MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION
APPLICATION FOR A PERMIT TO CONSTRUCT

DOCKET #09-26

COMPANY: Kingspan Roofing + Waterproofing

LOCATION: 1 Hunter Douglas Drive SE, Cumberland, MD 21502

APPLICATION: Tank farm and production equipment for a polyurethane foam insulation board manufacturing facility.

ITEM	DESCRIPTION
1	Notice of Application and Informational Meeting
2	Permit to Construct Application Forms – Forms 5, 5T, 5EP, and 6, supplemental information including maps, site plans, safety data sheets and emissions calculations.
3	Evidence of Zoning Approval
4	MDEnviroScreen Report
5	Privilege Log

MARYLAND DEPARTMENT OF THE ENVIRONMENT
AIR AND RADIATION ADMINISTRATION

NOTICE OF APPLICATION AND INFORMATIONAL MEETING

The Maryland Department of the Environment, Air and Radiation Administration (ARA) received a permit-to-construct application from Kingspan Roofing + Waterproofing on August 6, 2026, for a tank farm and production equipment for a polyurethane foam insulation board manufacturing facility. The proposed installation will be located at 1 Hunter Douglas Drive, Cumberland, MD 21502.

Copies of the application, the MDE EJ Screening Tool Report (which includes the score), and other supporting documents are available for public inspection on the Department's website at https://mde.maryland.gov/programs/Permits/AirManagementPermits/Pages/index.aspx (click on Docket Number 09-26). Any applicant-provided information regarding a description of the environmental and socioeconomic indicators contributing to that EJ score can also be found at the listed website. Such information has not yet been reviewed by the Department. A review of the submitted information will be conducted when the Department undertakes its technical review of all documents included in the application.

In accordance with HB 1200/Ch. 588 of 2022, the applicant provided an environmental justice (EJ) Score for the census tract in which the project is located. The EJ Score, expressed as a statewide percentile, was shown to be 67, which the Department has verified. This score represents a combined measure of pollution and the potential vulnerability of a population to the effects of pollution.

Pursuant to the Environment Article, Section 1-603, Annotated Code of Maryland, an Informational Meeting has been scheduled so that citizens can discuss the application and the permit review process with the applicant and the Department. The meeting will be held on Tuesday, October 6, 2026, at 6 PM to 7 PM at the Allegany County Department of Emergency Services at 11400 Pittsburgh Plate Glass Rd SE, Cumberland, MD 21502. You may also participate virtually. Please register to attend using the following link:

https://forms.gle/zqFhdd2T8Rn5pVUx9

Registered attendees will receive instructions on how to join the virtual meeting using a computer and internet connection or telephone on the day of the meeting.

This meeting location is accessible to individuals with disabilities as defined under the Americans with Disabilities Act (ADA). Individuals who require reasonable accommodation or a language interpreter to participate in the meeting should contact the Department by email at mde.accommodations@maryland.gov or call 410-537-3152 (MD Relay TTY: 7-1-1) at least 5 business days in advance of the meeting.

Further information may be obtained by calling Ms. Shannon Heafey at 410-537-4433.

Christopher R. Hoagland, Director
Air and Radiation Administration

09/02/2025

Mr. Matthew Hafner
Air Quality Permits Program
Maryland Department of the Environment
1800 Washington Blvd.
Baltimore, MD 21230

Subject: Air Quality Permit Application – Kingspan Roofing + Waterproofing, Cumberland, MD

Dear Mr. Hafner,
Kingspan is the global leader in high-performance insulation and building envelope solutions. In 2022, Kingspan established its Roofing + Waterproofing Division—a new global business focused on delivering solutions for energy efficiency and water protection of roofs across all building typologies. Roofing membranes and roofing components are essential elements in ensuring the energy efficiency and durability of the building envelope.

As part of this division, Kingspan has acquired the former Hunter Douglas facility in Cumberland, Allegany County, Maryland. At this facility, we intend to manufacture and supply Roofing + Waterproofing products to the North American market.
We are planning building modifications and construction of a chemical tank farm, and would like to commence with the work in December 2025. Enclosed please find the completed Forms 5, 5T, 5EP, 6, 11, and 42, along with the associated submittals for each.

Jim LaDue has been contracted as our permitting consultant to support Kingspan throughout the application process and will be working directly with MDE on our behalf.
We look forward to working with you and your colleagues at MDE through this permitting process.

Thank you for your time and consideration.
Sincerely,
Sean O'Cuanaigh
Polymer Technology Directory
Kingspan Roofing + Waterproofing

PROCESS DESCRIPTION

The facility in Cumberland will manufacture products to insulate walls and roofs of various commercial and industrial buildings in the construction market. This involves a main production process for Foam Insulation (ISO) Board (aka PIR Board or PolyIso).

ISO Board Production: Insulation boards are composed of an insulating core made of polyisocyanurate (PIR) or polyurethane (PU) foam which is sandwiched between two layers of flexible material, such as aluminum foil, paper, plastic film, multi-laminate foil, bituminous glass fleece, etc. The finished boards have high thermal insultation and fireproof properties. Foam panels are formed by mixing and laying down chemicals onto the facer materials, e.g. glass reinforced plastic (GRP), where a chemical reaction takes place and in the presence of a blowing agent (pentane) foam expands to fill the shape of the board. The resultant rigid closed foam cells are continuously formed into sheets approximately 3 inches thick and 4 feet wide. These are then cut into panels of the desired length. The main stages of the production process are as follows:

Unwinding Section: Rolls of flexible facing materials are loaded onto unwinding units, which manage the feeding of the lower and upper layers of substrate into the production line. Double unwinding units help maintain production speed by keeping one unit ready in standby while the other is in production.

Laydown table: A flat surface supports the lower flexible substrate as foam is applied. An integrated vacuum system (if required) ensures that the flexible substrate remains perfectly flat and in full contact with the table's surface. An electric heating system (if required) precisely controls the table temperature to ensure optimum foam adhesion by allowing different temperatures to be set in different zones.

Dosing Units: Metering units are responsible for the homogenous mixing of the reactive components polyol and isocyanate, as well as various additives (e.g., catalysts, blowing agents, curing agents, flame retardants). The main task of these units is to maintain constant production parameters – especially to keep the pressure and temperature of the main components within very narrow tolerances.

Foaming Heads: The foaming portal is designed to evenly distribute a homogeneous mixture of the reactive materials at the line speeds required by production targets. An integrated control system offers a wide range of options for precise laydown of the PU/PIR reactive mixture. This includes adaptation to production speed, mixhead pressure, laydown height, and laydown position.

Double Belt: The laminator plays a key role in determining the quality and surface finish of the final insulation board. It consists of a gear-driven, double-belt conveyor that precisely maintains the required board dimensions as it transports the flexible substrates and foam core through the curing process. An integrated heating system circulates hot

air through separate upper and lower conveyor circuits to maintain the correct temperature for optimum foam reaction, regardless of board thickness and production speed. The conveyor and electrical heating system are fully enclosed in a thermally insulated tunnel to conserve heat and energy.
Cross Cut Saw: After lamination, the continuous board moves to the flying crosscut saw. Single or double circular blades accurately cut the board to pre-set lengths within minimal tolerances and guaranteed squareness. Precise and smooth cuts are achieved through electronic synchronization of the cutting unit to the line speed and by using high-precision guiding and driving systems in combination with a helical toothed rack and pinion.
Stacking and Packaging: A specialized machine will handle each panel after production. Bundles will be assembled and then wrapped for environmental protection.

ISO Board Line Raw Materials:

MDI: Main chemical component is Methylene diphenyl diisocyanate (MDI) - an aromatic diisocyanate which represents approx. 55% of total chemical usage. MDI bonds with the polymer to form the base structure of the foam and helps the blowing action to form cells.
Polyol: Second highest component level at approx. 30% of total chemical usage. Polyol is the backbone of the foam structure.
Pentane: Third highest component level at approx. 7% of total chemical usage. Pentane once released into the foam blend produces the expansion of the foam structure with it remaining in the cells to enhance the foam insulation properties.
Flame Retardant: Approx. 3% of total chemical usage. Provides the flammability properties of the foam.
Additives: Mixture of 7 chemicals approx. 5% of total chemical usage. Include catalysts, surfactants, stabilizers to ensure blend reacts at required speed and strengthens the cell structure to remain a foam matrix holding the pentane within the foam structure.
Facing Material: Paper reinforced material which covers both faces of the board.
Packaging Materials: Various materials used from pallets to plastic wrapping.

Raw materials will be received at the facility by truck and rail. Storage tanks for raw materials are expected to be as follows:

Tanks of chemicals for Isoboards:

- Two (2) 20,000-gallon pentane tanks. Situated outside above ground.
- Four (4) 22,000-gallon MDI tanks situated within tank farm inside.
- Four (4) 22,000-gallon Polyol tanks situated within tank farm inside.

- 13,000-gallon flame retardant tank situated within tank farm inside.
- 13,000-gallon potassium octoate tank situated within tank farm inside.
- 13,000-gallon surfactant tank situated within tank farm inside
- Other additives will be small day tanks filled from industrial bulk containers (IBCs).

EMISSIONS

Emissions estimates from the facility are based on the following operational data, methods, and factors. No HAP emissions are expected from any process at the facility.

VOC: ISO Board Production

- The potential air emissions resulting from the production of ISO Boards is pentane. Pentane is used as the blowing agent in the formation of the foam insulation. The foam is a closed-cell type in this process which significantly increases the insulation effectiveness and reduces overall pentane emissions. Actual pentane emissions will vary depending on the thickness of the board produced and other factors. The amount of pentane released in the foaming forming process is anticipated to be <5% based on the studies of other production locations; specifically, a Method 25D "squeezed foam test" conducted for a Kingspan facility in Florida on September 27, 2010, and a similar test conducted for a Kingspan facility in California on July 19, 2021.
- Pentane emissions escaping from the ISO board formation are captured and ducted to a flameless electric regenerative thermal oxidizer. To be conservative, the emissions are calculated based on a control efficiency of 95% to allow for variables. Additional notes on pentane in file 'Form 11 part 4 -describe the RTO'.
- 4,4'-Methylenediphenyl diisocyanate is a part of the MDI raw material. Based on the total amount of MDI to be delivered to the site at max capacity, there was an emissions estimate calculated for the potential total amount of MDI and for the 4,4'-Methylenediphenyl diisocyanate portion (for form 5T). For total emissions of the MDI we have assumed an annual usage of 73,816,839 lbs and applied a 0.0001% emission factor and could potentially emit 73.82 lbs per year of MDI. The emission point for the MDI would be during pouring which has the extraction system tied to the RTO unit. Applying an efficiency rate of 95% for the RTO then total annual emissions could be calculated to be 3.691 lbs per year. Taking this emission amount and using 35% as the 4,4'-Methylenediphenyl diisocyanate

amount we could have 1.29 lbs per year for this component of the MDI raw material.

- One of the catalyst raw materials has Ethylene Glycol listed as a percentage of the component. By the same calculations method as for the MDI above we can calculate and estimate and emission among for the EG. It is estimated that we will handle approximately 402,637.3 lbs of the raw material containing the EG [redacted] see SDS). From the supplier datasheet it was estimated that the raw material contains approximately 62.5% of EG giving us a potential annual usage of 251,648.3 lbs of EG. For calculation we applied 0.1% emission factor for the EG giving us a potential emission of 251.6 lbs per year. As the emission point for this material is during the foaming process, which is extracted and routed to the RTO unit. Applying an efficiency rate of 95% for the RTO then total annual emissions could be calculated to be 12.58 lbs per year.

ISO Board Formation Emissions

Parameter	Data
Maximum Poly ISO Production Rate, ft^2/yr (1)	312,040,000
Pentane Usage, lb/ft^2	0.033
Maximum Pentane Usage Rate, TPY	5,119
Amount of Pentane Released, %	4.3
Potential Pentane Emissions, TPY	220
Control Type	Flameless Electric Thermal Oxidizer
Control Efficiency, %	95
VOC Emissions Emitted, lb/hr	2.94
VOC Emissions Emitted, TPY	11

- (1) Based on the maximum Max r30 production rate. Max r30 is the insulation rating for the thickest board that would be produced. Some thinner boards would also be produced but would result in less pentane and less PM emissions.

VOC: <u>ISO Board Cutting Operations</u>

- The sawing process can result in the release of some amounts of the pentane blowing agent as foam cells will be broken by the blades. The foam cells impacted by the cuts are infinitesimal compared to the total volume of cells in each board. In other Kingspan facilities, attempts to measure the release of pentane from the cutting operations yielded no measurable quantities and no data to determine a release rate is available. To apply a potential VOC emission from the cutting operations, a total pentane amount available from waste foam will be applied for illustration purposes. A calculation of the amount of VOC potential in the waste foam can be after the process emissions summary table marked with an asterisk*.

PM: Electric RTO

- The flameless electric regenerative thermal oxidizer controls the VOC emissions from the ISO Board Formation process with a 95% control efficiency. PM_{10} Emissions from the flameless electric thermal oxidizer are calculated based on the manufacturer's data and the following parameters.

RTO PM Emissions

Parameter	Data
Process Exhaust Flow, SCFM	12,660
Process Exhaust Temp, °F	120
Organic Particulates Max, gr/SCF	0.002
Conversion, gr/lb	7,000
PM_{10} Emissions, lb/hr	0.22
PM_{10} Emissions, TPY	0.95

Additional details on the RTO are in supporting document 'Form 11 Part D – Describe the RTO'.

PM: ISO Board Cutting

- The other potentially significant air emission would be PM from the product cutting operations when the panels are being shaped to final product dimensions. Emissions from these cutting operations will be extracted via a ducting system to high-efficiency fabric filters with a 99% capture efficiency. The captured PM (99%) will be formed into briquettes for resale to other parties. See notes in supporting information file 'Form 6 Part 15'

- PM_{10} emissions from the ISO board cutting are calculated based on the following parameters.

ISO Board Cutting Emissions

Parameter	Data
Total Board Footage at max production, ft^2/yr	312,040,000
Starting Board Dimensions, ft	0.25' (height) x 4.01' (width) x 8.01' (length)
Footage per Board, ft^2	32.12
Number of Boards	9,751,250
Estimated Waste per Board, ft^3	0.03
Estimated Waste Total, ft^3	292,538

Parameter	Data
Total Board Footage at max production, ft^2/yr	312,040,000
Waste Density, lb/ft^3	1.875
Uncontrolled Waste (PM_{10}) Emissions, lbs/yr	548,508
Uncontrolled Waste (PM_{10}) Emissions, TPY	274
Control Type	Fabric Filters
Control Efficiency, %	99
PM_{10} Emissions Emitted, lb/hr	0.733
PM_{10} Emissions Emitted, TPY	2.743

PENTANE TANKS

- Pentane is stored in pressure tanks like those used for propane. Therefore, the only emissions would be very small fugitives during pipe disconnection during the delivery and unloading process. It is not likely that there would be any significant release of emissions when transfer piping connections are disconnected from delivery trucks are being made due to the closed loop unloading system where the bulk tank venting is connected directly to the delivery tank truck. The process of emptying the delivery vessel is via a positive displacement pump and all liquid material is suctioned from the vessel until the pump 'runs dry'. At this point the valves at the delivery and at the pumps are closed. When disconnecting the pipework, common practice is to have a flask available in case any residual liquid remains once the pipes are disconnected. The following is assumed for documenting any potential emission from the unloading process.
    - To manufacture the maximum amount of product capacity assumed for the site, a total pentane usage was calculated to be 10,277,240 lbs for a year. Delivery quantity is approximately 44,000 lbs per truck. This equates to a potential number of loads of 234 being delivered to site. If we assume a potential loss of 1 lb per delivery, then we would add 234 lbs to the total emissions calculations. (if liquid pentane was present at disconnection, it would be collected in the flask and used for making foam samples in the lab if necessary).
- Similarly to the pentane, we can make the same assumptions for MDI deliveries. Taking an annual MDI usage of 73,816,839 lbs and account for delivery vessel quantities of 200,000 lbs, this would equate to 404 connections. The material is offloaded via positive displacement pumps and until it runs dry and the valves are closed on the delivery vessel and the offloading equipment. Once the offloading

pipes are disconnected, any residual liquid would be collected. If we assume again that 1 lb of material is attributed to each delivery, this 404 lbs total could be added to the MDI emission numbers.

