5.60E-04	1.75E-04
Acenaphthylene	208-96-8	152.2	8.60E-06	1.51E-02	3.44E-03	1.08E-03
Anthracene	120-12-7	178.23	2.20E-07	3.85E-04	8.80E-05	2.75E-05
Benzo(a)anthracene	56-55-3	228.3	2.10E-07	3.68E-04	8.40E-05	2.63E-05
Benzo(a)pyrene	50-32-8	176.5	9.80E-09	1.72E-05	3.92E-06	1.23E-06
Benzo(b)fluoranthene	205-99-2	252.3	1.00E-07	1.75E-04	4.00E-05	1.25E-05
Benzo(e)pyrene	192-97-2	252.3	1.10E-07	1.93E-04	4.40E-05	1.38E-05
Benzo(g,h,i)perylene	191-24-2	276.3	4.00E-08	7.01E-05	1.60E-05	5.00E-06
Benzo(k)fluoranthene	207-08-9	252.3	4.10E-08	7.18E-05	1.64E-05	5.13E-06
Chrysene	218-01-9	228.3	1.80E-07	3.15E-04	7.20E-05	2.25E-05
Fluoranthene	206-44-0	202.3	6.10E-07	1.07E-03	2.44E-04	7.63E-05
Fluorene	86-73-7	166.2	3.80E-06	6.66E-03	1.52E-03	4.75E-04
Indeno(1,2,3-cd)pyrene	193-39-5	276.3	7.00E-09	1.23E-05	2.80E-06	8.75E-07
2-Methylnaphthalene	91-57-6	142.2	7.40E-05	1.30E-01	2.96E-02	9.25E-03
Naphthalene	91-20-3	127.17	9.00E-05	1.58E-01	3.60E-02	1.13E-02
Perylene	198-55-0	252.1	8.80E-09	1.54E-05	3.52E-06	1.10E-06
Phenanthrene	85-01-8	178.2	7.60E-06	1.33E-02	3.04E-03	9.50E-04
Pyrene	129-00-0	202.3	5.40E-07	9.46E-04	2.16E-04	6.75E-05
TOTAL PAH HAPS			0.00019	0.333	7.60E-02	2.38E-02
TOTAL HAPS			0.0053	9.29	2.12	0.66

Trace Metals AP-42 Table 11.1-12

POLLUTANT	CASRN	MW	FACTOR	PTE	EMISSION RATES	
			lb/ton	ton/yr	lb/hr	ton/yr
Antimony	7440-36-0	121.8	1.80E-07	3.15E-04	7.20E-05	2.25E-05
Arsenic	7440-38-2	74.9	5.60E-07	9.81E-04	2.24E-04	7.00E-05
Barium	7440-39-3	137.3	5.80E-06	1.02E-02	2.32E-03	7.25E-04
Cadmium	7440-43-9	112.4	4.10E-07	7.18E-04	1.64E-04	5.13E-05
Chromium	7440-47-3	52.0	5.50E-06	9.64E-03	2.20E-03	6.88E-04
Cobalt	7440-48-4	58.9	2.60E-08	4.56E-05	1.04E-05	3.25E-06
Copper	7440-50-8	63.5	3.10E-06	5.43E-03	1.24E-03	3.88E-04
Hexavalent Chromium	18540-29-9	52.0	4.50E-07	7.88E-04	1.80E-04	5.63E-05
Lead	7439-92-1	207.2	6.20E-07	1.09E-03	2.48E-04	7.75E-05
Manganese	7439-96-5	54.9	7.70E-06	1.35E-02	3.08E-03	9.63E-04
Mercury	7439-97-6	200.6	2.40E-07	4.20E-04	9.60E-05	3.00E-05
Nickel	7440-02-0	58.7	6.30E-05	1.10E-01	2.52E-02	7.88E-03
Phosphorus	7723-14-0	31.0	2.80E-05	4.91E-02	1.12E-02	3.50E-03
Selenium	7782-49-2	79.0	3.50E-07	6.13E-04	1.40E-04	4.38E-05
Silver	7440-22-4	107.9	4.80E-07	8.41E-04	1.92E-04	6.00E-05
Thallium	7440-28-0	204.4	4.10E-09	7.18E-06	1.64E-06	5.13E-07
Zinc	7440-66-6	65.4	6.10E-05	1.07E-01	2.44E-02	7.63E-03

Pollutant Emission Rates

Facility Name Diamond Materials
Facility Location 0

Unit Burner HC-200SP 2.0 MMBTU Hot oil Heater with StackPack™ Heat Exchanger
C2-GO-20B Nominal 2.7 MMBTU Gas/Oil Burner

Total Airflow	1366	ACFM	Stack Height	9.41	ft in sq.ft. ft/sec ft/min
Standard Airflow	755	DSCFM	Stack Diameter	12	
Heat Input	2.7	MMBTU	Stack Area	0.79	
Stack Temperature	400	F	Stack Velocity	29.0	
Stack Moisture	10	%		1739.2	

Burner Fuels - Net Heating Values & Usage Rates *

	BTU/unit	Sulfur		ft ³ /hr	ft ³ /yr
Natural Gas	1037	0.0017	gr/scf	2.60E+03	22.8E+6
				gal/hr	gal/yr
No. 2 Fuel Oil	141000	0.25	%	19.1	167.7E+3

* Usage rates based on exclusive use of each fuel annually (8760 hrs)

Criteria Pollutants - NATURAL GAS Mfr. Data

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Particulates			0.0048	0.013	0.057
Sulfur Dioxide	7446-09-5	64.06	1.05 * S	0.005	0.021
Carbon Monoxide	630-08-0	28.01	0.037	0.100	0.438
Oxides of Nitrogen	10102-44-0	46.05	0.092	0.248	1.09
Volatile Organics	74-98-6	44.1	0.025	0.068	0.296

HAPS - NATURAL GAS AP-42 Table 11.1-13

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Formaldehyde	50-00-0	30.03	2.60E-08	6.8E-05	3.0E-04

Pollutant Emission Rates

Criteria Pollutants - No2 Oil Mfr. Data

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Particulates			0.0143	0.039	0.169
Sulfur Dioxide	7446-09-5	64.06	1.05 * S	0.71	3.10
Carbon Monoxide	630-08-0	28.01	0.037	0.100	0.438
Oxides of Nitrogen	10102-44-0	46.05	0.14	0.378	1.66
Volatile Organics	74-98-6	44.1	0.038	0.103	0.449

HAPS - No2 Oil AP-42 Table 11.1-13

POLLUTANT	CASRN	MW	FACTOR	EMISSION RATES	
			lb/MBtu	lb/hr	ton/yr
Formaldehyde	50-00-0	30.03	3.50E-06	6.7E-05	2.9E-04
Acenaphthene	83-32-9	154.21	5.30E-07	1.0E-05	4.4E-05
Acenaphthylene	208-96-8	152.2	2.00E-07	3.8E-06	1.7E-05
Anthracene	120-12-7	178.23	1.80E-07	3.4E-06	1.5E-05
Benzo(b)fluoranthene	205-99-2	252.3	1.00E-07	1.9E-06	8.4E-06
Fluoranthrene	206-44-0	202.3	4.40E-08	8.4E-07	3.7E-06
Fluorene	86-73-7	166.2	3.20E-08	6.1E-07	2.7E-06
Naphthalene	91-20-3	127.17	1.70E-05	3.3E-04	1.4E-03
Phenanthrene	85-01-8	178.2	4.90E-06	9.4E-05	4.1E-04
Pyrene	129-00-0	202.3	3.20E-08	6.1E-07	2.7E-06

Blue Smoke Emissions - Silo Filling & Truck Loading

Facility Name Diamond Materials
Facility Location 0

Asphalt Volatility (V) -0.50
Mix Temp 325 deg F

Silo Filling Emission Factors AP-42 Table 11.1-14

Total PM $EF = 0.000332 + 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$
Organic PM $EF = 0.00105(-V)e^{((0.0251)(T+460)-20.43)}$
TOC $EF = 0.0504(-V)e^{((0.0251)(T+460)-20.43)}$
CO $EF = 0.00488(-V)e^{((0.0251)(T+460)-20.43)}$

Silo Filling Emission Rates

POLLUTANT	FACTOR	PTE		EMISSION RATES			
	lb/ton	lb/yr	ton/yr	lb/hr	lb/yr	ton/yr	
Total PM	0.000586	2053	1.03	0.234	146.5	0.07	uncontrolled rates
Organic PM	0.000254	890	0.44	0.102	63.5	0.03	see below
TOC	0.012187	42702	21.35	4.875	3046.7	1.52	see below
CO	0.001180	4135	2.07	0.472	295.0	0.15	uncontrolled

Plant Load-out Emission Factors AP-42 Table 11.1-14

Total PM $EF = 0.000181 + 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$
Organic PM $EF = 0.00141(-V)e^{((0.0251)(T+460)-20.43)}$
TOC $EF = 0.0172(-V)e^{((0.0251)(T+460)-20.43)}$
CO $EF = 0.00558(-V)e^{((0.0251)(T+460)-20.43)}$

Plant Load-out Emission Rates

POLLUTANT	FACTOR	PTE		EMISSION RATES			
	lb/ton	lb/yr	ton/yr	lb/hr	lb/yr	ton/yr	
Total PM	0.000522	1829	0.91	0.209	130.5	0.07	uncontrolled rates
Organic PM	0.000341	1195	0.60	0.136	85.2	0.04	see below
TOC	0.004159	14573	7.29	1.664	1039.7	0.52	see below
CO	0.001349	4728	2.36	0.540	337.3	0.17	uncontrolled

