Submitted electronically to airpermitapps@idem.in.gov on June 27
Submitted by B Paul Consulting, LLC on behalf of Freudenberg-NOK
Tom Robertson, source contact, (812) 212-3027

145-48010-00027 AI# 11484

B PAUL CONSULTING, LLC

PERMITTING | COMPLIANCE | ADVOCACY

June 27, 2024

SUBMITTED VIA USPS PRIORITY MAIL

IDEM Air Permits Administration
ATTN: Incoming Application
100 North Senate Avenue
MC 61-53, IGCN 1003
Indianapolis, IN 46204-2251

Received by
State of Indiana
IDEM - OAQ
Via Email 6/27/2024 KB-1

RE: APPLICATION FOR ADMINISTRATIVE AMENDMENT, FREUDENBERG-NOK GENERAL PARTNERSHIP, SHELBYVILLE, INDIANA, SOURCE ID 145-00027

To whom it may concern:

Please find enclosed an application to the Indiana Department of Environmental Management Office of Air Quality Management for an administrative permit amendment to the Minor Source Operating Permit (MSOP) M145-39480-00027 (as amended by 44179) for the Freudenberg-NOK manufacturing facility in Shelbyville, Indiana.

The purpose for this administrative permit amendment is to add emission units to the permit which are exempt from pre-construction permitting requirements pursuant to 326 IAC 2-6.1-6(d)(11).

If you need any additional information, please contact me at (317) 344-9730.

Sincerely,

B Paul

B Paul Consulting
President, B Paul Consulting, LLC

Submitted electronically to airpermitapps@idem.in.gov on June 27, 2024
Submitted by B Paul Consulting, LLC on behalf of Freudenberg-NOK
Tom Robertson, Source Contact, (812) 212-3027

JUNE 2024

FREUDENBERG-NOK GENERAL PARTNERSHIP, SHELBYVILLE

APPLICATION FOR ADMINISTRATIVE PERMIT AMENDMENT TO M145-39480-00027

B PAUL CONSULTING, LLC
PERMITTING | COMPLIANCE | ADVOCACY

B PAUL CONSULTING, LLC
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Table of Contents

1 INTRODUCTION

Freudenberg-NOK General Partnership (Freudenberg) owns and operates a sealing technology manufacturing facility located at 1700 Miller Avenue in Shelbyville. The facility operates under IDEM Minor Source Operating Permit (MSOP) F145-39480-00028, which was issued March 2018 and most recently revised by Administrative Permit Amendment 44179 in July 2021.

The plant produces rubber and rubber components for sealing devices. The primary manufacturing operations at the facility include rubber mixing, extrusion, rubber presses, curing ovens, and blasting systems for cleaning rubber molds.

Freudenberg is submitting this application to add three new low-emitting emission units to the permit: an ingredient dosing system, a rubber mixer, and a rubber press. In addition, Freudenberg has replaced the 32 natural gas space heaters at the site with 7 small natural gas space heaters.

The new equipment are emission units which are exempt from pre-construction permitting pursuant to 326 IAC 2-1.1-3. The Potential to Emit (PTE) of the emission units combined is less than the thresholds which would require a permit revision pursuant to 326 IAC 2-6.1-6. In addition, there are no new air pollution control or monitoring requirements which need to be added to the permit. According to 326 IAC 2-6.1-6(d)(11), these emission units can be added to the permit by an Administrative Permit Amendment.

In addition, Freudenberg requests removing several emission units from the permit or updating the descriptions of existing units.

This application includes the following sections:

- Section 2 describes the new emission units and the PTE for the emission units
- Section 3 describes the potential applicability of federal and state air pollution control requirements.
- Appendix A includes the PTE emission calculations for the new emission units and revised PTE calculations for the entire site (to reflect the new units and removal of units along with some material changes)
- Appendix B includes the IDEM permit application forms.
- Appendix C is a copy of the existing MSOP for the source with the proposed changes shown using the Microsoft Word “Track Changes” feature.

2 EMISSION UNITS AND POTENTIAL TO EMIT

This application for an administrative permit amendment covers the following new emission units which Freudenberg plans to add to the facility in 2024. This section of the application describes these emission units and the basis for the PTE estimates for them.

Table 2-1: New Emission Units

Emission Unit ID	Description	Capacity	Control device	Exhaust
DS-01	Ingredient Dosing System	6 tons per hour of ingredients	Baghouse	959008
Mixer 06	Silicone mixer	600 pounds per hour	Baghouse	959008
Press 18	SIM-60 Rubber press	7.1 pounds rubber per hour	None	Indoors
Space heaters 01-07	Seven (7) natural gas space heaters	0.125 MMBtu/hr each	None	Outdoors

2.1 NEW INGREDIENT DOSING SYSTEM

Freudenberg plans to install an ingredient dosing system at the Shelbyville plant. The system will be used to store various ingredients for rubber mixes. Ingredients are transferred from totes or bags into the system bins by gravity feed. Particulate matter emissions would be expected to occur as the bin is filling. Particulate emissions will be controlled by an existing baghouse which is already associated with the two rubber mixers 55L Rubber Mixer 1 and 2.

The capacity of the system is no greater than 6 tons per hour.

Particulate matter emissions may occur when the bins are filled. Potential to Emit (PTE) is based on the AP-42 Table 9.9.1-1 emission factor for grain storage bin vents (SCC 3-02-005-40).

$$PTE\ \left(\frac{ton}{yr}\right) = System\ capacity\ \left(\frac{ton\ material}{hr}\right) * Emission\ factor\ \left(\frac{lb\ emissions}{ton\ material}\right) * 8760\frac{hr}{yr} * \frac{ton}{2000}lb$$

The emission calculations for the dosing system are found in Appendix A, Attachment A-3 of this application.

2.2 NEW MIXER

Freudenberg plans to install a new silicone mixer to the facility. The new mixer will have a maximum hourly capacity of 600 pounds per hour and will vent an existing baghouse which is already associated with the two rubber mixers 55L Rubber Mixer 1 and 2. PTE for particulates and VOCs are calculated using the same method as the other 5 mixers at the site – with emission factors taken from a study completed for the Rubber Manufacturers Association dated September 1996.

$$PTE\ \left(\frac{ton}{yr}\right) = System\ capacity\ \left(\frac{lb\ material}{hr}\right) * Emission\ factor\ \left(\frac{lb\ emissions}{lb\ material}\right) * 8760\frac{hr}{yr} * \frac{ton}{2000}lb$$

The emission calculations for the new mixer are found in Appendix A, Attachment A-4 of this application.

2.3 NEW PRESS

Freudenberg plans to install a new SIM-60 rubber press at the Shelbyville plant. This small press will have 7.1 lb/hr rubber capacity.

For emissions from pressing rubber in the new press, Freudenberg estimated VOC and volatile HAP emissions using emission factors taken from a study completed for the Rubber Manufacturers Association dated September 1996. PTE is estimated using the following equation:

$$PTE\ \left(\frac{ton}{yr}\right) = Press\ capacity\ \left(\frac{lb\ rubber}{hr}\right) * Emission\ factor\ \left(\frac{lb\ emissions}{lb\ rubber}\right) * 8760\frac{hr}{yr} * \frac{ton}{2000\ lb}$$

The emission calculations for the new press are found in Appendix A, Attachment A-8 of this application.

2.4 SPACE HEATERS

Freudenberg has replaced the 32 natural gas space heaters currently described in the permit with 7 space heaters, each with a heat input capacity of 0.125 MMBtu/hr.

PTE of the space heaters was calculated using the emission factors in AP-42 Chapter 1.4.

The emission calculations for the space heaters are found in Appendix A, Attachment A-13 of this application.

2.5 CUMULATIVE PTE FOR NEW EQUIPMENT

The cumulative PTE for all the new equipment is presented in Table 2-2 below. As the table shows, none of the emission levels exceed the thresholds for requiring pre-construction approval pursuant to 326 IAC 2-6.1-6.

Table 2-2: Cumulative PTE for New Equipment

Description	*CO PTE (ton/yr)*	*NOx PTE (ton/yr)*	*PM PTE (ton/yr)*	*PM10 PTE (ton/yr)*	*PM2.5 PTE (ton/yr)*	*SO2 PTE (ton/yr)*	*VOC PTE (ton/yr)*	*Total HAP PTE (ton/yr)*	*Single HAP PTE (ton/yr)*	
New Ingredient Dosing			0.66	0.17	0.03					
New Mixer			2.42	2.42	2.42		1.16			
New SIM 60 Press							2.29	0.00	0.0237	Acetephenone
New natural gas heaters	0.32	0.38	0.01	0.03	0.03	0.00	0.02	0.01	0.0068	Hexane
Total of New Equipment	**0.32**	**0.38**	**3.09**	**2.62**	**2.48**	**0.00**	**3.47**	**0.01**	**0.0237**	**Acetephenone**

2.6 OTHER EQUIPMENT CHANGES

The four Rubber Dip Baths described in Condition A.2(e) and (f) now use aqueous fluids and there are no longer any VOC emissions. These items should be removed from the permit.

