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## MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

**Freudenberg - NOK General Partnership  
State Road 44 West  
Shelbyville, Indiana 46176**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the emission units 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.

Operation Permit No.: MSOP 145-14928-00027	
Issued by: Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: April 21, 2003  Expiration Date: April 21, 2008

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## 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 through A.3 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)]

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The Permittee owns and operates a rubber parts manufacturing plant

Authorized Individual: General Manager  
Source Address: State Road 44 West, Shelbyville, Indiana 46176  
Mailing Address: 1700 Miller Avenue, Shelbyville, Indiana 46176  
General Source Phone: 317-392-2571  
SIC Code: 3053  
County Location: Shelby  
Source Location Status: Attainment for all criteria pollutants  
Source Status: Minor Source, under PSD Rules;  
Minor Source, Section 112 of the Clean Air Act

### A.2 Emissions Units and Pollution Control Equipment Summary

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This stationary source is approved to is approved to operate the following emissions units and pollution control devices:

- (a) one (1) rubber mixer, identified as #1 Mixer, with a maximum capacity of processing 1,080 pounds of raw material per hour, 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, 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, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 919005;
- (d) one (1) rubber mixer, identified as 55L Rubber Mixer, 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;
- (e) three (3) rubber extruders, identified as Barwell Rubber Extruders, each with a maximum capacity of processing 700 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
- (f) Sixty-one (61) rubber presses, using no control, and exhausting to the atmosphere with the following capacities:

- (1) eight (8) rubber presses, identified as R-100 Boots Presses, each with a maximum capacity of processing 25.8 pounds of rubber per hour;
  - (2) seven (7) rubber presses, identified as N-50 Boots Presses, each with a maximum capacity of processing 7.0 pounds of rubber per hour;
  - (3) seven (7) rubber presses, identified as DC-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (4) three (3) rubber presses, identified as PT-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (5) six (6) rubber presses, identified as PT-90 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (6) six (6) rubber presses, identified as SIM60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (7) one (1) rubber press, identified as DESMA 110, with a maximum capacity of processing 3.4 pounds of rubber per hour;
  - (8) nineteen (19) transfer rubber presses, identified as Transfer Presses, each with a maximum capacity of processing 34 pounds of rubber per hour;
  - (9) one (1) rubber press, identified as Zone C-02 Press, with a maximum capacity of processing 3 pounds of rubber per hour; and
  - (10) three (3) rubber presses, identified as NT-160 Presses, with a maximum capacity of processing 14.2 pounds of rubber per hour.
- (g) 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;
- (h) two (2) double-head plastic injection molding presses, identified as Ossberger Plastic Presses - double-head, each with a maximum capacity of processing 53.4 pounds of plastic per hour, using no control, and exhausting to the atmosphere;
- (i) 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;
- (j) one (1) 60-inch rubber warm-up mill, identified as 60-inch rubber warm-up mill, with a maximum capacity of processing 422 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
- (k) 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;
- (l) 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;
- (m) two (2) rubber dip baths, identified as rubber dip bath for #1 Mixer and rubber dip bath for #2 Mixer, each with a maximum capacity of coating 1,080 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
- (n) one (1) parts washer, identified as Graymills Clean-O-Matic parts washer, using approximately fifty (50) gallons of cleaner per year;

- (o) one (1) vacublast mold cleaning grit blaster with a maximum capacity of processing 2,400 pounds of material per hour, using no control, and exhausting to the atmosphere;
- (p) laboratory equipped with one (1) Banbury Mixer BR 1600 and associated Electric Delta Therm, lab mill with 12" drop mill, one (1) Moriyama Mixer with 16" drop mill, three (3) electric molding presses, and four (4) molding ovens; and
- (q) one (1) wet blaster.

**SECTION B GENERAL CONDITIONS**

THIS SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1.1 AND 40 CFR 52.780, WITH CONDITIONS LISTED BELOW.

**B.1 Permit No Defense [IC 13]**

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This permit to operate does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

**B.2 Definitions**

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Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations IC 13-11, 326 IAC 1-2, and 326 IAC 2-1.1-1 shall prevail.

**B.3 Effective Date of the Permit [IC13-15-5-3]**

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Pursuant to IC 13-15-5-3, this permit becomes effective upon its issuance.

**B.4 Permit Term and Renewal [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5]**

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This permit is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions of this permit do not affect the expiration date.

The Permittee shall apply for an operation permit renewal at least ninety (90) days prior to the expiration date. If a timely and sufficient permit application for a renewal has been made, this permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

**B.5 Modification to Permit [326 IAC 2]**

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All requirements and conditions of this operating permit shall remain in effect unless modified in a manner consistent with procedures established for modifications of construction permits pursuant to 326 IAC 2 (Permit Review Rules).