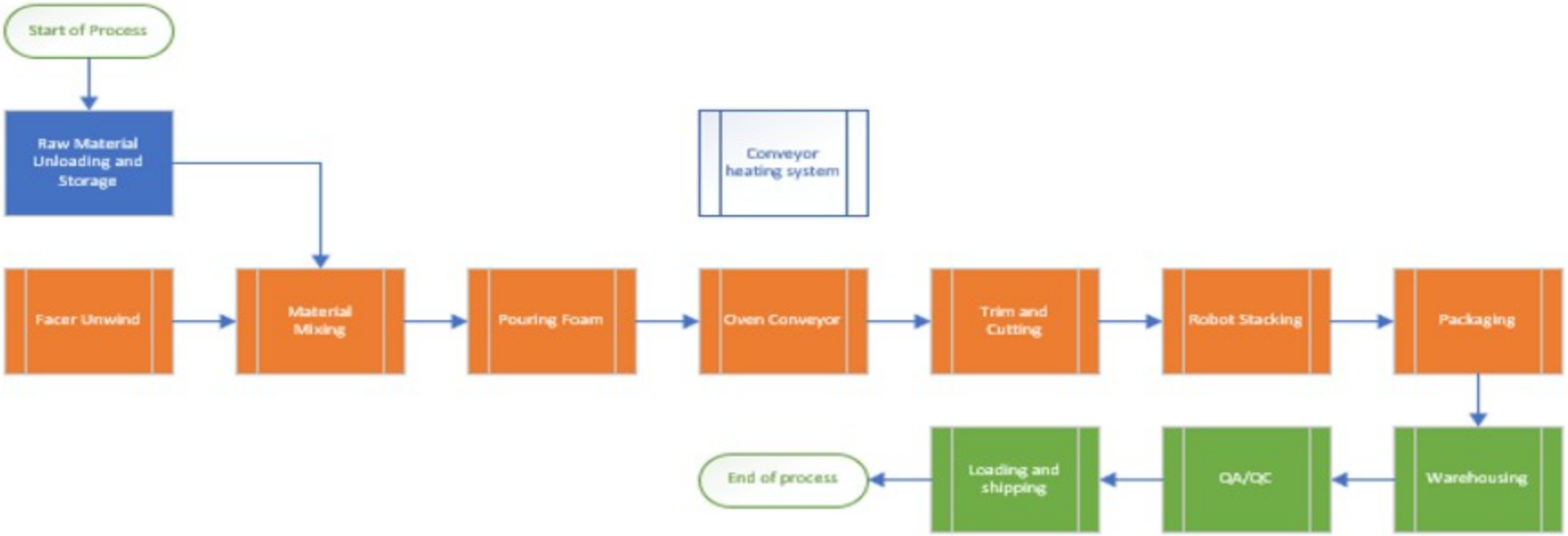
- If we use the 0.0001% emission factor for MDI for the material collected at offload, then the emission would be 0.000404 lbs annually. This assumes all collected MDI liquid is used for foam lab samples.

Process Emissions Summary

Potential Emissions

Source	VOC		PM_{10}	
	lb/hr	TPY	lb/hr	TPY
ISO Board Formation pentane	2.94	11	-	-
Electric RTO	-	-	0.22	0.95
ISO Board Cutting	-	-	0.733	2.743
MDI Emissions total lbs delivered	0.00053	0.002	-	-
MDI Unloading Emissions	$0.54x10^{-7}$	0.000000202	-	-
Waste Foam VOC	4.91	18.37*	-	-
Pentane Unloading Emissions	0.03	0.117	-	-
Ethylene Glycol	0.00183	0.00685	-	-
Total Emissions	**7.882**	**29.496**	**0.953**	**3.693**

** At the manufacturing levels that the Cumberland site is stating as capacity of production, the calculations show that the foam dust waste could reach a weight of 548,508 lbs in a year. Using the 7% pentane content this implies that there are 38,396 lbs of VOC available in the waste foam. Applying the 4.3% emission rate from the processing means that 36,745 lbs of pentane is in this amount of waste foam or 18.37 TPY. There is a challenge to applying an emission factor of pentane to the waste foam. It is clear that when cutting the foam that the saw blades will break foam cells containing the pentane and lead to an immediate release. Other Kingspan facilities have attempted to quantify the release during the cutting process but due to the fact that there is an air extraction system functioning during cutting, the amount of pentane released is not detectable with the sensing methods that were used as the pentane concentration is diluted considerably by the air flow. What the measuring methods have determined is that no pentane is detected in the areas during production and therefore no specialized zoning or equipment has had to be introduced to any production lines globally.*



Production Process Overview

AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST

OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	Kingspan Roofing + Waterproofing
COMPANY ADDRESS:	4115 N Perkins Rd, Stillwater, OK 74075
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	Kingspan Roofing + Waterproofing
PREMISES ADDRESS:	1 Hunter Douglas Drive, Cumberland, MD 21502
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Jim LaDue
JOB TITLE:	Project Permit Consultant
PHONE NUMBER:	774-269-8678
EMAIL ADDRESS:	jladue@iwstrategy.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
Production equipment to produce foam insulation products	

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.

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

No.	x	Form 5	No.		Form 11
No.	x	Form 5T	No.		Form 41
No.	x	Form 5EP	No.	x	Form 42
No.	x	Form 6	No.		Form 44
No.		Form 10			

- [x] Vendor/manufacturer specifications/guarantees
- [x] Evidence of Workman's Compensation Insurance
- [x] Process flow diagrams with emission points
- [x] Site plan including the location of the proposed source and property boundary
- [x] Material balance data and all emissions calculations
- [x] 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)
- [x] 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.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Management Administration ▪ Air Quality Permits Program
1800 Washington Blvd ▪ Baltimore, Maryland 21230
(410) 537-3230 ▪ 1-800-633-6101 ▪ www.mde.state.md.us

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.

MARYLAND DEPARTMENT OF THE ENVIRONMENT
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Air and Radiation Management Administration • Air Quality Permits Program

APPLICATION FOR PROCESSING/MANUFACTURING EQUIPMENT

Permit to Construct ○x Registration Update ○ Initial Registration ○

1A. Owner of Equipment/Company Name

Kingspan Roofing + Waterproofing

Mailing Address

1 Hunter Douglas Drive SE,

City Cumberland State MD Zip 21502

Telephone Number

(774) 269-8678

Signature

Jim LaDue

Jim LaDue , Project Permit Consultant Date June 3, 2025

DO NOT WRITE IN THIS BLOCK

2. REGISTRATION NUMBER

County No. (1-2)	Premises No. (3-6)	Registration Class (7)	Equipment No. (8-11)	Data Year (12-13)	Application Date

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

_ 1 Hunter Douglas DR SE,

_Cumberland MD 21502 (386) 327-5731 Telephone Number

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		0626	

4. Describe this Equipment: Make, Model, Features, Manufacturer (include Maximum Hourly Input Rate, etc.)
See note titled Form 5 - Part 4 notes

5. Workmen's Compensation Coverage **CLE-007353992-01** Binder/Policy Number **5/14/26** Expiration Date

Company

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 1

6B. Number of Stack/Emission Points Associated with this Equipment Stack: 1 Non-Stack: 1

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

The facility in Cumberland will manufacture products to insulate walls and roofs of various commercial and industrial buildings in the construction market. This involves a main production process for Foam Insulation (ISO) Board (aka PIR Board or PolyIso).

9. Control Devices Associated with this Equipment

None [ ] 24-0

Simple/Multiple Cyclone	Spray/Adsorb Tower	Venturi Scrubber	Carbon Adsorber	Electrostatic Precipitator	Baghouse	Thermal/Catalytic Afterburner	Dry Scrubber
[ ]	[ ]	[ ]	[ ]	[ ]	[x]	[ ]	[ ]
24-1	24-2	24-3	24-4	24-5	24-6	24-7	24-8

Other NA

[x] Describe: Regenerative Thermal Oxidizer [RTO]

24-9

10. Annual Fuel Consumption for this Equipment

OIL-1000 GALLONS	SULFUR %	GRADE	NATURAL GAS-1000 FT^3	LP GAS-100 GALLONS	GRADE
0			0	0	
26-31	32-33	34	35-41	42-45	

COAL- TONS	SULFUR %	ASH%	WOOD-TONS	MOISTURE %
0			0	
46-52	53-55	56-58	59-63	64-65

OTHER FUELS _____ (Specify Type) [ ] 66-1 ANNUAL AMOUNT CONSUMED _____ (Specify Units of Measure)

OTHER FUEL _____ (Specify Type) [ ] 66-2 ANNUAL AMOUNT CONSUMED _____ (Specify Units of Measure)

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

11. Operating Schedule (for this Equipment)

Continuous Operation	Batch Process	Hours per Batch	Batch per Week	Hours per Day	Days Per Week	Days per Year
[x]	[ ]	[ ]	[ ]	24	6	312
67-1	67-2	68-69		70-71	72	73-75

Seasonal Variation in Operation:

No Variation	Winter Percent	Spring Percent	Summer Percent	Fall Percent	(Total Seasons= 100%)
[x]	[ ]	[ ]	[ ]	[ ]	
76	77-78	79-80	81-82	83-84	

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

If not, then	Height Avove Ground (FT)	Inside Diameter at Top	Exit Temperature (°F)	Exit Velocity (FT/SEC)
	40		120	
	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 (Y or N)

NAME	CAS NO. (IF APPLICABLE)	INPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1. Methylene diphenyl diisocyanate (MDI)	See excel file for CAS		55%		
2. Polyol:	See excel file for CAS		30%		
3. Pentane	See excel file for CAS		7%		
4. Flame Retardant	See excel file for CAS		3%		
5. Additives: - Various Chemicals	See excel file for CAS		5%		
6. Paper Facer	N/A		<1%		
7.					
8.					
9.					
TOTAL					

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

NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1. PolyIso Roofing Insulation	N/A	1303	Boards	9,751,250	Boards
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
TOTAL					

15. Waste Streams- Solid and Liquid

NAME	CAS NO. (IF APPLICABLE)	OUTPUT RATE PER HOUR	UNITS	PER YEAR	UNITS
1. Particulate [dust] from cutting operations	N/A	73.3	lbs	548,508	lbs
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
TOTAL					

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

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
0	0	0
99-104	105-110	111-116

Carbon Monoxide	Volatile Organic Compounds	PM-10
0	0	0
177-122	123-128	129-134

17. Total Fugitive Emissions (for this equipment only) in Pounds Per Operating Day

Particulate Matter	Oxides of Sulfur	Oxides of Nitrogen
0	0	0
135-139	140-144	145-149

Carbon Monoxide	Volatile Organic Compounds	PM-10
0	0	5.28
150-154	155-159	160-164

Method Used to Determine Emissions **(1= Estimate 2= Emission Factor 3= Stack Test 4= Other)**

TSP	SOX	NOX	CO	VOC	PM10
				1,2	1
165	166	167	168	169	170

AIR AND RADIATION MANAGEMENT ADMINISTRATION USE ONLY

18. Date Rec'd. Local _____ **Date Rec'd. State** _____ **Return to Local Jurisdiction** **Date**_____ **By**_____

Reviewed by Local Jurisdiction **Date**_____ **By**_____ **Reviewed by State** **Date**_____ **By**_____

19. Inventory Date **Month/Year** (171-174) **Equipment Code** (175-177) **SCC Code** (178-185)

20. Annual Operating Rate (186-192) **Maximum Design Hourly Rate** (193-199) **Permit to Operate Month** (200-201) **Transaction Date (MM/DD/YR)** (202-207)

Staff Code (208-210) **VOC Code** (211 212) **SIP Code** (213 214) **Regulation Code** (215-218) **Confidentiality** (219)

Point Description (220-238) **Action** (239) A: Add C: Change

Form 5 – part 4 notes

The production line for producing foam insulation board consists of various pieces of equipment from multiple equipment manufacturers and operating together. Kingspan project manages the installation and commissioning of the production line. A basic description of the equipment involved is provided below to support the application details of form 5.

- Facer unwinding
    - This equipment holds the rolls of facer material and will unwind automatically when in production. The equipment has four stations to hold rolls. Two are set up to feed the top paper and two more for the bottom facer. One top and one bottom facer unwinding is in operation during production and when the first roll is empty the second awaiting roll is attached to allow the line to run continuously without interruption.
- Chemical laydown
    - The next stage in the process is where the chemicals are mixed together in a mixing head and dispensed onto the moving facer during production. The raw materials are stored in bulk tanks or totes and fed automatically at specified flow rates under controlled processing conditions. The chemical laydown area has an extraction system built in that is directed to the RTO unit.
- RTO unit
    - The extraction system at the chemical laydown and on the pumping table is directed to the RTO.
- After the foam chemicals are dispensed onto the moving facer they are contained in a moving mold which dictates product thickness and width. The mold is made up of moving slats which are heated and temperature controlled. Heating for the moving mold is via electric. The moving mold can be referred to as a conveyor, a laminator or is sometimes referred to as an oven.
- From the moving mold the product next enters a cutting operation where the sawing equipment cuts the product to a predetermined length, approximately 16’.
- The cut product is fed by conveyors through to the edge cutting process which ‘trims’ the product to the final width, approximately 4’.
- Next, the trimmed product is conveyed to the cutting operation for the final cut length, approximately 8’ or 4’.
- The cutting operations described above all have an extraction system that feeds to a dust collection system. An additional process associated with the dust collection system is described as compacting or briquetting the dust generated from the cutting operations.

- Once the product has been cut to the final dimensions it is conveyed to a stacking operation where it will automatically stack the finished board on a pallet up to 4’ in height.
- Once the pallets are complete, they are conveyed to the wrapping process where they are automatically covered in the plastic film that surrounds the completed ‘bundle’ of product. From here the product is ready to be transferred to the finished goods warehouse.