Barwell Extruder #3, described in Condition A.2(h), has been removed from the site and should be removed from the permit.

Several rubber presses have been removed from the site. The current number of presses is now 62 presses. The presses which have been removed are shown in Appendix A and Appendix C.

The 28-inch rubber warm up mill described in Condition A.2(m) has been removed from the site and should be removed from the permit.

This application also include particulate matter emissions from truck traffic on paved roads at the site. These emissions were omitted from past versions of the permit. Emissions were calculated using standard IDEM and US EPA calculation methods based on the number of vehicles, the weight of the vehicles, the distance traveled by the vehicles, and default constants from AP-42 Section 13.2.

2.7 UPDATED EMISSION CALCULATIONS

In addition to the updates to the emission calculations to reflect the new equipment and the equipment which has been removed, Freudenberg has updated the emission calculations for the mold releases and the bead blaster cabinets.

The mold release emissions calculations have changed based on the use of new or updated mold release products and usage rates. The site has moved toward mold releases which contain less VOCs. The majority of the historical mold release emissions occurred from the transfer presses which are no longer used at the site. Appendix A: Attachment A-9 provides the updated VOC and HAP emissions from mold releases. Particulate matter emissions from mold release usage are negligible given the extremely low solids contents of these products.

The PTE calculation methodology for the two bead blaster cabinets has been revised. Bead blasting does not generate as much dust as sand blasting or grit blasting methods. Freudenberg has calculated PTE based on the amount of material captured in the blast cabinet baghouses over the course of the year along with the hours of operation of the units. This provides an estimate of the pounds per hour of emissions which could be potentially emitted. This calculation method has been used to calculate PTE at other Freudenberg sites in Indiana. The new calculation method is shown in Appendix A, Attachment A-11. As a result of the updated calculations, rule 326 IAC 6-3-2 is no longer applicable since the unlimited hourly potential emissions of particulate matter are less than 0.551 pounds per hour.

2.8 SITE SUMMARY AFTER CHANGES

After the addition of the new emission units, the Unlimited Potential to Emit for the site will remain below Title V Major Source levels and Hazardous Air Pollutant Major Source levels.

Appendix A, Attachments A-1 presents a summary table of unlimited PTE for criteria pollutants and HAPs. This summary reflects the emissions from the new equipment, the removal of equipment, and changes to the emission calculation methods.

	Criteria Pollutant Unlimited PTE (ton/yr)							HAP Unlimited PTE (ton/yr)		
	CO	**NOx**	**PM**	**PM10**	**PM 2.5**	**SO2**	**VOC**	**Total HAP**	**Single highest HAP**	
Ingredient dosing			0.66	0.17	0.03					
Rubber Mixers			16.12	16.12	16.12		7.71			
Rubber Warm-up Mills							9.07	2.35	0.80	Acetophenone
Extruders			0.001				0.64	1.03	0.35	Acetophenone
Rubber and Molding Presses							13.38	0.42	0.14	Acetophenone
Mold Release							0.31	0.01	0.01	Glycol ether
Curing Ovens							0.09	0.13	0.05	Acetophenone
Bead blasting			3.40	3.40	3.40					
Natural Gas Fired Heating Units	0.32	0.38	0.01	0.03	0.03	0.00	0.02	0.01	0.01	Hexane
Laboratory equipment							0.62	0.02	0.008	Acetophenone
Point Source Unlimited PTE	**0.32**	**0.38**	**20.19**	**19.72**	**19.58**	**0.00**	**31.22**	**3.96**	**1.34**	**Acetophenone**
Fugitive Emissions (Paved Roads)			3.88	0.03	0.01					
Source total Unlimited PTE	**0.32**	**0.38**	**24.07**	**19.75**	**19.59**	**0.00**	**31.22**	**3.96**	**1.34**	**Acetophenone**

3 APPLICABLE REQUIREMENTS

3.1 PERMITTING REQUIREMENTS

The addition of the new equipment cumulatively have PTE below the pre-construction permitting requirements in 326 IAC 2-1.1-3 and 326 IAC 2-6.1-6. Furthermore, the addition of these emission units does not cause the unlimited PTE for the site to exceed any major source thresholds. All Criteria Pollutant PTE are less than 100 tons per year and all HAP PTE are less than 10 ton/yr for any single HAP and less than 25 ton/yr for all HAPs combined.

Therefore, the addition of these new emission units is exempt from pre-construction permitting and may be added to the permit by administrative permit amendment pursuant to 326 IAC 2-6.1-6(d)(11).

3.2 NEW SOURCE PERFORMANCE STANDARD (NSPS) APPLICABILITY

This section of the application describes the federal NSPS rules in 40 CFR Part 60 which may or may not apply to the proposed emission units.

Freudenberg is not subject to the provisions of 40 CFR 60 Subpart BBB because the Shelbyville plant is not engaged in rubber tire manufacturing as defined in 40 CFR 60.540.

Freudenberg is not aware of any other NSPS rules applying to the emission units in this application.

3.3 NATIONAL EMISSION STANDARD FOR HAZARDOUS AIR POLLUTANTS (NESHAPS) APPLICABILITY

Because the PTE of hazardous air pollutants (HAPs) is less than 10 tons per year for any single HAP and less than 25 tons per year of all HAPs combined, Freudenberg is an area source of hazardous air pollutants (HAPs), and therefore is potentially subject to NESHAP standards applicable to area sources. This subsection describes the potential applicability of these rules.

The new equipment in this application are not subject to the requirements of 40 CFR 63 Subpart VVVVVV, National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources because none of these new emission units are “Chemical manufacturing process” units, as defined in 40 CFR 63.11502.

Freudenberg is not aware of any other NESHAP rules applying to the emission units in this application.

3.4 COMPLIANCE ASSURANCE MONITORING

Because Freudenberg operates as a minor source under Title V, Compliance Assurance Monitoring under 40 CFR 64 and 326 IAC 3-8 is not an applicable requirement.

3.5 INDIANA EMISSION STANDARDS AND RULES

This section describes the potential applicability of Indiana air pollution control standards and requirements found in Title 326 of the Indiana Administrative Code.

3.5.1 326 IAC 6-2 – PARTICULATE MATTER LIMITS FOR SOURCES OF INDIRECT HEATING

This rule applies to sources of indirect heating. The 7 space heaters, which have a cumulative heat input capacity of 0.875 MMBtu/hr are subject to the particulate matter limits in 326 IAC 6-2-4. The limit is 0.6 lb/MMBtu since the cumulative heat input capacity at the site is less than 10 MMBtu/hr.

3.5.2 326 IAC 6-3 – PARTICULATE MATTER LIMITS FOR MANUFACTURING PROCESSES

The particulate matter emission limitations in 326 IAC 6-3 do not apply to the new dosing system or the new mixer because the uncontrolled particulate matter emissions are less than 0.551 lb/hr. The rule does not apply to the new press because it is not a source of particulate matter.

In addition, the limit does not apply to the 35L Moriyama Mixer, the 55L Rubber Mixers, or the bead blasting cabinets, as cited in the current permit, because the unlimited particulate matter emissions from these units is less than 0.551 lb/hr.

3.5.3 326 IAC 8-1-6 – VOC BACT

326 IAC 8-1-6, VOC BACT requirements, does not apply to any of the new emission units because the potential VOC emissions from each unit are less than 25 tons per year.

3.5.4 OTHER INDIANA REQUIREMENTS

Freudenberg is not aware of any other Indiana air pollution control requirements in 326 IAC which apply to this facility. The source does not contain the types of operations subject to those requirements.

4 PROPOSED CHANGES TO PERMIT

Appendix C consists of a copy of the most recent version of the permit with the changes Freudenberg is proposing.

5 ATTACHMENTS

In addition to this introductory material, this application includes the following attachments:

- Detailed emission calculation worksheets for the following operations (Appendix A):
- IDEM Air Permit Application Forms (Appendix B)
  - Application Cover Sheet
  - Form GSD-01: Basic Source Level Information
- Permit showing proposed changes (Appendix C)

Appendix A: Emission Calculation Worksheets

Appendix A: Attachment A-1
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Site Summary

Unlimited PTE

	Criteria Pollutant Unlimited PTE (ton/yr)							HAP Unlimited PTE (ton/yr)		
	CO	NOx	PM	PM10	PM 2.5	SO2	VOC	Total HAP	Single highest HAP	
Ingredient dosing			0.66	0.17	0.03					
Rubber Mixers			16.12	16.12	16.12		7.71			
Rubber Warm-up Mills							9.07	2.35	0.80	Acetophenone
Extruders			0.001				0.64	1.03	0.35	Acetophenone
Rubber and Molding Presses							13.38	0.42	0.14	Acetophenone
Mold Release							0.31	0.01	0.01	Glycol ether
Curing Ovens							0.09	0.13	0.05	Acetophenone
Bead blasting			3.40	3.40	3.40					
Natural Gas Fired Heating Units	0.32	0.38	0.01	0.03	0.03	0.00	0.02	0.01	0.01	Hexane
Laboratory equipment							0.62	0.02	0.008	Acetophenone
Point Source Unlimited PTE	**0.32**	**0.38**	**20.19**	**19.72**	**19.58**	**0.00**	**31.22**	**3.96**	**1.34**	**Acetophenone**
Fugitive Emissions (Paved Roads)			3.88	0.03	0.01					
Source total Unlimited PTE	**0.32**	**0.38**	**24.07**	**19.75**	**19.59**	**0.00**	**31.22**	**3.96**	**1.34**	**Acetophenone**

