



**STATEMENT OF BASIS**  
**Page 1 of 3**  
BAQ Air Permitting Division

<b>Company Name:</b>	Alleguard	<b>Permit Writer:</b>	Frederick I. Love
<b>Agency Air Number:</b>	0200-0177	<b>Date:</b>	DRAFT
<b>Permit Number:</b>	TV-50000009 v1.2		

**DATE APPLICATION RECEIVED:** August 16, 2024

**PROJECT DESCRIPTION**

The facility is requesting to incorporate construction permit (CP-50000206 v1.0) into the Title V Operating permit. The facility is also requested a minor modification which will implement a few changes to the operating permit. The changes will include:

- 1) [Emission Unit 01] A smaller boiler Equipment ID: Boiler 2 (Description: 6.9 MMBtu/hr Natural Gas Fired Boiler) is the only operational boiler on site. Due to the rating of the smaller boiler, the exempt boiler will be listed on the insignificant activities list (See Insignificant Activities List in chart below). Although Equipment ID: Boiler 1 (Description: 10.5 MMBtu/hr Natural Gas Fired Boiler) has been out of service onsite since 2017 and lines removed, the boiler will remain on permit to avoid triggering a Significant Modification to Title V permit. The facility will document annual reviews and permit conditions accordingly. The previously submitted 502(b)(10) for the removal of this boiler should be kept with the revised permit.
- 2) [Emission Unit 02] Several additional bags have been added to the site from ten (10) to twenty-six (26) pre-puff aging bags. The aging bags have no impact on potential to emit calculations. The Facility cannot store material that has not been expanded. Therefore, there is no impact on VOC emissions due to the number of post-puff storage bags. The facility is requesting to remove the number of bags and capacity from the permit and revise the equipment description. The bag storage occurs after the EPS material is first processed by the pre-expander; therefore, post-puff storage more accurately reflects this equipment description (Description: Post-puff bags-pneumatically fed bag farm for post-puff aging and stabilization). The Emission Unit Description will be updated to EPS Bead Aging Storage Bags.
- 3) [Emission Unit 03] The facility is requesting the description of Equipment ID: Block Mold #1 will be changed to "16 Sunghoon Block Molding. The equipment was not replaced but was rather inaccurately described.

**FACILITY DESCRIPTION**

The facility is a foam block manufacturer.

SIC CODE: 3086 (Plastic Foam Products)

NAICS CODE: 326140 (Polystyrene Foam Product Manufacturing)

**INSIGNIFICANT ACTIVITIES LIST**

The facility has requested the addition of several pieces of equipment for the insignificant activities list. The facility has also verified that Equipment ID: FP #1 description has been changed from 130 hp stated in the submission dated 08/01/2024 (Titled: Alleguard Anderson 502b10 Narrative.pdf) to 84 hp from the onsite inspection/investigation report performed on 11/29/2023.

EXEMPT SOURCES		
Equipment ID	Equipment Description	Basis for Exemption
Boiler #2	Hurst Boiler, Natural Gas Fired (model no. S358-200-5M and rated 6.9 MMBtu/hr)	SC Regulation 61-62.70-Title V Operating Program (April 23, 2021), Section B (2)



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EXEMPT SOURCES		
Equipment ID	Equipment Description	Basis for Exemption
MP #1	Shape Press Hirsch Model HS 1450 for (rated capacity: 120 lb/hr of EPS beads)	SC Regulation 61-62.70, 70.5(c)
WELD #1	Welding and Grinding Operations (for general side maintenance)	SC Regulation 61-62.70-Title V Operating Program (April 23, 2021), Section A (14)
FP #1	Diesel Fire Pump (size: 84 hp)	SC Regulation 61-62.70-Title V Operating Program (April 23, 2021), Section B (5)
TNK #1	Fire Pump Fuel Tank (capacity: 273 gallons)	SC Regulation 61-62.70-Title V Operating Program (April 23, 2021), Section A (25)

## **EMISSIONS**

FACILITY WIDE EMISSIONS			
Pollutant	Uncontrolled	Controlled	PTE
	TPY	TPY	TPY
PM	0.36	--	0.36
PM <sub>10</sub>	0.36	--	0.36
PM <sub>2.5</sub>	0.36	--	0.36
SO <sub>2</sub>	0.05	--	0.05
NO <sub>x</sub>	4.52	--	4.52
CO	3.82	--	3.82
VOC	1254.5	--	<250.0

## **REGULATIONS**

### **Applicable - Standard No. 7 (Prevention of Significant Deterioration)**

PSD Limits					
Permit ID	Equipment ID	Permit Issue Date	Pollutant	Emission Limit (TPY)	Explanation
0200-0177-CC	Facility-wide	07/02/2021	VOC	<250.0 tpy	To avoid PSD

The algorithms, explaining the method used to determine emission rates, are provided below. The results of these algorithms are used to calculate the monthly and twelve-month rolling sum. Subsequent submittals of the algorithm



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are required within 30 days of the change if the basis for emissions is modified or the Department requests additional information.

**Polystyrene Bead Storage Emissions**

*X pounds beads hour \* 7% (pentane) \* 24% = pounds VOC/hr*

**Pre-Expander and Expander**

*X pounds beads hour \* 7% (pentane) \* 27% = pounds VOC/hr*

**Molding Operations**

*X pounds beads hour \* 8% (pentane) \* 12% = pounds VOC/hr*

**Billet/Shape Molded Drying**

*X pounds beads hour \* 7% (pentane) \* 33% = pounds VOC/hr*

Natural Gas Fired Boiler = AP-42 Section 1.4 = 5.5 lb VOC/million SCF

**PUBLIC NOTICE**

A public notice was not required for this permit.

**SUMMARY AND CONCLUSIONS**

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.