Generic Name	Foam % approx.	Product Trade Name	Chemical ingredient Name	Percentage	CAS
MDI	55	[redacted]	P-MDI	50-<70%	9016-87-9
			MDI	25-<50%	101-68-8
			Isocyanic Acid	1-<3%	57636-09-6
			Methylenediphenyl diisocyanate	1-<3%	26447-40-5
			1,3-Diazetidine-2,4-dione, 1,3-bis[4-[(4-isocyanatophyl)methyl]phenyl]-	1-<3%	17589-24-1
Polyol	30	[redacted]	Aromatic Polyester Polyol	>75%	Propietary
			[redacted]	<15%	[redacted]
			[redacted]	<10%	[redacted]
Pentane	7%	[redacted]	[redacted]	1-99%	[redacted]
			[redacted]	1-99%	[redacted]
Flame Retardant	3	[redacted]	% Phosporic trichloride, reaction productes with propylene oxide	>99%	1244733-77-4
Additives	3	[redacted]	Ethylene Glycol	60-65%	107-21-1
			[redacted]	35-40%	[redacted]
		[redacted]	[redacted]	60-95%	[redacted]
			[redacted]	1-3%	[redacted]
		[redacted]	[redacted]	Trade secret	Trade Secret
			[redacted]	Trade Secret	Trade Secret
		[redacted]	[redacted]	70-80%	[redacted]
			[redacted]	20-30%	[redacted]

MARYLAND DEPARTMENT OF THE ENVIRONMENT
Air and Radiation Management Administration ● Air Quality Permits Program
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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: Kingspan Roofing + Waterproofing

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:
Dust Collection System

2. Emission Point Description

Describe the emission point including all associated equipment and control devices:
See additional file 'Form 5EP part 1 dust extraction information'

3. Emissions Schedule for the Emission Point

Continuous or Intermittent (C/I)?	C	**Seasonal Variation** Check box if none: ☒ Otherwise estimate seasonal variation:	
Minutes per hour:	60	Winter Percent	
Hours per day:	24	Spring Percent	
Days per week:	6	Summer Percent	
Weeks per year:	52	Fall Percent	

4. Emission Point Information

Height above ground (ft):		Length and width dimensions at top of rectangular stack (ft):	Length:	Width:	
Height above structures (ft):					
Exit temperature (°F):		Inside diameter at top of round stack (ft):			
Exit velocity (ft/min):		Distance from emission point to nearest property line (ft):			
Exhaust gas volumetric flow rate (acfm):		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:

- ☐ None
- ☒ Baghouse No. 1
- ☐ Cyclone No. _____
- ☐ Elec. Precipitator (ESP) No. _____
- ☐ Dust Suppression System No. _____
- ☐ Venturi Scrubber No. _____
- ☐ Spray Tower/Packed Bed No. _____
- ☐ Carbon Adsorber No. _____
  - ☐ Cartridge/Canister
  - ☐ Regenerative
- ☐ Thermal Oxidizer No. _____
  - ☐ Regenerative
- ☐ Catalytic Oxidizer No. _____
- ☐ Nitrogen Oxides Reduction No. _____
  - ☐ Selective ☐ Non-Selective
  - ☐ Catalytic ☐ Non-Catalytic
- ☐ Other No. _____
  Specify:

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)	0.733			2.743
Particulate Matter (filterable as PM2.5)				
Particulate Matter (condensables)				
Volatile Organic Compounds (VOC)	4.91			18.37
Oxides of Sulfur (SOx)				
Oxides of Nitrogen (NOx)				
Carbon Monoxide (CO)				
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_2O)				
Hydrofluorocarbons (HFCs)				
Perfluorocarbons (PFCs)				
Sulfur Hexafluoride (SF6)				
Total GHG (as CO_2e)				

List individual federal Hazardous Air Pollutants (HAP) below:	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)

(Attach additional sheets as necessary.)

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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: Kingspan Roofing + Waterproofing

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:
RTO

2. Emission Point Description

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

3. Emissions Schedule for the Emission Point

Continuous or Intermittent (C/I)?	C	**Seasonal Variation** Check box if none: ☒ Otherwise estimate seasonal variation:	
Minutes per hour:	60	Winter Percent	
Hours per day:	24	Spring Percent	
Days per week:	6	Summer Percent	
Weeks per year:	52	Fall Percent	

4. Emission Point Information

Height above ground (ft):	40	Length and width dimensions at top of rectangular stack (ft):	Length:	Width:	
Height above structures (ft):	15				
Exit temperature (°F):	120	Inside diameter at top of round stack (ft):		2.33	
Exit velocity (ft/min):	TBD	Distance from emission point to nearest property line (ft):		62	
Exhaust gas volumetric flow rate (acfm):	TBD	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:

- ☐ None
- ☐ Baghouse No. _____
- ☐ Cyclone No. _____
- ☐ Elec. Precipitator (ESP) No. _____
- ☐ Dust Suppression System No. _____
- ☐ Venturi Scrubber No. _____
- ☐ Spray Tower/Packed Bed No. _____
- ☐ Carbon Adsorber No. _____
  - ☐ Cartridge/Canister
  - ☐ Regenerative
- ☒ Thermal Oxidizer No. 1
  - ☒ Regenerative
- ☐ Catalytic Oxidizer No. _____
- ☐ Nitrogen Oxides Reduction No. _____
  - ☐ Selective ☐ Non-Selective
  - ☐ Catalytic ☐ Non-Catalytic
- ☐ Other No. _____
  Specify:

FORM 5EP: Emission Point Data

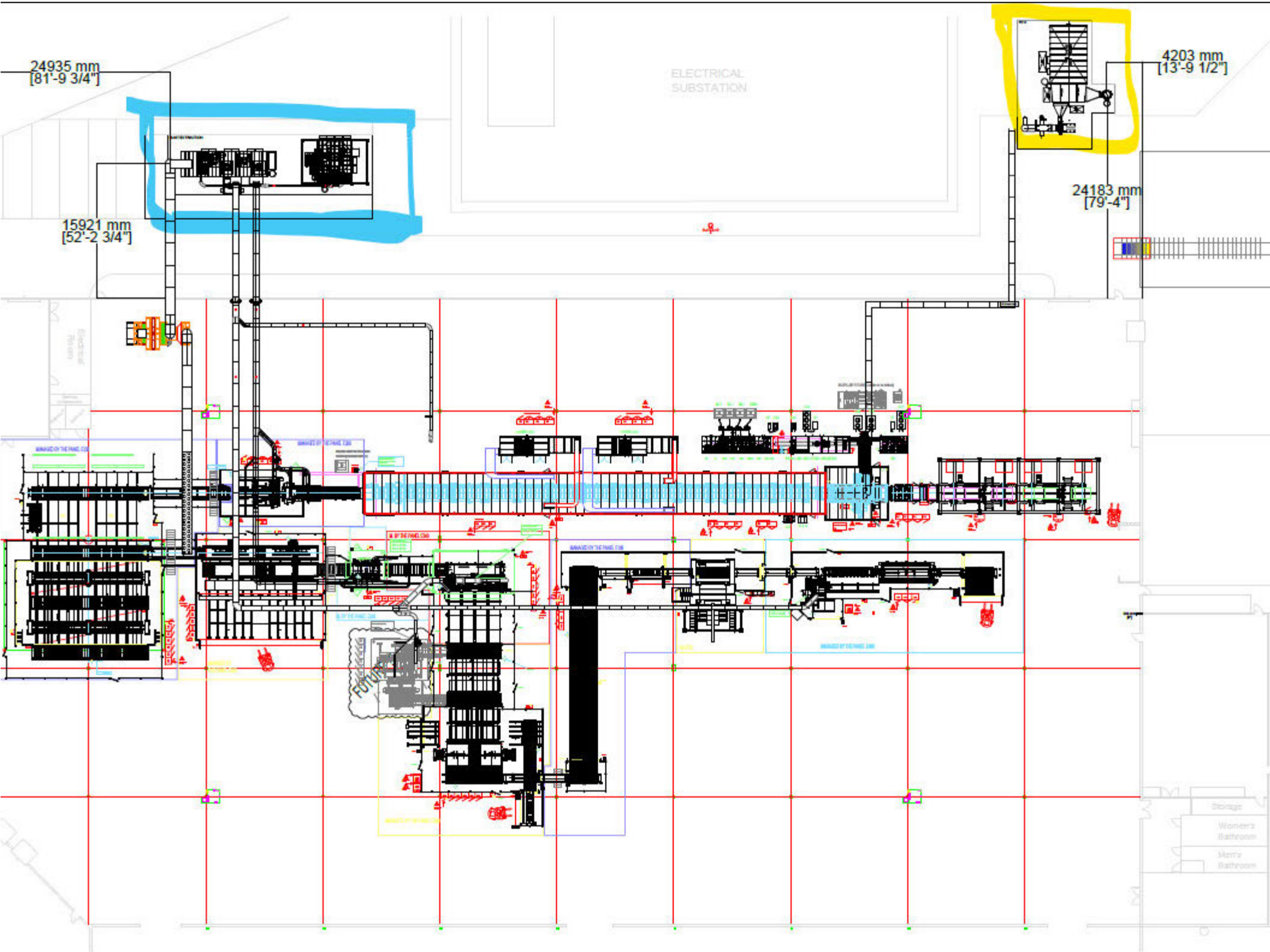
6. Estimated Emissions from the Emission Point

Criteria Pollutants	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)
Particulate Matter (filterable as PM10)	0.22			0.95
Particulate Matter (filterable as PM2.5)				
Particulate Matter (condensables)				
Volatile Organic Compounds (VOC)	2.94			11
Oxides of Sulfur (SOx)				
Oxides of Nitrogen (NOx)				
Carbon Monoxide (CO)				
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_2O)				
Hydrofluorocarbons (HFCs)				
Perfluorocarbons (PFCs)				
Sulfur Hexafluoride (SF6)				
Total GHG (as CO_2e)				

List individual federal Hazardous Air Pollutants (HAP) below:	At Design Capacity (lb/hr)	At Projected Operations		
		(lb/hr)	(lb/day)	(ton/yr)

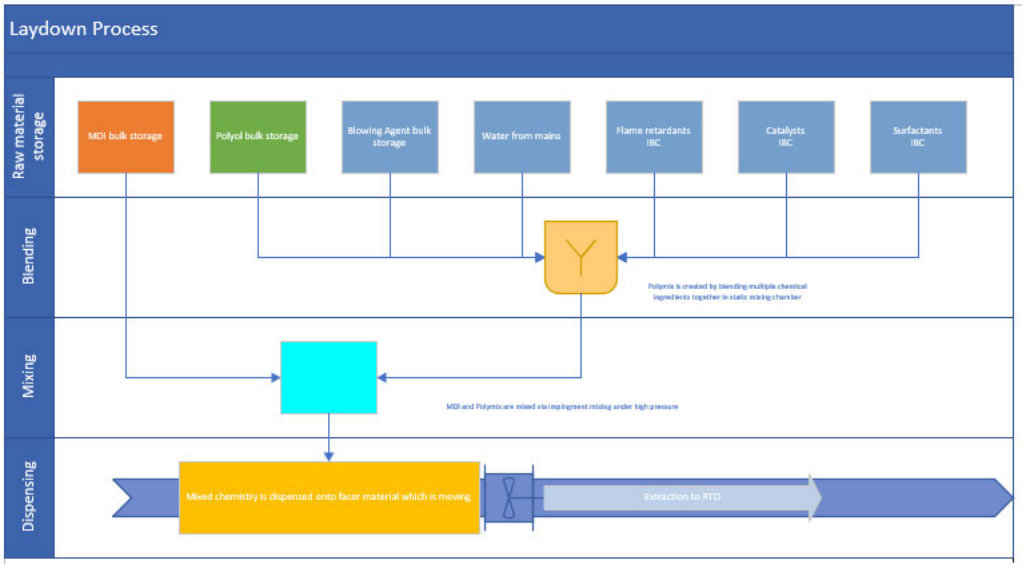
(Attach additional sheets as necessary.)


24935 mm
[81'-9 3/4"]
15921 mm
[52'-2 3/4"]
4203 mm
[13'-9 1/2"]
24183 mm
[79'-4"]
ELECTRICAL
SUBSTATION
FUTURE
Storage
Women's
Bathroom
Men's
Bathroom

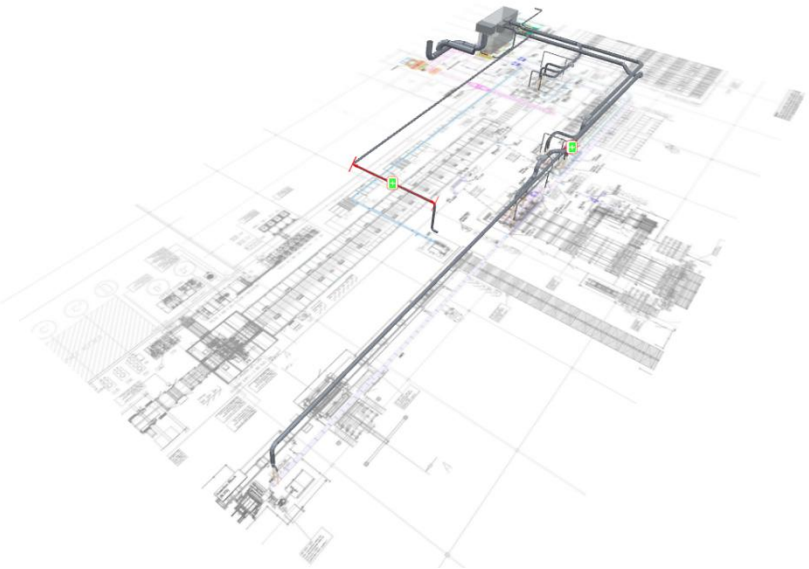
Emission Points Kingspan Roofing + Waterproofing Cumberland Maryland

Point Emission

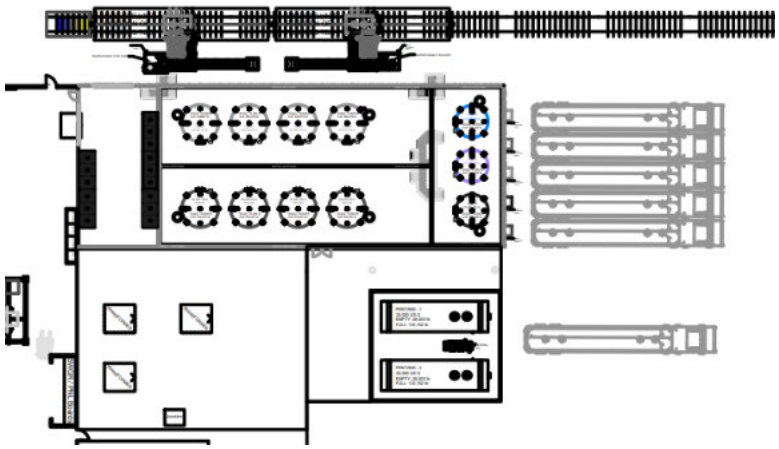
- RTO
    - During the production process to make the foam the laydown area has extraction system extracts to the RTO



- Dust Collection System
    - All board cutting processes are extracted to the baghouse for the dust collection systems



- Fugitive emission points
    - Chemical delivers for truck and rail
    - Chemical storage tanks




RTO
DUST
COLLECTOR

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

Applicant Name: Kingspan Roofing + Waterproofing

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			
						Actual Total Existing TAP Emissions	Projected TAP Emissions from Proposed Installation	Premises Wide Total TAP Emissions	
			1-hour	8-hour	Annual	(lb/hr)	(lb/hr)	(lb/hr)	(lb/yr)
ex. ethanol	*64175*	*II*	*18843*	*3769*	*N/A*	*0.60*	*0.15*	*0.75*	*1500*
ex. benzene	*71432*	*I*	*80*	*16*	*0.13*	*0.5*	*0.75*	*1.00*	*400*
4,4'-Methylenediphenyl isocyanate	101-68-8	I		0.5118		0	0.02968	0.03	27.78
Ethylene Glycol	107-21-1	II	1000	77		0	.272	.272	254.592
[redacted]	[redacted]	?		17705.5		0	3.94	3.94	29507
[redacted]	[redacted]	?		17705.5		0	3.94	3.94	29507

(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/m^3.

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/m^3, and any applicable annual screening level for the TAP must be greater than 1 µg/m^3.