Appendix A: Attachment A-2
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Modification Summary

New Equipment

Description	*CO PTE (ton/yr)*	*NOx PTE (ton/yr)*	*PM PTE (ton/yr)*	*PM10 PTE (ton/yr)*	*PM2.5 PTE (ton/yr)*	*SO2 PTE (ton/yr)*	*VOC PTE (ton/yr)*	*Total HAP PTE (ton/yr)*	*Single HAP PTE (ton/yr)*	
New Ingredient Dosing			0.66	0.17	0.03					
New Mixer			2.42	2.42	2.42		1.16			
New SIM 60 Press							2.29	0.00	0.0237	Acetephenone
New natural gas heaters	0.32	0.38	0.01	0.03	0.03	0.00	0.02	0.01	0.0068	Hexane
Total of New Equipment	**0.32**	**0.38**	**3.09**	**2.62**	**2.48**	**0.00**	**3.47**	**0.01**	**0.0237**	**Acetephenone**

Appendix A: Attachment A-3
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Ingredient Dosing

Unit Description	Max. Capacity (ton/hr)	Uncontrolled Emission Factor (lb/ton)			Unlimited PTE (ton/yr)			Rule 6-3-2 Analysis			
		PM (lb/ton)	PM10 (lb/ton)	PM2.5 (lb/ton)	PM (ton/yr)	PM10 (ton/yr)	PM2.5 (ton/yr)	PM emissions (lb/hr)	Rule 6-3-2 applicable?	Rule 6-3-2 limit (lb/hr)	Controls required?
Dosing system bins	6	0.0250	0.0063	0.0011	0.66	0.17	0.03	0.150	No	NA	No
Total PTE											

Assumptions and Methodology

Emission factor from AP-42 Table 9.9.1-1, SCC 3-02-005-40 for storage bin vents

PM lb/hr = Max capacity (lb/hr) * Emission factor (lb/ton)
PTE (ton/yr) = Max capacity (lb/hr) * Emission factor (lb/ton) * 8760 hr/yr * ton/2000 lb

Rule 6-3-2 Analysis

Rule 6-3-2 applicable if Potential PM (lb/hr) > 0.551 lb/hr
Rule 6-3-2 limits (lb/hr) from Table in 326 IAC 6-3-2(e) or from interpolation equations

Limit (lb/hr) = $4.10 \times P^{0.67}$ for processes less than 30 tons per hour

Limit (lb/hr) = $55.0 \times P^{0.11} - 40$ for processes greater than 30 tons per hour

Controls required if Potential PM (lb/hr) > Rule 6-3-2 limit (lb/hr)

Appendix A: Attachment A-4
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Rubber Mixers

Unit Description	Max. Capacity (lb/hr)	PM/PM10/ PM2.5 Emission Factor (lb/lb)	PM/PM10/ PM2.5 lb/hr	PM/PM10/ PM2.5 PTE (ton/yr)	Rule 6-3-2 applicable?	Rule 6-3-2 limit (lb/hr)	Controls required?	VOC Emission Factor (lb/lb)	VOC PTE (ton/yr)
Mixer #1	1080	9.20E-04	0.994	4.35	Yes	2.71	No	4.40E-04	2.08
Mixer #2	1215	9.20E-04	1.120	4.90	Yes	2.94	No	4.40E-04	2.34
35L Moriyama Mixer	225	9.20E-04	0.210	0.91	No	NA	No	4.40E-04	0.43
55L Rubber Mixer 1	440	9.20E-04	0.400	1.77	No	NA	No	4.40E-04	0.85
55L Rubber Mixer 2	440	9.20E-04	0.400	1.77	No	NA	No	4.40E-04	0.85
Silicone mixer 06	600	9.20E-04	0.550	2.42	No	NA	No	4.40E-04	1.16
Total PTE				**16.12**					**7.71**

Assumptions and Methodology

Emission factors taken from the study completed for the Rubber Manufacturers Association (RMA), 9/96;

PM/PM10/PM2.5 lb/hr = Max capacity (lb/hr) * Emission factor (lb/lb)
VOC and PM/PM10/PM2.5 PTE (ton/yr) = Max capacity (lb/hr) * Emission factor (lb/lb) * 8760 hr/yr * ton/2000 lb

Rule 6-3-2 Analysis

Rule 6-3-2 applicable if Potential PM (lb/hr) > 0.551 lb/hr
Rule 6-3-2 limits (lb/hr) from Table in 326 IAC 6-3-2(e) or from interpolation equations

Limit (lb/hr) = $4.10 \times P^{0.67}$ for processes less than 30 tons per hour

Limit (lb/hr) = $55.0 \times P^{0.11} - 40$ for processes greater than 30 tons per hour

Controls required if Potential PM (lb/hr) > Rule 6-3-2 limit (lb/hr)

Appendix A: Attachment A-5
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Warm-up Mills

VOC Emissions

Emission Unit	Capacity (lb/hr)	VOC emission factor (lb/lb)	VOC PTE (ton/yr)
42 inch warm-up mill	700	6.48E-04	1.99
60 inch rubber warm-up mill 01	422	6.48E-04	1.20
60 inch rubber warm-up mill 02	422	6.48E-04	1.20
60 inch rubber warm-up mill 03	422	6.48E-04	1.20
60 inch rubber warm-up mill 04	422	6.48E-04	1.20
48-inch rubber warm-up mill	400	6.48E-04	1.14
50-inch rubber warm-up mill	400	6.48E-04	1.14
Rubber Processing Capacity	**3188**		**9.07**

Methodology

Source of Emission Factors

Study completed for the Rubber Manufacturers Association (RMA), 9/96; PTE (ton/yr) = Capacity (lb/hr) * Emission factor (lb/lb) * 8760/2000

HAP emissions

Pollutant	Emission factor (lb/lb)	PTE (ton/yr)
1,1,1 Trichloroethane	4.29E-06	0.0599
1,2,4 Trichlorobenzene	2.00E-07	0.0028
1,3 Butadiene	7.50E-06	0.1047
1,4 Dichlorobenzene	9.20E-06	0.1285
2,4 Toluene Diamine	2.30E-07	0.0032
Methyl Isobutyl Ketone	3.10E-06	0.0433
Acetaldehyde	7.60E-06	0.1061
Acetonitrile	6.10E-06	0.0852
Acetophenone	5.71E-05	0.7973
Acrylonitrile	6.10E-06	0.0852
Aniline	1.50E-07	0.0021
Benzene	1.20E-06	0.0168
Benzidene	8.00E-07	0.0112
Biphenyl	9.00E-07	0.0126
Bis (2-ethylhexl) Phthalate	2.60E-06	0.0363
Carbon Disulfide	4.20E-06	0.0586
Carbonyl Sulfide	3.80E-06	0.0531
Chloroethane	3.10E-06	0.0433
Cumene	2.80E-06	0.0391
Dibenzofuran	9.00E-07	0.0126
Dimethyl Phthalate	7.00E-07	0.0098
Dibutylphthalate	7.20E-06	0.1005
Ethylbenzene	1.10E-06	0.0154
Hexachlorobutadiene	3.90E-07	0.0054
Dichloromethane	5.00E-08	0.0007
Xylene	1.60E-06	0.0223
Napthalene	4.00E-06	0.0559
Hexane	1.64E-05	0.2290
o-Toluidine	1.50E-07	0.0021
o-Xylene	1.70E-06	0.0237
Phenol	1.30E-06	0.0182
Propylene Oxide	6.10E-06	0.0852
Tetrachloroethylene	3.10E-06	0.0433
Toluene	2.70E-06	0.0377
Total		**2.3511**

Appendix A: Attachment A-6
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Rubber Extruders

Unit Description	Max. Capacity (lb/hr)	PM/PM10/ PM2.5 Emission Factor (lb/lb)	PM/PM10/ PM2.5 lb/hr	PM/PM10/ PM2.5 PTE (ton/yr)	Rule 6-3-2 applicable?	Rule 6-3-2 limit (lb/hr)	Controls required?	VOC Emission Factor (lb/lb)	VOC PTE (ton/yr)
Barwell Extruder 1	700	1.12E-07	7.84E-05	3.43E-04	No	NA	No	1.06E-04	0.32
Barwell Extruder 2	700	1.12E-07	7.84E-05	3.43E-04	No	NA	No	1.06E-04	0.32
Total PTE				**0.001**					**0.64**

Assumptions and Methodology

Emission factors taken from the study completed for the Rubber Manufacturers Association (RMA), 9/96;