**B.6 Annual Notification [326 IAC 2-6.1-5(a)(5)]**

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- (a) Annual notification shall be submitted to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.
- (b) Noncompliance with any condition must be specifically identified. If there are any permit conditions or requirements for which the source is not in compliance at any time during the year, the Permittee must provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be, achieved. The notification must be signed by an authorized individual.
- (c) The annual notice shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted in the format attached no later than March 1 of each year to:

Compliance Branch, Office of Air Quality  
Indiana Department of Environmental Management  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, IN 46206-6015

- (d) The notification shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

B.7 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, including the following information on each emissions unit:
  - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
  - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
  - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

Indiana Department of Environmental Management  
Compliance Branch, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

The PMP extension notification does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) A copy of the PMP's shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMP whenever lack of proper maintenance causes or contributes to any violation. The PMP does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

B.8 Permit Revision [326 IAC 2-5.1-3(e)(3)] [326 IAC 2-6.1-6]

- (a) Permit revisions are governed by the requirements of 326 IAC 2-6.1-6.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management  
Permits Branch, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1.

- (c) The Permittee shall notify the OAQ within thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.9 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)] [326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2]

Upon presentation of proper identification cards, credentials, and other documents as may be required by law, and subject to the Permittee's right under all applicable laws and regulations to assert that the information collected by the agency is confidential and entitled to be treated as such, the Permittee shall allow IDEM, OAQ, U.S. EPA, or an authorized representative to perform the following:

- (a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under this title or the conditions of this permit or any operating permit revisions;
- (c) Inspect, at reasonable times, any processes, emissions units (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit or any operating permit revisions;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.10 Transfer of Ownership or Operation [326 IAC 2-6.1-6(d)(3)]

Pursuant to [326 IAC 2-6.1-6(d)(3)] :

- (a) In the event that ownership of this source is changed, the Permittee shall notify IDEM, OAQ, Permits Branch, within thirty (30) days of the change.
- (b) The written notification shall be sufficient to transfer the permit to the new owner by an notice-only change pursuant to 326 IAC 2-6.1-6(d)(3).
- (c) IDEM, OAQ shall issue a revised permit.



The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

B.11 Annual Fee Payment [326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing.
  
- (b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

## SECTION C SOURCE OPERATION CONDITIONS

Entire Source
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### C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than 100 pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

### C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

- (a) Violation of any conditions of this permit.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.
- (c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.
- (d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.
- (e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

### C.3 Opacity [326 IAC 5-1]

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

- (a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.
- (b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:
- (1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or
- (2) If there is a change in the following:
- (A) Asbestos removal or demolition start date;
- (B) Removal or demolition contractor; or
- (C) Waste disposal site.
- (c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).
- (d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

Indiana Department of Environmental Management  
Asbestos Section, Office of Air Quality  
100 North Senate Avenue, P.O. Box 6015  
Indianapolis, Indiana 46206-6015

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-7-1(34).

- (e) **Procedures for Asbestos Emission Control**  
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

- (f) **Indiana Accredited Asbestos Inspector**  
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

## Testing Requirements

### C.5 Performance Testing [326 IAC 3-6]

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- (a) Compliance testing on new emissions units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date.

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual date.
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted by the IDEM, OAQ, if the source submits to IDEM, OAQ, a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

## Compliance Requirements [326 IAC 2-1.1-11]

### C.6 Compliance Requirements [326 IAC 2-1.1-11]

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The commissioner may require stack testing, monitoring, or reporting at any time to assure compliance with all applicable requirements by issuing an order under 326 IAC 2-1.1-11. Any monitoring or testing shall be performed in accordance with 326 IAC 3 or other methods approved by the commissioner or the U.S. EPA.

## Compliance Monitoring Requirements

### C.7 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]

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Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60, Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

## Record Keeping and Reporting Requirements

### C.8 Malfunctions Report [326 IAC 1-6-2]

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Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

- (a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.
- (b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.
- (c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).
- (d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

### C.9 General Record Keeping Requirements [326 IAC 2-6.1-5]

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- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented when operation begins.

### C.10 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

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- (a) Reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management  
Compliance Data Section, Office of Air Quality  
100 North Senate Avenue, P. O. Box 6015  
Indianapolis, Indiana 46206-6015

- (b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) Unless otherwise specified in this permit, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The report does not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

## SECTION D.1 FACILITY OPERATION CONDITIONS

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

- (a) one (1) rubber mixer, identified as #1 Mixer, with a maximum capacity of processing 1,080 pounds of raw material per hour, 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, 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, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 919005;
- (d) one (1) rubber mixer, identified as 55L Rubber Mixer, 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; and
- (e) three (3) rubber extruders, identified as Barwell Rubber Extruders, each with a maximum capacity of processing 700 pounds of rubber per hour, using no control, and exhausting to the atmosphere.