Blue Smoke Emissions - Silo Filling & Truck Loading

Facility Name **Diamond Materials**
Facility Location **0**

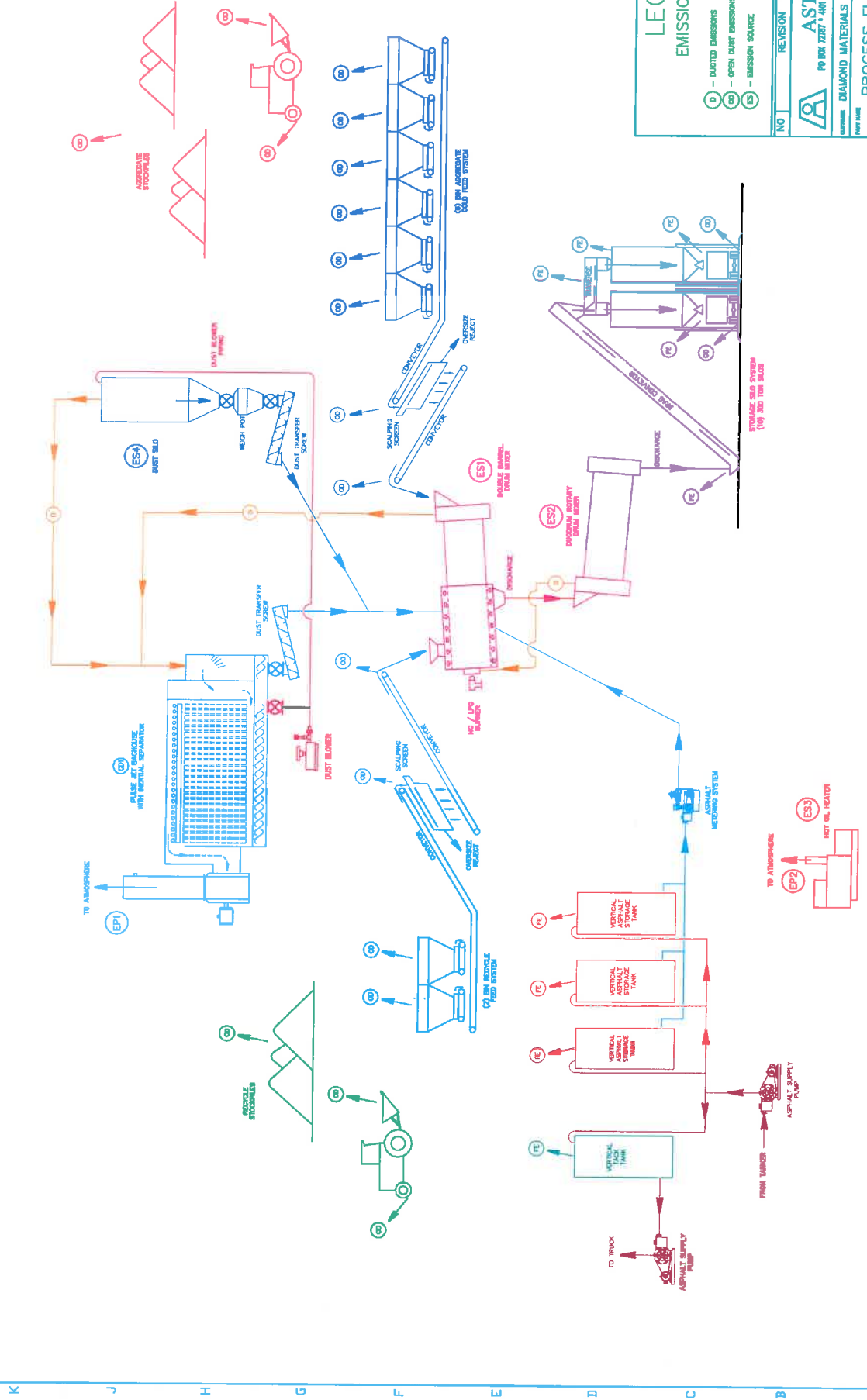
		Uncontrolled Emissions AP-42 Table 11.1-15								
Pollutant	CAS #	Silo Filling				Load-out				
		EF (%)	lb/ton	lb/hr	ton/yr	EF (%)	lb/ton	lb/hr	ton/yr	
Acenaphthene	83-32-9	0.47	1.19E-06	4.77E-04	1.49E-04	0.26	8.86E-07	3.55E-04	1.11E-04	
Acenaphthylene	208-96-8	0.014	3.55E-08	1.42E-05	4.44E-06	0.028	9.55E-08	3.82E-05	1.19E-05	
Anthracene	120-12-7	0.13	3.30E-07	1.32E-04	4.13E-05	0.07	2.39E-07	9.55E-05	2.98E-05	
Benzo(a)anthracene	56-55-3	0.056	1.42E-07	5.69E-05	1.78E-05	0.019	6.48E-08	2.59E-05	8.10E-06	
Benzo(b)fluoranthene	205-99-2	Not Detected				0.0076	2.59E-08	1.04E-05	3.24E-06	
Benzo(k)fluoranthene	207-08-9	Not Detected				0.0022	7.50E-09	3.00E-06	9.38E-07	
Benzo(g,h,i)perylene	191-24-2	Not Detected				0.0019	6.48E-09	2.59E-06	8.10E-07	
Benzo(a)pyrene	50-32-8	Not Detected				0.0023	7.84E-09	3.14E-06	9.80E-07	
Benzo(e)pyrene	192-97-2	0.0095	2.41E-08	9.65E-06	3.01E-06	0.0078	2.66E-08	1.06E-05	3.32E-06	
Chrysene	218-01-9	0.21	5.33E-07	2.13E-04	6.66E-05	0.103	3.51E-07	1.40E-04	4.39E-05	
Dibenz(a,h)anthracene	53-40-3	Not Detected				0.00037	1.26E-09	5.05E-07	1.58E-07	
Fluoranthene	206-44-0	0.15	3.81E-07	1.52E-04	4.76E-05	0.05	1.70E-07	6.82E-05	2.13E-05	
Fluorene	86-73-7	1.01	2.56E-06	1.03E-03	3.21E-04	0.77	2.63E-06	1.05E-03	3.28E-04	
Indeno(1,2,3-cd)pyrene	193-39-5	Not Detected				0.00047	1.60E-09	6.41E-07	2.00E-07	
2-Methylnaphthalene	91-57-6	5.27	1.34E-05	5.35E-03	1.67E-03	2.38	8.11E-06	3.25E-03	1.01E-03	
Naphthalene	91-20-3	1.82	4.62E-06	1.85E-03	5.78E-04	1.25	4.26E-06	1.70E-03	5.33E-04	
Perylene	198-55-0	0.03	7.62E-08	3.05E-05	9.52E-06	0.022	7.50E-08	3.00E-05	9.38E-06	
Phenanthrene	85-01-8	1.8	4.57E-06	1.83E-03	5.71E-04	0.81	2.76E-06	1.10E-03	3.45E-04	
Pyrene	129-00-0	0.44	1.12E-06	4.47E-04	1.40E-04	0.15	5.11E-07	2.05E-04	6.39E-05	
TOTAL PAH HAPs		11.4	2.89E-05	1.16E-02	3.62E-03	5.93	2.02E-05	8.09E-03	2.53E-03	
Phenol	108-95-2	Not Detected				1.18	4.02E-06	1.61E-03	5.03E-04	

Blue Smoke Emissions - Silo Filling & Truck Loading

Facility Name **Diamond Materials**
Facility Location **0**

		Uncontrolled Emissions AP-42 Table 11.1-16							
Pollutant	CAS #	Silo Filling				Load-out			
		EF (%)	lb/ton	lb/hr	ton/yr	EF (%)	lb/ton	lb/hr	ton/yr
Volatile Organic Compounds		100	1.22E-02	4.87	1.52	94	3.91E-03	1.56	0.49
Methane	74-82-8	0.26	3.17E-05	1.27E-02	3.96E-03	6.5	2.70E-04	1.08E-01	3.38E-02
Acetone	67-64-1	0.055	6.70E-06	2.68E-03	8.38E-04	0.046	1.91E-06	7.65E-04	2.39E-04
Ethylene	74-85-1	1.1	1.34E-04	5.36E-02	1.68E-02	0.71	2.95E-05	1.18E-02	3.69E-03
Total non-VOC/non-HAPs		1.4	1.71E-04	6.82E-02	2.13E-02	7.3	3.04E-04	1.21E-01	3.80E-02
Benzene	71-43-2	0.032	3.90E-06	1.56E-03	4.87E-04	0.052	2.16E-06	8.65E-04	2.70E-04
Bromomethane	74-83-9	0.0049	5.97E-07	2.39E-04	7.46E-05	0.0096	3.99E-07	1.60E-04	4.99E-05
2-Butanone	78-93-3	0.039	4.75E-06	1.90E-03	5.94E-04	0.049	2.04E-06	8.15E-04	2.55E-04
Carbon Disulfide	75-15-0	0.016	1.95E-06	7.80E-04	2.44E-04	0.013	5.41E-07	2.16E-04	6.76E-05
Chloroethane	75-00-3	0.004	4.87E-07	1.95E-04	6.09E-05	0.00021	8.73E-09	3.49E-06	1.09E-06
Chloromethane	74-87-3	0.023	2.80E-06	1.12E-03	3.50E-04	0.015	6.24E-07	2.50E-04	7.80E-05
Cumene	92-82-8	Not Detected				0.11	4.57E-06	1.83E-03	5.72E-04
Ethylbenzene	100-41-4	0.038	4.63E-06	1.85E-03	5.79E-04	0.28	1.16E-05	4.66E-03	1.46E-03
Formaldehyde	50-00-0	0.69	8.41E-05	3.36E-02	1.05E-02	0.088	3.66E-06	1.46E-03	4.57E-04
n-Hexane	100-54-3	0.1	1.22E-05	4.87E-03	1.52E-03	0.15	6.24E-06	2.50E-03	7.80E-04
Isooctane	540-84-1	0.00031	3.78E-08	1.51E-05	4.72E-06	0.0018	7.49E-08	2.99E-05	9.36E-06
Methylene Chloride	75-09-2	0.00027	3.29E-08	1.32E-05	4.11E-06	Not Detected			
Styrene	100-42-5	0.0054	6.58E-07	2.63E-04	8.23E-05	0.0073	3.04E-07	1.21E-04	3.80E-05
Tetrachloroethane	127-184-4	Not Detected				0.0077	3.20E-07	1.28E-04	4.00E-05
Toluene	100-88-3	0.062	7.56E-06	3.02E-03	9.44E-04	0.21	8.73E-06	3.49E-03	1.09E-03
Trichlorofluoromethane	75-69-4	Not Detected				0.0013	5.41E-08	2.16E-05	6.76E-06
m-/p-Xylene	1330-20-7	0.2	2.44E-05	9.75E-03	3.05E-03	0.41	1.71E-05	6.82E-03	2.13E-03
o-Xylene	95-47-6	0.057	6.95E-06	2.78E-03	8.68E-04	0.08	3.33E-06	1.33E-03	4.16E-04
Total Volatile Organic HAPs		1.3	1.58E-04	6.34E-02	1.98E-02	1.5	6.24E-05	2.50E-02	7.80E-03

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LEGEND

EMISSION POINTS

- EP - DUCTED EMISSIONS
- EP - EMISSION POINT
- OD - OPEN DUST EMISSIONS
- ES - EMISSION SOURCE
- FE - FUGITIVE EMISSIONS

NO	REVISION	APPR	BY	DATE

ASTEC, INC
 PO BOX 7207 - HOT LANE AVENUE - GAITHERSBURG, MD 20878

DIAMOND MATERIALS

PROCESS FLOW DIAGRAM

NO	REVISION	APPR	BY	DATE
21-174				07/07/2025

HIGH RAP DOUBLE BARREL / DUODRUM FACILITY

DATE: 07/07/2025

REV: 0

FD-DBXDD

TELERANCES ON DIMENSIONS UNLESS OTHERWISE NOTED ON THE DRAWING ARE:
 MACHINING (UNLESS OTHERWISE SPECIFIED) - FRACTIONAL (1/16") - HOLE SIZE (-0.005" +0.005")
 AND USE OF CORNER RADIUS UNLESS OTHERWISE SPECIFIED

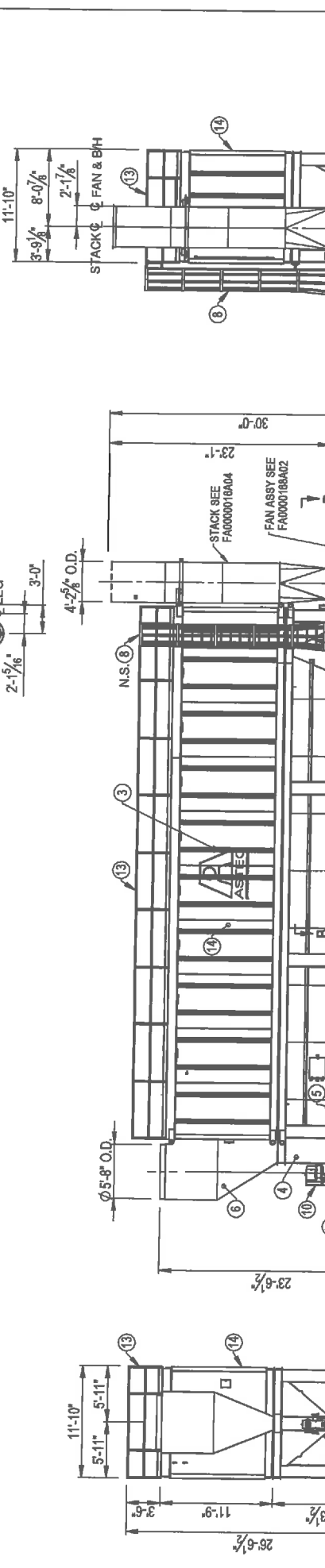
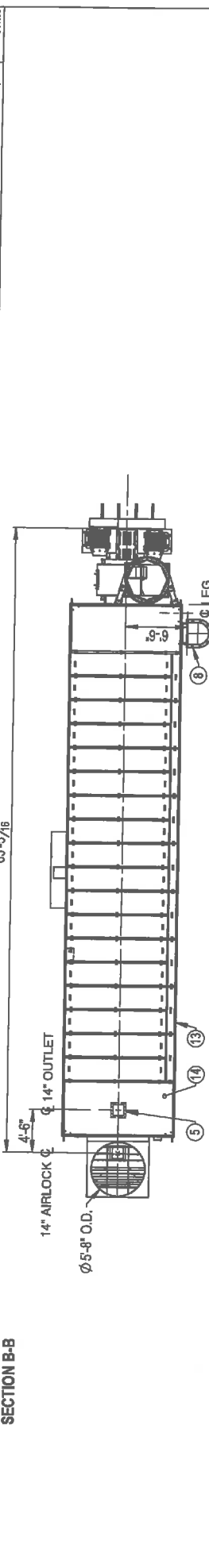
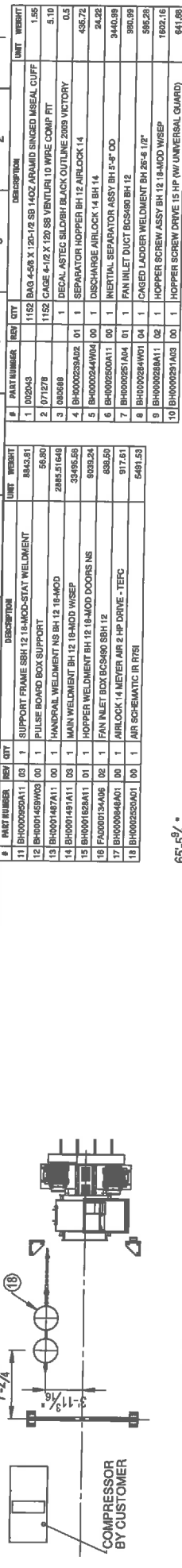
21-174 Diamond Materials - Process Flow Diagram