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*
4,4'-Methylenediphenyl isocyanate	Regenerative Thermal Oxidizer	95			
Ethylene Glycol	Regenerative Thermal Oxidizer	95			
[redacted]	Regenerative Thermal Oxidizer	95			
[redacted]	Regenerative Thermal Oxidizer	95			

(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 ($\mu g/m^3$)			Premises Wide Total TAP Emissions		Allowable Emissions Rate (AER) per COMAR 26.11.16.02A		Off-site Concentrations per Screening Analysis ($\mu g/m^3$)			Compliance Method Used?
		1-hour	8-hour	Annual	(lb/hr)	(lb/yr)	(lb/hr)	(lb/yr)	1-hour	8-hour	Annual	AER or Screen
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*
4,4'-Methylenediphe[redacted]	101-68-8	N/A	.5118	N/A	.03	27.78	.008	N/A	N/A	N/A	N/A	AER
Ethylene Glycol	107-21-1	1000	77	N/A	.27	254.592	1.255	N/A	N/A	N/A	N/A	AER
[redacted]	[redacted]	N/A	17705.5	N/A	3.94	29507	288.6	N/A	N/A	N/A	N/A	AER
[redacted]	[redacted]	N/A	17705.5	N/A	3.94	29507	288.6	N/A	N/A	N/A	N/A	AER

(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.

AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST

OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	Kingspan Roofing + Waterproofing
COMPANY ADDRESS:	4115 N Perkins Rd, Stillwater, OK 74075
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	Kingspan Roofing + Waterproofing
PREMISES ADDRESS:	1 Hunter Douglas Dr SE, Cumberland, MD 21502
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Jim LaDue
JOB TITLE:	Project Permit Consultant
PHONE NUMBER:	774-269-8678
EMAIL ADDRESS:	jladue@iwstrategy.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
Dust Collection System	

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. x Form 5
No. NA Form 5T
No. x Form 5EP
No. x Form 6
No. NA Form 10
No. NA Form 11
No. NA Form 41
No. x Form 42
No. NA Form 44

☐ 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.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

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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	Telephone No.	Date of Application
Kingspan Roofing + Waterproofing	774-269-8678	6/5/25

2. Mailing Address	City	Zip Code	County
4115 N Perkins Rd	Stillwater	74075	Payne

3. Equipment Location	City/Town or P.O.	County
1 Hunter Douglas Dr SE	Cumberland	Allegany

4. Signature of Owner or Operator	Title	Print or Type Name
Sean O Cuanaigh	Polymer Technology Director	Sean Ocuanaigh

5. Application Type: **Alteration** [ ] **New Construction** [x]

6. Date Construction is to Start: TBD **Completion Date (Estimate):** 2/2026

7. Type of Gas Cleaning or Emission Control Equipment:

Simple Cyclone [x] **Multiple Cyclone** [ ] **Afterburner** [ ] **Electrostatic Precipitator** [ ]

Scrubber [ ] _____ (type) **Other** [ ] _____ (type) _____

8. Gas Cleaning Equipment Manufacturer **Model No.** **Collection Efficiency (Design Criteria)**

9. Type of Equipment which Control Equipment is to Service:

Mixers and Cutter

10. Stack Test to be Conducted:

Yes [ ] **No** [ ] **NA** _____ (Stack Test to be Conducted By) _____ (Date)

11. Cost of Equipment _____

Estimated Erection Cost _____

12. The Following Shall Be Design Criteria:

	INLET	OUTLET
Gas Flow Rate	_____ACFM*	_____ACFM*
Gas Temperature	_____°F	_____°F
Gas Pressure	_____INCHES W.G.	_____INCHES W.G.
	PRESSURE DROP _____	
Dust Loading	_____GRAINS/ACFD**	_____GRAINS/ACFD**
Moisture Content OR Wet Bulb Temperature	_____% _____°F	_____% _____°F

Liquid Flow Rate _____ GALLONS/MINUTE
(Wet Scrubber)
(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

Size of Dust Particles Entering Cleaning Unit	% of Total Dust	% to be Collected
0 to 10 Microns	NA	_____
10 to 44 Microns	_____	_____
Larger than 44 Microns	_____	_____

14. For Afterburner Construction Only:

Volume of Contaminated Air NA ___CFM Gas Inlet (DO NOT INCLUDE COMBUSTION AIR)

Temperature _____ °F Capacity of

Afterburner _____BTU/HR Diameter

(or area) of Afterburner Throat_____

Combustion Chamber_____ _____Operating Temperature at Afterburner _____°F
(diameter) (length)

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.

See Attachment included - Form 6 Part 15

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** _____

Form 6: Part 15 – Dust Mitigation System Drawing

The dust extraction system will draw materials from a number of areas in the manufacturing process. Namely:

- ‘flying saw’ which completes the first cut of finished product into a standard length to pass the product through a towered conveying system
- ‘longitudinal squaring’ which cuts the product to the correct width
- ‘multiblade’ which cuts product down to finished standard lengths of 8’ or 4’
- ‘stock insertion unit’ where it is possible to cut finished product to be used in packaging feet inserts

Below is a 3D image from drawings showing the pipework configuration of another manufacturing facility.

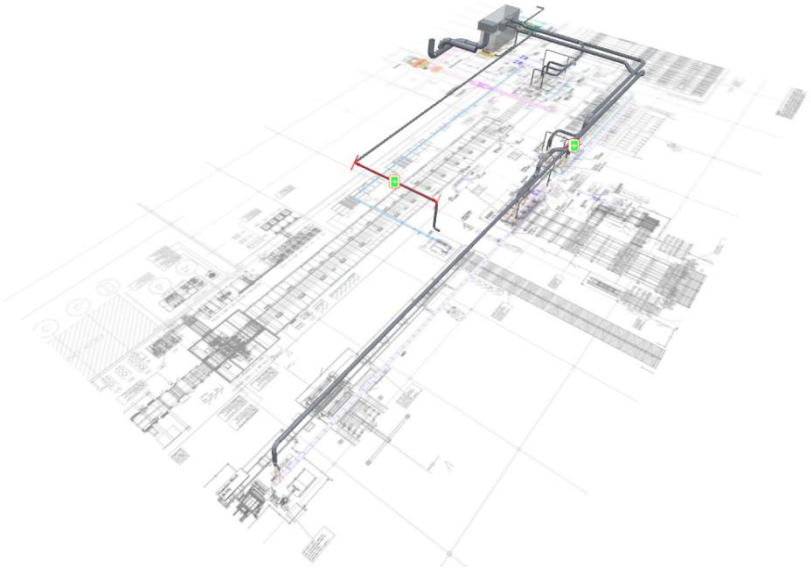


Figure 1: 3D mock-up of ductwork for dust extraction system



Photo 1: Extraction pipework for ‘flying saw’ in a manufacturing facility



Photo 2: Extraction pipework for ‘multiblade’ in a manufacturing facility



Photo 3: Example of enclosure for ‘flying saw’ operation showing dust extraction piping

Below are the calculations used to determine the amount of dust generated by the cutting processes as stated in the process description document.

Total Board Square Footage at max production	312,040,000 sf
Board dimensions	8' x 4' = 32 sf
Number of boards	9,751,250

The production size of the product is made larger in length and width to account for curing and the cutting processes to manufacture the 8’ x 4’ boards. Using a nominal board thickness of 3” we have a per board volume of 8 cubic feet. The volume of product that is made to get to this finished board volume is 8.03 cubic feet. This difference (0.03 ft3) is the waste per board. Taking the number of boards and multiplying by the volume difference between starting and final board yields 292,538 ft3 of waste product. Using a nominal density of 1.875 lb/ft3 this would yield 548,508 lbs of dust waste which is recovered by the dust extraction system. The dust extraction system using fabric filters and an assumed control efficiency of 99% would calculate to PM_{10} Emissions Emitted in the range of **2.743 TPY** or **0.733 lbs/hr** or operation assuming 24hx6dx52w = 7488hours.

Note: Kingspan has planned for a bricking machine where the dust collected from the extraction system is compacted into a solid brick to reduce volume of the waste. Kingspan is seeking to divert the bricked waste that could be generated from production, to be used by a 3rd party rather than sending to landfill.

AIR QUALITY PERMIT TO CONSTRUCT APPLICATION CHECKLIST

OWNER OF EQUIPMENT/PROCESS	
COMPANY NAME:	Kingspan Roofing + Waterproofing
COMPANY ADDRESS:	4115 N Perkins Rd, Stillwater, OK 74075
LOCATION OF EQUIPMENT/PROCESS	
PREMISES NAME:	Kingspan Roofing + Waterproofing
PREMISES ADDRESS:	1 Hunter Douglas Dr SE, Cumberland, MD 21502
CONTACT INFORMATION FOR THIS PERMIT APPLICATION	
CONTACT NAME:	Jim LaDue
JOB TITLE:	Project Permit Consultant
PHONE NUMBER:	774-269-8678
EMAIL ADDRESS:	jladue@iwstrategy.com
DESCRIPTION OF EQUIPMENT OR PROCESS	
RTO	

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. x Form 5
No. NA Form 5T
No. x Form 5EP
No. x Form 6
No. NA Form 10
No. NA Form 11
No. NA Form 41
No. x Form 42
No. NA Form 44

☐ 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.

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 PERMIT TO CONSTRUCT
GAS CLEANING OR EMISSION CONTROL EQUIPMENT

1. Owner of Installation	Telephone No.	Date of Application
Kingspan Roofing + Waterproofing	774-269-8678	6/5/25

2. Mailing Address	City	Zip Code	County
4115 N Perkins Rd	Stillwater	74075	Payne

3. Equipment Location	City/Town or P.O.	County
1 Hunter Douglas Dr SE	Cumberland	Allegany

4. Signature of Owner or Operator	Title	Print or Type Name
Sean O Cuanaigh	Polymer Technology Director	Sean Ocuanaigh

5. Application Type: **Alteration** [ ] **New Construction** [X]

6. Date Construction is to Start: **TBD** **Completion Date (Estimate):** 2/2026

7. Type of Gas Cleaning or Emission Control Equipment:

Simple Cyclone [X] **Multiple Cyclone** [ ] **Afterburner** [ ] **Electrostatic Precipitator** [ ]

Scrubber [ ] _____ (type) **Other** [ ] _____ (type) _____

8. Gas Cleaning Equipment Manufacturer **Model No.** **Collection Efficiency (Design Criteria)**

9. Type of Equipment which Control Equipment is to Service:

10. Stack Test to be Conducted:

Yes [ ] **No** [ ] _____ (Stack Test to be Conducted By) _____ (Date)

11. Cost of Equipment _____

Estimated Erection Cost _____

12. The Following Shall Be Design Criteria:

	INLET	OUTLET
Gas Flow Rate	_____ACFM*	_____ACFM*
Gas Temperature	_____°F	_____°F
Gas Pressure	_____INCHES W.G.	_____INCHES W.G.
	PRESSURE DROP _____	
Dust Loading	_____GRAINS/ACFD**	_____GRAINS/ACFD**
Moisture Content OR Wet Bulb Temperature	_____% _____°F	_____% _____°F

Liquid Flow Rate _____ GALLONS/MINUTE
(Wet Scrubber)
(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

Size of Dust Particles Entering Cleaning Unit	% of Total Dust	% to be Collected
0 to 10 Microns		_____
10 to 44 Microns	_____	_____
Larger than 44 Microns	_____	_____

14. For Afterburner Construction Only:

Volume of Contaminated Air NA ____CFM Gas Inlet (DO NOT INCLUDE COMBUSTION AIR)

Temperature _____ °F Capacity of

Afterburner _____BTU/HR Diameter

(or area) of Afterburner Throat_____

Combustion Chamber_____ _____Operating Temperature at Afterburner _____°F
(diameter) (length)

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.

See Attachment included - Form 6 Part 15 describe RTO

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** _____

Form 11 Part 4 – Describe the RTO

A Flameless Electric Regenerative Thermal Oxidizer (RTO) is an advanced air pollution control system designed to destroy volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and other industrial process emissions without the use of traditional fossil-fuel burners. Kingspan will install the unit and extract from the laydown area, where chemistries are mixed and injected into the moving mold, and from the ingredient pumping platform, where pentane blowing agent pumps are housed.

The diagram below shows a typical configuration of piping for the RTO unit.

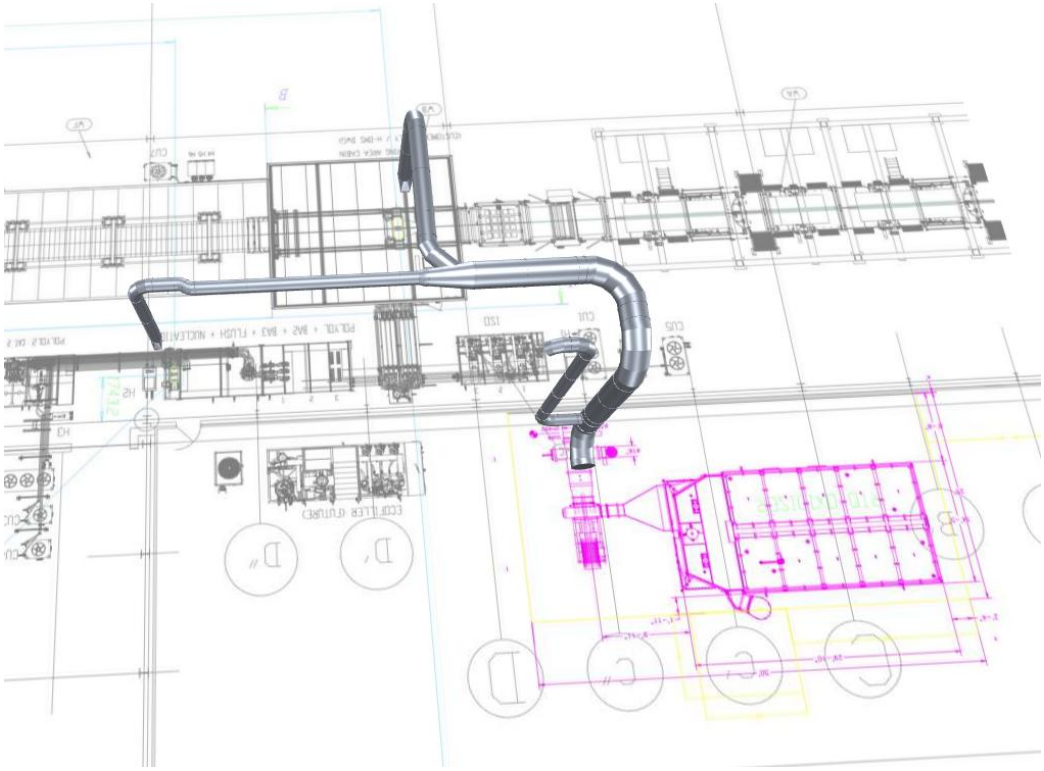


Figure 1: Pipework from process to RTO unit

Manufacturers notes regarding RTO:

6.2.1 Hydrocarbon (VOC)

'If all of the performance conditions, as defined in Customer Process Basis, are satisfied, then the oxidation equipment will reduce the concentration of gaseous phase hydrocarbons measured at the inlet of the oxidizer as compared to the concentration of gaseous phase hydrocarbons measured at the outlet (i.e. discharge stack) of the oxidizer by 98%[1] or to a lower limit of 13 ppmv average as C3 as verified by U.S. EPA test method 25A.'