PM/PM10/PM2.5 lb/hr = Max capacity (lb/hr) * Emission factor (lb/lb)
VOC and PM/PM10/PM2.5 PTE (ton/yr) = Max capacity (lb/hr) * Emission factor (lb/lb) * 8760 hr/yr * ton/2000 lb

Rule 6-3-2 Analysis

Rule 6-3-2 applicable if Potential PM (lb/hr) > 0.551 lb/hr
Rule 6-3-2 limits (lb/hr) from Table in 326 IAC 6-3-2(e) or from interpolation equations

Limit (lb/hr) = $4.10 \times P^{0.67}$ for processes less than 30 tons per hour

Limit (lb/hr) = $55.0 \times P^{0.11} - 40$ for processes greater than 30 tons per hour

Controls required if Potential PM (lb/hr) > Rule 6-3-2 limit (lb/hr)

Appendix A: Attachment A-7
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Rubber Extruders (HAPs)

Total production capacity - all extruders (lb/hr) **1400**

Pollutant	**Emission Factor lb/lb**	**PTE ton/yr**
1,1,1 Trichloroethane	4.29E-06	0.0263
1,2,4 Trichlorobenzene	2.00E-07	0.0012
1,3 Butadiene	7.50E-06	0.0460
1,4 Dichlorobenzene	9.20E-06	0.0564
2,4 Toluene Diamine	2.30E-07	0.0014
Methyl Isobutyl Ketone	3.10E-06	0.0190
Acetaldehyde	7.60E-06	0.0466
Acetonitrile	6.10E-06	0.0374
Acetophenone	5.71E-05	0.3501
Acrylonitrile	6.10E-06	0.0374
Aniline	1.50E-07	0.0009
Benzene	1.20E-06	0.0074
Benzidene	8.00E-07	0.0049
Biphenyl	9.00E-07	0.0055
Bis (2-ethylhexl) Phthalate	2.60E-06	0.0159
Carbon Disulfide	4.20E-06	0.0258
Carbonyl Sulfide	3.80E-06	0.0233
Chloroethane	3.10E-06	0.0190
Cumene	2.80E-06	0.0172
Dibenzofuran	9.00E-07	0.0055
Dimethyl Phthalate	7.00E-07	0.0043
Dibutylphthalate	7.20E-06	0.0442
Ethylbenzene	1.10E-06	0.0067
Hexachlorobutadiene	3.90E-07	0.0024
Dichloromethane	5.00E-08	0.0003
Xylene	1.60E-06	0.0098
Napthalene	4.00E-06	0.0245
Hexane	1.64E-05	0.1006
o-Toluidine	1.50E-07	0.0009
o-Xylene	1.70E-06	0.0104
Phenol	1.30E-06	0.0080
Propylene Oxide	6.10E-06	0.0374
Tetrachloroethylene	3.10E-06	0.0190
Toluene	2.70E-06	0.0166
Maximum individual HAP	Acetophenone	0.3501
Total		**1.0323**

Assumptions and Methodology

Emission factors taken from a study completed for the Rubber Manufacturers Association (RMA), 9/96
PTE (ton/yr) = maximum production rate (lbs/hr) * 8760 hour/yr * Emission factor (lb/lb) * ton/2000 lb

Appendix A: Attachment A-8
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Rubber and Molding Presses

Emission Units	Number of units	Capacity - each (lb/hr)	VOC PTE (ton/yr)
Rubber Presses			
Emission factor in lb/lb rubber pressed			***6.68E-03***
N-50 Boots Presses	4	7	0.82
PT-60	4	7.1	0.83
PT-90	12	7.1	2.49
SIM-60 Presses	14	7.1	2.91
Sim-120	12	7.1	2.49
50-ton Presses	2	3.4	0.20
DESMA 160	1	3.4	0.10
DESMA 250	1	25.8	0.76
IM-60	11	7.1	2.29
New SIM-60 Press 18	1	7.1	0.21
Total All Rubber Presses	**62**	447.40	13.10
Molding Presses			
Emission factor in lb/ton rubber pressed			***1.00***
Ossberger injection molding press	1	26.7	0.06
Ossberger press	1	100	0.22
Total All Molding Presses	**2**	126.70	0.28
Total all presses		**574.10**	**13.38**

Methodology

Source of Emission Factors

Study completed for the Rubber Manufacturers Association (RMA), 9/96;

PTE (ton/yr) = Capacity (lb/hr) * Emission factor (lb/lb) * 8760/2000

HAP	Emission factor (lb/lb)	PTE (ton/yr)
1,1,1 Trichloroethane	0.00000429	0.0108
1,2,4 Trichlorobenzene	0.0000002	0.0005
1,3 Butadiene	0.0000075	0.0189
1,4 Dichlorobenzene	0.0000092	0.0231
2,4 Toluene Diamine	0.00000023	0.0006
Methyl Isobutyl Ketone	0.0000031	0.0078
Acetaldehyde	0.0000076	0.0191
Acetonitrile	0.0000061	0.0153
Acetophenone	0.0000571	0.1436
Acrylonitrile	0.0000061	0.0153
Aniline	0.00000015	0.0004
Benzene	0.0000012	0.0030
Benzidene	0.0000008	0.0020
Biphenyl	0.0000009	0.0023
Bis (2-ethylhexl) Phthalat	0.0000026	0.0065
Carbon Disulfide	0.0000042	0.0106
Carbonyl Sulfide	0.0000038	0.0096
Chloroethane	0.0000031	0.0078
Cumene	0.0000028	0.0070
Dibenzofuran	0.0000009	0.0023
Dimethyl Phthalate	0.0000007	0.0018
Dibutylphthalate	0.0000072	0.0181
Ethylbenzene	0.0000011	0.0028
Hexachlorobutadiene	0.00000039	0.0010
Dichloromethane	0.00000005	0.0001
Xylene	0.0000016	0.0040
Napthalene	0.000004	0.0101
Hexane	0.0000164	0.0412
o-Toluidine	0.00000015	0.0004
o-Xylene	0.0000017	0.0043
Phenol	0.0000013	0.0033
Propylene Oxide	0.0000061	0.0153
Tetrachloroethylene	0.0000031	0.0078
Toluene	0.0000027	0.0068
Total HAP		0.4235
Highest Single HAP	**Acetophenone**	**0.1436**

Appendix A: Attachment A-9
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Mold Release

Material	Historic annual usage (gal/yr)	Maximum projected usage (gal/yr)	Specific gravity	Density (lb/gal)	% VOC content	VOC content (lb/gal)	VOC PTE (ton/yr)	% HAP content	HAP	HAP content (lb/gal)	HAP PTE (ton/yr)
McLube 1711L	10	14	0.79	6.59	98.00%	6.46	0.05	20.00%	Glycol ether	1.32	0.01
McLube 1725L	10	14	0.76	6.34	98.00%	6.21	0.04	0.50%	Toluene	0.03	0.00
Releasomer RR5	72	101	0.88	7.34	60.00%	4.40	0.22	0.00%	NA	0.00	0.00
TOTAL							**0.31**				**0.01**

Assumptions and Methodology

Historic annual usage values provided by source based on 120 operating hours per week
Density and % VOC content from product Safety Data Sheet

VOC Content lb/gal = Density (lb/gal) * % VOC content
PTE ton/year = VOC content lb/gal * Max gal/year * ton/2000 lb

Appendix A: Attachment A-10
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Curing Ovens

Emission Units	Number of units	Capacity - each (lb/hr)	VOC PTE (ton/yr)
Curing ovens			
	Emission factor in lb/lb rubber cured		***1.16E-04***
N-50 Grieve	1	72	0.04
Despatch	1	41	0.02
GS Blue M	2	14.4	0.01
NAL	1	41	0.02
Total All Ovens		**182.80**	**0.09**

Methodology

Source of Emission Factors

Study completed for the Rubber Manufacturers Association (RMA), 9/96;

PTE (ton/yr) = Capacity (lb/hr) * Emission factor (lb/lb) * 8760/2000

HAP	Emission factor (lb/lb)	PTE (ton/yr)
1,1,1 Trichloroethane	4.29E-06	0.0034
1,2,4 Trichlorobenzene	2.00E-07	0.0002
1,3 Butadiene	7.50E-06	0.0060
1,4 Dichlorobenzene	9.20E-06	0.0074
2,4 Toluene Diamine	2.30E-07	0.0002
Methyl Isobutyl Ketone	3.10E-06	0.0025
Acetaldehyde	7.60E-06	0.0061
Acetonitrile	6.10E-06	0.0049
Acetophenone	5.71E-05	0.0457
Acrylonitrile	6.10E-06	0.0049
Aniline	1.50E-07	0.0001
Benzene	1.20E-06	0.0010
Benzidene	8.00E-07	0.0006
Biphenyl	9.00E-07	0.0007
Bis (2-ethylhexl) Phthalate	2.60E-06	0.0021
Carbon Disulfide	4.20E-06	0.0034
Carbonyl Sulfide	3.80E-06	0.0030
Chloroethane	3.10E-06	0.0025
Cumene	2.80E-06	0.0022
Dibenzofuran	9.00E-07	0.0007
Dimethyl Phthalate	7.00E-07	0.0006
Dibutylphthalate	7.20E-06	0.0058
Ethylbenzene	1.10E-06	0.0009
Hexachlorobutadiene	3.90E-07	0.0003
Dichloromethane	5.00E-08	0.0000
Xylene	1.60E-06	0.0013
Napthalene	4.00E-06	0.0032
Hexane	1.64E-05	0.0131
o-Toluidine	1.50E-07	0.0001
o-Xylene	1.70E-06	0.0014
Phenol	1.30E-06	0.0010
Propylene Oxide	6.10E-06	0.0049
Tetrachloroethylene	3.10E-06	0.0025
Toluene	2.70E-06	0.0022
Total HAP		0.1349
Highest Single HAP	**Acetophenone**	**0.0457**