SAFETY FIRST - THINK IT THROUGH

#	PART NUMBER	REV	QTY	DESCRIPTION	UNIT	WEIGHT
11	BH000020A11	00	1	SUPPORT FRAME SBH 12 18-MODS-STAT WELDMENT	8843.81	
12	SBH00145HW03	00	1	PULSE BOARD BOX SUPPORT	56.80	
13	BH0001487A11	00	1	HANDRAIL WELDMENT NS BH 12 18-MOD	2885.51(648)	
14	BH0001487A11	03	1	MAIN WELDMENT BH 12 18-MOD WISEP	30795.525	
15	BH0001828A11	01	1	HOPPER WELDMENT BH 12 18-MOD DOORS NS	9093.24	
16	FA0000134AM6	02	1	FAN INLET BOX DC5890 SBH 12	899.50	
17	BH0000048A01	00	1	AIRLOCK 14 MEYER AIR 2 HP DRIVE - TERC	917.61	
18	BH0002520A01	00	1	AIR SCHEMATIC IR R791	5491.25	

#	PART NUMBER	REV	QTY	DESCRIPTION	UNIT	WEIGHT
1	002043					
2	071278					
3	080668					
4	BH0002520A02	01	1	DISCHARGE AIRLOCK 14 BH 14	456.72	
5	BH0002520A01	00	1	DISCHARGE AIRLOCK 14 BH 14	456.72	
6	BH0002520A01	00	1	DISCHARGE AIRLOCK 14 BH 14	456.72	
7	BH0002520A01	00	1	DISCHARGE AIRLOCK 14 BH 14	456.72	
8	BH0002520A01	00	1	DISCHARGE AIRLOCK 14 BH 14	456.72	
9	BH0002520A01	00	1	DISCHARGE AIRLOCK 14 BH 14	456.72	
10	BH0002520A01	00	1	DISCHARGE AIRLOCK 14 BH 14	456.72	

SAFETY FIRST - THINK IT THROUGH



REV	DESCRIPTION	DATE	BY	ECO
1	ASTEC, INC			
2	4101 KERRONE AVE			
3	CHATTANOOGA, TN 37407			
4	PRIME & ORION, WI 53081			
5	20-403			
6	RIVERSTONE GROUP, INC			
7	SBH77-18 PULSE JET BAGHOUSE WISEP			
8	BIGPOUSE - STADIUM - WINDTUNNEL SEPARATOR			
9	01/01/2010			
10	08/07/2004			
11	08/02/2004			

ALL WELDS TO BE MINIMUM 1/8\"/>

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Section 1:

IDENTIFICATION

Product Name: Hot Mix Asphalt (HMA)
 Generic ID: Hot Mix Asphalt, HMA, Blacktop, Bituminous Concrete, SuperPave Mixes
 Usage and Restrictions: HMA is used for paving roads, driveways, parking lots and other surface, base, or sub-base applications.
 Supplier Details: York Materials Group
 950 Smile Way
 York, PA 17404
 Emergency Phone #: 717.771.3545

Section 2:

HAZARD(S) IDENTIFICATION

GHS Classification: Carcinogenicity: 2 H351

GHS Label Elements:



Signal Word: Warning

Hazard Statements: H351 - Suspected of causing cancer.

Precautionary Statements: P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P280 - Wear protective gloves, protective clothing, and eye protection.
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P405 - Store locked up.
 P501 - Dispose of contents/container in accordance with local, regional, national, and international regulations.

Other Hazards: Product contains crystalline silica; repeated inhalation of crystalline silica causes damage to organs and may cause cancer. Individuals with lung disease (e.g. bronchitis, emphysema, COPD, pulmonary disease) can be aggravated by exposure. Dust may cause mechanical irritation to eyes, nose, throat, and lungs. Direct contact may result in corneal injury. Additionally, the product contains low levels of polynuclear aromatics (PNAs), which may cause skin lesions and skin cancer.
 At elevated temperatures, this product will cause thermal burns and may release toxic hydrogen sulfide (H₂S). Hydrogen sulfide is a fatal and highly flammable gas with a rotten egg odor that quickly causes odor fatigue. Explosion can occur if hydrogen sulfide is allowed to accumulate in the headspace of closed systems in the presence of an ignition source.

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient(s)	CAS Number	% (by weight)	OSHA/MSHA PEL (mg/M ³)	ACGIH TLV (mg/M ³)
Limestone	1317-65-3	50-100	N/A	N/A
Quartz	14808-60-7	<1.0	10/(%SiO ₂ +2)(R)	0.1(1997)(R)
Carbonic Acid	546-93-0	<50	N/A	N/A
Petroleum Asphalt Oil	8052-42-4	<10	N/A	.05

Section 4: FIRST AID MEASURES

Description of Necessary First Aid Measures:

Eye Contact: Immediately flush with plenty of water for at least 15 minutes. Hold eyelids apart. Remove contacts if present and easy to do. Beyond flushing, do not attempt to remove material from the eye(s). Get medical attention if irritation develops or persists.

Inhalation: Move to fresh air. Call a physician if symptoms develop or persist.

Skin Contact: Wash off with soap and water. Get medical attention if irritation develops and persists.

Ingestion: Rinse mouth and drink plenty of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Most Important Symptoms & Effects, Both Acute and Delayed:

Emissions from asphalt are suspected of causing cancer. Dust may cause immediate or delayed irritation to eyes, skin and respiratory tract. During processing, inhalation of fumes may cause dizziness and/or irritation to the eyes, nose, and throat. This product if heated, may release asphalt fumes that may cause irritation to the throat, nose and skin irritation. If inhaled, the fumes may cause nausea, headache, or dizziness. Prolonged and repeated contact with cold asphalt may cause dermatitis and other skin problems, while contact with hot product will cause thermal burns. If ingested, the product may cause internal organ irritation and may cause possible nausea, vomiting, and diarrhea. Hot asphalt droplets or particles can cause eye burns or irritation. A splash in the eye of hot asphalt can cause serious eye injury. Hot molten product will cause thermal burns to the skin.

Skin Contact: HMA dust may cause dry skin, discomfort, irritation and dermatitis. When this product is subject to high heat RAP will cause severe burns.

Eye Contact: Eye contact to airborne dust may cause immediate or delayed irritation or inflammation. Eye exposures require immediate first aid and medical attention to prevent significant damage to the eye.

Ingestion: Do not ingest HMA. Ingestion of small quantities is not known to be harmful; ingesting large quantities can cause intestinal distress. May cause nausea, vomiting, and diarrhea.

Chronic Symptoms: Emissions from asphalt are suspected of causing cancer. If dust is generated, repeated exposure through inhalation may cause cancer or lung disease. Repeated or prolonged skin contact may cause dermatitis. Product may contain polynuclear aromatic hydrocarbons (PNAs). Evidence from animal studies indicates that prolonged exposure to various PNAs can cause cancer of the lungs, skin, and other organs.

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Inhalation:

Exposure to fumes, vapors, or dust may cause irritation of the nose, throat, and respiratory system. Hot HMA releases irritating fumes or vapors; symptoms may include headache, dizziness, loss of coordination, and drowsiness. Cutting, crushing or grinding hardened asphalt will release dust.

Breathing dust may cause irritation and silicosis. The three types of silicosis include: 1) Simple chronic silicosis – which results from long-term exposure (more than 20 years) to low amounts of respirable crystalline silica. Nodules of chronic inflammation and scarring provoked by the respirable crystalline silica form in the lungs and chest lymph nodes. This disease may feature breathlessness and may resemble chronic obstructive pulmonary disease (COPD); 2) Accelerated silicosis – occurs after exposure to larger amounts of respirable crystalline silica over a shorter period of time (5-15 years); 3) Acute silicosis – results from short-term exposure to very large amounts of respirable crystalline silica. The lungs become very inflamed and may fill with fluid, causing severe shortness of breath and low blood oxygen levels. Inflammation, scarring, and symptoms progress faster in accelerated silicosis than in simple silicosis. Progressive massive fibrosis may occur in simple or accelerated silicosis, but is more common in the accelerated form. Progressive massive fibrosis results from severe scarring and leads to the destruction of normal lung structures.

Some studies show that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders such as scleroderma (thickening of the skin), systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. Silicosis increases the risk of tuberculosis. Some studies show an increased incidence of chronic kidney disease and end-stage renal disease in workers exposed to respirable crystalline silica.

WARNING: irritating and toxic hydrogen sulfide gas may be present. Greater than 15-20ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50-500 ppm can cause headache, nausea, and dizziness. Continued exposure at these levels can lead to loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500ppm can cause rapid unconsciousness and death if not promptly revived

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary:

If burned by hot product, cool affected area immediately with cool water. Do not attempt to remove solidified material from skin or eyes. Seek medical attention immediately. If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container, label, or SDS at hand.

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Section 5: FIRE-FIGHTING MEASURES

Extinguishing Media:

- Suitable Extinguishing Media:** Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO2)
- Unsuitable Extinguishing Media:** Do not use water when molten material is involved. Use of water on hot/molten product will result in a violent expansion as the water turns to steam causing explosion with massive force.
- Special Protective Equipment For Fire-Fighters:** Use protective equipment appropriate for surrounding materials. No specific precautions.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Do not breathe dust, vapor, or gas. Avoid all contact with skin, eyes, or clothing. Equip cleanup crew with proper protection. Emergency Procedures: Ventilate area.

Methods and Materials For Containment and Cleaning-Up

Allow liquid material to solidify before cleaning up. Place spilled material into a container. Avoid actions that cause dust to become airborne. Avoid inhalation of dust. Wear appropriate protective equipment.

Section 7: HANDLING AND STORAGE

Precautions for Safe Handling:

Additional Hazards When Processed: If stored under heat for extended periods or significantly agitated, this material might evolve or release hydrogen sulfide, a flammable gas. Hydrogen sulfide is a toxic gas that can be fatal. Exercise caution and ensure adequate ventilation. Cutting, crushing or grinding hardened asphalt or other crystalline silica-bearing materials will release respirable crystalline silica. Use all appropriate measures of dust control or suppression and Personal Protective Equipment (PPE) described in Section 8.

Precautions for Safe Handling: Do not handle until all safety precautions have been read and understood. Protect skin and eyes from contact with molten material. Do not breathe dust or fumes.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work. Wash contaminated clothing before reuse.

Conditions for Safe Storage, Including Any Incompatibilities:

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use.

Incompatible Materials: Fluorine, magnesium, acids, alum, ammonium salts, strong acids, formaldehyde.

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Section 8:

EXPOSURE CONTROLS AND PERSONAL MEASURES

Individual Protection Measures:

- Eye/Face Protection:** Safety glasses with side shields should be worn as a minimum protection. Wear chemical goggles to prevent eye contact with material.
- Skin Protection:** Resistant gloves should be worn to protect hands. Protective clothing should be worn to prevent skin contact.
- Respiratory Protection:** When first opening tank trucks, railcars, or other containers, it is recommended to wear appropriate NIOSH approved respiratory protection. Appropriate NIOSH approved respiratory protection must be worn if material is heated and/or generates asphalt fumes and/or hydrogen sulfide above the OSHA and ACGIH recommended limits.
- Ventilation:** Use local exhaust or general dilution ventilation to control exposure within applicable limits.
- Thermal Hazard Protection:** If material is hot, wear thermally resistant protective gloves. Protect skin and eyes from contact with molten material.

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Appearance:	Coarse granular black material
	Color:	Black
	Odor:	Slight petroleum odor
	Odor Threshold:	Not applicable.
	Physical State:	Solid.
	pH:	Not applicable.
	Melting/Freezing Point:	Not applicable.
	Boiling Point:	>350F
	Flash Point:	>93.3C (200F)
	Evaporation Rate:	Not applicable.
	Flammability:	Not flammable.
	Lower Flammability/Explosive Limit:	Not applicable.
	Upper Flammability/Explosive Limit:	Not applicable.
	Vapor Pressure:	Not applicable.
	Vapor Density:	Not applicable.
	Relative Density/Specific Gravity:	Not applicable.
	Solubility:	Insoluble in water.
	Partition coefficient: n-octanol/water:	Not applicable.
	Auto-ignition Temperature:	Not applicable.
	Decomposition Temperature:	Not applicable.
	Viscosity:	Not applicable.
	SADT:	Not applicable.
	Oxidizing Properties:	Not applicable.
	Explosive Properties:	Not expected to present an explosion hazard due to mechanical impact or static discharge.

Section 10: STABILITY AND REACTIVITY

Reactivity:	May release poisonous hydrogen sulfide.
Chemical Stability:	Material is stable under normal conditions.
Hazardous Reaction Possibility:	No dangerous reaction known under conditions of normal use.
Conditions to avoid:	Keep away from ignition sources. Avoid contact with incompatible materials.
Incompatible materials:	Fluorine, magnesium, acids, alum, ammonium salts, strong acids, formaldehyde.
Hazardous decomposition:	Thermal decomposition generates: Carbon oxides (CO, CO ₂), Hydrocarbons. Hot asphalt can release toxic Hydrogen Sulfide. Hydrogen Sulfide can accumulate in vapor space of tanks and vessels during transfer and storage of this material. Hydrogen sulfide is a toxic gas that can be fatal.

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Section 11: TOXICOLOGICAL INFORMATION

For questions regarding toxicological information refer to contact information in Section 1.

Section 12: ECOLOGICAL INFORMATION

For questions regarding ecological information refer to contact information in Section 1.