(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.1.1 Particulate [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 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)	Uncontrolled Emissions (lb/hr)
#1 Mixer	0.54	2.71	0.99
#2 Mixer	0.61	2.94	1.12
35L Moriyama Mixer	0.11	0.93	0.21
55L Rubber Mixer	0.22	1.49	0.40
Barwell Rubber Extruders	0.35 each	2.03 each	0.00



## SECTION D.2 FACILITY OPERATION CONDITIONS

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

- (a) one (1) parts washer, identified as Graymills Clean-O-Matic parts washer, using approximately fifty (50) gallons of cleaner per year.  
(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

### Emission Limitations and Standards (Cold Cleaning Degreaser Operations)

#### D.2.1 Volatile Organic Compounds (VOC) [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Operations), for cold cleaning operations constructed after January 1, 1980, the Permittee shall:

- (a) Equip the cleaner with a cover;
- (b) Equip the cleaner with a facility for draining cleaned parts;
- (c) Close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) Drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) Provide a permanent, conspicuous label summarizing the operation requirements;
- (f) Store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

#### D.2.2 Volatile Organic Compounds (VOC) [326 8-3-5]

- (a) Pursuant to 326 IAC 8-3-5(a) (Cold Cleaner Degreaser Operation and Control), for cold cleaner degreaser operations without remote solvent reservoirs constructed after July 1, 1990, the Permittee shall ensure that the following control equipment requirements are met:
- (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) The solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) The solvent is agitated; or
    - (C) The solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.

- (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.
  - (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
    - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
    - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
    - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility construction of which commenced after July 1, 1990, shall ensure that the following operating requirements are met:
- (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
OFFICE OF AIR QUALITY  
COMPLIANCE BRANCH**

**MINOR SOURCE OPERATING PERMIT  
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

<b>Company Name:</b>	<b>Freudenberg - NOK General Partnership</b>
<b>Address:</b>	<b>State Road 44 West</b>
<b>City:</b>	<b>Shelbyville, Indiana 46176</b>
<b>Phone #:</b>	<b>317-392-2571</b>
<b>MSOP #:</b>	<b>145-14928-00027</b>

I hereby certify that Freudenberg - NOK General Partnership is  still in operation.  
 no longer in operation.

I hereby certify that Freudenberg - NOK General Partnership is  in compliance with the requirements of MSOP 145-14928-00027.  
 not in compliance with the requirements of MSOP 145-14928-00027.

<b>Authorized Individual (typed):</b>
<b>Title:</b>
<b>Signature:</b>
<b>Date:</b>

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

<b>Noncompliance:</b>



**Please note - This form should only be used to report malfunctions  
applicable to Rule 326 IAC 1-6 and to qualify for  
the exemption under 326 IAC 1-6-4.**

**326 IAC 1-6-1 Applicability of rule**

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

**326 IAC 1-2-39 "Malfunction" definition**

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

**\*Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

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## Indiana Department of Environmental Management Office of Air Quality

### Addendum to the Technical Support Document (TSD) for a Minor Source Operating Permit (MSOP)

<b>Source Name:</b>	<b>Freudenberg - NOK General Partnership</b>
<b>Source Location:</b>	<b>State Road 44 West, Shelbyville, Indiana 46176</b>
<b>County:</b>	<b>Shelby</b>
<b>SIC Code:</b>	<b>3053</b>
<b>Operation Permit No.:</b>	<b>145-14928-00027</b>
<b>Permit Reviewer:</b>	<b>Linda Quigley/EVP</b>

On March 7, 2003, the Office of Air Quality (OAQ) had a notice published in the Shelbyville News, Shelbyville, Indiana, stating that Freudenberg - NOK General Partnership had applied for a Minor Source Operating Permit (MSOP) for the operation of a rubber parts manufacturing plant. The notice also stated that OAQ proposed to issue a Minor Source Operating Permit for this operation and provided information on how the public could review the proposed MSOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this MSOP should be issued as proposed.

On March 28, 2003, Jim Euler, DECA Environmental & Associates, Inc., submitted comments on behalf of Freudenberg - NOK General Partnership on the proposed MSOP. The summary of the comments and corresponding responses is as follows (bolded language has been added and the language with a line through it has been deleted):

#### Comment #1

Emissions units and Pollution Control Equipment Summary -

Condition A.2(f)(10) - Please remove this unit from the permit. It does not exist at the source.

Condition A.2.(f)(11) - Please indicate the three rubber presses are "identified as NT-160) in this section as it is identified on page 3 of 8 of the TSD.

#### Response #1

Section A.2(f) has been revised as follows:

- (f) ~~Sixty-two~~ **one (62 61)** rubber presses, using no control, and exhausting to the atmosphere with the following capacities:
- (1) eight (8) rubber presses, identified as R-100 Boots Presses, each with a maximum capacity of processing 25.8 pounds of rubber per hour;
  - (2) seven (7) rubber presses, identified as N-50 Boots Presses, each with a maximum capacity of processing 7.0 pounds of rubber per hour;
  - (3) seven (7) rubber presses, identified as DC-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (4) three (3) rubber presses, identified as PT-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;

- (5) six (6) rubber presses, identified as PT-90 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
- (6) six (6) rubber presses, identified as SIM60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
- (7) one (1) rubber press, identified as DESMA 110, with a maximum capacity of processing 3.4 pounds of rubber per hour;
- (8) nineteen (19) transfer rubber presses, identified as Transfer Presses, each with a maximum capacity of processing 34 pounds of rubber per hour;
- (9) one (1) rubber press, identified as Zone C-02 Press, with a maximum capacity of processing 3 pounds of rubber per hour; **and**
- ~~(10) one (1) rubber press, with a maximum capacity of processing 12.68 pounds of rubber per hour; and~~
- ~~(11)~~**(10)** three (3) rubber presses, **identified as NT-160 Presses**, with a maximum capacity of processing 14.2 pounds of rubber per hour.