Attachment A-11
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Bead blasting

Potential to Emit for Large Blast Cabinets

Unit	Blast Material	Maximum blast material throughput (lb/hour)	Material captured in dust collector (lbs/year)	Total operating hours (hr/year)	Dust collector control efficiency	Potential emissions captured by dust collector (lb/hr)	Potential emissions passing through dust collector (lb/hr)	Potential emissions (lb/hr)	Unlimited PTE (ton/yr)	Mass of parts blasted (lb/hr)	Rule 6-3-2 Limit (lb/hour)
Bead blasting cabinet	Plastic beads	3,600	1,100	2,880	98.00%	0.38	0.0078	0.39	1.70	1,000	Not applicable
Bead blasting cabinet	Plastic beads	3,600	1,100	2,880	98.00%	0.38	0.0078	0.39	1.70	1,000	Not applicable
									3.40		

Assumptions and Methodology

PM, PM10, and PM2.5 emissions are estimated to be equal.

Control efficiency of 98% conservatively estimated by Freudenberg NOK
Potential emissions captured by dust collector (lb/hr) = Material collected in dust collector (lbs) / hours of operation
Potential emissions passing through dust collector (lb/hr) = Potential emissions captured by dust collector (lb/hr) * (1 - control efficiency) / control efficiency
Total potential emissions (lb/hr) = Potential captured by dust collector + potential passing through dust collector
PTE (ton/yr) = Total potential emissions (lb/hr) * 8760 hours/yr * ton/2000 lb
Rule 6-3-2 limit (lb/hr) = (4.1 * (Maximum Material throughput lb/hr + Mass of parts blasted lb/hr) * ton/2000 lb)$^{0.67}$

Appendix A: Attachment A-12
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Laboratory

Emission Units	Number of units	Capacity - each (lb/hr)	VOC PTE (ton/yr)
Rubber Press			
Emission factor in lb/lb rubber pressed			***6.68E-03***
SIM-30 Rubber Press	1	3.4	0.10
Molding Press			
Emission factor in lb/ton rubber pressed			***1.00***
Electric Molding Press	3	3.4	0.02
Rubber Mill			
Emission factor in lb/lb rubber pressed			***6.48E-04***
12" Lab Drop Mill	1	3.4	0.10
Molding Ovens			
Emission factor in lb/lb rubber pressed			***1.16E-04***
Molding ovens	4	3.4	0.40
Total all lab equipment		**30.60**	**0.62**

Methodology

Source of Emission Factors

Study completed for the Rubber Manufacturers Association (RMA), 9/96;

PTE (ton/yr) = Capacity (lb/hr) * Emission factor (lb/lb) * 8760/2000

HAP	Emission factor (lb/lb)	PTE (ton/yr)
1,1,1 Trichloroethane	0.00000429	0.0006
1,2,4 Trichlorobenzene	0.0000002	0.0000
1,3 Butadiene	0.0000075	0.0010
1,4 Dichlorobenzene	0.0000092	0.0012
2,4 Toluene Diamine	0.00000023	0.0000
Methyl Isobutyl Ketone	0.0000031	0.0004
Acetaldehyde	0.0000076	0.0010
Acetonitrile	0.0000061	0.0008
Acetophenone	0.0000571	0.0077
Acrylonitrile	0.0000061	0.0008
Aniline	0.00000015	0.0000
Benzene	0.0000012	0.0002
Benzidene	0.0000008	0.0001
Biphenyl	0.0000009	0.0001
Bis (2-ethylhexl) Phthalat	0.0000026	0.0003
Carbon Disulfide	0.0000042	0.0006
Carbonyl Sulfide	0.0000038	0.0005
Chloroethane	0.0000031	0.0004
Cumene	0.0000028	0.0004
Dibenzofuran	0.0000009	0.0001
Dimethyl Phthalate	0.0000007	0.0001
Dibutylphthalate	0.0000072	0.0010
Ethylbenzene	0.0000011	0.0001
Hexachlorobutadiene	0.00000039	0.0001
Dichloromethane	0.00000005	0.0000
Xylene	0.0000016	0.0002
Napthalene	0.000004	0.0005
Hexane	0.0000164	0.0022
o-Toluidine	0.00000015	0.0000
o-Xylene	0.0000017	0.0002
Phenol	0.0000013	0.0002
Propylene Oxide	0.0000061	0.0008
Tetrachloroethylene	0.0000031	0.0004
Toluene	0.0000027	0.0004
Total HAP		0.0224
Highest Single HAP	**Acetophenone**	**0.0077**

Appendix A: Attachment A-13
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Natural Gas Combustion Units

Number of units	7
Capacity per unit (MMBtu/hr)	0.125
Total MMBtu/hr	0.875
Total mmcf/yr	7.51

Criteria Pollutant PTE	CO	NOx	PM	PM10	PM2.5	SO2	VOC
Emission factor in lb/mmcf	84	100	1.9	7.6	7.6	0.6	5.5
Unlimited PTE in ton/yr	0.32	0.38	0.01	0.03	0.03	0	0.02

Organic HAP PTE	Benzene	Dichloro-benzene	Formal-dehyde	Hexane	Toluene
Emission factor in lb/mmcf	0.0021	0.0012	0.075	1.8	0.0034
Unlimited PTE in ton/yr	0.0000	0.0000	0.0003	0.0068	0.0000

Metal HAP PTE	Lead	Cadmium	Chromium	Manganese	Nickel
Emission factor in lb/mmcf	0.0005	0.0011	0.0014	0.00038	0.0021
Unlimited PTE in ton/yr	0.00000	0.00000	0.00001	0.00000	0.00001

Assumptions and Methodology

Total MMBtu/hr = sum of Btu/hr /1,000,000
Higher heating value of 1020 MMBtu/mmcf assumed
Total mmcf/yr = Total MMBtu/hr *8760 hr/yr * mmcf/1,020 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3

Unlimited PTE (tons/yr) = Total mmcf/yr) x Emission Factor (lb/mmcf)/2,000 lb/ton

Appendix A: Attachment A-14
Freudenberg NOK - Shelbyville
Application for Administrative Permit Amendment
Paved Roads

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Material delivery truck - entering plant full	6.0	40.0	240.0	1600	0.303	1.82	664.30
Material delivery truck - leaving plant empty	6.0	15.0	90.0	1600	0.303	1.82	664.30
Shipment truck - entering plant empty	9.0	15.0	135.0	1600	0.303	2.73	996.45
Shipment truck - leaving plant full	9.0	40.0	360.0	1600	0.303	2.73	996.45
TOTAL	**30.0**		**825.0**			**9.1**	**3,321.50**

Average Vehicle Weight Per Trip =	27.5	tons/trip
Average Miles Per Trip =	0.30	miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	27.5	27.5	27.5	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for Iron and Steel production facilit

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)
Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]

where p =	125	days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N =	365	days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	2.555	0.511	0.1255	lb/mile
Mitigated Emission Factor, Eext =	2.337	0.467	0.1147	lb/mile

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)
Material delivery truck - entering plant full	0.85	0.17	0.04	0.78	0.16	0.04
Material delivery truck - leaving plant empty	0.85	0.17	0.04	0.78	0.16	0.04
Shipment truck - entering plant empty	1.27	0.25	0.06	1.16	0.23	0.06
Shipment truck - leaving plant full	1.27	0.25	0.06	1.16	0.23	0.06
TOTAL	**4.24**	**0.85**	**0.21**	**3.88**	**0.78**	**0.19**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)

Appendix B: IDEM Permit Application Forms

AIR PERMIT APPLICATION COVER SHEET

State Form 50639 (R4 / 1-10)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

IDEM – Office of Air Quality – Permits Branch
100 N. Senate Avenue, MC 61-53 Room 1003
Indianapolis, IN 46204-2251
Telephone: (317) 233-0178 or
Toll Free: 1-800-451-6027 x30178 (within Indiana)
Facsimile Number: (317) 232-6749
www.IN.gov/idem

NOTES:

- The purpose of this cover sheet is to obtain the core information needed to process the air permit application. This cover sheet is required for all air permit applications submitted to IDEM, OAQ. Place this cover sheet on top of all subsequent forms and attachments that encompass your air permit application packet.
- Submit the completed air permit application packet, including all forms and attachments, to **IDEM Air Permits Administration** using the address in the upper right hand corner of this page.
- IDEM will send a bill to collect the filing fee and any other applicable fees.
- Detailed instructions for this form are available on the Air Permit Application Forms website.