Section 13: DISPOSAL CONSIDERATIONS

Dispose of waste and containers in compliance with applicable Federal, State, Provincial and Local regulations. Where possible, recycling of used and unused uncontaminated substance is recommended.

Section 14: TRANSPORTATION INFORMATION

14.1. In Accordance with DOT

Proper Shipping Name : ELEVATED TEMPERATURE LIQUID, N.O.S. at or above 100 C and below its flash point (Asphalt)
Hazard Class : 9
Identification Number : UN3257
Label Codes : 9 Packing Group : III ERG Number : 128

14.2. In Accordance with IMDG

Proper Shipping Name : ELEVATED TEMPERATURE LIQUID, N.O.S. at or above 100 C and below its flash point (Asphalt)
Hazard Class : 9
Identification Number : UN3257
Label Codes : 9 Packing Group : III EmS-No. (Fire) : F-A EmS-No. (Spillage) : S-P

14.3. In Accordance with IATA

Proper Shipping Name : ELEVATED TEMPERATURE LIQUID, N.O.S. at or above 100 C and below its flash point (Asphalt)
Identification Number : UN3257
Hazard Class : 9
Label Codes : 9 ERG Code (IATA) : 9L

14.4. In Accordance with TDG

Proper Shipping Name : ELEVATED TEMPERATURE LIQUID, N.O.S. at or above 100 C and below its flash point (Asphalt)
Packing Group : III
Hazard Class : 9
Identification Number : UN3257
Label Codes : 9

SAFETY DATA SHEET

Hot Mix Asphalt (HMA)



Section 15:

REGULATORY INFORMATION

**Safety, Health and Environmental Regulations/
Legislations Specific For The Chemical:**

US: SDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Limestone (1317-65-3): Listed on the United States TSCA (Toxic Substances Control Act) inventory

Carbonic acid, magnesium
salt (1:1) (546-93-0): Listed on the United States TSCA (Toxic Substances Control Act) inventory

Quartz (14808-60-7): Listed on the United States TSCA (Toxic Substances Control Act) inventory
SARA Sect. 311/312 Hazard Classes: Immediate (acute) health hazard; Delayed (chronic) health hazard

Asphalt (8052-42-4): Listed on the United States TSCA (Toxic Substances Control Act) inventory
SARA Section 311/312 Hazard Classes: Delayed (chronic) health hazard

Section 16:

OTHER INFORMATION

Date of Preparation: 07-09-15
 Expiration Date: None
 Version: 1.0
 Revision Date: 01-30-15
 Other: This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but are given without warranty or guarantee of any kind. In particular, the data furnished in this sheet do not address hazards that may be posed by other materials mixed with asphalt. Users should review other relevant material safety data sheets before working with this product. Inexperienced product users should obtain proper training before using this product. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

- END -



CERTIFICATE OF LIABILITY INSURANCE

DATE(MM/DD/YYYY)
03/22/2021

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Aon Risk Services Central, Inc. Chicago IL Office 200 East Randolph Chicago IL 60601 USA	CONTACT NAME: _____	
	PHONE (A/C. No. Ext): (866) 283-7122	FAX (A/C. No.): (800) 363-0105
E-MAIL ADDRESS: _____		
INSURER(S) AFFORDING COVERAGE		NAIC #
INSURED York Building Products Co., Inc. 950 Smile way York PA 17404 USA	INSURER A: American Zurich Ins Co	40142
	INSURER B:	
	INSURER C:	
	INSURER D:	
	INSURER E:	
	INSURER F:	

Holder Identifier :

COVERAGES **CERTIFICATE NUMBER:** 570086477461 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS.

Limits shown are as requested

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
	COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER: _____						EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Ea occurrence) MED EXP (Any one person) PERSONAL & ADV INJURY GENERAL AGGREGATE PRODUCTS - COMP/OP AGG	
	AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> NON-OWNED AUTOS ONLY						COMBINED SINGLE LIMIT (Ea accident) BODILY INJURY (Per person) BODILY INJURY (Per accident) PROPERTY DAMAGE (Per accident)	
	UMBRELLA LIAB <input type="checkbox"/> OCCUR EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION						EACH OCCURRENCE AGGREGATE	
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER (Mandatory In NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N N	N/A	WC348639120	04/01/2021	04/01/2022	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$1,000,000 E.L. DISEASE-EA EMPLOYEE \$1,000,000 E.L. DISEASE-POLCY LIMIT \$1,000,000	

Certificate No : 570086477461

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER

CANCELLATION

Air Quality Permits Program
 Maryland Dept. of the Environment
 Air & Radiation Management Admin
 Air Quality Permits Program
 1800 Washington Blvd., Suite 720
 Baltimore MD 21230 USA

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

Aon Risk Services Central, Inc.

Office of the County Executive

Danielle Hornberger
County Executive

Dan Schneckenburger
Director of Administration

Office: 410.996.5202
Fax: 800.863.0947

Department of Land Use & Development Services

Stephen O'Connor, AICP, Director
Office: 410.996.5220
Fax: 800.430.3829

County Information
410.996.5200
410.658.4041



CECIL COUNTY, MARYLAND

Office of the Director
200 Chesapeake Boulevard, Suite 2300, Elkton, MD 21921

July 15, 2021

Jim Gawthrop, P.E.
Vice President, Engineering
York Building Products – A Stewart Company
950 Smile Way
York, PA 17404

RE: Letter of Zoning – Tax Map 24, Grid 23, Parcel 241 (Tax Account ID 05-114780) – Belvidere Rd. Port Deposit MD 21904

Dear Mr. Gawthrop:

This correspondence is in response to your email and supporting documentation received in this office on July 15, 2021. Specifically, your request is to ascertain if the zoning ordinance permits the erection of an asphalt plant on the above referenced which is located within the Mineral Extraction A (MEA) zoning district.

Please be advised that asphalt plants are contemplated in the Zoning Ordinance's Table of Permissible Uses (Section 54.4 (12.08.000)). An asphalt plant is permitted provided the conditions outlined Article V, Part XII, Section 146 of the Zoning Ordinance are satisfied.

Thank you for this opportunity to comment. Please feel free to call or email me with any questions.

Sincerely,

Stephen J. O'Connor, AICP
Director

Cc: Aaron Harding – Chief, Planning & Zoning – designate
File 2021-22

1. The winery is accessory to a vineyard;
2. Access is not derived from an internal street of a subdivision;
3. Adequate off street parking is provided. Parking shall be adequately screened from adjacent properties;
4. The facility may provide food and beverages at events such as wine tastings, weddings, business meetings and conferences;
5. No type of advertising for the winery shall be carried out on the property except one (1) sign identifying the winery, limited to thirty two (32) square feet in size.

Section 146. Concrete and Asphalt Plant (12.08.000)

Concrete and asphalt batching plants shall be permitted in the M2 and MEA zone, provided:

1. Operation structures shall not be erected and storage of materials shall not take place within two hundred (200) feet of any property line or one hundred (100) feet of the right-of-way of any road.
2. The setback from property line shall not apply if the adjoining lot is being used for heavy industry or mineral extraction.
3. A bufferyard meeting the E standard in Appendix B shall be provided between the operation structures and any right-of-way of any road.
4. If this use is to be located in the Resource Conservation Area (RCA) of the Cecil County Chesapeake Bay Critical Area the applicant must apply for, and receive, Growth Allocation as described in Article XI, Part I of this Ordinance prior to any approvals.

Section 147. Mini-Storage (12.12.000)

Mini-storage shall be permitted in the BG and BI zones provided:

1. No activities other than the dead storage or transfer of non-volatile goods or leasing of storage space are permitted.
2. A bufferyard meeting the D standard of Appendix B shall be provided at property boundaries when adjoining properties are used or zoned for residential purposes.
3. A bufferyard meeting the C standard of Appendix B shall be provided at property boundaries when adjoining properties are used or zoned for other than residential purposes.

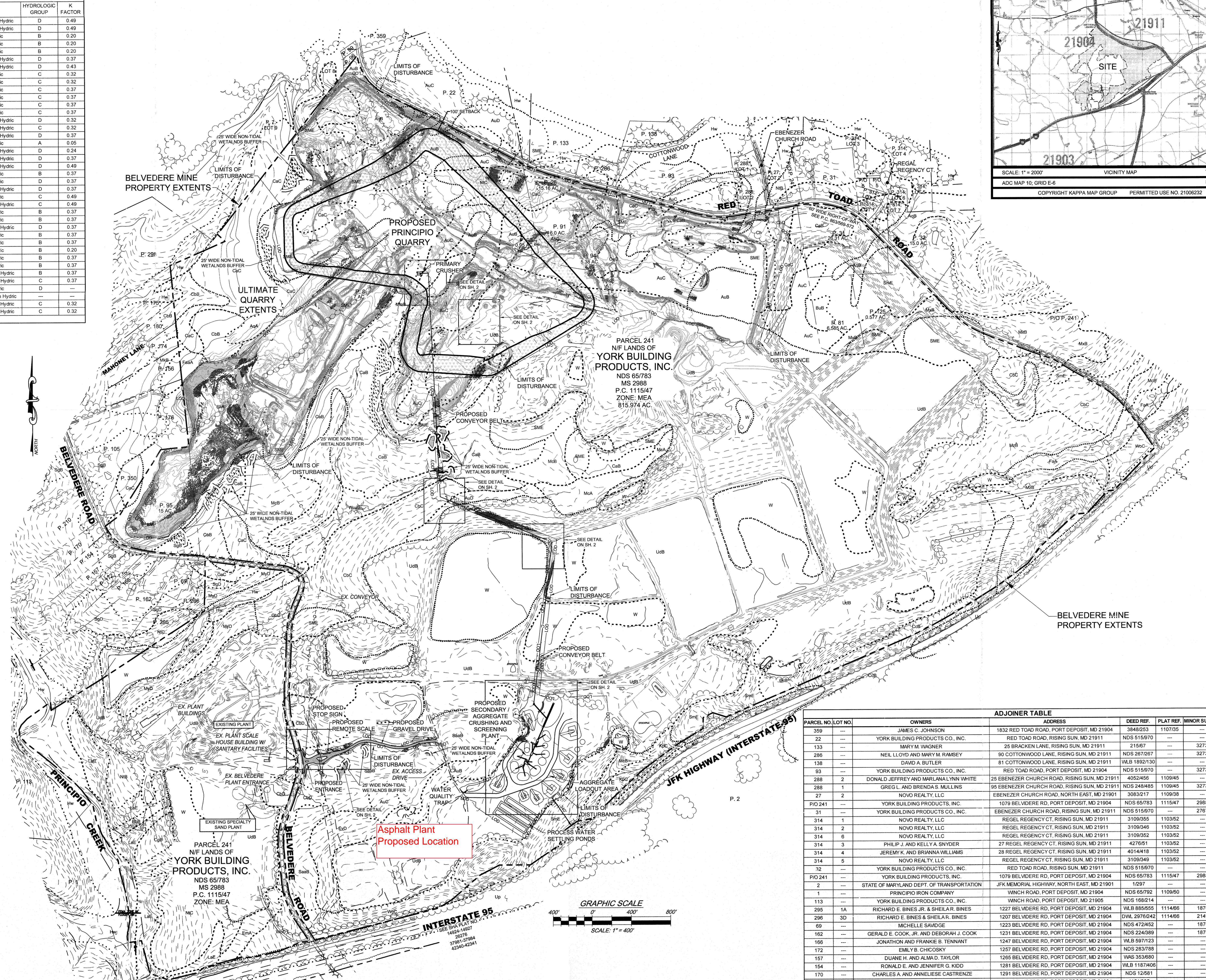
Section 148. Non-Automotive Fuel Sales or Storage (12.13.000)

Non-automotive fuel sales shall be permitted in the BG, BI, M1 and M2 zones provided:

TYPE	SOIL NAME & DESCRIPTION	HYDROLOGIC GROUP	K FACTOR
AaA	Aquasol silt loam, 0 to 2 percent slopes	Partially Hydric	D 0.49
AaB	Aquasol silt loam, 2 to 5 percent slopes	Partially Hydric	D 0.49
AaC	Aquasol silt loam, 5 to 10 percent slopes	Not Hydric	B 0.20
AaD	Aquasol silt loam, 10 to 15 percent slopes	Not Hydric	B 0.20
AaE	Aquasol silt loam, 15 to 25 percent slopes	Not Hydric	B 0.20
AaF	Aquasol silt loam, 25 to 45 percent slopes	Not Hydric	B 0.20
BaA	Baldwinsville silt loam, 0 to 2 percent slopes	Partially Hydric	D 0.37
BaB	Baldwinsville silt loam, 2 to 5 percent slopes	Partially Hydric	D 0.37
BaC	Baldwinsville silt loam, 5 to 10 percent slopes	Not Hydric	C 0.32
BaD	Baldwinsville silt loam, 10 to 15 percent slopes	Not Hydric	C 0.32
BaE	Baldwinsville silt loam, 15 to 25 percent slopes	Not Hydric	C 0.32
BaF	Baldwinsville silt loam, 25 to 45 percent slopes	Not Hydric	C 0.32
CaA	Chillum silt loam, 0 to 2 percent slopes	Partially Hydric	D 0.37
CaB	Chillum silt loam, 2 to 5 percent slopes	Not Hydric	C 0.37
CaC	Chillum silt loam, 5 to 10 percent slopes	Not Hydric	C 0.37
CaD	Chillum silt loam, 10 to 15 percent slopes	Not Hydric	C 0.37
CaE	Chillum silt loam, 15 to 25 percent slopes	Not Hydric	C 0.37
CaF	Chillum silt loam, 25 to 45 percent slopes	Not Hydric	C 0.37
CbA	Chillum silt loam, 0 to 2 percent slopes	Partially Hydric	D 0.37
CbB	Chillum silt loam, 2 to 5 percent slopes	Not Hydric	C 0.37
CbC	Chillum silt loam, 5 to 10 percent slopes	Not Hydric	C 0.37
CbD	Chillum silt loam, 10 to 15 percent slopes	Not Hydric	C 0.37
CbE	Chillum silt loam, 15 to 25 percent slopes	Not Hydric	C 0.37
CbF	Chillum silt loam, 25 to 45 percent slopes	Not Hydric	C 0.37
CcA	Codorus silt loam, 0 to 2 percent slopes, occasionally flooded	Partially Hydric	D 0.32
EmA	Elkton silt loam, 0 to 2 percent slopes	Partially Hydric	D 0.37
EmB	Elkton silt loam, 2 to 5 percent slopes	Partially Hydric	D 0.37
EmC	Elkton silt loam, 5 to 10 percent slopes	Not Hydric	B 0.20
EmD	Elkton silt loam, 10 to 15 percent slopes	Not Hydric	B 0.20
EmE	Elkton silt loam, 15 to 25 percent slopes	Not Hydric	B 0.20
EmF	Elkton silt loam, 25 to 45 percent slopes	Not Hydric	B 0.20
FaA	Fallingstone sandy loam, 0 to 2 percent slopes	Partially Hydric	D 0.24
Hw	Hatboro-Codorus complex, 0 to 3 percent slopes, flooded	Partially Hydric	D 0.37
KpC	Keypoint silt loam, 5 to 10 percent slopes	Partially Hydric	D 0.49
LaE	Legore silt loam, 25 to 45 percent slopes	Not Hydric	B 0.37
MaA	Manahope loam, 0 to 2 percent slopes	Not Hydric	B 0.37
MaB	Manahope loam, 2 to 5 percent slopes	Partially Hydric	D 0.37
MaC	Manahope loam, 5 to 10 percent slopes	Not Hydric	B 0.37
MaD	Manahope loam, 10 to 15 percent slopes	Not Hydric	B 0.37
MaE	Manahope loam, 15 to 25 percent slopes	Not Hydric	B 0.37
MaF	Manahope loam, 25 to 45 percent slopes	Not Hydric	B 0.37
MbA	Matapsake silt loam, 2 to 5 percent slopes	Not Hydric	C 0.49
MbB	Matapsake silt loam, 5 to 10 percent slopes	Partially Hydric	C 0.49
MbC	Matapsake silt loam, 10 to 15 percent slopes	Not Hydric	B 0.37
MbD	Matapsake silt loam, 15 to 25 percent slopes	Not Hydric	B 0.37
MbE	Matapsake silt loam, 25 to 45 percent slopes	Not Hydric	B 0.37
MdA	Montalto silt loam, 5 to 10 percent slopes	Not Hydric	B 0.37
MdB	Montalto silt loam, 10 to 15 percent slopes	Not Hydric	B 0.37
MdC	Montalto silt loam, 15 to 25 percent slopes	Not Hydric	B 0.37
MdD	Montalto silt loam, 25 to 45 percent slopes	Not Hydric	B 0.37
MdE	Montalto silt loam, 45 to 75 percent slopes	Not Hydric	B 0.37
MdF	Montalto silt loam, 75 to 95 percent slopes	Not Hydric	B 0.37
NbA	Neshaminy silt loam, 8 to 15 percent slopes	Not Hydric	B 0.37
NbB	Neshaminy silt loam, 15 to 25 percent slopes	Not Hydric	B 0.37
NbC	Neshaminy silt loam, 25 to 45 percent slopes	Not Hydric	B 0.37
PaA	Pasadena sandy loam, 2 to 5 percent slopes	Not Hydric	B 0.20
PaB	Pasadena sandy loam, 5 to 10 percent slopes	Not Hydric	B 0.37
PaC	Pasadena sandy loam, 10 to 15 percent slopes	Not Hydric	B 0.37
PaD	Pasadena sandy loam, 15 to 25 percent slopes	Not Hydric	B 0.37
PaE	Pasadena sandy loam, 25 to 45 percent slopes	Not Hydric	B 0.37
PaF	Pasadena sandy loam, 45 to 75 percent slopes	Not Hydric	B 0.37
PaG	Pasadena sandy loam, 75 to 95 percent slopes	Not Hydric	B 0.37
PaH	Pasadena sandy loam, 95 to 100 percent slopes	Not Hydric	B 0.37
SmE	Sassafras and Croom soils, 15 to 25 percent slopes	Partially Hydric	B 0.37
UbB	Udorthens, borrow area, 0 to 5 percent slopes	Partially Hydric	C 0.37
Up	Urban land	Not Hydric	D ---
W	Water	Unknown Hydric	---
WoaB1	Woodstown loam, 2 to 5 percent slopes	Partially Hydric	C 0.32
Woc	Woodstown loam, 5 to 10 percent slopes	Partially Hydric	C 0.32

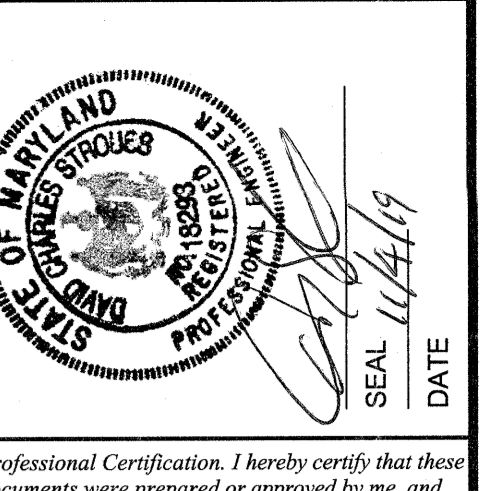
LEGEND	EXISTING	PROPOSED
CONTOUR	85	145
SPOT ELEVATION	143x5	145
FLOW ARROW		→
SOIL BOUNDARY	M/S	M/S
PROPERTY LINE	---	---
EASEMENT	---	---
FENCELINE	X	X
GAS LINE	G	G
TELEPHONE LINE	T	T
ELECTRIC LINE	E	E
LIGHT POLE	+	+
WETLANDS	W	W
WETLAND BUFFER	W	W
STREAM	S	S
STREAM BUFFER	S	S
STORM DRAIN	SD	SD
PAVEMENT	P	P
TREELINE	T	T
LIMITS OF DISTURBANCE	L	L
CONVEYOR	C	C

- ### SITE PLAN NOTES
- TAX MAP 24, PARCEL 241
TOTAL LOT AREA = 815.974 AC
ZONING: MEA
DEED REFERENCE: N.D.S. 65/783
ADDRESS: 1079 BELVEDERE ROAD, PORT DEPOSIT, MD 21904
TOTAL MINING PERMIT AREA = 7.1885 ACRES
 - EXISTING USE: SAND & GRAVEL SURFACE MINING OPERATION
PROPOSED USE: SAND & GRAVEL SURFACE MINING OPERATION WITH THE ADDITION OF A ROCK QUARRY AND AGGREGATE CRUSHING OPERATION AND A GRAVEL DRIVE ACCESSING BELVEDERE ROAD
 - THIS PLAN IS AN UPDATE OF THE MINING PERMIT PLAN PREPARED BY CNA DATED JAN. 2017.
 - NO EXCAVATION SHALL TAKE PLACE WITHIN 100 FEET FROM ANY RIGHT OF WAY LINE OF ANY ROAD.
 - NO EXCAVATION SHALL TAKE PLACE, NOR SHALL THE SLOPE OF THE NATURAL LAND SURFACE BE ALTERED AS A RESULT OF SAID EXCAVATION, NOR SHALL THE STORAGE OF MATERIALS TAKE PLACE NEARER THAN 100 FEET TO ANY PROPERTY LINE. THIS SETBACK SHALL NOT APPLY WHERE THE ADDING PROPERTY IS USED FOR MINERAL EXTRACTION OR HEAVY INDUSTRY. THIS REQUIREMENT HAS BEEN MET.
 - A BUFFER ZONE MEETING THE DISTANCE SHALL BE REQUIRED BETWEEN ANY OPERATION STRUCTURES AND THE RIGHT OF WAY OF ANY ROAD.
 - THE PROPERTY SHOWN HEREON APPEARS TO BE LOCATED IN ZONE 'X' (AREAS TO BE OUTSIDE THE 50% ANNUAL CHANCE AS SHOWN ON FEMA FLOOD HAZARD PANEL NOS. 2401501C15E DATED MAY 4, 2015 AND 240150000D DATED JULY 8, 2013).
 - THIS PROJECT IS NOT WITHIN THE CHESTARAKE NATIONAL AREA.
 - EXISTING TOPOGRAPHY TAKEN FROM CECIL COUNTY COMPREHENSIVE MAPPING PROGRAM ON 1927 N.A. DATUM, DATED SPRING 1988 AND AERIAL PHOTOGRAPHY DATED NOVEMBER 2010 AND JULY 2016.
 - COORDINATES BASED ON MARYLAND COORDINATE SYSTEM (MCS), NAD 83 DATUM
 - PROPERTY BOUNDARY INCLUDED IN THIS PLAN. TAX MAP 24, PARCEL 241
 - SOIL BOUNDARIES WERE TAKEN FROM THE 2009 CECIL COUNTY DIGITAL SOIL SURVEY DATA.
 - THE ON-SITE STORM DRAINAGE AND STORMWATER MANAGEMENT SYSTEM WILL BE PRIVATELY OWNED AND MAINTAINED.
 - OWNER/DEVELOPER: YORK BUILDING PRODUCTS, INC.
YORK CITY INDUSTRIAL PARK
950 S.M.E. WAY, YORK, PA 17404-1798
(483) 907-2408
ATTN: JAMES GAWTHRAL
 - PROPERTY BOUNDARIES ARE BASED ON ACTUAL TAX MAPS ON FILE WITH CECIL COUNTY, MARYLAND. NO RESPONSIBILITY IS ASSUMED FOR THEIR ACCURACY.
 - THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY.
 - REGULATORY APPROVALS REQUIRED:
 - MAJOR SITE PLAN
 - CECIL SOIL CONSERVATION DISTRICT - EAS PLAN
 - MD MINING PERMIT
 - CECIL CO. LUPRR - ENTRANCE PLAN
 - UPDATE MDE 15mm DISCHARGE PERMIT
 - NON-TIDAL WETLANDS WERE PREVIOUSLY DELINEATED ON SITE BY OTHERS. PROPOSED MINING AND CONSTRUCTION ARE OUTSIDE OF LIMITS OF WETLANDS AND BUFFERS. NO IMPACTS ARE PROPOSED.
 - THIS SITE IS EXEMPT FROM FORESTS CONSERVATION REGULATIONS FOR NONCOLD SURFACE MINING SECTION 3.22.
 - VARIANCES REQUESTED:
 - ROAD CODE VARIANCE FOR NO ACCELERATION OR DECELERATION LANES FROM CECIL CODE.
 - NO WASTE PRODUCTS ARE PROPOSED WITH THIS MINING OPERATION.
 - LIMIT OF DISTURBANCE TAKEN FROM EAS PLAN BY McCRONE DATED AUG. 2019.
 - EXISTING PRIVATE WATER WELL AND SEWAGE SEPTIC FACILITIES ARE LOCATED AT EXISTING PLANT BUILDINGS ON THE WEST SIDE OF BELVEDERE ROAD. NO ADDITIONAL FACILITIES ARE PROPOSED.
 - EXISTING NUMBER OF EMPLOYEES = 12
PROPOSED NUMBER OF EMPLOYEES = 14
TOTAL NUMBER OF EMPLOYEES = 26
 - OUTDOOR STORAGE FOR THE MINING OPERATION IS PROPOSED AT THE AGGREGATE LOAD-OUT AREA AS SHOWN.
 - PARKING REQUIRED: 1 SPACE PER EMPLOYEE = 26 SPACES
PARKING PROVIDED: EXISTING = 12 SPACES ON WEST SIDE OF BELVEDERE ROAD NEAR EXISTING BUILDINGS.
PROPOSED = 14 SPACES AS SHOWN ON SHEET #2
TOTAL = 26 SPACES