**Comment #2**

Page 7 of 10 TSD Appendix A - Please remove the Material "RR-5 Hot, No ODCs". This material is no longer used at the source. The RR-5 Hot NF will be the only mold release agent used. After removing this material, please adjust the potential VOC emissions accordingly through the permit.

Page 7 of 10 TSD Appendix A - The Weight % Organics for the Quickote CLM Wet was transcribed incorrectly. The MSDS and the W-1 form from the application indicated a Weight % of 8%, not 80% as indicated in the Draft MSOP. Please change the Weight % Organics to 8%. After making this change, please adjust the potential VOC emissions accordingly throughout the permit

**Response #2**

Page 7 of 10, TSD Appendix A has been revised accordingly. See page 1 of 1, TSD Addendum to Appendix A. The Technical Support Document has been revised as follows:

**Potential To Emit Before Controls**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	13.54
PM-10	13.83
SO <sub>2</sub>	0.03
VOC	<del>99.16</del> <b>52.28</b>
CO	4.36
NO <sub>x</sub>	5.19

**Source Status**

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	1.62
PM10	1.91
SO <sub>2</sub>	0.03
VOC	<del>99.16</del> <b>52.28</b>
CO	4.36
NO <sub>x</sub>	5.19

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
  
- (b) These emissions were based on the emission calculations supplied with the Minor Source Operating Permit application.





## Indiana Department of Environmental Management Office of Air Quality

### Technical Support Document (TSD) for a Minor Source Operating Permit

#### Source Background and Description

**Source Name:** Freudenberg - NOK General Partnership  
**Source Location:** State Road 44 West, Shelbyville, Indiana 46176  
**County:** Shelby  
**SIC Code:** 3053  
**Operation Permit No.:** 145-14928-00027  
**Permit Reviewer:** Linda Quigley/EVP

The Office of Air Quality (OAQ) has reviewed an application from Freudenberg - NOK General Partnership relating to the conversion of its Exemptions and Registrations to a Minor Source Operating Permit for the operation of a rubber parts manufacturing plant.

#### Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

- (a) one (1) rubber mixer, identified as #1 Mixer, with a maximum capacity of processing 1,080 pounds of raw material per hour, 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, 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, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as 919005;
- (d) one (1) rubber mixer, identified as 55L Rubber Mixer, 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;
- (e) three (3) rubber extruders, identified as Barwell Rubber Extruders, each with a maximum capacity of processing 700 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
- (f) Fifty-nine (59) rubber presses, using no control, and exhausting to the atmosphere with the following capacities:
  - (1) eight (8) rubber presses, identified as R-100 Boots Presses, each with a maximum capacity of processing 25.8 pounds of rubber per hour;

- (2) seven (7) rubber presses, identified as N-50 Boots Presses, each with a maximum capacity of processing 7.0 pounds of rubber per hour;
  - (3) seven (7) rubber presses, identified as DC-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (4) three (3) rubber presses, identified as PT-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (5) six (6) rubber presses, identified as PT-90 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (6) six (6) rubber presses, identified as SIM60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
  - (7) one (1) rubber press, identified as DESMA 110, with a maximum capacity of processing 3.4 pounds of rubber per hour;
  - (8) nineteen (19) transfer rubber presses, identified as Transfer Presses, each with a maximum capacity of processing 34 pounds of rubber per hour;
  - (9) one (1) rubber press, identified as Zone C-02 Press, with a maximum capacity of processing 3 pounds of rubber per hour; and
  - (10) one (1) rubber press, with a maximum capacity of processing 12.68 pounds of rubber per hour.
- (g) 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;
  - (h) two (2) double-head plastic injection molding presses, identified as Ossberger Plastic Presses - double-head, each with a maximum capacity of processing 53.4 pounds of plastic per hour, using no control, and exhausting to the atmosphere;
  - (i) 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;
  - (j) one (1) 60-inch rubber warm-up mill, identified as 60-inch rubber warm-up mill, with a maximum capacity of processing 422 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
  - (k) 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;
  - (l) 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;
  - (m) two (2) rubber dip baths, identified as rubber dip bath for #1 Mixer and rubber dip bath for #2 Mixer, each with a maximum capacity of coating 1,080 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
  - (n) one (1) parts washer, identified as Graymills Clean-O-Matic parts washer, using approximately fifty (50) gallons of cleaner per year;

- (o) one (1) vacublast mold cleaning grit blaster with a maximum capacity of processing 2,400 pounds of material per hour, using no control, and exhausting to the atmosphere;
- (p) laboratory equipped with one (1) Banbury Mixer BR 1600 and associated Electric Delta Therm, lab mill with 12" drop mill, one (1) Moriyama Mixer with 16" drop mill, three (3) electric molding presses, and four (4) molding ovens; and
- (q) one (1) wet blaster.

#### **New Emission Units and Pollution Control Equipment receiving prior approval**

The application includes information relating to the prior approval for the construction and operation of the following equipment:

three (3) rubber presses, identified as NT-160 Presses, each with a maximum capacity of processing 14.2 pounds of rubber per hour, using no control, and exhausting to the atmosphere.