FOR OFFICE USE ONLY

PERMIT NUMBER: 145-48010-00027 AI# 11484

DATE APPLICATION WAS RECEIVED:

Received by
State of Indiana
IDEM - OAQ
Via Email 6/27/2024 KB-1

1. Tax ID Number:

PART A: Purpose of Application

Part A identifies the purpose of this air permit application. For the purposes of this form, the term "source" refers to the plant site as a whole and NOT to individual emissions units.

2. Source / Company Name: Freudenberg-NOK General Partnership | **3. Plant ID:** 145 – 00027

4. Billing Address: 1700 Miller Avenue

City: Shelbyville | **State:** IN | **ZIP Code:** 46176 –

5. Permit Level: ☐ Exemption ☐ Registration ☐ SSOA ☒ MSOP ☐ FESOP ☐ TVOP ☐ PBR

6. Application Summary: *Check all that apply. Multiple permit numbers may be assigned as needed based on the choices selected below.*

☐ Initial Permit
☐ Renewal of Operating Permit
☐ Asphalt General Permit
☐ Review Request
☐ Revocation of Operating Permit
☐ Alternate Emission Factor Request
☐ Interim Approval
☐ Relocation of Portable Source
☐ Acid Deposition (Phase II)
☐ Site Closure
☐ Emission Reduction Credit Registry

☐ Transition (between permit levels) *From:* *To:*

☒ Administrative Amendment:
☐ *Company Name Change*
☐ *Change of Responsible Official*
☐ *Correction to Non-Technical Information*
☐ *Notice Only Change*
☒ *Other (specify):* Addition of Exempt Emission Units

☒ Modification:
☒ *New Emission Unit or Control Device*
☐ *Modified Emission Unit or Control Device*
☐ *New Applicable Permit Requirement*
☐ *Change to Applicability of a Permit Requirement*
☐ *Prevention of Significant Deterioration*
☐ *Emission Offset*
☐ *MACT Preconstruction Review*
☐ *Minor Source Modification*
☐ *Significant Source Modification*
☐ *Minor Permit Modification*
☐ *Significant Permit Modification*
☒ *Other (specify):* Addition of Exempt Emission Units

7. Is this an application for an initial construction and/or operating permit for a **"Greenfield" Source**? ☐ Yes ☒ No

8. Is this an application for construction of a new emissions unit at an **Existing Source**? ☒ Yes ☐ No

Continued on Next Page

PART B: Pre-Application Meeting

Part B specifies whether a meeting was held or is being requested to discuss the permit application.

9. Was a meeting held between the company and IDEM prior to submitting this application to discuss the details of the project?

☒ No ☐ Yes: *Date:*

10. Would you like to schedule a meeting with IDEM management and your permit writer to discuss the details of this project?

☒ No ☐ Yes: *Proposed Date for Meeting:*

PART C: Confidential Business Information

Part C identifies permit applications that require special care to ensure that confidential business information is kept separate from the public file.

Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in the Indiana Administrative Code (IAC). To ensure that your information remains confidential, refer to the IDEM, OAQ information regarding submittal of confidential business information. For more information on confidentiality for certain types of business information, please review IDEM's Nonrule Policy Document Air-031-NPD regarding Emission Data.

11. Is any of the information contained within this application being claimed as **Confidential Business Information**?

☒ No ☐ Yes

PART D: Certification Of Truth, Accuracy, and Completeness

Part D is the official certification that the information contained within the air permit application packet is truthful, accurate, and complete. Any air permit application packet that we receive without a signed certification will be deemed incomplete and may result in denial of the permit.

For a Part 70 Operating Permit (TVOP) or a Source Specific Operating Agreement (SSOA), a "responsible official" as defined in 326 IAC 2-7-1(34) must certify the air permit application. For all other applicants, this person is an "authorized Individual" as defined in 326 IAC 2-1.1-1(1).

☒ *I certify under penalty of law that, based on information and belief formed after reasonable inquiry, the statements and information contained in this application are true, accurate, and complete.*

Jeff Clark
Name *(typed)*

Site Executive Officer
Title

Jeff Clark
Signature

6/19/2024
Date

145-48010-00027 AI# 11484

OAQ GENERAL SOURCE DATA APPLICATION
GSD-01: Basic Source Level Information

State Form 50640 (R5 / 1-10)
INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Received by
State of Indiana
IDEM - OAQ
Via Email 6/27/2024 KB-1

IDEM – Office of Air Quality – Permits Branch
100 N. Senate Avenue, MC 61-53 Room 1003
Indianapolis, IN 46204-2251
Telephone: (317) 233-0178 or
Toll Free: 1-800-451-6027 x30178 (within Indiana)
Facsimile Number: (317) 232-6749
www.IN.gov/idem

NOTES:

- The purpose of GSD-01 is to provide essential information about the entire source of air pollutant emissions. GSD-01 is a required form.
- Detailed instructions for this form are available on the Air Permit Application Forms website.
- All information submitted to IDEM will be made available to the public unless it is submitted under a claim of confidentiality. Claims of confidentiality must be made at the time the information is submitted to IDEM, and must follow the requirements set out in 326 IAC 17.1-4-1. Failure to follow these requirements exactly will result in your information becoming a public record, available for public inspection.

PART A: Source / Company Location Information

1. Source / Company Name: Freudenberg-NOK General Partnership | **2. Plant ID**: 145 – 00027

3. Location Address: 1700 Miller Avenue

City: Shelbyville | **State**: IN | **ZIP Code**: 46176 –

4. County Name: Shelby | **5. Township Name**: Addison

6. Geographic Coordinates:

Latitude: 39.508 | **Longitude**: -85.785

7. Universal Transferal Mercadum Coordinates *(if known)*:

Zone: | **Horizontal**: | **Vertical**:

8. Adjacent States: Is the source located within 50 miles of an adjacent state?

☐ No ☒ Yes – *Indicate Adjacent State(s):* ☐ Illinois (IL) ☐ Michigan (MI) ☒ Ohio (OH) ☐ Kentucky (KY)

9. Attainment Area Designation: Is the source located within a non-attainment area for any of the criteria air pollutants?

☒ No ☐ Yes – *Indicate Nonattainment Pollutant(s):* ☐ CO ☐ Pb ☐ NO_x ☐ O_3 ☐ PM ☐ PM_{10} ☐ $PM_{2.5}$ ☐ SO_2

10. Portable / Stationary: Is this a portable or stationary source? ☐ Portable ☒ Stationary

PART B: Source Summary

11. Company Internet Address *(optional)*: www.freudenberg-nok.com

12. Company Name History: Has this source operated under any other name(s)?

☒ No ☐ Yes – *Provide information regarding past company names in Part I, Company Name History.*

13. Portable Source Location History: Will the location of the portable source be changing in the near future?

☒ Not Applicable ☐ No ☐ Yes – *Complete Part J, Portable Source Location History, and Part K, Request to Change Location of Portable Source.*

14. Existing Approvals: Have any exemptions, registrations, or permits been issued to this source?

☐ No ☒ Yes – *List these permits and their corresponding emissions units in Part M, Existing Approvals.*

15. Unpermitted Emissions Units: Does this source have any unpermitted emissions units?

☒ No ☐ Yes – *List all unpermitted emissions units in Part N, Unpermitted Emissions Units.*

16. New Source Review: Is this source proposing to construct or modify any emissions units?

☐ No ☒ Yes – *List all proposed new construction in Part O, New or Modified Emissions Units.*

17. Risk Management Plan: Has this source submitted a Risk Management Plan?

☒ Not Required ☐ No ☐ Yes → Date submitted: EPA Facility Identifier: – –

Continued on Next Page

PART C: Source Contact Information

IDEM will send the original, signed permit decision to the person identified in this section. This person MUST be an employee of the permitted source.

18. Name of Source Contact Person: Tom Robertson

19. Title *(optional)*: HSE & Quality Manager

20. Mailing Address: 1700 Miller Avenue

City: Shelbyville	**State**: IN	**ZIP Code**: 46176 –

21. Electronic Mail Address *(optional)*: thomas.robertson@fnst.com

22. Telephone Number: (812) 212 – 3027	**23. Facsimile Number** *(optional)*: ( ) –

PART D: Authorized Individual/Responsible Official Information

IDEM will send a copy of the permit decision to the person indicated in this section, if the Authorized Individual or Responsible Official is different from the Source Contact specified in Part C.