PARCEL NO.	LOT NO.	OWNERS	ADDRESS	DEED REF.	PLAT REF.	MINOR SUB NO.	ZONING
241	---	YORK BUILDING PRODUCTS, INC.	1079 BELVEDERE RD, PORT DEPOSIT, MD 21904	NDS 65/783	1115/47	2988	MEA
28	---	YORK BUILDING PRODUCTS CO., INC.	RED TOAD ROAD, RISING SUN, MD 21911	NDS 515/970	---	3273	MEA
91	---	YORK BUILDING PRODUCTS CO., INC.	RED TOAD ROAD, PORT DEPOSIT, MD 21904	NDS 515/970	---	---	MEA
90	---	YORK BUILDING PRODUCTS CO., INC.	RED TOAD ROAD, RISING SUN, MD 21911	NDS 34/348	---	---	MEA
94	---	YORK BUILDING PRODUCTS CO., INC.	1548 RED TOAD ROAD, PORT DEPOSIT, MD 21904	NDS 515/970	---	---	MEA
31	---	YORK BUILDING PRODUCTS CO., INC.	EBENEZER CHURCH ROAD, RISING SUN, MD 21911	NDS 515/970	---	2787	MEA
81	---	YORK BUILDING PRODUCTS CO., INC.	RED TOAD ROAD, RISING SUN, MD 21911	NDS 515/970	---	---	MEA
125	---	YORK BUILDING PRODUCTS CO., INC.	RED TOAD ROAD, RISING SUN, MD 21911	NDS 515/970	---	---	MEA
8	---	YORK BUILDING PRODUCTS CO., INC.	BELVEDERE RD, PORT DEPOSIT, MD 21904	NDS 81/799	---	---	MEA
95	---	MASON DIXON SAND AND GRAVEL CO. OF PA	BELVEDERE RD, PORT DEPOSIT, MD 21904	106/87	---	---	MEA

DATE	JOB NUMBER	SCALE	DRAWN BY	DESIGNED BY	APPROVED BY	FOLDER REFERENCE
10/17/2019	---	---	---	---	---	---



Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed Professional Engineer under the laws of the State of Maryland. License No. 16293, Expiration Date 8-8-2021.

REV #	DATE	DESCRIPTION
1	10/17/2019	CELL/P/C COMMENTS

McCRONE
ENGINEERS • SURVEYORS • PLANNERS
ANNAPOLIS • CENTREVILLE • ELKTON • SALISBURY • BELLAIR

PRINCIPIO QUARRY
FIFTH ELECTION DISTRICT, CECIL COUNTY, MARYLAND
PREPARED FOR: YORK BUILDING PRODUCTS, INC.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

**AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT**

**SUPPLEMENT TO
DOCKET #17-21**

COMPANY: York Building Products Co., Inc.
LOCATION: 1079 Belvidere Road, Port Deposit, MD 21904
APPLICATION: One (1) hot mix asphalt plant

<u>ITEM</u>	<u>DESCRIPTION</u>
1	Notice of Tentative Determination, Opportunity to Request a Public Hearing, and Opportunity to Submit Written Comments
2	Fact Sheet and Tentative Determination
3	Draft Permit to Construct and Conditions
4	Supplemental Information
5	Privilege Log – Not Applicable

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

**NOTICE OF TENTATIVE DETERMINATION, OPPORTUNITY TO REQUEST
A PUBLIC HEARING, AND OPPORTUNITY TO SUBMIT WRITTEN COMMENTS**

FIRST NOTICE

The Department of the Environment, Air and Radiation Administration (ARA) has completed its review of an application for a Permit to Construct submitted by York Building Products Co., Inc. on July 20, 2021 for the installation of one (1) hot mix asphalt plant. The proposed installation will be located at 1079 Belvidere Road, Port Deposit, MD 21904.

Pursuant to Section 1-604, of the Environment Article, Annotated Code of Maryland, the Department has made a tentative determination that the Permit to Construct can be issued and is now ready to receive public comment on the application.

Copies of the Department's tentative determination, the application, the draft permit to construct with conditions, and other supporting documents are available for public inspection on the Department's website. Look for Docket #17-21 at the following link:

<https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx>

Interested persons may request a public hearing and/or submit written comments on the tentative determination. Requests for a public hearing must be submitted in writing and must be received by the Department no later than 20 days from the date of this notice. Written comments must be received by the Department no later than 30 days from the date of this notice.

Interested persons may request an extension to the public comment period. The extension request must be submitted in writing and must be received by the Department no later than 30 days from the date of this notice or within 5 days after the hearing (if a hearing is requested), whichever is later. The public comment period may only be extended one time for a 60-day period.

All requests for a public hearing, requests for an extension to the public comment period, and all written comments should be emailed to Ms. Shannon Heafey at shannon.heafey@maryland.gov.

Further information may be obtained by contacting Ms. Shannon Heafey by email at shannon.heafey@maryland.gov or by phone at (410) 537-4433.

George S. Aburn, Jr., Director
Air and Radiation Administration

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

**FACT SHEET AND TENTATIVE DETERMINATION
YORK BUILDING PRODUCTS, CO., INC.**

PROPOSED INSTALLATION OF ONE (1) HOT MIX ASPHALT PLANT

I. INTRODUCTION

The Maryland Department of the Environment (the "Department") received an application from York Building Products Co., Inc. on July 20, 2021 for a Permit to Construct for one (1) hot mix asphalt plant. The proposed installation will be located at 1079 Belvidere Road, Port Deposit, MD 21904.

A notice was placed in the Cecil Whig on September 8, 2021 and September 15, 2021 announcing an opportunity to request an informational meeting to discuss the application for a Permit to Construct. An informational meeting was not requested.

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 installation is expected to comply with all applicable air quality regulations. A notice will be published to provide the public with opportunities to request a public hearing and to comment on the application, the Department's tentative determination, the draft permit conditions, and other supporting documents. The Department will not schedule a public hearing unless a legitimate request is received.

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

Current Status

The facility was issued a permit to construct for a crushing and screening plant on March 10, 2021 and a quartz processing plant on June 1, 2021. The quartz processing plant

began operating in September 2021. The crushing and screening plant has not yet been installed.

Proposed Installation

York Building Products has submitted an application to install one (1) hot mix asphalt plant. The plant will have an overall throughput rating of 400 tons per hour and include the following equipment:

8'x40' Double Barrel Dryer Drum Mixer controlled by a pulse jet baghouse

100 MMBTU burner fired by propane or natural gas

Four (4) asphalt storage silos

Three (3) vertical asphalt storage tanks

One (1) No. 2/natural gas-fired Hot Oil Heater rated at 2.7 MMBTU/hr

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) 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.
- (b) COMAR 26.11.06.02C(1), which prohibits visible emissions, other than uncombined water, greater than 20 percent opacity.
- (c) COMAR 26.11.06.03B(1)(a), which limits the concentration of particulate matter in any exhaust gases to not more than 0.05 grains per standard cubic foot of dry exhaust gas.
- (d) COMAR 26.11.06.03C and 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 26.11.09.05A(1), which limits visible emissions other than uncombined water to not more than 20 percent opacity from fuel burning equipment.
- (g) COMAR 26.11.09.07A(1), which limits the sulfur content of distillate fuel oils to not more than 0.3 percent by weight.
- (h) COMAR 26.11.11.02B and C, which prohibit the use of cutback asphalt except:

- (i) where long-life stock pile storage is necessary;
 - (ii) where the use or application from October 15 through April 15 is necessary; and
 - (iii) where cutback asphalt is used solely as a penetrating prime coat.
- (i) 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.
 - (j) 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 Cecil 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 Philadelphia 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. Cecil 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

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.

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 EPA emission factors. The conservative U.S. EPA's SCREEN3 model was also used to project the maximum ground level concentrations from the proposed facility, which were 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 each criteria pollutant based on the emissions from the proposed installation are listed in column 2 of Table II. The combined impact of the projected contribution from the proposed 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. As to the ground level ozone, since the ozone precursors, NO_x (6.5 tons/yr) and VOC (8.0 tons/yr), are well below the significant level, 25.0 tons/yr for each pollutant, the proposed installation would not affect the local ground level concentration.
- C. **Compliance with Air Toxics Regulations** – The toxic air pollutants of concern that would be emitted from this installation are listed in column 1 of Table III. The predicted maximum off-site ambient concentration of this toxic air pollutant is shown in column 4 of Table III, and in each case 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	PROJECTED MAXIMUM EMISSIONS FROM PROPOSED INSTALLATION	
	(lbs/day)	(tons/year)
Nitrogen Dioxide (NO ₂)	10.4	6.5
Sulfur Dioxide (SO ₂)	13.6	0.85
Carbon Monoxide (CO)	520	32.5
Volatile Organic Compounds (VOC)	128	8.0
Particulate Matter (PM ₁₀)	92	5.75

**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. → 1.4	annual avg. → 22	annual avg. → 100
Carbon Monoxide (CO)	8-hour max → 60 1-hour max → 86	8-hr max. → 1000 1-hr max. → 1300	8-hr max. → 10,000 1-hr max. → 40,000
Sulfur Dioxide (SO ₂)	24-hour max. → 1.50 annual avg. → 0.29	24-hour max. → 1.7 annual avg. → 9.9	24-hour max. → 366 annual avg. → 78.5
Particulate Matter (PM ₁₀)	24-hr max → 6.1	24-hr max. → 53	24-hr max. → 150

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

CO SO₂ → HU-Beltsville Monitoring Station in Prince George's County
 NO₂ and PM₁₀ → Oldtown Fire Station in Baltimore City
 SO₂ → 600 Dorsey Avenue, Essex in Baltimore County

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

TOXIC AIR POLLUTANTS	SCREENING LEVELS ($\mu\text{g}/\text{m}^3$)	PROJECTED WORST-CASE FACILITY-WIDE EMISSIONS (lbs/hr)	PREDICTED MAXIMUM OFF-SITE GROUND LEVEL CONCENTRATIONS ($\mu\text{g}/\text{m}^3$)
Benzene	1-hour → 80 8-hour → 16 Annual → 1.3	0.156	1-hour → 0.26 8-hour → 0.18 Annual → 0.02
Formaldehyde	1-hour → None 8-hour → 20.3 Annual → 0.8	0.0031	1-hour → None 8-hour → 1.4 Annual → 0.16
2-Methylnapthalene	1-hour → None 8-hour → 29.1 Annual → None	0.030	1-hour → None 8-hour → 0.03 Annual → None
Acenaphthene	1-hour → None 8-hour → 20 Annual → None	0.00056	1-hour → None 8-hour → 0.0006 Annual → None
Acenaphthylene	1-hour → None 8-hour → 24.6 Annual → None	0.0034	1-hour → None 8-hour → 0.004 Annual → None
Anthracene	1-hour → None 8-hour → 20 Annual → None	0.00088	1-hour → None 8-hour → 0.001 Annual → None
Benzo(e)pyrene	1-hour → None 8-hour → 20 Annual → None	0.000044	1-hour → None 8-hour → 0.00005 Annual → None
Benzo(g,h,i)perylene	1-hour → None 8-hour → 20 Annual → None	0.000016	1-hour → None 8-hour → 0.00002 Annual → None
Fluoranthene	1-hour → None 8-hour → 82 Annual → None	0.00024	1-hour → None 8-hour → 0.0003 Annual → None
Fluorene	1-hour → None 8-hour → 20 Annual → None	0.0015	1-hour → None 8-hour → 0.002 Annual → None

Perylene	1-hour→ None 8-hour→ 20 Annual→ None	0.0000035	1-hour→ None 8-hour→ 0.000004 Annual→ None
Phenanthrene	1-hour→ None 8-hour→ 9.8 Annual→ None	0.0030	1-hour→ None 8-hour→ 0.003 Annual→ None
Pyrene	1-hour→ None 8-hour→ 20 Annual→ None	0.00022	1-hour→ None 8-hour→ 0.0002 Annual→ None
Ethylene	1-hour→ None 8-hour→ 2294 Annual→ None	2.8	1-hour→ None 8-hour→ 3.2 Annual→ None
Heptane	1-hour→ 20491 8-hour→ 16393 Annual→ None	3.76	1-hour→ None 8-hour→ 4.3 Annual→ None
2-Methyl-1-pentane	1-hour→ None 8-hour→ 11500 Annual→ None	1.6	1-hour→ None 8-hour→ 1.8 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.

DRAFT PERMIT

Larry Hogan

Ben Grumbles

Air and Radiation Administration

1800 Washington Boulevard, Suite 720
Baltimore, MD 21230

Construction Permit

Operating Permit

PERMIT NO.:

As listed on Page 2

DATE ISSUED:

[TBD]

PERMIT FEE:

\$2,000.00

EXPIRATION DATE:

In accordance with COMAR 26.11.02.04B

LEGAL OWNER & ADDRESS

York Building Products Co., Inc. – A Stewart
Company
950 Smile Way
York, PA 17404
Attention: James N. Gawthrop, P.E., Vice
President Engineering

SITE

York Building Products Co., Inc. – Principio
Quarry
1079 Belvidere Road
Port Deposit, MD 21904
AI #164346

SOURCE DESCRIPTION

This permit authorizes the installation of one (1) hot mix asphalt plant.