*Note: The source requested the above units be included in the MSOP even though construction will not commence until August 2003. The three (3) rubber presses above have the potential to emit less than one (1) ton per year of both single HAP and total HAPs and the potential to emit 1.25 ton per year of volatile organic compounds (VOC), therefore they are exempt activities.*

#### **Unpermitted Emission Units and Pollution Control Equipment**

There are no unpermitted facilities operating at this source during this review process.

#### **Existing Approvals**

The source has been operating under previous approvals including, but not limited to, the following:

- (a) Exemption, CP 145-8768-00027, issued November 7, 1997;
- (b) Exemption, CP 145-3740, issued August 3, 1994;
- (c) Registration, CP 145-3601, issued May 9, 1994;
- (d) Exemption, CP 145-3301, issued February 8, 1994; and
- (e) Registration, issued February 10, 1981.

All conditions from previous approvals were incorporated into this permit.

#### **Enforcement Issue**

- (a) IDEM is aware that this source missed the deadline of December 25, 1999 for submitting an application for a Minor Source Operating Permit.
- (b) IDEM is reviewing this matter and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

#### **Recommendation**

The staff recommends to the Commissioner that the Minor Source Operating Permit be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

A complete application for the purposes of this review was received on October 12, 2000.

**Emission Calculations**

See Appendix A of this document for detailed emissions calculations, pages 1 through 10.

**Potential To Emit Before Controls**

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, the department, or the appropriate local air pollution control agency.”

Pollutant	Potential To Emit (tons/year)
PM	13.54
PM-10	13.83
SO <sub>2</sub>	0.03
VOC	99.16
CO	4.36
NO <sub>x</sub>	5.19

HAP's	Potential To Emit (tons/year)
Acetophenone	less than 10
Hexane	less than 10
1,4 Dichlorobenzene	less than 10
Acetaldehyde	less than 10
TOTAL	less than 25

Note: The above listed HAPs represent worst case emissions. See Appendix A for complete listing of HAP emissions.

The potential to emit (as defined in 326 IAC 2-7-1(29)) of VOC is equal to or greater than 25 tons per year but less than 100 tons per year. Therefore, pursuant to 326 IAC 2-5.1-3, Section (a)(1), and 326 IAC 2-6.1-2, a minor source operating permit is required.

**County Attainment Status**

The source is located in Shelby County.

Pollutant	Status
PM-10	attainment
SO <sub>2</sub>	attainment
NO <sub>2</sub>	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Shelby County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

- (b) Shelby County has been classified as attainment or unclassifiable for the remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

### Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/ or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	1.62
PM10	1.91
SO <sub>2</sub>	0.03
VOC	99.16
CO	4.36
NO <sub>x</sub>	5.19

- (a) This existing source is **not** a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.
- (b) These emissions were based on the emission calculations supplied with the Minor Source Operating Permit application.

### Part 70 Permit Determination

#### 326 IAC 2-7 (Part 70 Permit Program)

This existing source is still not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

- (a) each criteria pollutant is less than 100 tons per year,  
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and  
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source.

### Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) The National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning (40 CFR Part 63, Subpart T) is not applicable to this source because a non-chlorinated solvent cold cleaner is used. No other NESHAPs apply to this source.

### State Rule Applicability - Entire Source

#### 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))

This source is not subject to this rule because potential uncontrolled emissions of all criteria pollutants are less than 250 tons per year. This source is also not one of the 28 listed source categories. Therefore, this source is not subject to the requirements of 326 IAC 2-2 and 40 CFR 52.21 (Prevention of Significant Deterioration (PSD)).

**326 IAC 2-4.1 (New Source Toxics Control)**

This rule applies to new or reconstructed facilities with potential emissions of any single HAP equal to or greater than ten (10) tons per year and potential emissions of combination of HAPs greater than or equal to twenty-five (25) tons per year. Since this facility emits less than ten (10) tons per year of a single HAP and less than twenty-five (25) tons per year of combination of HAPs, the requirements of 326 IAC 2-4.1 do not apply.

**326 IAC 2-6 (Emission Reporting)**

This source is located in Shelby County and the potential to emit of all criteria pollutants is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

**326 IAC 5-1 (Opacity Limitations)**

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

**State Rule Applicability - Individual Facilities**

**326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)**

Pursuant to 326 IAC 6-3-2 the particulate emissions shall be limited by the following:

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:

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

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)	Uncontrolled Emissions (lb/hr)
#1 Mixer	0.54	2.71	0.99
#2 Mixer	0.61	2.94	1.12
35L Moriyama Mixer	0.11	0.93	0.21
55L Rubber Mixer	0.22	1.49	0.40
Barwell Rubber Extruders	0.35 each	2.03 each	0.00

These units are in compliance without control devices. The source has voluntarily installed a baghouse on each mixer operation.

326 IAC 8-1-6 (New facilities; general reduction requirements)

This rule applies to new facilities as of January 1, 1980, which have the potential to emit twenty-five (25) tons or more per year of VOC. These facilities were constructed in 1981, 1994 and 1997. Each facility at this source is independent of the next and has the potential to emit less than twenty-five (25) tons per year of VOC. Therefore, the provisions of 326 IAC 8-1-6 do not apply.