24. Name of Authorized Individual or Responsible Official: Jeff Clark

25. Title: Site Executive Officer

26. Mailing Address: 1700 Miller Avenue

City: Shelbyville	**State**: IN	**ZIP Code**: 46176 –

27. Telephone Number: (317) 421 – 3423	**28. Facsimile Number** *(optional)*: ( ) –

29. Request to Change the Authorized Individual or Responsible Official: Is the source officially requesting to change the person designated as the Authorized Individual or Responsible Official in the official documents issued by IDEM, OAQ? *The permit may list the title of the Authorized Individual or Responsible Official in lieu of a specific name.*

☒ No ☐ Yes – ***Change Responsible Official to**:*

PART E: Owner Information

30. Company Name of Owner: Freudenberg-NOK General Partnership

31. Name of Owner Contact Person: Robert Sams

32. Mailing Address: 47690 East Anchor Court

City: Plymouth	**State**: MI	**ZIP Code**: 48170 –

33. Telephone Number: (419) 889 – 1481	**34. Facsimile Number** *(optional)*: ( ) –

34. Operator: Does the "Owner" company also operate the source to which this application applies?

☐ No – *Proceed to Part F below.*	☒ Yes – *Enter "SAME AS OWNER" on line 35 and proceed to Part G below.*

PART F: Operator Information

35. Company Name of Operator: SAME AS OWNER

36. Name of Operator Contact Person:

37. Mailing Address:

City:	**State**:	**ZIP Code**: –

38. Telephone Number: ( ) –	**39. Facsimile Number** *(optional)*: ( ) –

Continued on Next Page

PART G: Agent Information

40. Company Name of Agent: B Paul Consulting, LLC

41. Type of Agent: ☒ Environmental Consultant ☐ Attorney ☐ Other (specify):

42. Name of Agent Contact Person: Bernard Paul

43. Mailing Address: 285 Spring Drive

City: Zionsville	**State**: IN	**ZIP Code**: 46077 –

44. Electronic Mail Address *(optional)*: bernie@bpaulconsulting.com

45. Telephone Number: (317) 344 – 9730	**46. Facsimile Number** *(optional)*: ( ) –

47. Request for Follow-up: Does the "Agent" wish to receive a copy of the preliminary findings during the public notice period (if applicable) and a copy of the final determination? ☐ No ☒ Yes

PART H: Local Library Information

48. Date application packet was filed with the local library: Not applicable to Administrative Amendment

49. Name of Library:

50. Name of Librarian *(optional)*:

51. Mailing Address:

City:	**State**:	**ZIP Code**: –

52. Internet Address *(optional)*:

53. Electronic Mail Address *(optional)*:

54. Telephone Number: ( ) –	**55. Facsimile Number** *(optional)*: ( ) –

PART I: Company Name History *(if applicable)*

Complete this section only if the source has previously operated under a legal name that is different from the name listed above in Section A.

56. Legal Name of Company	**57. Dates of Use**
	to
	to
	to
	to
	to
	to
	to
	to
	to
	to

58. Company Name Change Request: Is the source officially requesting to change the legal name that will be printed on all official documents issued by IDEM, OAQ?

☐ No ☐ Yes – ***Change Company Name to***:

Continued on Next Page

PART J: Portable Source Location History *(if applicable)*

Complete this section only if the source is portable and the location has changed since the previous permit was issued. The current location of the source should be listed in Section A.

59. Plant ID	60. Location of the Portable Source	61. Dates at this Location
–		to
–		to
–		to
–		to
–		to
–		to
–		to
–		to
–		to
–		to
–		to
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–		to
–		to
–		to
–		to
–		to
–		to
–		to

PART K: Request to Change Location of Portable Source *(if applicable)*

Complete this section to request a change of location for a portable source.

62. Current Location:

Address:

City:	**State**:	**ZIP Code**: –

County Name:

63. New Location:

Address:

City:	**State**:	**ZIP Code**: –

County Name:

Continued on Next Page

PART L: Source Process Description

Complete this section to summarize the main processes at the source.

64. Process Description	65. Products	66. SIC Code	67. NAICS Code
Gaskets, Packing, and Sealing Devices	Rubber and spring packed seals	3053	339991

PART M: Existing Approvals *(if applicable)*

Complete this section to summarize the approvals issued to the source since issuance of the main operating permit.

68. Permit ID	69. Emissions Unit IDs	70. Expiration Date
39480	Entire plant - most recent MSOP renewal	3/26/2028
44179	Administrative amendment	3/26/2028

PART N: Unpermitted Emissions Units *(if applicable)*

Complete this section only if the source has emission units that are not listed in any permit issued by IDEM, OAQ.

71. Emissions Unit ID	72. Type of Emissions Unit	73. Actual Dates		
		Began Construction	Completed Construction	Began Operation
	NA			

PART O: New or Modified Emissions Units *(if applicable)*

Complete this section only if the source is proposing to add new emission units or modify existing emission units.

74. Emissions Unit ID	75. NEW	76. MOD	77. Type of Emissions Unit	78. Estimated Dates		
				Begin Construction	Complete Construction	Begin Operation
	X		New rubber press			
	X		New mixer			
	X		Ingredient dosing system			
	x		Natural gas heaters			

Appendix C: Permit with Proposed Changes

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

Minor Source Operating Permit Renewal
OFFICE OF AIR QUALITY

Freudenberg - NOK General Partnership
1700 Miller Ave.
Shelbyville, Indiana 46176

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M145-39480-00027 Master Agency Interest ID.: 11484	
Issued By: *Original Signed By:* Iryn Calilung, Section Chief Permits Branch, Office of Air Quality	Issuance Date: March 26, 2018 Expiration Date: March 26, 2028

Administrative Amendment No. 145-42190-00027, issued on December 16, 2019.

Administrative Amendment No. 145-44179-00027	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date: March 26, 2028

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 and A.2 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary rubber parts manufacturing plant.

Source Address:	1700 Miller Ave., Shelbyville, Indiana 46176
General Source Phone Number:	317-421-3400
SIC Code:	3053 (Gaskets, Packing, and Sealing Devices)
County Location:	Shelby
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

This stationary source consists of the following emission units and pollution control devices:

Six (6)~~Five (5)~~ rubber mixers:

(a) One (1) rubber mixer, identified as #1 Mixer, with a maximum capacity of processing 1,080 pounds of raw material per hour, constructed in 2003, with one (1) baghouse for particulate matter control, exhausting to one (1) stack identified as 929034

(b) One (1) rubber mixer, identified as #2 Mixer, with a maximum capacity of processing 1,215 pounds of raw material per hour, constructed in 2003, with two (2) baghouses for particulate matter control, exhausting to two (2) stacks, identified as 909002 and 909003.

(c) One (1) rubber mixer, identified as 35L Moriyama Mixer, with a maximum capacity of processing 225 pounds of raw material per hour, constructed in 2003, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 919005.

(d) Two (2) rubber mixers, identified as 55L Rubber Mixer 1 and 55L Rubber Mixer 2, each with a maximum capacity of processing 440 pounds of raw material per hour, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 959008.

(1) 55L Rubber Mixer 1 was constructed in 2003,
(2) 55L Rubber Mixer 2 was constructed in 2016.

~~Four (4) dip baths:~~

(e) One (1) silicone mixer, identified as Mixer 06, with a maximum capacity of processing 600 pounds of raw material per hour, approved for construction in 2024, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as

Commented [BPC1]: The dip baths no longer use VOC containing chemicals. All chemicals are water based. These units should no longer be listed as emission units.

959008.Two (2) rubber dip baths, identified as rubber dip bath for #1 Mixer and rubber dip bath for #2 Mixer, both constructed in 2003, each with a maximum capacity of coating 1,080 pounds of rubber per hour, using no control, and exhausting to the atmosphere.

(f) One (1) ingredient dosing system, identified as IDS 01, with a maximum capacity of processing 6 tons of ingredients per hour, approved for construction in 2024, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 959008.Two (2) rubber dip baths, approved in 2021 for construction, uncontrolled, exhausting indoors, and consisting of the following:

(1) One (1) rubber dip bath, identified as Mixer 3 Dip Bath, with a maximum usage of 0.29 gallons of coating per hour.

(2) One (1) rubber dip bath, identified as Mixer 5 Dip Bath, with a maximum usage of 0.33 gallons of coating per hour.

Three (3)Two (2) extruders:

(g) Two (2) rubber extruders, identified as Barwell Rubber Extruders 1 and 2 constructed in 2003, each with a maximum capacity of processing 700 pounds of rubber per hour, using no control, and exhausting to the atmosphere.

(h) One (1) rubber extruder, identified as Barwell Rubber Extruder 3 approved in 2019 for construction, with a maximum capacity of processing 700 pounds of rubber per hour, using no control, and exhausting to the atmosphere.

Eighty (80)Sixty-two (62) rubber presses:

(i) Eighty (80)Sixty-two (62) rubber presses, unless otherwise indicated, constructed in 2003, using no control, and exhausting to the atmosphere:

(1) Four (4) rubber presses, identified as R-100 Boots Presses 5 to 8, each with a maximum capacity of processing 25.8 pounds of rubber per hour.

(2) Four (4) rubber presses, identified as N-50 Boots Presses 1 to 4, each with a maximum capacity of processing 7.0 pounds of rubber per hour.

(3) Seven (7) rubber presses, identified as DC-60 Presses 1 to 7, each with a maximum capacity of processing 7.1 pounds of rubber per hour.

(4) Five (5)Four (4) rubber presses, identified as PT-60 Presses 1 to 54, each with a maximum capacity of processing 7.1 pounds of rubber per hour.