5.1 Customer Process Basis

Process Condition	Details and Comments
Process Exhaust Flow	12,660 SCFM
Process Exhaust Temperature	120 °F
VOC within Process Exhaust	Pentane
VOC Heat of Combustion	19,512 Btu/lb
VOC Loading	60 lb/hr
Particulate Loading	None Specified (No silicone for RV)
RTO Sizing and Design	**Details and Comments**
Maximum Air Flow	12,660 SCFM
Minimum Air Flow	4,220 SCFM
Maximum VOC Capacity	60 lb/hr @ 19,512 Btu/lb
Maximum Process Exhaust Temperature	160 °F
Allowable Static Pressure at RTO Inlet	-2.0" w.c
Organic Particulates Max	<0.002gr/SCF
Incombustible particulates and aerosols	<0.0004gr/SCF
Sulfur (in organics)	<0.0004gr/SCF
Halogens	<0.0004gr/SCF
Silane and Siloxanes	<0.0002gr/SCF
Oxidizer Weight (approximate)	136,686lbs
Oxidizer Length (approximate)	31'
Oxidizer Width (approximate)	15'
Oxidizer Height (approximate)	8'6"

Design Condition	Flow Rate (SCFM)	VOC LOAD (lb/hr)	Total Power consumption KW
Max Case	12,660	60	213
Idle	0	0	66

Emissions routed to RTO: With the RTO unit ducting connected to the laydown area and to the pumping station skid the following emissions are deemed to be captured by the process.

- Pentane blowing agent during pouring
- MDI
- Ethylene Glycol (catalyst carrier)

The pentane blowing agent emission factor at pouring table is based on a 4.3% emission factor. This factor was determined using US EPA Method 25 at another Kingspan facility using similar chemistries and processing equipment. All of the assumed emissions from the pentane is deemed to be extracted to the RTO unit due to the fact that during production the pentane detection system does not show any pentane in the area. This pentane detection system is designed to alarm and increase air flow rate in the event of a detection of 15% of the LEL for the pentanes and will alarm and shut off production equipment, other than the extraction, if levels of 35% of LEL is detected.

The calculation of pentane emissions from the manufacturing of the foam is determined as follows:

- Taking total board volume produced in cubic feet (total sf x thickness in feet), multiplying by the density (lbs/ft3) to get the total weight and applying the 7% usage rate to get a total amount of pentane used.
    - 312,040,000 ft2 x 0.25 ft = 78,010,000 ft3
    - 78,010,0000 ft3 x 1.873 lbs/ft3 = 146,112,730 lbs total foam
    - @7% = 10,227,891 lbs total pentane
    - @4.3% emission factor = 439,799.3 lbs per year to the RTO
- With the RTO operating at 95% this assumes pentane emission of 21,990 lbs per year or 10.995 TPY
    - Using yearly operational hours this equates to 2.94 lbs/hr

For MDI emissions at the pouring table when foam is being produced, a rate of 0.0001%[2,3,4] of the usage of MDI will be assumed. Taking the same data from the

pentane above for lbs of total foam and applying the 55% ratio for MDI gives the following information.

- 146,112,730lbs of foam x 55% = 80,362002 lbs of MDI
- @0.0001% emission factor = 80.36 lbs per year to the RTO
- @95% efficiency this would yield 4.018 lbs emission per year or 0.002 TPY

1. Kingspan used 95% efficiency for the RTO performance rather than the manufacturers stated 98%
2. Reports vary on which emission factor to use for MDI products. PolyIso boards use polymeric MDI which can consist of CAS number 9016-87-9 (50-75%), 101-68-8 (25-50%), and 26447-40-5 (1-3%). See SDS for [redacted]
3. Plant operations, storage and processing of MDI is conducted at low temperatures and is assumed to limit potential for any emissions. In other Kingspan facilities where indoor air quality and monitoring of MDI tests have been completed, results are reported as N/D (non-detectable) or below recordable levels.
4. MDI is assumed to be entirely consumed in the chemical reaction to produce the foam product.

For ethylene glycol emissions

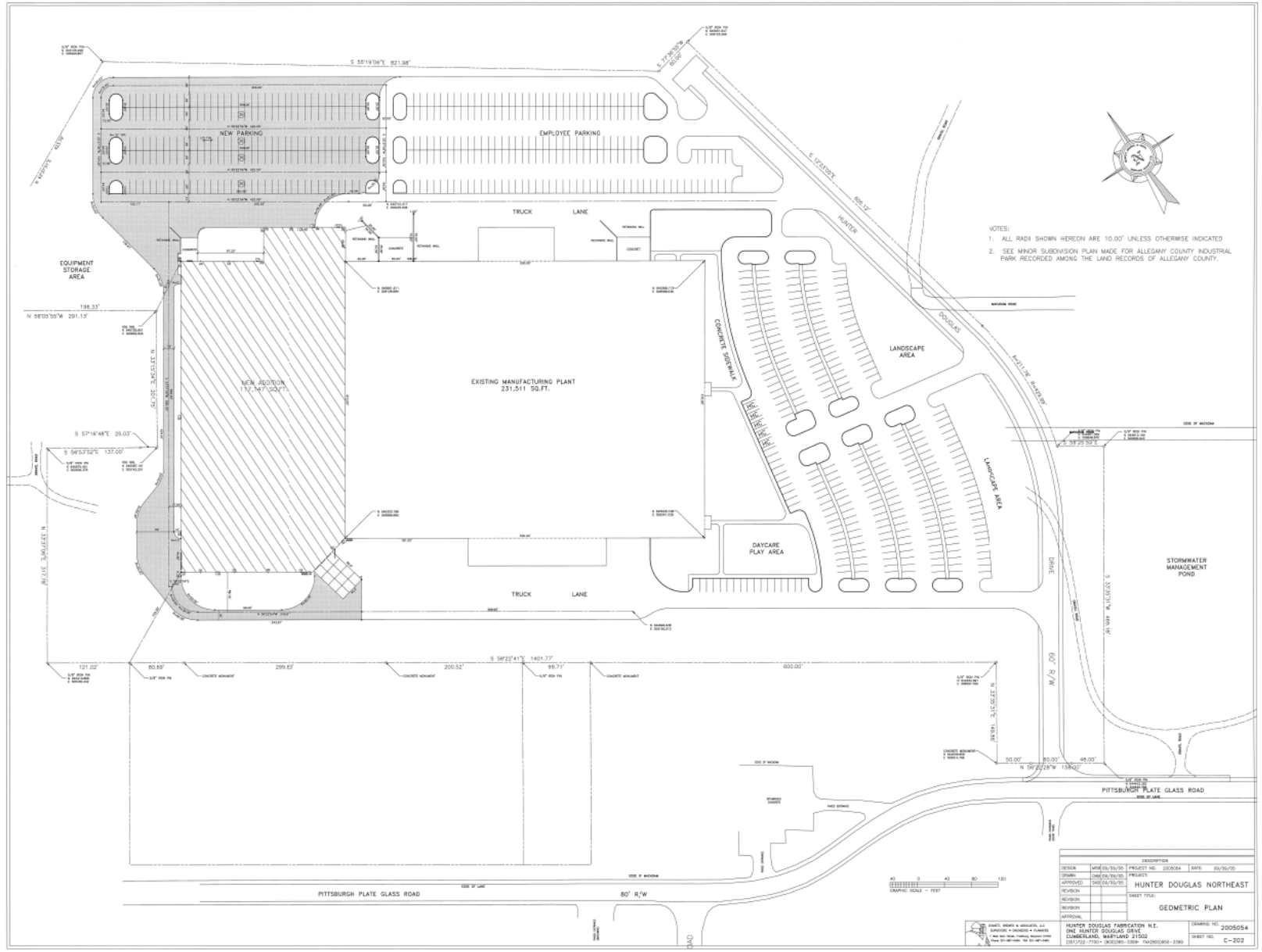
- 146,112,730lbs of foam x 3% = 4,383,382 lbs of Catalyst containing EG
- Using 0.1% estimated emission factor gives us 438.38 lbs per year emission
- Raw material contains approx. 62.5% of EG giving us 273.99 lbs of EG
- @95% efficiency this would yield 13.7 lbs emission per year or 0.00685 TPY

Kingspan Roofing and Waterproofing Cumberland

Location and Production Process Overview

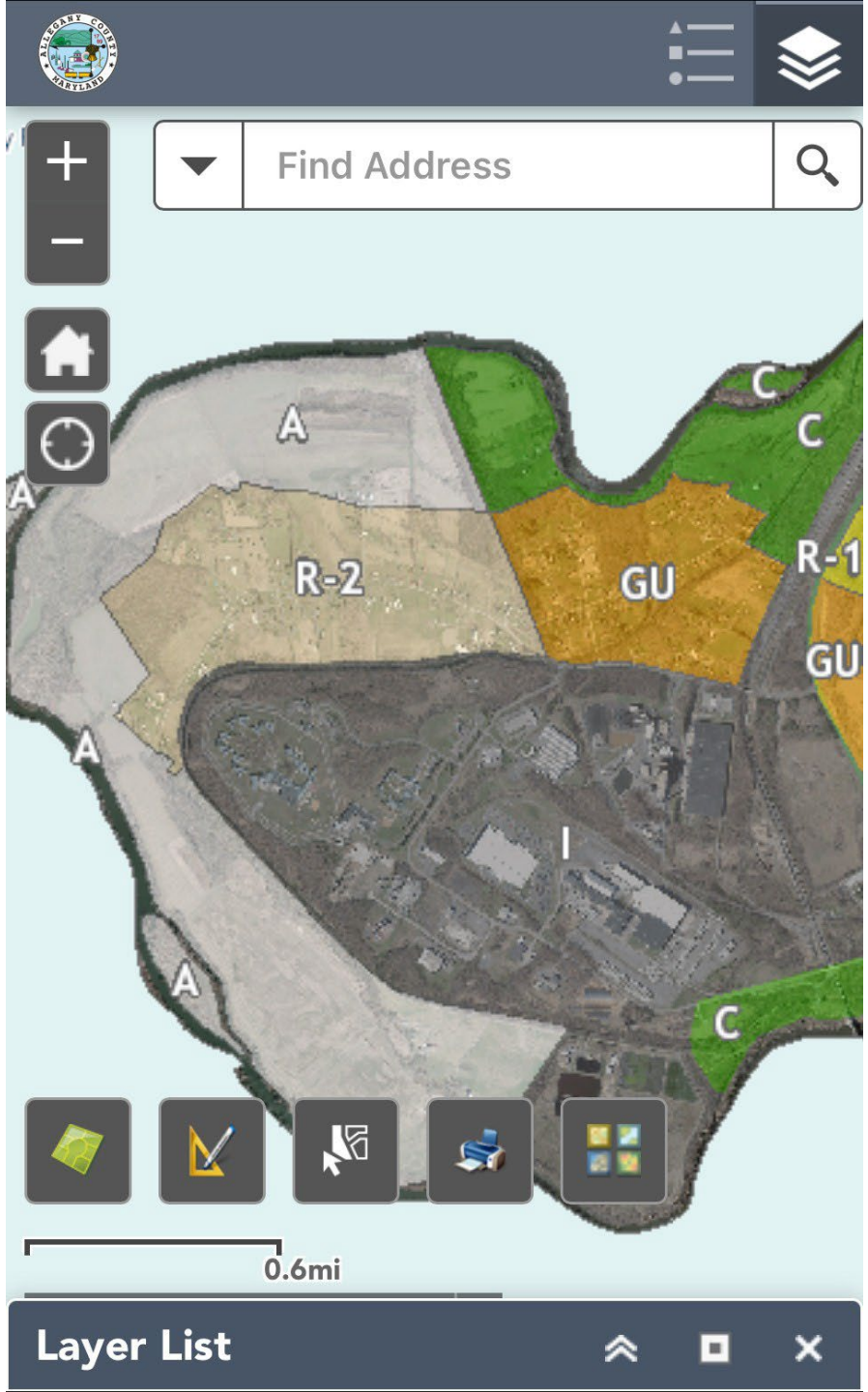
Ariel view of property acquired by KRW in Cumberland, Maryland