326 IAC 8-3-2 (Cold Cleaner Operations)

Pursuant to 326 IAC 8-3-2, the owner or operator of the Graymills Clean-O-Matic parts washer, shall:

- (a) equip the cleaner with a cover;
- (b) equip the cleaner with a facility for draining cleaned parts;
- (c) close the degreaser cover whenever parts are not being handled in the cleaner;
- (d) drain cleaned parts for at least fifteen (15) seconds or until dripping ceases;
- (e) provide a permanent, conspicuous label summarizing the operation requirements;
- (f) store waste solvent only in covered containers and not dispose of waste solvent or transfer it to another party, in such a manner that greater than twenty percent (20%) of the waste solvent (by weight) can evaporate into the atmosphere.

326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control)

- (a) Pursuant to 326 IAC 8-3-5(a), the owner or operator of the Graymills Clean-O-Matic parts washer, which does not have a remote solvent reservoir, shall ensure that the following control equipment requirements are met:
  - (1) Equip the degreaser with a cover. The cover must be designed so that it can be easily operated with one (1) hand if:
    - (A) the solvent volatility is greater than two (2) kiloPascals (fifteen (15) millimeters of mercury or three-tenths (0.3) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F));
    - (B) the solvent is agitated; or
    - (C) the solvent is heated.
  - (2) Equip the degreaser with a facility for draining cleaned articles. If the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), then the drainage facility must be internal such that articles are enclosed under the cover while draining. The drainage facility may be external for applications where an internal type cannot fit into the cleaning system.
  - (3) Provide a permanent, conspicuous label which lists the operating requirements outlined in subsection (b).
  - (4) The solvent spray, if used, must be a solid, fluid stream and shall be applied at a pressure which does not cause excessive splashing.



- (5) Equip the degreaser with one (1) of the following control devices if the solvent volatility is greater than four and three-tenths (4.3) kiloPascals (thirty-two (32) millimeters of mercury) or six-tenths (0.6) pounds per square inch) measured at thirty-eight degrees Celsius (38°C) (one hundred degrees Fahrenheit (100°F)), or if the solvent is heated to a temperature greater than forty-eight and nine-tenths degrees Celsius (48.9°C) (one hundred twenty degrees Fahrenheit (120°F)):
  - (A) A freeboard that attains a freeboard ratio of seventy-five hundredths (0.75) or greater.
  - (B) A water cover when solvent is used is insoluble in, and heavier than, water.
  - (C) Other systems of demonstrated equivalent control such as a refrigerated chiller or carbon adsorption. Such systems shall be submitted to the U.S. EPA as a SIP revision.
- (b) Pursuant to 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control), the owner or operator of a cold cleaning facility shall ensure that the following operating requirements are met:
  - (1) Close the cover whenever articles are not being handled in the degreaser.
  - (2) Drain cleaned articles for at least fifteen (15) seconds or until dripping ceases.
  - (3) Store waste solvent only in covered containers and prohibit the disposal or transfer of waste solvent in any manner in which greater than twenty percent (20%) of the waste solvent by weight could evaporate.

## Conclusion

The operation of this rubber parts manufacturing plant shall be subject to the conditions of the attached proposed **Minor Source Operating Permit 145-14928-00027**.

## Appendix A: Emission Calculations

**Company Name:** Freudenberg - NOK General Partnership  
**Address City IN Zip:** State Road 44 West, Shelbyville, Indiana  
**MSOP:** 145-14928  
**Plt ID:** 145-00027  
**Reviewer:** Linda Quigley/EVP  
**Application Received:** October 12, 2000

<b>Uncontrolled Potential Emissions (tons/year)</b>						
Emissions Generating Activity						
Pollutant	Mold Release Agents	Mixers, Extruders and Presses	Rubber Warm-up Mills and Post Curing Ovens	Space Heaters HVAC Units	Vacublast Mold Cleaning Grit Blaster	<b>TOTAL</b>
PM	0.55	11.93	0.00	0.10	0.96	13.54
PM10	0.55	11.93	0.00	0.39	0.96	13.83
SO2	0.00	0.00	0.00	0.03	0.00	0.03
NOx	0.00	0.00	0.00	5.19	0.00	5.19
VOC	56.33	39.35	3.19	0.29	0.00	99.16
CO	0.00	0.00	0.00	4.36	0.00	4.36
total HAPs	0.00	2.42	0.93	negl.	0.00	3.35
worst case single HAP	0.00	0.81	0.28	negl.	0.00	0.81
		Acetophenone	Acetophenone			
Total emissions based on rated capacity at 8,760 hours/year.						
<b>Controlled Potential Emissions (tons/year)</b>						
Emissions Generating Activity						
Pollutant	Mold Release Agents	Mixers, Extruders and Presses	Rubber Warm-up Mills and Post Curing Ovens	Space Heaters HVAC Units	Vacublast Mold Cleaning Grit Blaster	<b>TOTAL</b>
PM	0.55	0.01	0.00	0.10	0.96	1.62
PM10	0.55	0.01	0.00	0.39	0.96	1.91
SO2	0.00	0.00	0.00	0.03	0.00	0.03
NOx	0.00	0.00	0.00	5.19	0.00	5.19
VOC	56.33	39.35	3.19	0.29	0.00	99.16
CO	0.00	0.00	0.00	4.36	0.00	4.36
total HAPs	0.00	2.42	0.93	negl.	0.00	3.35
worst case single HAP	0.00	0.81	0.28	negl.	0.00	0.81
		Acetophenone	Acetophenone			
Total emissions based on rated capacity at 8,760 hours/year, after control.						