This permit includes premises-wide limitations on the emissions of NO_x, CO, and VOC to preclude applicability of Part 70 Operating Permit requirements.

This permit serves as a temporary permit to operate for a period of 180 days after the startup of the hot mix asphalt plant.

This permit supersedes all previous permits to construct issued to ARA Premises No. 015-0286.

This source is subject to the conditions described on the attached pages.

Program Manager

Director, Air and Radiation Administration

**YORK BUILDING PRODUCTS CO., INC. – PRINCIPIO QUARRY
 PERMIT-TO-CONSTRUCT CONDITIONS
 PREMISES No. 015-0286**

INDEX

- Part A – General Provisions
- Part B – Applicable Regulations
- Part C – Construction Conditions
- Parts D1-D3 – Operating and Monitoring Conditions
- Part E – Notifications and Testing
- Part F – Record Keeping and Reporting
- Part G – Temporary Permit-To-Operate Conditions

This permit covers the following registered installations:

ARA Registration Number	Description	Date of Installation
015-0286-6-0392	One (1) Crushing and Screening Plant rated at 350 tons/hr consisting of the following: One (1) Jaw Crusher; One (1) Secondary Cone Crusher; One (1) Tertiary Cone Crusher; One (1) 7' x 16', Primary Screen; One (1) 8' x 20', Secondary Screen; Twenty (20) conveyors; and Six (6) feeders.	2021
015-0286-6-0393	One (1) Quartz Processing Plant Process A rated at 120 tph and consisting of the following: One (1) Primary VSI Crusher; One (1) Primary Screen (wet); Five (5) conveyors (four (4) wet); One (1) feeder; Two (2) Screw Washers; Two (2) Hydrocyclones; One (1) Classifier; and Two (2) Truck Loadout Silos with dust collectors. Process B rated at 20 tph and consisting of the following: One (1) Scalping Screen; Nine (9) belts/elevators; Two (2) baghouses; One (1) feeder; and One (1) Sand Dryer.	2021
015-0286-6-0399	One (1) 400 tph Hot Mix Asphalt Plant consisting of the following:	2022

**YORK BUILDING PRODUCTS CO., INC. – PRINCIPIO QUARRY
 PERMIT-TO-CONSTRUCT CONDITIONS
 PREMISES No. 015-0286**

	8'x40' Double Barrel Dryer Drum Mixer controlled by a pulse jet baghouse 100 MMBTU burner fired by propane or natural gas Four (4) asphalt storage silos Three (3) vertical asphalt storage tanks	
015-0286-5-0209	One (1) No. 2/natural gas-fired Hot Oil Heater rated at 2.7 MMBTU/hr	2022

Part A – General Provisions

- (1) The following Air and Radiation Administration (ARA) permit-to-construct applications and supplemental information are incorporated into this permit by reference:
- (a) All valid applications for Processing or Manufacturing Equipment (Form 5) received at the Department prior to issuance of this permit, and pertaining to registered equipment associated with York Building Products Co., Inc. – Principio Quarry (ARA Premises No. 015-0286). This includes the Form 5 application for one (1) hot mix asphalt plant received July 22, 2021.
 - (b) All valid Summary of Demonstrations for Meeting the Ambient Impact Requirement and T-BACT Requirements (5T) received at the Department prior to issuance of this permit, and pertaining to premises-wide emissions of any toxic air pollutants (TAPs) associated with York Building Products Co., Inc. – Principio Quarry (ARA Premises No. 015-0286). This includes the Form 5T application for one (1) hot mix asphalt plant received July 22, 2021.
 - (c) All valid Emissions Data (5EP) received at the Department prior to issuance of this permit, and pertaining to premises-wide emissions of any TAP associated with York Building Products Co., Inc. – Principio Quarry (ARA Premises No. 015-0286). This includes the two (2) Form 5EP applications for one (1) hot mix asphalt plant received July 22, 2021.
 - (d) All valid applications for Gas Cleaning or Emission Control Equipment (Form 6) received at the Department prior to issuance of this permit, and pertaining to registered equipment associated with York Building Products Co., Inc. – Principio Quarry (ARA Premises No. 015-0286). This includes the Form 6 application for one (1) pulse jet baghouse plant received July 22, 2021.

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- (e) Two (2) applications for Fuel Burning Equipment (Form 11) received at the Department on July 22, 2021.
- (f) Supplemental Information: Process Flow Diagrams, Site Plans, Emissions Calculations, Safety Data Sheets, and Zoning Approval received July 22, 2021.

If there are any conflicts between representations in this permit and representations in the applications, the representations in the permit shall govern. Estimates of dimensions, volumes, emissions rates, operating rates, feed rates and hours of operation included in the applications do not constitute enforceable numeric limits beyond the extent necessary for compliance with applicable requirements.

- (2) Upon presentation of credentials, representatives of the Maryland Department of the Environment (“MDE” or the “Department”) and the Cecil County Health Department shall at any reasonable time be granted, without delay and without prior notification, access to the Permittee’s property and permitted to:
 - (a) inspect any construction authorized by this permit;
 - (b) sample, as necessary to determine compliance with requirements of this permit, any materials stored or processed on-site, any waste materials, and any discharge into the environment;
 - (c) inspect any monitoring equipment required by this permit;
 - (d) review and copy any records, including all documents required to be maintained by this permit, relevant to a determination of compliance with requirements of this permit; and
 - (e) obtain any photographic documentation or evidence necessary to determine compliance with the requirements of this permit.
- (3) The Permittee shall notify the Department prior to increasing quantities and/or changing the types of any materials referenced in the application or limited by this permit. If the Department determines that such increases or changes constitute a modification, the Permittee shall obtain a permit-to-construct prior to implementing the modification.
- (4) Nothing in this permit authorizes the violation of any rule or regulation or the creation of a nuisance or air pollution.

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- (5) If any provision of this permit is declared by proper authority to be invalid, the remaining provisions of the permit shall remain in effect.
- (6) This permit supersedes all previous permit to construct issued to ARA Premises No. 015-0286.
- (7) Subsequent to issuance of this permit, the Department may impose additional and modified requirements that are incorporated into a State permit-to-operate issued pursuant to COMAR 26.11.02.13.

Part B – Applicable Regulations

- (1) This source is subject to all applicable federal air pollution control requirements including, but not limited to, the following:

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, I for Hot Mix Asphalt Plants, and OOO for Nonmetallic Mineral Processing Plants.

All notifications required under 40 CFR 60, Subparts A, I, and OOO shall be submitted to both of the following:

The Administrator
Compliance Program
Maryland Department of the Environment
Air and Radiation Administration
1800 Washington Boulevard, STE 715
Baltimore MD 21230

and

Director, Air Protection Division
U.S. EPA – Region 3
Mail Code 3AP00
1650 Arch Street
Philadelphia, PA 19103-2029

- (2) This source is subject to all applicable federally enforceable State air pollution control requirements including, but not limited to, the following regulations:

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- (a) COMAR 26.11.01.07C, which requires that the Permittee report to the Department occurrences of excess emissions.
- (b) COMAR 26.11.02.04B, which states that a permit to construct or an approval expires if, as determined by the Department:
 - (i) Substantial construction or modification is not commenced within 18 months after the date of issuance of the permit or approval, unless the Department specifies a longer period in the permit or approval;
 - (ii) Construction or modification is substantially discontinued for a period of 18 months after the construction or modification has commenced; or
 - (iii) The source for which the permit or approval was issued is not completed within a reasonable period after the date of issuance of the permit or approval.
- (c) COMAR 26.11.02.09A, which requires that the Permittee obtain a permit-to-construct if an installation is to be modified in a manner that would cause changes in the quantity, nature, or characteristics of emissions from the installation as referenced in this permit.
- (d) COMAR 26.11.06.02C(1), which prohibits visible emissions, other than uncombined water, greater than 20 percent opacity.

Exceptions. The visible emissions standard in COMAR 26.11.06.02C(2) does not apply to emissions during start-up and process modifications or adjustments, or occasional cleaning of control equipment, if: (i) the visible emissions are not greater than 40 percent opacity; and (ii) the visible emissions do not occur for more than 6 consecutive minutes in any 60 minute period.

- (e) COMAR 26.11.06.03B(1)(a), which limits the concentration of particulate matter in any exhaust gases to not more than 0.05 grains per standard cubic foot of dry exhaust gas.
- (f) COMAR 26.11.06.03C and 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.

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- (g) COMAR 26.11.06.12, which prohibits the construction, modification, or operation of an NSPS source in a manner which results or will result in a violation of the provisions of 40 CFR, Part 60.
 - (h) COMAR 26.11.09.05A(1), which limits visible emissions other than uncombined water to not more than 20 percent opacity from fuel burning equipment.
 - (i) COMAR 26.11.09.07A(1), which limits the sulfur content of distillate fuel oils to not more than 0.3 percent by weight.
 - (j) COMAR 26.11.11.02B and C, which prohibit the use of cutback asphalt except:
 - (i) where long-life stock pile storage is necessary;
 - (ii) where the use or application from October 15 through April 15 is necessary; and
 - (iii) where cutback asphalt is used solely as a penetrating prime coat.
- (3) This source is subject to all applicable State-only enforceable air pollution control requirements including, but not limited to, the following regulations:
- (a) COMAR 26.11.02.13A(9,16,56), which requires that the Permittee obtain from the Department, and maintain and renew as required, a valid State permit-to-operate.
 - (b) 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 such submittals.
 - (c) 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.
 - (d) 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.
 - (e) COMAR 26.11.15.06, which prohibits the discharge of toxic air pollutants to the extent that such emissions would unreasonably endanger human health.

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Part C – Construction Conditions

- (1) Except as otherwise provided in this part, the hot mix asphalt plant shall be constructed in accordance with specifications included in the incorporated applications.
- (2) The hot mix asphalt plant shall be equipped with a pulse jet baghouse to meet the particulate matter standards in COMAR 26.11.03B(1)(a) and 40 CFR 60 Subpart I.

Part D1 – General Operating Conditions

- (1) Except as otherwise provided in this part, all registered installations shall be operated in accordance with specifications included in the application and any operating procedures recommended by equipment vendors unless the Permittee obtains from the Department written authorization for alternative operating procedures.
- (2) Premises wide emissions shall be less than following limits in any rolling 12-month period:
 - (a) 25 tons of oxides of nitrogen (NO_x); and
 - (b) 25 tons of volatile organic compounds (VOC); and
 - (c) 100 tons of carbon monoxide (CO).
- (3) No engines shall be used to power the registered installations unless prior approval is received from the Department.
- (4) The Permittee shall control fugitive dust on-site by using water, chemical dust suppressants, or a combination of both.

Part D2 –Operating and Monitoring Conditions for the Crushing and Screening Plant

- (1) The crushing and screening plant shall operate at a maximum throughput rate of 350 tons per hour.
- (2) The crushing and screening plant shall operate at an average throughput rate of 260 tons per hour or less on a monthly basis unless the Permittee can

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demonstrate, to the satisfaction of the Department, compliance with the ambient impact requirements of 26.11.15 at higher average throughput rates.

- (3) The Permittee shall only process material mined at the site in the crushing and screening plant unless prior approval is received from the Department.
- (4) Wet suppression systems shall be used for the portable crushing and screening plant whenever needed to comply with the fugitive particulate matter handling requirements of COMAR 26.11.06.03C and COMAR 26.11.06.03D and the following opacity limits for affected facilities at nonmetallic mineral processing plants constructed, modified, or reconstructed on or after April 22, 2008 as specified in 40 CFR 60, Subpart OOO:
 - (a) No more than 12 percent opacity from the crusher; and
 - (b) No more than 7 percent opacity from all other fugitive sources.
[Reference: 40 CFR §60.672(b) and Table 3 to 40 CFR 60, Subpart OOO]
- (5) The Permittee shall perform monthly periodic inspections to check that water is flowing to discharge spray nozzles in all wet suppression systems. The Permittee must initiate corrective action within 24 hours and complete corrective action as expediently as practical if the Permittee finds that water is not flowing properly during an inspection of the water spray nozzles.
[Reference: 40 CFR §60.674(b)]

Part D3 –Operating and Monitoring Conditions for the Quartz Processing Plant

- (1) Process A of the Quartz Processing Plant shall be limited to a maximum processing rate of 120 tons per hour and Process B shall be limited to a maximum processing rate of 20 tons per hour.
- (2) Only propane shall be used as fuel in the sand dryer unless the Permittee receives approval from the Department to burn alternate fuels.
- (3) Wet suppression systems shall be used as necessary to meet the fugitive particulate matter regulations of COMAR 26.11.06.03C & D.
- (4) The sand dryer associated with process B of the quartz processing plant shall exhaust through a baghouse prior to discharging to the atmosphere to meet the visible emission and particulate matter standards of COMAR 26.11.06.02C(1) and COMAR 26.11.06.03B(1)(a).