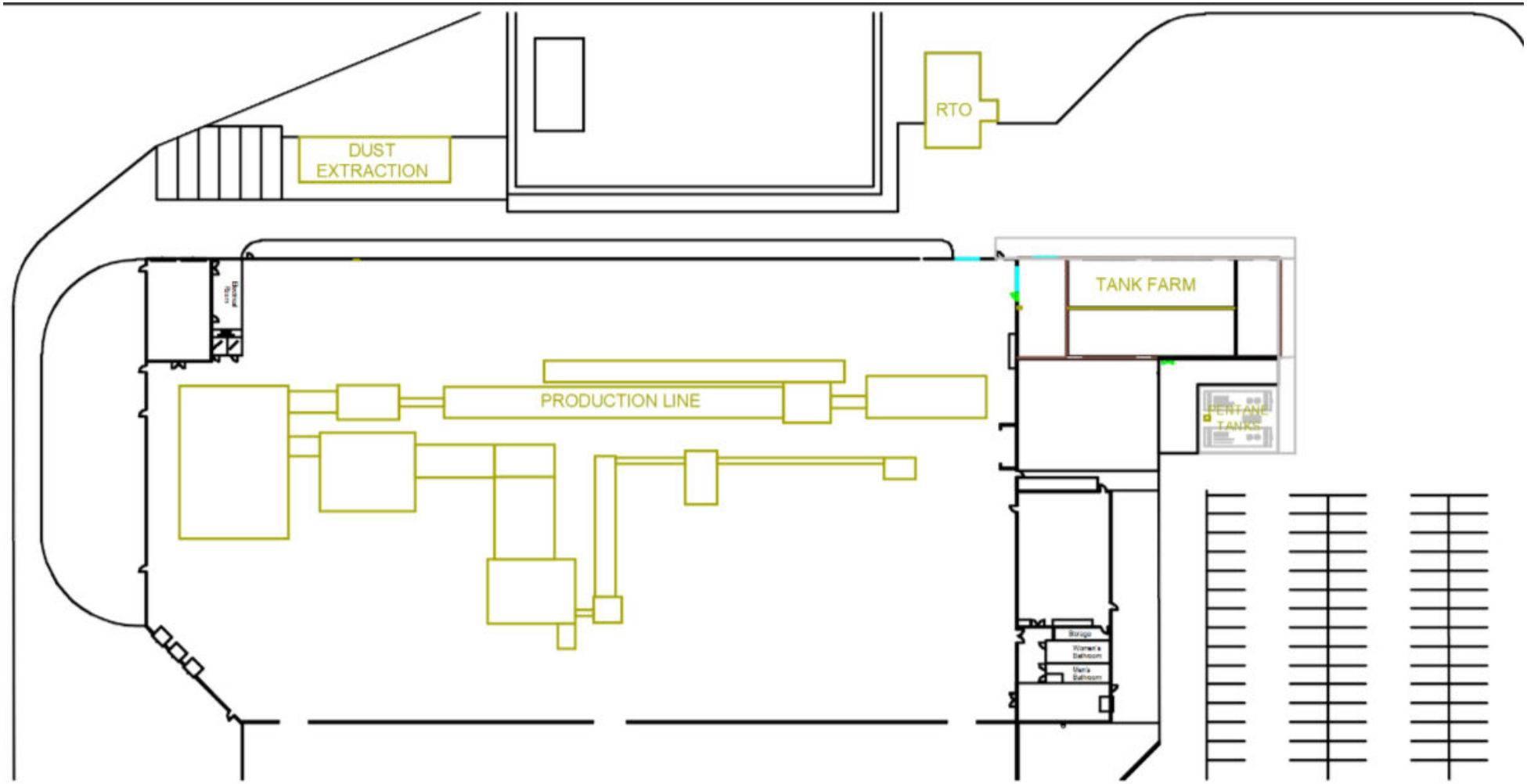




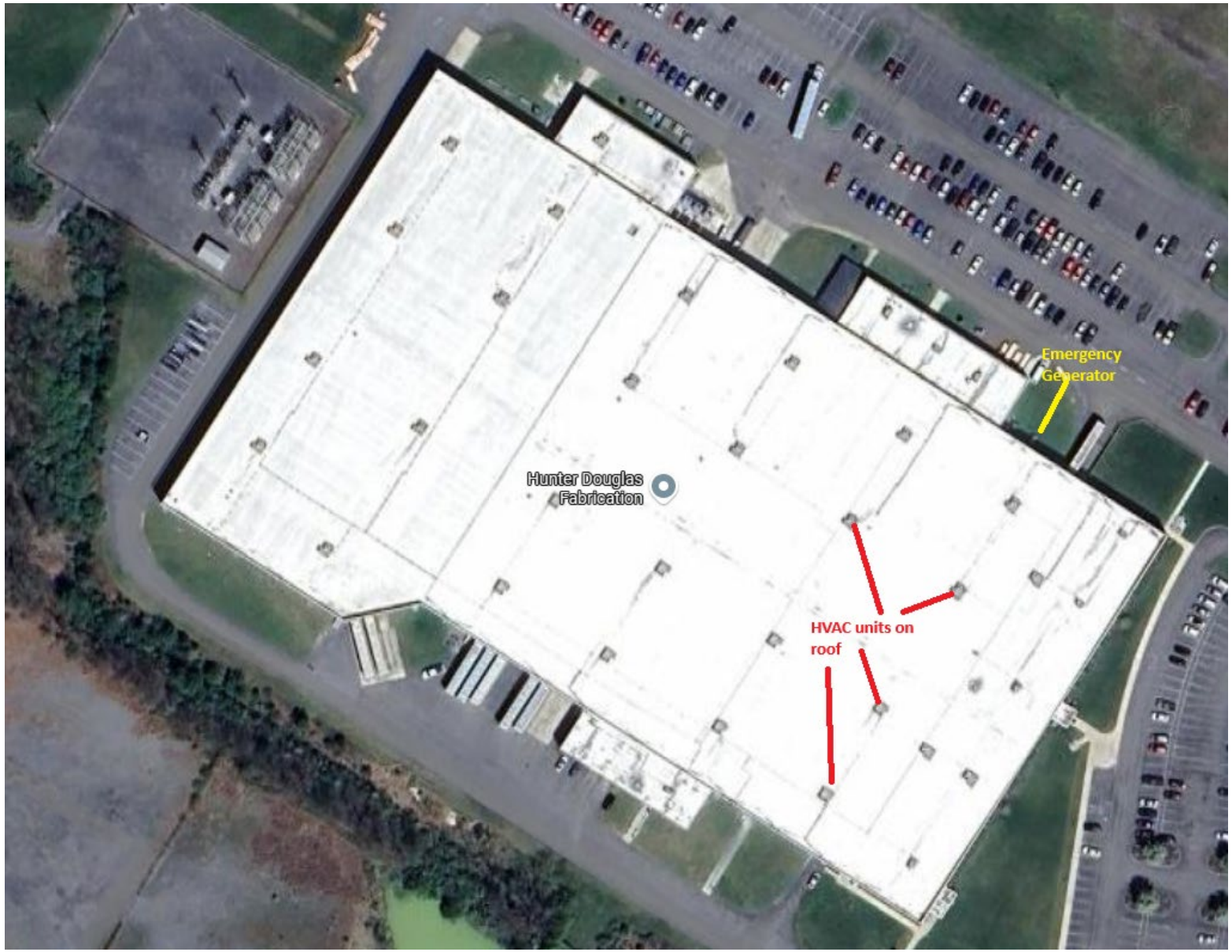
Drawing of the property from 2005 when it was Hunter Douglas Northeast

Image provided by Allegany County regarding industrial zoning where the property is located




DUST
EXTRACTION
RTO
TANK FARM
PRODUCTION LINE
PENTANE
TANKS

Ariel view pointing out the HVAC units and emergency generator locations at the building. Heating is from natural gas and cooling is electric. Generator uses natural gas if triggered to operate



ALLEGANY
· COUNTY ·

Department of Planning & Zoning
Office of Zoning Administration

David J. Caporale, President
William R. Atkinson, Commissioner
Creade V. Brodie, Jr., Commissioner
Jason M. Bennett, C.P.A., Administrator
T. Lee Beeman, Esq. Attorney
James Squires, Director P&Z

MEMORANDUM

Date: 6/5/2025
To: To Whom It May Concern
From: Chris Gay *Planner - OZA*

Subject: Zoning Certification – Kingspan Roofing + Waterproofing Inc.
Manufacturing use, Cumberland

Pursuant to your recent zoning certification request, I have researched the property better described as **15000 Kingspan Drive, SE**, and offer the following comments;

i. The Department of Planning & Zoning office is responsible for zoning and building codes administration within Election District 16 of Allegany County, Maryland;

ii. Improvements hereon at the aforementioned address appear to be contained on parcel designated within the 2025 Tax Records of Allegany County, Maryland, as Map **50**, Grid **4**, Parcel **166**, Lot **1**;

iii. The **current**, County certified *E911 Location Address* assigned to the subject property and improvement is **15000 Kingspan Drive SE**. The current property owner of record (Kingspan Inc.) petitioned the Allegany County Commissioners for a *'road title modification'* and subsequent *location address* modification. The *road title* was modified by action duly authorized by the County Commissioners through *Resolution 24-17*, executed October 17th, 2024, an attached hereto as Exhibit A. The previous title holder engaged the use of an address of *1 Hunter Douglas Drive, SE*. The actual County assigned addressed at the time of construction of the facility was 15000 Hunter Douglas Drive, SE. The original subdivision plat defining the original "Lot 1" was 11400 PPG Road SE as depicted on Plat Δ1602 and recorded among the Land Records of Allegany County, Maryland; reference Exhibits B.1 and B.2 attached hereto.

iv. The subject parcel is situated within a **"I"**- *Industrial* Zoning District, a zoning district that permits manufacturing;

v. There are no known zoning or building code violations at the site.

If anyone should have any questions or need further assistance on this permit record, they may contact the Land Development Services Office at 301-777-5951.

Sincerely,

Chris Gay

Chris Gay
Planner - OZA

County Office Complex -701 Kelly Road
Cumberland, Maryland 21502-3401
T-301-777-5951 | F 301-777--5950
www.alleganygov.org

ALLEGANY
· COUNTY ·

Department of Planning & Zoning
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David J. Caporale, President
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T. Lee Beeman, Esq. Attorney

James Squires, Director P&Z

/cg
attachment
cc: file

C:\LDS\Office\Documents\Projects\H-I-J-K\Kingspan\15000 Kingspan Drive_SE_Zoning Confirmation Letter.DOC
rev 6/25 [T7400A]

County Office Complex -701 Kelly Road
Cumberland, Maryland 21502-3401
T-301-777-5951 | F 301-777--5950
www.alleganygov.org

EXHIBIT A.1

RESOLUTION 24-17

WHEREAS, the County of Allegany has developed and maintained an *E911 Location Address Plan*, hereinafter referred to as the *Plan*, for public safety and convenience of the citizens of Allegany County, and;

WHEREAS, the County of Allegany actively maintains digital data, plats and maps for the accuracy and implementation of said *Plan*, and;

WHEREAS, the County of Allegany has formulated, adopted and implemented a policy for entitling or modifying street titles and assigning addresses for the maintenance of said *Plan*, and;

WHEREAS, the County of Allegany has been petitioned by the County's Department of Economic Development to re-title a certain County Maintained Road currently known *Hunter Douglas Drive*, and;

WHEREAS, the subject road is better described as an *industrial park road* that intersects Pittsburgh Plate Glass Road (A.K.A PPG Road), approximately one mile west of the intersection of Oldtown Road (MD 51), North Branch, and;

WHEREAS, County staff has successfully conducted an investigation in conformance with E911 address *Plan* and deemed the requested action compliant with the *Plan*, and;

WHEREAS, County staff has no objection to the re-titling of *Hunter Douglas Drive* and recommends the County Commissioners adopt a revised title of the subject *road* as ***Kingspan Drive***.

NOW, THEREFORE, BE IT RESOLVED, that the County Commissioners of Allegany County, do hereby repeal the road title of *Hunter Douglas Drive* and assign a road title of ***Kingspan Drive*** to County Maintained Road #879, hereon depicted through Exhibit A, attached hereto, and directs County Departments to amend records to reflect same.

AND BE IT FURTHER RESOLVED that this *Resolution* shall take effect on the 17th day of October, 2024.

BOARD OF COUNTY COMMISSIONERS OF ALLEGANY COUNTY MARYLAND

David J. Caporale *President*

William R. Atkinson *Commissioner*

Creade V. Brodie, Jr. *Commissioner*

Planning and Zoning
Allegany County, Maryland

OCT 18 2024

RECEIVED

EXHIBIT A.2

CERTIFICATION

I, Samantha Logsdon, Clerk to the Commissioners of Allegany County, Maryland, a body corporate and politic, duly organized and existing under the laws of the State of Maryland, hereby certify that the above *Resolution* was duly adopted at the public meeting of the Allegany County Commissioners held on the 17th day of October 2024.