**Appendix A: Emission Calculations**

**PM and VOC**

**From Mixers, Extruders and Presses**

**Company Name:** Freudenberg - NOK General Partnership  
**Address:** State Road 44 West, Shelbyville, Indiana  
**MSOP:** 145-14928  
**Plant ID:** 145-00027  
**Reviewer:** Linda Quigley/EVP  
**Date Received:** October 12, 2000

Unit Description	Number of Units	Max. Capacity lb/hr	PM Emission Factor lb/lb	VOC Emission Factor lb/lb	Potential Emissions PM lb/hr	Uncontrolled Potential Emissions PM ton/yr	Controlled Potential Emissions PM ton/yr	Control Efficiency %	Potential Emissions VOC lb/hr	Potential Emissions VOC ton/yr
<b>Mixers</b>										
Mixer #1	1	1080.0	9.20E-04	4.40E-04	0.99	4.35	4.35E-03	99.90	0.48	2.08
Mixer #2	1	1215.0	9.20E-04	4.40E-04	1.12	4.90	4.90E-03	99.90	0.53	2.34
35L Moriyama Mixer	1	225.0	9.20E-04	4.40E-04	0.21	0.91	9.07E-04	99.90	0.10	0.43
55L Rubber Mixer	1	440.0	9.20E-04	4.40E-04	0.40	1.77	1.77E-03	99.90	0.19	0.85
<b>Extruders</b>										
Barwell Rubber Extruders	3	700.0	1.12E-07	1.06E-04	0.00	0.00	n/a	n/a	0.22	0.97
<b>Presses</b>										
R-100 Boots Presses	8	25.8	n/a	6.68E-03	n/a	n/a	n/a	n/a	1.38	6.04
N-50 Boots Presses	7	7.0	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.33	1.43
DC-60 Presses	7	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.33	1.45
PT-60	3	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.14	0.62
PT-90	6	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.28	1.25
SIM60 Presses	6	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.28	1.25
DESMA 110	1	3.4	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.02	0.10
Transfer Presses	19	34.0	n/a	6.68E-03	n/a	n/a	n/a	n/a	4.32	18.90
NT-160 Presses	3	14.2	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.28	1.25
Zone C-02 Press	1	3.0	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.02	0.09
<b>Injection/Blow Mold Presses</b>										
				lb/ton						
Ossberger Plastic Press single-head	1	26.7	n/a	1.00E+00	n/a	n/a	n/a	n/a	0.01	0.06
Ossberger Plastic Press double-head	2	53.4	n/a	1.00E+00	n/a	n/a	n/a	n/a	0.05	0.23
<b>Total</b>						<b>11.93</b>	<b>0.01</b>			<b>39.35</b>

**Methodology**

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

Emission Factors for Plastic Injection/Blow Mold Presses taken from a study conducted for the State of Wisconsin.

Potential emissions in tons per year = maximum production rate (lbs/yr) \* e.f. (lb/lb)/2000

**Appendix A: Emission Calculations****HAP Emissions**

**Company Name:** Freudenberg - NOK General Partnership  
**Address:** State Road 44 West, Shelbyville, Indiana  
**MSOP:** 145-14928  
**Plant ID:** 145-00027  
**Reviewer:** Linda Quigley/EVP  
**Date Received:** October 12, 2000