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- (5) The materials handling equipment associated with process B of the quartz processing plant shall exhaust through a baghouse prior to discharging to the atmosphere to meet the visible emission and particulate matter standards of COMAR 26.11.06.02C(1) and COMAR 26.11.06.03B(1)(a).
- (6) The Permittee shall perform at least one (1) leak detection test, using methods approved by the Department, per calendar year on each baghouse associated with the quartz processing plant.
- (7) The two (2) truck loadout silos associated with process A of the quartz processing plant shall be operated with dust collectors to meet the visible emission and particulate matter standards of COMAR 26.11.06.02C(1) and COMAR 26.11.06.03B(1)(a).

Part D3 –Operating and Monitoring Conditions for the Hot Mix Asphalt Plant

- (1) The Permittee shall not process more than 1,500,000 tons of hot mix asphalt in the hot mix asphalt plant in any rolling 12-month period unless the Permittee can demonstrate that total premises wide emissions of NO_x and VOC are less than 25 tons and total premises wide emissions of CO are less than 100 tons per year at other operating limits.
- (2) The exhaust gases from the hot mix asphalt plant shall vent through a baghouse to meet the visible emissions and particulate matter limitations of COMAR 26.11.06.02C(1) and COMAR 26.11.06.03B(1) and the following particulate matter and opacity limits specified in 40 CFR, Part 60, Subpart I for the hot mix asphalt plant:
 - (a) No more than 0.04 grains per standard cubic foot of exhaust gas; and
 - (b) Less than 20 percent opacity.
- (3) The Permittee shall not produce any asphalt paving materials containing RAP (RAP) in concentrations greater than 50 percent by weight in the hot mix asphalt plant unless the Permittee obtains written approval from the Department and demonstrates compliance with applicable visible emissions standards and the nuisance and odor requirements at a higher RAP concentration.
- (4) When producing hot mix asphalt containing RAP, the mix temperature shall not exceed 360 °F unless the Permittee obtains written approval from the Department and demonstrates compliance with the visible emissions requirements of COMAR 26.11.06.02C(1), the opacity limits specified in 40 CFR,

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Part 60, Subpart I, and the nuisance and odor requirements of COMAR 26.11.06.08 and .09 at a higher temperature.

- (5) The Permittee shall burn only natural gas or propane in the drum dryer of the hot mix asphalt plant unless the Permittee obtains an approval from the Department to burn alternate fuels.
- (6) The Permittee shall burn only natural gas or distillate fuel oil with a maximum sulfur content of 0.3 percent by weight, in the hot oil heater unless the Permittee obtains an approval from the Department to burn alternate fuels.
- (7) The Permittee shall perform a leak detection test at least once per calendar year on the baghouse associated with the hot mix asphalt plant.
- (8) The Permittee shall continuously monitor the mix temperature of the hot mix asphalt plant when using RAP.
- (9) The Permittee shall continuously monitor the pressure drop across the baghouse when the hot mix asphalt plant is operating.
- (10) Soils contaminated with petroleum based fuels, metals, or other volatile organic compounds shall not be processed in the hot mix asphalt plant.

Part E – Notifications and Testing

- (1) The Permittee shall submit written or electronic notification to the Department of the initial startup date of the hot mix asphalt plant within 15 days of initiating startup.
- (2) Within 60 days of achieving maximum production rate in the hot mix asphalt plant, but not later than 180 days after initial startup of the hot mix asphalt plant, the Permittee shall conduct the following performance tests on the hot mix asphalt plant:
 - (a) A Method 5 test shall be used to determine compliance with the particulate matter standards. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm.
 - (b) A Method 9 observation shall be used to determine compliance with the opacity standards.
- (3) The Permittee shall submit written or electronic notification to the Department of the initial startup date of the portable crushing and screening plant and the initial

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startup date of each subsequent, equivalent replacement equipment within 15 days after such date. **[Reference: 40 CFR §60.7(a)(3) and §60.676(i)]**

- (4) For the initial portable crushing and screening plant and each subsequent, equivalent replacement equipment (if required), the Permittee shall demonstrate compliance with all applicable opacity standards within the applicable timeframes in accordance with 40 CFR 60, Subpart OOO. Except for the seasonal shutdown provision under 40 CFR §60.675(i), under no circumstance shall the demonstration for compliance with opacity standards occur later than 180 days after initial startup of the portable crushing and screening plant.
[Reference: 40 CFR §60.11(b) and §60.672(b)]
- (5) The Permittee shall use Method 9 of Appendix A-4 to 40 CFR, Part 60 and the procedures in 40 CFR §60.11, with the following additions:
 - (a) The minimum distance between the observer and the emission source shall be 4.57 meters (15 feet).
 - (b) The observer shall, when possible, select a position that minimizes interference from other fugitive emission sources (e.g., road dust). The required observer position relative to the sun (Method 9 of Appendix A-4 of this part, Section 2.1) must be followed.
 - (c) For affected facilities using wet dust suppression for particulate matter control, a visible mist is sometimes generated by the spray. The water mist must not be confused with particulate matter emissions and is not to be considered a visible emission. When a water mist of this nature is present, the observation of emissions is to be made at a point in the plume where the mist is no longer visible.
[Reference: 40 CFR §60.675(c)(1)]
- (6) The duration of the Method 9 (40 CFR, Part 60, Appendix A-4) observations must be 30 minutes (five 6-minute averages). Compliance with the applicable opacity standards must be based on the average of the five 6-minute averages.
[Reference: 40 CFR §60.675(c)(3)]
- (7) The Permittee shall submit notification of the intended date of the required Method 9 observations to the Department at least 7 days prior to that date unless an alternate date is mutually agreed with the Department.
[Reference: 40 CFR §60.675(g)]
- (8) Within 45 days following the required Method 9 observations, the Permittee shall submit the results to the Department.

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- (9) The Permittee may use the results of the Method 9 opacity observations for the portable crushing and screening plant conducted at one site to satisfy the compliance demonstration required at each additional site where the equipment will be located.

Part F – Record Keeping and Reporting

- (1) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information associated with the crushing and screening plant:
- (a) The amount of material processed and total hours of operation each month in the portable crushing and screening plant;
 - (b) Calculations of the average throughput rating at the crushing and screening plant on a monthly basis;
 - (c) A log, kept onsite, of each periodic inspection of the wet suppression systems associated with the crushing and screening plant including the dates and any corrective actions taken
[Reference: 40 CFR §60.674(b) and §60.676(b)(1)];
 - (d) Copies of all notifications of initial start-up of the portable crushing and screening plant and each subsequent, equivalent replacement equipment;
 - (e) Copies of all required opacity observation test results for the initial portable crushing and screening plant and each subsequent, equivalent replacement equipment; and
 - (f) Sufficient equipment information or vendor literature for all initial equipment associated with the portable crushing and screening plant and each subsequent, equivalent replacement equipment to substantiate equivalency and emissions.
- (2) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information associated with the quartz processing plant:
- (a) The amount of material processed and total hours of operation each month for each process of the quartz processing plant;

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- (b) Calculations of the average throughput rating at each process of the quartz processing plant on a monthly basis;
 - (c) The date, time, and results of all leak detection tests performed on the two (2) baghouses associated with the quartz processing plant.
 - (d) Monthly records of maintenance performed on the two (2) baghouses and two (2) dust collectors associated with the quartz processing plant.
- (3) The Permittee shall maintain for at least five (5) years, and shall make available to the Department upon request, records of the following information associated with the hot mix asphalt plant:
- (a) The amount of asphalt produced and total hours of operations each month;
 - (b) Rolling 12-month totals of asphalt of production;
 - (c) The amount and type of fuel burned in the asphalt drum dryer each month;
 - (d) The amount and type of fuel burned in the hot oil heater each month;
 - (e) The RAP percentage for each mix in the hot mix asphalt plant;
 - (f) Temperature readings in the hot mix asphalt plant for each mix using RAP;
 - (g) The pressure drop readings across the baghouse associated with the hot mix asphalt plant;
 - (h) The date, time, and results of all leak detection tests performed on the baghouse associated with the hot mix asphalt plant;
 - (i) Monthly records of maintenance performed on the baghouse associated with the hot mix asphalt plant; and
 - (j) Copies of all required opacity observation results and particulate matter performance test results.
- (4) The Permittee shall maintain at the facility for at least five (5) years, and shall make available to the Department upon request, records necessary to support annual certifications of emissions and demonstrations of compliance for toxic air pollutants. Such records shall include, if applicable, the following:

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- (a) mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each registered source of emissions;
- (b) accounts of the methods and assumptions used to quantify emissions;
- (c) all operating data, including operating schedules and production data, that were used in determinations of emissions;
- (d) amounts, types, and analyses of all fuels used;
- (e) any records, the maintenance of which is required by this permit or by State or federal regulations, that pertain to the operation and maintenance of continuous emissions monitors, including:
 - (i) all emissions data generated by such monitors;
 - (ii) all monitor calibration data;
 - (iii) information regarding the percentage of time each monitor was available for service; and
 - (iv) information concerning any equipment malfunctions.
- (f) information concerning operation, maintenance, and performance of air pollution control equipment and compliance monitoring equipment, including:
 - (i) identifications and descriptions of all such equipment;
 - (ii) operating schedules for each item of such equipment;
 - (iii) accounts of any significant maintenance performed;
 - (iv) accounts of all malfunctions and outages; and
 - (v) accounts of any episodes of reduced efficiency.
- (g) limitations on source operation or any work practice standards that significantly affect emissions; and
- (h) other relevant information as required by the Department.

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- (5) The Permittee shall submit to the Department by April 1 of each year a certification of emissions for the previous calendar year. The certifications shall be prepared in accordance with requirements, as applicable, adopted under COMAR 26.11.01.05 – 1 and COMAR 26.11.02.19D.
- (a) Certifications of emissions shall be submitted on forms obtained from the Department.
 - (b) A certification of emissions shall include mass emissions rates for each regulated pollutant, and the total mass emissions rate for all regulated pollutants for each of the facility's registered sources of emissions.
 - (c) The person responsible for a certification of emissions shall certify the submittal to the Department in the following manner:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."
- (6) The Permittee shall submit to the Department by April 1 of each year a written certification of the results of an analysis of emissions of toxic air pollutants from the Permittee's facility during the previous calendar year. Such analysis shall include either:
- (a) a statement that previously submitted compliance demonstrations for emissions of toxic air pollutants remain valid; or
 - (b) a revised compliance demonstration, developed in accordance with requirements included under COMAR 26.11.15 & 16, that accounts for changes in operations, analytical methods, emissions determinations, or other factors that have invalidated previous demonstrations.

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- (7) The Permittee shall report, in accordance with requirements under COMAR 26.11.01.07, occurrences of excess emissions to the Compliance Program of the Air and Radiation Administration.

Part G – Temporary Permit-to-Operate Conditions

- (1) This permit-to-construct shall also serve as a temporary permit-to-operate that confers upon the Permittee authorization to operate the hot mix asphalt plant for a period of up to 180 days after initiating operation of the crushing and screening plant.
- (2) The Permittee shall provide the Department with written or electronic notification of the date on which operation of the hot mix asphalt plant is initiated. Such notification shall be provided within 15 business days after such date.
- (3) During the effective period of the temporary permit-to-operate the Permittee shall operate the new installation as required by the applicable terms and conditions of this permit-to-construct, and in accordance with operating procedures and recommendations provided by equipment vendors.
- (4) The Permittee shall submit to the Department an application for a State permit-to-operate no later than 60 days prior to expiration of the effective period of the temporary permit-to-operate.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION

SUPPLEMENTAL INFORMATION REFERENCES

The Code of Maryland Regulations (COMAR) is searchable by COMAR citation at the following Division of State Documents website:

<http://www.dsd.state.md.us/COMAR/ComarHome.html>

The Code of Federal Regulations (CFR), including New Source Performance Standards (NSPS) at 40 CFR, Part 60 and National Emission Standards for Hazardous Air Pollutants (NESHAP) at 40 CFR, Parts 61 and 63, is searchable by CFR citation at the following U.S. Government Publishing Office website:

<http://www.ecfr.gov>

Information on National Ambient Air Quality Standards (NAAQS) is located at the following U.S. Environmental Protection Agency (EPA) website:

<https://www.epa.gov/criteria-air-pollutants/naaqs-table>

Information on Maryland's Ambient Air Monitoring Program is located at the following Maryland Department of the Environment website:

<http://mde.maryland.gov/programs/Air/AirQualityMonitoring/Pages/index.aspx>

Information on the U.S. EPA's Screen3 computer model and other EPA-approved air dispersion models is located at the following U.S. EPA website:

http://www.epa.gov/scram001/dispersion_screening.htm

Information on the U.S. EPA TANKS Emission Estimation Software is located at the following U.S. EPA website:

<http://www.epa.gov/ttn/chief/software/tanks/index.html>

Information on the U.S. EPA Emission Factors and AP-42 is located at the following U.S. EPA website:

<https://www.epa.gov/air-emissions-factors-and-quantification/ap-42-compilation-air-emission-factors>