Samantha Logsdon

Samantha Logsdon
County Clerk

SEAL

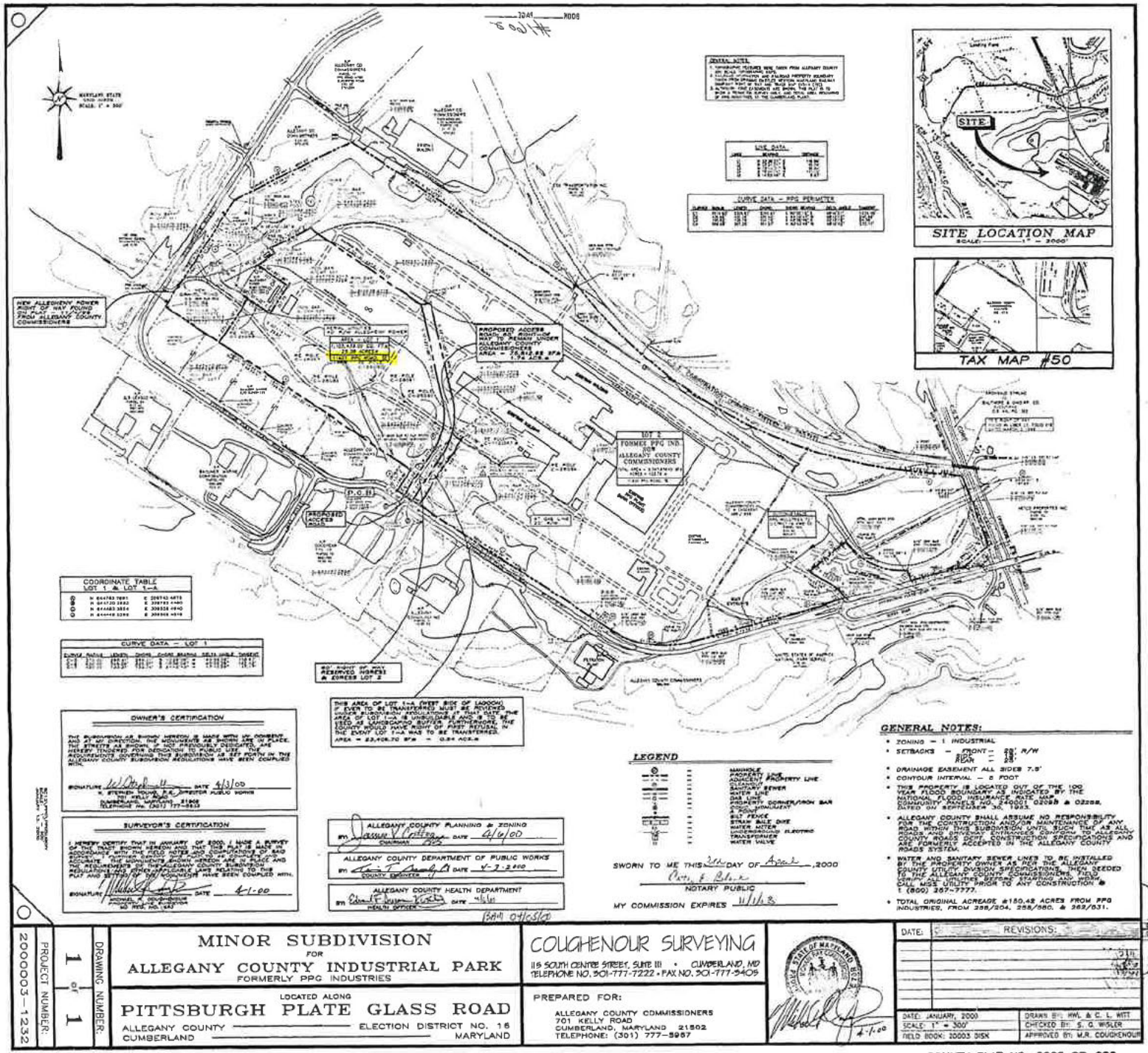

SITE LOCATION MAP
SCALE: 1" = 2000'
TAX MAP #50
SITE
NEW ALLEGHENY POWER RIGHT OF WAY FOUND DEEDED FROM ALLEGANY COUNTY COMMISSIONERS
PROPOSED ACCESS ROAD TO BE CONSTRUCTED BY ALLEGANY COUNTY COMMISSIONERS
AREA = 25,812.88 S.F.A.
= 1.19 ACRES ±
LOT 2
FORMER PPG IND. INC.
ALLEGANY COUNTY COMMISSIONERS
P.O.B.
PROPOSED ACCESS ROAD
60' RIGHT OF WAY RESERVED HEREIN & EXISTS LOT 2
THIS AREA OF LOT 1-A (WEST SIDE OF LAGOON) IF EVER TO BE TRANSFERRED MUST BE REVIEWED UNDER SUBDIVISION REGULATIONS AT THAT DATE. THE AREA OF LOT 1-A IS UNBUILDABLE AND IS TO BE USED AS LANDSCAPED BUFFER. FURTHERMORE, THE COUNTY SHALL HAVE RIGHT OF FIRST REFUSAL IN THE EVENT LOT 1-A WAS TO BE TRANSFERRED.
AREA = 23,426.20 S.F. ± = 0.54 ACS.±
COORDINATE TABLE
LOT 1 & LOT 1-A
CURVE DATA - LOT 1
CURVE DATA - PPG PERIMETER
LINE DATA
OWNER'S CERTIFICATION
THE SUBDIVISION AS SHOWN HEREON IS MADE WITH MY CONSENT AND AT MY DIRECTION, THE STREETS AS SHOWN, IF NOT PREVIOUSLY DEDICATED, ARE HEREBY TENDERED FOR DEDICATION TO PUBLIC USE. THE REQUIREMENTS GOVERNING THIS SUBDIVISION AS SET FORTH IN THE ALLEGANY COUNTY SUBDIVISION REGULATIONS HAVE BEEN COMPLIED WITH.
SIGNATURE
DATE 4/3/00
H. STEPHEN HOUSE, P.E. DIRECTOR PUBLIC WORKS
701 KELLY ROAD
CUMBERLAND, MARYLAND 21502
TELEPHONE NO. (301) 777-5913
SURVEYOR'S CERTIFICATION
I HEREBY CERTIFY THAT IN JANUARY OF 2000, I MADE A SURVEY OF THE TRACT SHOWN HEREON AND THAT THIS PLAT IS MADE IN ACCORDANCE WITH THE FIELD NOTES AND COMPUTATIONS OF SAID SURVEY. ALL MONUMENTS SHOWN HEREON ARE IN PLACE AND ALL NEW MONUMENTS SHOWN HEREON WILL BE PLACED AND THE REQUIREMENTS OF THE ALLEGANY COUNTY SUBDIVISION REGULATIONS AND ANY APPLICABLE LAWS RELATING TO THE PLAT AND SURVEY THEREOF HEREIN SHOWN HAVE BEEN COMPLIED WITH.
SIGNATURE
DATE 4-1-00
MICHAEL R. COUGHENOUR
NO. REG. NO. 1787
ALLEGANY COUNTY PLANNING & ZONING
BY: DATE 4/6/00
CHAIRMAN
ALLEGANY COUNTY DEPARTMENT OF PUBLIC WORKS
BY: DATE 4-7-2000
COUNTY ENGINEER
ALLEGANY COUNTY HEALTH DEPARTMENT
BY: DATE 4/5/00
HEALTH OFFICER
LEGEND
MANHOLE
PROPERTY LINE
ADJACENT PROPERTY LINE
CLEANOUT
SANITARY SEWER
WATER LINE
GAS LINE
PROXIMITY CORNER/IRON BAR
CONCRETE MONUMENT
SILT FENCE
STRAW BALE DIKE
WATER METER
UNDERGROUND ELECTRIC
TRANSFORMER
WATER VALVE
SWORN TO ME THIS 7th DAY OF April, 2000
NOTARY PUBLIC
MY COMMISSION EXPIRES 11/1/03
GENERAL NOTES:
• ZONING - I INDUSTRIAL
• SETBACKS - FRONT - 25' R/W
REAR - 15'
SIDE - 15'
• DRAINAGE EASEMENT ALL SIDES 7.5'
• CONTOUR INTERVAL - 5 FOOT
• THIS PROPERTY IS LOCATED OUT OF THE 100 YEAR FLOOD BOUNDARY AS INDICATED BY THE NATIONAL FLOOD INSURANCE RATE MAP, COMMUNITY PANELS NO. 240001 0200B & 0220B, DATED SEPTEMBER 30, 1983.
• ALLEGANY COUNTY SHALL ASSUME NO RESPONSIBILITY FOR THE CONSTRUCTION AND/OR MAINTENANCE OF ANY ROAD WITHIN THIS SUBDIVISION UNTIL SUCH TIME AS ALL ROADS AND DRAINAGE ENTRANCES CONFORM TO ALLEGANY COUNTY ROADS DEPT. CONSTRUCTION SPECIFICATIONS AND ARE FORMERLY ACCEPTED IN THE ALLEGANY COUNTY ROADS SYSTEM.
• WATER AND SANITARY SEWER LINES TO BE INSTALLED BY THE PROPERTY OWNER AS PER THE ALLEGANY COUNTY UTILITY DIVISION SPECIFICATIONS. WHEN SEEDED TO THE ALLEGANY COUNTY COMMISSIONERS, FIELD CHECKS WILL BE MADE BY THE UTILITY DIVISION AT WHICH TIME ALL UTILITIES BEFORE STARTING ANY WORK CALL MISS UTILITY PRIOR TO ANY CONSTRUCTION @ 1 (800) 257-7777.
• TOTAL ORIGINAL ACREAGE ±150.42 ACRES FROM PPG INDUSTRIES, FROM 238/204, 258/560, & 263/031.
MINOR SUBDIVISION
FOR
ALLEGANY COUNTY INDUSTRIAL PARK
FORMERLY PPG INDUSTRIES
LOCATED ALONG
PITTSBURGH PLATE GLASS ROAD
ALLEGANY COUNTY — ELECTION DISTRICT NO. 16
CUMBERLAND — MARYLAND
COUGHENOUR SURVEYING
115 SOUTH CENTER STREET, SUITE III • CUMBERLAND, MD
TELEPHONE NO. 301-777-7222 • FAX NO. 301-777-5405
PREPARED FOR:
ALLEGANY COUNTY COMMISSIONERS
701 KELLY ROAD
CUMBERLAND, MARYLAND 21502
TELEPHONE: (301) 777-5957
REVISIONS:
DATE: JANUARY, 2000
SCALE: 1" = 300'
FIELD BOOK: 20003 DISK
DRAWN BY: HWL & C. L. WITT
CHECKED BY: S. G. WISLER
APPROVED BY: M.R. COUGHENOUR
PROJECT NUMBER: 2000003-1232
DRAWING NUMBER: 1 of 1
COUNTY PLAT NO. 2000 38-002
MSA SSM1234-1063

EXHIBIT B.1

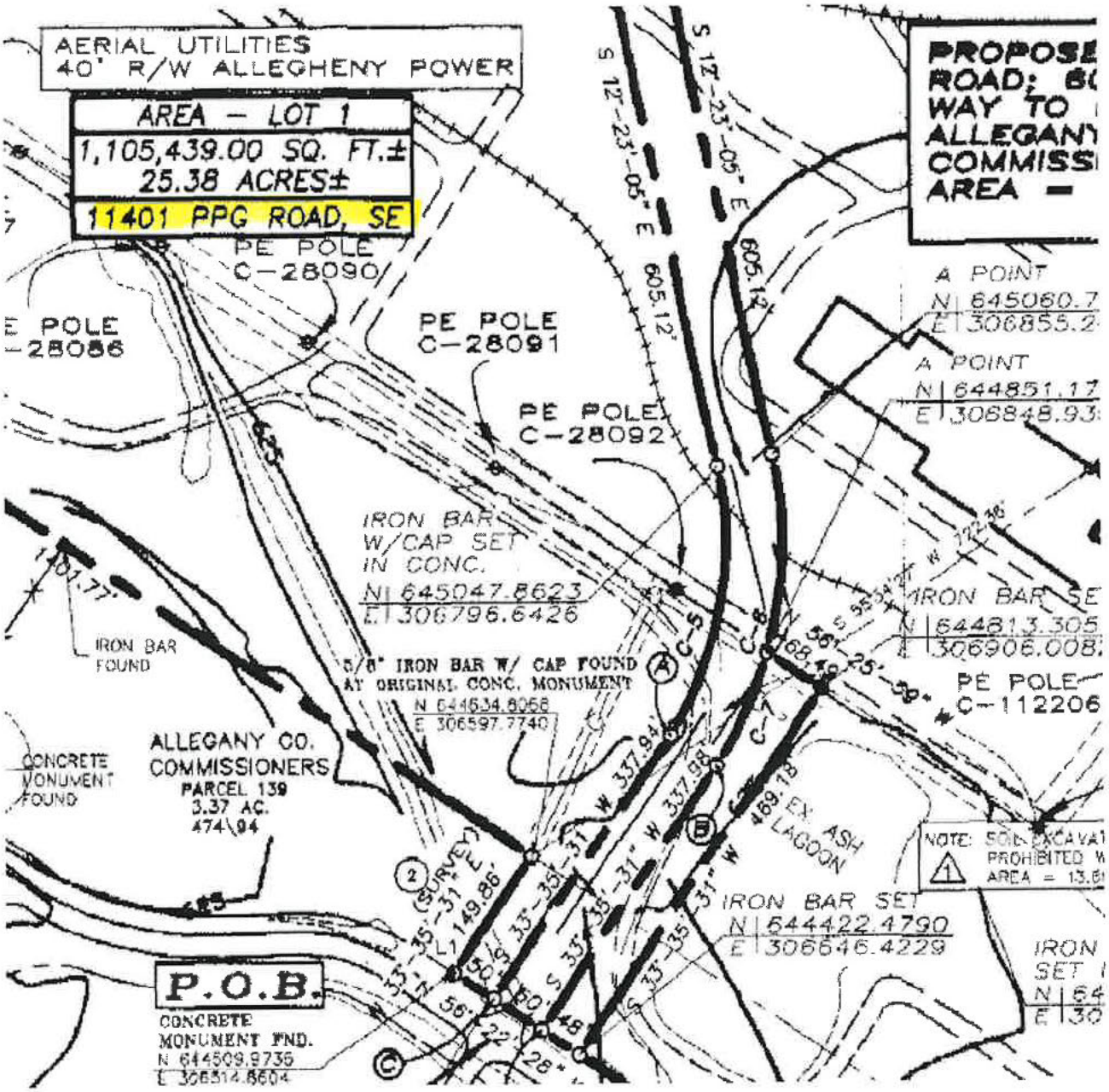

AERIAL UTILITIES
40' R/W ALLEGHENY POWER
AREA – LOT 1
1,105,439.00 SQ. FT.±
25.38 ACRES±
11401 PPG ROAD, SE
PE POLE
C-28090
PE POLE
C-28091
PE POLE
C-28092
IRON BAR
W/CAP SET
IN CONC.
N 645047.8623
E 306796.6426
5/8" IRON BAR W/ CAP FOUND
AT ORIGINAL CONC. MONUMENT
N 644634.8068
E 306597.7740
ALLEGANY CO.
COMMISSIONERS
PARCEL 139
3.37 AC.
474\94
IRON BAR
FOUND
CONCRETE
MONUMENT
FOUND
P.O.B.
CONCRETE
MONUMENT FND.
N 644509.9735
E 306514.8604
S 12°-23'-05" E
605.12'
A POINT
N 645060.7
E 306855.2
A POINT
N 644851.17
E 306848.93
IRON BAR SE
N 644813.305
E 306906.008
PE POLE
C-112206
EX. ASH
LAGOON
IRON BAR SET
N 644422.4790
E 306646.4229
NOTE: SOIL EXCAVAT
PROHIBITED W
AREA = 13.6
S 33°-35'-31" W 337.94'
S 33°-35'-31" W 337.98'
S 33°-35'-31" W 469.18'
S 33°-35'-31" E 149.86'
(SURVEY)
L1
C-5
C-6
C-7
C-8
A
B
C
1
2

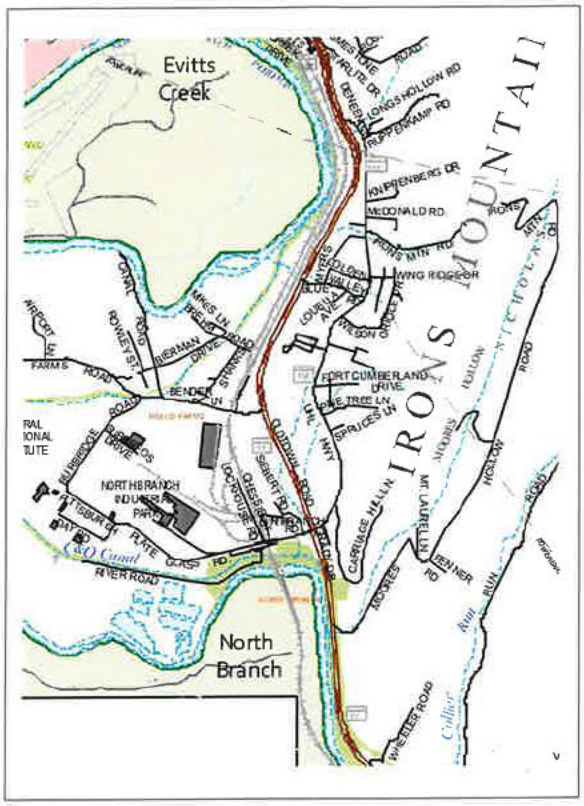
EXHIBIT B.2

SWM fees to be charged on permit for building

LAND USE PERMIT APPLICATION SUMMARY

DEPT. OF PLANNING AND ZONING | OFFICE OF PERMITTING AND LICENSING | ALLEGANY COUNTY, MARYLAND

APPLICATION NUMBER **0006029**



Greater Cumberland
Planning Region

Applicant
Hunter Douglas, Northeast
Frostburg Industrial Park
Frostburg, MD 21532
Ph: 689-6863 Cell:
eMail:

Date Applied: 6/22/2000
Last Revised: 7/12/2000
ISSUED LUP: 10/9/2000
Application Distributed: / /202
Application Complete:
ISSUED CO: 8/29/2001

Owner
Hunter Douglas, Northeast
15000 Hunter Douglas Drive SE, Cumberlan

Contractor
Carl Belt, Inc.
P.O. Box 1210, Cumberland, MD 21502
729-8900 # 0

Description of Project
Manufacturing Plant
ATF ☐ Class: **M** Units: **1** # Occupants: Total Estimated Value: **$8,000,000.00**

1. **Industrial**	2.	3.
Dimensions: **410'x 530'**	Dimensions:	Dimensions:
Area(sf): **230000**	Area(sf): **0**	Area(sf): **0**
Stories: **1**	Stories: **0**	Stories: **0**
Rooms: **42**	Rooms: **0**	Rooms: **0**
Bedrooms: **0**	Bedrooms: **0**	Bedrooms: **0**
Baths: **11**	Baths: **0**	Baths: **0**
Basement: **No**	Basement: **No**	Basement: **No**

Driveway **Proposed--County**
Water: **Proposed--ACDPU**
Sewer: **Proposed--ACDPU**

Location/Lot Information
Community: **Cumberland** Location Address: **15000 Hunter Douglas Drive SE**
Location: **N/s of PPG Road: @ Day Road intersection**
Zoning District:
ED: **16**
-SDAT- Tax Map Information: M- **50** Q- **10** P- **3** L- **1**
Tax Account ID#:
FEMA Zone:
Deed Reference (L/F): **684/40**
Easting: 306500 Northing: 646000
Dimensions:
Deed from/Date:
Lot Size: **25.38** Ac sf.
☐ CORNER LOT ☐ IRREGULAR LOT

Site Plan Information
Site Plan #: **99SS40** Maior
Status: **5/10/2000**
Area Disturbed: **1216631** SWM PD

Subdivision Information
Plat #: **2000-SB-002** LOR: No
Name: **Allegany County Industrial Park**
Status: 4/6/2000

NFIP/Floodplain Management
FPM Plat #:
Plat Name:
Status:

Administration

Appl Fee:	$100.00	INVOICE #:	5501, 5639
Zon Cert Fee:	$500.00	TOTAL FEE:	**$18,390.43**
SCD Fee:	$0.00	Review Sub(T):	$1,590.43
BOA Fee:	$0.00	Code Fee Sub(T):	$16,200.00
Misc Fee:	$0.00	Land Use Sub(T):	$600.00
MHBGF:	$0.00	FEES PAID FULL	☑

Board Of Appeals Information
Case #:**0** Case Name:
Subject:
Filed: Hearing: Date Approved:

Setback Information

Front:	50	Other 1:	
Rear:	25	Other 2:	
Alley Street:		Other 3:	
		Other 4:	
Right Side:	15	Other 5:	
Left Side:	15	☐ Administrative Variance Requested	
Height Limit:		Comments:	
Streams:	25		
Other Buildings:	8	Other LUP BoA Cases:	