(5) Thirteen (13)Twelve (12) rubber presses, identified as PT-90 Presses 1 to 1312, each with a maximum capacity of processing 7.1 pounds of rubber per hour.

(a) PT-90 Presses 13 was approved in 2016 for construction.

(6) Seventeen (17)Fifteen (15) SIM-60 rubber presses, identified as follows, each with a maximum capacity of processing 7.1 pounds of rubber per hour.

(a) SIM-60 Presses 11 and 12 were approved in 2016 for construction.
(b) SIM-60 Presses 13 and 14 approved in 2019 for construction.
(c) SIM-60 Presses 15, 16, and 17 approved in 2021 for construction.
(d) SIM-60 Press 18 approved in 2024 for construction

(7) ~~Two (2) transfer rubber presses, identified as Transfer Presses 1 and 2, each with a maximum capacity of processing 34 pounds of rubber per hour.~~

(8) Twelve (12) rubber presses, identified as follows, each with a maximum capacity of processing 7.1 pounds of rubber per hour.

(a) Sim-120 Presses 1 to 3 were approved in 2016 for construction.
(b) Sim-120 Presses 4 and 5 are approved in 2018 for construction.
(c) Sim-120 Presses 6 through 8 approved in 2019 for construction.
(d) SIM-120 Presses 9 through 12 approved in 2021 for construction.

(9) Two (2) rubber presses, identified as 50-ton Presses 1 and 2, approved in 2016 for construction, each with a maximum capacity of processing 3.4 pounds of rubber per hour.

(10) ~~Two (2) rubber presses~~One (1) rubber press, identified as DESMA 160 ~~Presses~~ Press 1~~ and 2~~, approved in 2016 for construction, ~~each~~ with a maximum capacity of processing 3.4 pounds of rubber per hour.

(11) One (1) rubber press, identified as DESMA 250, approved in 2021 for construction, with a maximum capacity of processing 25.8 pounds of rubber per hour.

(12) Eleven (11) rubber presses, identified as IM-60 Presses 1 to 11, each with a maximum capacity of processing 7.1 pounds of rubber per hour

(a) IM-60 Presses 3 to 11 were approved in 2016 for construction

Two (2) molding presses:

(j) One (1) single-head plastic injection molding press, identified as Ossberger Plastic Press – single-head, with a maximum capacity of processing 26.7 pounds of plastic per hour, using no control, and exhausting to the atmosphere

(k) One (1) single-head plastic press, identified as Ossberger Plastic Press, with a maximum capacity of processing 100 pounds plastic per hour, using no control, and exhausting to the atmosphere

~~Eight (8)~~Seven (7) mills:

(l) One (1) 42-inch rubber warm-up mill, identified as 42-inch rubber warm-up mill, with a maximum capacity of processing 700 pounds of rubber per hour, using no control, and exhausting to the atmosphere

(m) ~~One (1) 28-inch rubber warm-up mill, identified as 28-inch rubber warm-up mill, approved in 2016 for construction, with a maximum capacity of processing 200 pounds of rubber per hour, using no control, and exhausting to the atmosphere~~

(n) One (1) 48-inch rubber warm-up mill, identified as 48-inch rubber warm-up mill, approved in 2016 for construction, with a maximum capacity of processing 400 pounds of rubber per hour, using no control, and exhausting to the atmosphere

(o) One (1) 50-inch rubber warm-up mill, identified as 50-inch rubber warm-up mill, approved in 2016 for construction, with a maximum capacity of processing 400 pounds of rubber per hour, using no control, and exhausting to the atmosphere

(p) Four (4) 60-inch rubber warm-up mills, identified as 60-inch rubber warm-up mills 1 to 4, each with a maximum capacity of processing 422 pounds of rubber per hour, using no control, and exhausting to the atmosphere

(1) 60-inch rubber warm-up mills 3 and 4 were approved in 2016 for construction

Five (5) post-curing ovens:

(q) One (1) electric post-curing oven, identified as N-50 Grieve electric post-curing oven, with a maximum capacity of processing 72 pounds of rubber per hour, using no control, and exhausting to the atmosphere

(r) One (1) electric post-curing oven, identified as Despatch electric post-curing oven, with a maximum capacity of processing 41 pounds of rubber per hour, using no control, and exhausting to the atmosphere

(s) One (1) electric post-curing oven, identified as NAL post-curing oven, approved in 2016 for construction, with a maximum capacity of processing 41 pounds of rubber per hour, using no control, and exhausting to the atmosphere

(t) One (1) electric post-curing oven, identified as GS Blue M Electric oven – cures a maximum of 14.4 parts per hour, using no control, and exhausting to the atmosphere

(u) One (1) electric post-curing oven, identified as GS Blue M Electric oven – cures a maximum of 14.4 parts per hour, using no control, and exhausting to the atmosphere.

Laboratory:

(v) Laboratory, with a maximum capacity of processing 3.4 pounds of rubber per hour, equipped with the following:

(1) One (1) lab mill with 12” drop mill,
(2) Three (3) electric molding presses,
(3) Four (4) molding ovens,
(4) One (1) rubber press, identified as SIM-30.

Two (2) blasters:

(w) Two (2) dry bead blasters – each self-contained and including particulate filtration for control. Each with a maximum throughput of 624,000 lbs/yr.

The source has also wet blasting but the emissions are negligible.

(x) ~~Thirty-two (32)~~Seven (7) space heaters with heat input capacity ~~totaling 12.2~~of 0.125 MMBtu/hr each

~~(1) One heater was approved in 2016 for construction~~

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

~~Five (5)~~Six (6) rubber mixers:

(a) One (1) rubber mixer, identified as #1 Mixer, with a maximum capacity of processing 1,080 pounds of raw material per hour, constructed in 2003, with one (1) baghouse for particulate matter control, exhausting to one (1) stack identified as 929034

(b) One (1) rubber mixer, identified as #2 Mixer, with a maximum capacity of processing 1,215 pounds of raw material per hour, constructed in 2003, with two (2) baghouses for particulate matter control, exhausting to two (2) stacks, identified as 909002 and 909003

~~(c) One (1) rubber mixer, identified as 35L Moriyama Mixer, with a maximum capacity of processing 225 pounds of raw material per hour, constructed in 2003, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 919005~~

~~(d) Two (2) rubber mixers, identified as 55L Rubber Mixer 1 and 55L Rubber Mixer 2, each with a maximum capacity of processing 440 pounds of raw material per hour, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 959008~~

~~(1) 55L Rubber Mixer 1 was constructed in 2003,~~
~~(2) 55L Rubber Mixer 2 was constructed in 2016~~

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Commented [BPC2]: These units are not subject to 6-3-2 since uncontrolled PM emissions are less than 0.551 lb/hr.

Emission Limitations and Standards

D.1.1 Particulate Emission Limits [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the mixing ~~and extruding~~ operations shall not exceed the pound per hour emission rate established as E in the following formula:

Commented [BPC3]: Extruders are less than 0.551 lb/hr

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10\ P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Based on the above equation, particulate emissions from the mixing ~~and extrusion~~ operations shall be limited as follows:

Emission Unit	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Particulate Allowable (lbs/hr)
Mixer #1	0.54	2.71

Emission Unit	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Particulate Allowable (lbs/hr)
Mixer #2	0.61	2.94
~~35L Moriyama Mixer~~	~~0.11~~	~~0.93~~
~~55L Rubber Mixer 1~~	~~0.22~~	~~1.49~~
~~55L Rubber Mixer 2~~	~~0.22~~	~~1.49~~

D.1.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.3 Compliance Monitoring [326 IAC 2-1.1-11]

These units are capable of compliance without control devices. However, since the emissions factors used to determine compliance are alternative emissions factors, the source will be required to operate the baghouses on each mixer operation to comply with Condition D.1.1. This requirement is in lieu of testing requirement.

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Commented [BPC4]: This D section should be deleted since the pre-control emissions from each bead blaster are less than 0.551 lb/hr.

Facility Description [326 IAC 2-7-5(15)]:

Two (2) blasters:

(w) Two (2) dry bead blasters – each self-contained and including particulate filtration for control. Each with a maximum throughput of 624,000 lbs/yr.

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards

D.2.1 Particulate Emission Limitations [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emissions from the mixing and extruding operations shall not exceed the pound per hour emission rate established as E in the following formula:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 4.10 P^{0.67}$ where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

Based on the above equation, particulate emissions from the dry bead blasting operations shall be limited as follows:

Emission Unit	Process Weight Rate (ton/hr)	326 IAC 6-3-2 Particulate Allowable (lbs/hr)	Uncontrolled Emissions (lb/hr)	Controlled Emissions (lb/hr)
Two (2) dry bead blasters	0.092	0.832	1.42	0.01

D.2.2 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for these facilities and their control devices. Section B – Preventive Maintenance Plan contains the Permittee's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.2.3 Compliance Monitoring [326 IAC 2-1.1-11]

In order to comply with Conditions D.2.1, the particulate filtration for control shall be in operation and control emissions at all times the two (2) dry bead blasters are in operation.