Applicant's Certification
I hereby agree to comply with all regulations and codes, which are applicable hereto. I further agree that any misstatement or misrepresentation of facts presented as part of this application, or change to proposal without approval of the agencies concerned, shall constitute sufficient grounds for the disapproval or revocation of the subject permit. I hereby affirm that I own the property which is the subject of this application; or that I am the duly designated representative of the property owner, and that I possess the legal authority to make this Affidavit on behalf of myself or the owner for whom I am acting. I do solemnly declare and affirm under the penalties of perjury that the contents of this Application are true and correct to the best of my knowledge, information and belief

Signature Date

Comments/Other Conditions/Approvals: **** Also see ASCD Invoice in the amount of 590.00; Paid 4/25/2000***

ISSUED

The submission of an ASCD approved "as-built" SWM Plan is required for: (1) pond and conveyance structures (2) release of Perfomance Agreement

Approvals Required Marked 'X'

0 Soil Conservation District	LaVale Sanitary Commission	Land Use Planning Engineer	0 MDE Water Management Administration
0 Al Co Health Department	LaVale Zoning Board	0 Building Codes Compliance	0 [ ]Structural [ ]Plumbing [ ]Electrical Insp. Agency
0 ACDPW Engineering	0 Zoning Certification	1 House Numbering	Property Owner's Certification: 05/16/2
0 ACDPW Public Utilities	0 Maryland Fire Marshal	Floodplain Management	*verbal
0 ACDPW Roads Division	Maryland State Hwy Admin	Board of Zoning Appeals	This Project is subject to the conditions setforth by O&
Planning Commission	Site Inspection	Subdivision Review	This Project is subject to a Performance Agreement d

HUNTER DOUGLAS, NORTH 0006029

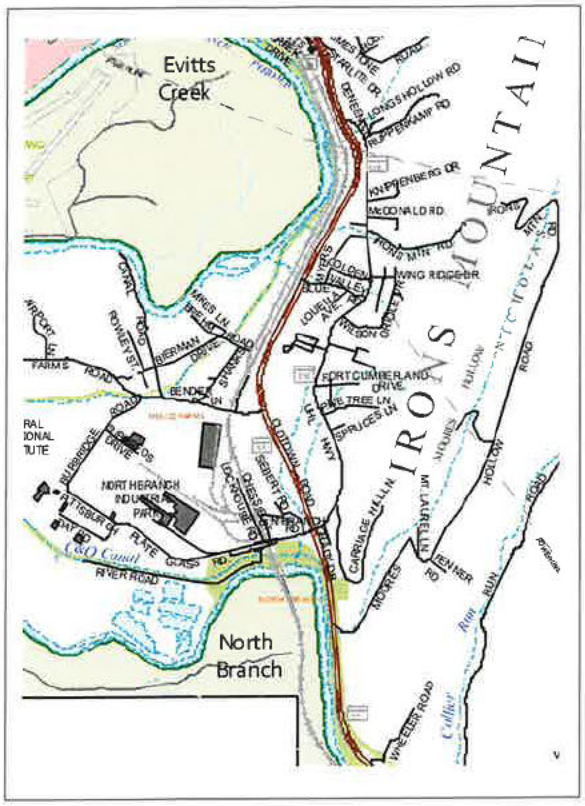
6/6/2025 1:49:12 PM

This Document is not a Land Use Permit

LAND USE PERMIT APPLICATION SUMMARY

DEPT. OF PLANNING AND ZONING | OFFICE OF PERMITTING AND LICENSING | ALLEGANY COUNTY, MARYLAND

APPLICATION NUMBER **0601016**



Greater Cumberland
Planning Region

Applicant
Hunter Douglas Northeast, Inc
15000 Hunter Douglas Drive, SE
Cumberland, MD 21502
Ph: 301-689-6863 Cell:
eMail:

Date Applied: 1/13/2006
Last Revised:
ISSUED LUP: 2/20/2006
Application Distributed: / /202
Application Complete:
CANCELLED CO: 1/23/2009

Owner
Hunter Douglas Northeast, Inc
2 Parkway, Upper Saddle River, NJ 07458-
301-722-7700

Contractor
Carl Belt c/o Larry Myers
0

Description of Project
Expansion of existing manufacturing plant
ATF ☐ Class: **M** Units: **1** # Occupants: **0** Total Estimated Value: **$5,000,000.00**

1. **Industrial**	2.	3.
Dimensions: 244 x 450	Dimensions:	Dimensions:
Area(sf): 109800	Area(sf): 0	Area(sf): 0
Stories: 1	Stories: 0	Stories: 0
Rooms:	Rooms: 0	Rooms: 0
Bedrooms:	Bedrooms: 0	Bedrooms: 0
Baths:	Baths: 0	Baths: 0
Basement: No	Basement: No	Basement: No

Driveway: Existing--County
Water: Existing--ACDPU
Sewer: Existing--ACDPU

Location/Lot Information
Community: **Cumberland** Location Address: **15000 Hunter Douglas Drive, SE**
Location: **N/s of PPG Road: @ Day Road intersection**
Zoning District: **I**
ED: **16**
-SDAT- Tax Map Information: M- **50** Q- **4** P- **166** L- **1**
Lot Size: **25.38** Ac sf
☐ CORNER LOT ☐ IRREGULAR LOT
Tax Account ID#:
FEMA Zone:
Deed Reference (L/F): **684/40**
Easting: 306500 Dimensions:
Northing: 645500 Deed from/Date:

Site Plan Information
Site Plan #: **05SS22,05SS** Maior
Status: 12/14/2005
Area Disturbed: 120000 SWM PD

Subdivision Information
Plat #: **2000-SB-002** LOR: No
Name: **Allegany County Industrial Park**
Status: 4/6/2000

NFIP/Floodplain Management
FPM Plat #:
Plat Name:
Status:

Administration

Appl Fee:	$250.00	INVOICE #: 8556*	
Zon Cert Fee:	$0.00	TOTAL FEE: **$550.00**	
SCD Fee:	$300.00	Review Sub(T): $300.00	
BOA Fee:	$0.00	Code Fee Sub(T): $0.00	
Misc Fee:	$0.00	Land Use Sub(T): $250.00	
MHBGF:	$0.00	FEES PAID FULL ☑	

Board Of Appeals Information
Case #: **0** Case Name:
Subject:
Filed: Hearing: Date Approved:

Setback Information

Front:	**40	Other 1:	* see 2003 IBC Section 507
Rear:	60	Other 2:	** from R/W
Alley Street:		Other 3:	
		Other 4:	
Right Side:	*60	Other 5:	
Left Side:	*60	☐ Administrative Variance Requested	
Height Limit:	40	Comments:	
Streams:	25		
Other Buildings:	*60	Other LUP 0006029, 0004022, 0509038	
		BoA Cases:	

Applicant's Certification
I hereby agree to comply with all regulations and codes, which are applicable hereto. I further agree that any misstatement or misrepresentation of facts presented as part of this application, or change to proposal without approval of the agencies concerned, shall constitute sufficient grounds for the disapproval or revocation of the subject permit. I hereby affirm that I own the property which is the subject of this application; or that I am the duly designated representative of the property owner, and that I possess the legal authority to make this Affidavit on behalf of myself or the owner for whom I am acting. I do solemnly declare and affirm under the penalties of perjury that the contents of this Application are true and correct to the best of my knowledge, information and belief

Signature Date

ISSUED

Comments/Other Conditions/Approvals: ***05SS27 Hunter Douglas***

The submission of an ASCD approved "as-built" SWM Plan is required for the release of the Performance Agreement.
* Reductions in Fire Seperation requirements applicable-see IBC 507.4.
Fees waived by County Commissioners on February 17th, 2006.

Approvals Required Marked 'X'

0 Soil Conservation District	LaVale Sanitary Commission	Land Use Planning Engineer	MDE Water Management Administration
0 Al Co Health Department	LaVale Zoning Board	0 Building Codes Compliance	0 [ ]Structural [ ]Plumbing [ ]Electrical Insp. Agency
0 ACDPW Engineering	0 Zoning Certification	1 House Numbering	* Released with Handicap Compliance review only -A
ACDPW Public Utilities	0 Maryland Fire Marshal	Floodplain Management	* Requires one handicap van accessible space per fo
0 ACDPW Roads Division	Maryland State Hwy Admin	Board of Zoning Appeals	This Project is subject to the conditions set forth by O
Planning Commission	0 Site Inspection	Subdivision Review	This Project is subject to a Performance Agreement d

HUNTER DOUGLAS NORTH 0601016

This Document is not a Land Use Permit

RESOLUTION 24-17

WHEREAS, the County of Allegany has developed and maintained an *E911 Location Address Plan,* hereinafter referred to as the *Plan*, for public safety and convenience of the citizens of Allegany County, and;

WHEREAS, the County of Allegany actively maintains digital data, plats and maps for the accuracy and implementation of said *Plan*, and;

WHEREAS, the County of Allegany has formulated, adopted and implemented a policy for entitling or modifying street titles and assigning addresses for the maintenance of said *Plan*, and;

WHEREAS, the County of Allegany has been petitioned by the County's Department of Economic Development to re-title a certain County Maintained Road currently known *Hunter Douglas Drive*, and;

WHEREAS, the subject road is better described as an *industrial park road* that intersects Pittsburgh Plate Glass Road (A.K.A PPG Road), approximately one mile west of the intersection of Oldtown Road (MD 51), North Branch, and;

WHEREAS, County staff has successfully conducted an investigation in conformance with E911 address *Plan* and deemed the requested action compliant with the *Plan*, and;

WHEREAS, County staff has no objection to the re-titling of *Hunter Douglas Drive* and recommends the County Commissioners adopt a revised title of the subject *road* as ***Kingspan Drive***.

NOW, THEREFORE, BE IT RESOLVED, that the County Commissioners of Allegany County, do hereby repeal the road title of *Hunter Douglas Drive* and assign a road title of ***Kingspan Drive*** to County Maintained Road #879, hereon depicted through Exhibit A, attached hereto, and directs County Departments to amend records to reflect same.

AND BE IT FURTHER RESOLVED that this *Resolution* shall take effect on the 17th day of October, 2024.

BOARD OF COUNTY COMMISSIONERS OF ALLEGANY COUNTY MARYLAND

David J. Caporale *President*

William R. Atkinson *Commissioner*

Creade V. Brodie, Jr. *Commissioner*

CERTIFICATION

I, Samantha Logsdon, Clerk to the Commissioners of Allegany County, Maryland, a body corporate and politic, duly organized and existing under the laws of the State of Maryland, hereby certify that the above *Resolution* was duly adopted at the public meeting of the Allegany County Commissioners held on the 17th day of October 2024.

Samantha Logsdon
County Clerk

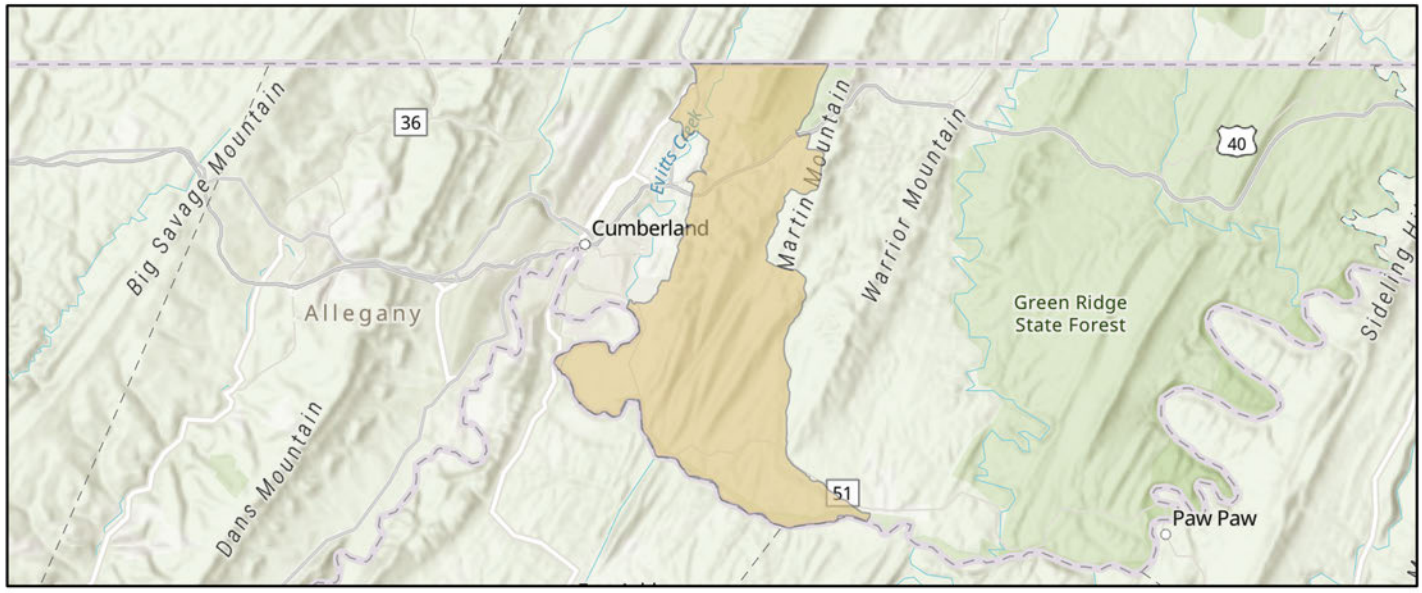
SEAL

C:\LDS\Office\Documents\House#\Resolution_Kingspan Drive 241017.doc
ver 10/24c [PWD_JS20]

MDEnviroScreen Report

Census Tract ID: 24001000200

County: Allegany



MDEnviroScreen Summary

EJ Score: 67.1

Overburdened Community: Yes

Underserved Community: Yes

MDEnviroScreen EJ Score Indicators

Pollution Burden Exposure

Indicator	Percentile
PM 2.5	7.2
Ozone	0
Diesel PM	10.3
Cancer Risk	0.2
Respiratory Hazard	2.9
Traffic	11.7
Toxic Release	94.4
Hazardous Landfill	0

Pollution Environmental Effect

Indicator	Percentile
Lead Paint	64.7
RMP Facility	76.8
Superfund	89.8
Hazardous Waste	11
Wastewater	54.7
Brownfield	76.8
Power Plant	97.8
CAFO	0
Mining	72.7

Sensitive Population

Indicator	Percentile
Low Birth Weight	67
Asthma Discharge	34.4
Myocardial Infarction	84
Lack of Broadband	95.1
Low Income*	80.7

*Low Income is included in Underserved but grouped into Sensitive Population for EJ Score Calculation

*The MDEnviroScreen EJ score represents a combined measure of pollution and the potential vulnerability of a population to the effects of pollution. The EJ score in MDEnviroScreen does not include data from every available map layer. For example, it does not include race/ethnicity or age, however, MDE has made that information available for informational purposes only. Collecting and displaying this data allows users to evaluate the relationships between demographics and pollution burden, and can be used to better understand issues related to environmental justice and racial equity in Maryland. MDE cautions users against using the "Underserved" map layer, or its subcategories, in any manner that would be considered discriminatory under applicable law.

Date Exported: 7/23/2025

The following pages contain chemistry SDS and are intentionally redacted to protect trade secret and/or intellectual property information.

MARYLAND DEPARTMENT OF THE ENVIRONMENT

AIR AND RADIATION ADMINISTRATION

PRIVILEGE LOG

The following items are considered confidential business information and are not included in the permit to construct docket (Docket #09-26) for public review:

Redacted from the permit to construct application:

1. Process Description – Product Trade Name
2. Form 5 Appendix – Product Trade Names and Composition
3. Form 5T – Proprietary Chemicals
4. MDI emissions – Product Trade Name
5. Eight (8) Safety Data Sheets for materials