**Barwell Extruders****3 units each @ 700 lb/hr capacity****Rubber Processing Capacity****2100 lb/hr**

<b>Pollutant</b>	<b>Emission Factor lb/lb</b>	<b>Hourly Emissions lb/hr</b>	<b>Daily Emissions lb/day</b>	<b>Potential Emissions tons/yr</b>
1,1,1 Trichloroethane	4.29E-06	9.01E-03	2.16E-01	3.95E-02
1,2,4 Trichlorobenzene	2.00E-07	4.20E-04	1.01E-02	1.84E-03
1,3 Butadiene	7.50E-06	1.58E-02	3.78E-01	6.90E-02
1,4 Dichlorobenzene	9.20E-06	1.93E-02	4.64E-01	8.46E-02
Methyl Ethyl Ketone	3.00E-06	6.30E-03	1.51E-01	2.76E-02
2,4 Toluene Diamine	2.30E-07	4.83E-04	1.16E-02	2.12E-03
Methyl Isobutyl Ketone	3.10E-06	6.51E-03	1.56E-01	2.85E-02
Acetaldehyde	7.60E-06	1.60E-02	3.83E-01	6.99E-02
Acetonitrile	6.10E-06	1.28E-02	3.07E-01	5.61E-02
Acetophenone	5.71E-05	1.20E-01	2.88E+00	5.25E-01
Acrylonitrile	6.10E-06	1.28E-02	3.07E-01	5.61E-02
Aniline	1.50E-07	3.15E-04	7.56E-03	1.38E-03
Benzene	1.20E-06	2.52E-03	6.05E-02	1.10E-02
Benzidene	8.00E-07	1.68E-03	4.03E-02	7.36E-03
Biphenyl	9.00E-07	1.89E-03	4.54E-02	8.28E-03
Bis (2-ethylhexl) Phthalate	2.60E-06	5.46E-03	1.31E-01	2.39E-02
Carbon Disulfide	4.20E-06	8.82E-03	2.12E-01	3.86E-02
Carbonyl Sulfide	3.80E-06	7.98E-03	1.92E-01	3.50E-02
Chloroethane	3.10E-06	6.51E-03	1.56E-01	2.85E-02
Cumene	2.80E-06	5.88E-03	1.41E-01	2.58E-02
Dibenzofuran	9.00E-07	1.89E-03	4.54E-02	8.28E-03
Dimethyl Phthalate	7.00E-07	1.47E-03	3.53E-02	6.44E-03
Dibutylphthalate	7.20E-06	1.51E-02	3.63E-01	6.62E-02
Ethylbenzene	1.10E-06	2.31E-03	5.54E-02	1.01E-02
Hexachlorobutadiene	3.90E-07	8.19E-04	1.97E-02	3.59E-03
Dichloromethane	5.00E-08	1.05E-04	2.52E-03	4.60E-04
Xylene	1.60E-06	3.36E-03	8.06E-02	1.47E-02
Napthalene	4.00E-06	8.40E-03	2.02E-01	3.68E-02
Hexane	1.64E-05	3.44E-02	8.27E-01	1.51E-01
o-Toluidine	1.50E-07	3.15E-04	7.56E-03	1.38E-03
o-Xylene	1.70E-06	3.57E-03	8.57E-02	1.56E-02
Phenol	1.30E-06	2.73E-03	6.55E-02	1.20E-02
Propylene Oxide	6.10E-06	1.28E-02	3.07E-01	5.61E-02
Tetrachloroethylene	3.10E-06	6.51E-03	1.56E-01	2.85E-02
Toluene	2.70E-06	5.67E-03	1.36E-01	2.48E-02
<b>Total</b>				<b>1.58E+00</b>

Note: Each extruder is a separate facility.

**Methodology**

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

Potential emissions in tons per year = maximum production rate (lbs/yr) \* e.f. (lb/lb)/2000

One (1) Press @ 3.00 lb/hr capacity  
 One (1) Press @ 3.40 lb/hr capacity  
 Twenty two (22) Presses each @ 7.10 lb/hr capacity  
 Seven (7) Presses each @ 7.00 lb/hr capacity  
 One (1) Press @ 12.68 lb/hr capacity  
 Three (3) Presses each @ 14.20 lb/hr capacity  
 Eight (8) Presses each @ 25.80 lb/hr capacity  
 Nineteen (19) Presses each @ 34.00 lb/hr capacity  
**Rubber Processing Capacity 1119.28 lb/hr**

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
1,1,1 Trichloroethane	4.29E-06	4.80E-03	1.15E-01	2.10E-02
1,2,4 Trichlorobenzene	2.00E-07	2.24E-04	5.37E-03	9.80E-04
1,3 Butadiene	7.50E-06	8.39E-03	2.01E-01	3.68E-02
1,4 Dichlorobenzene	9.20E-06	1.03E-02	2.47E-01	4.51E-02
Methyl Ethyl Ketone	3.00E-06	3.36E-03	8.06E-02	1.47E-02
2,4 Toluene Diamine	2.30E-07	2.57E-04	6.18E-03	1.13E-03
Methyl Isobutyl Ketone	3.10E-06	3.47E-03	8.33E-02	1.52E-02
Acetaldehyde	7.60E-06	8.51E-03	2.04E-01	3.73E-02
Acetonitrile	6.10E-06	6.83E-03	1.64E-01	2.99E-02
Acetophenone	5.71E-05	6.39E-02	1.53E+00	2.80E-01
Acrylonitrile	6.10E-06	6.83E-03	1.64E-01	2.99E-02
Aniline	1.50E-07	1.68E-04	4.03E-03	7.35E-04
Benzene	1.20E-06	1.34E-03	3.22E-02	5.88E-03
Benzidene	8.00E-07	8.95E-04	2.15E-02	3.92E-03
Biphenyl	9.00E-07	1.01E-03	2.42E-02	4.41E-03
Bis (2-ethylhexl) Phthalate	2.60E-06	2.91E-03	6.98E-02	1.27E-02
Carbon Disulfide	4.20E-06	4.70E-03	1.13E-01	2.06E-02
Carbonyl Sulfide	3.80E-06	4.25E-03	1.02E-01	1.86E-02
Chloroethane	3.10E-06	3.47E-03	8.33E-02	1.52E-02
Cumene	2.80E-06	3.13E-03	7.52E-02	1.37E-02
Dibenzofuran	9.00E-07	1.01E-03	2.42E-02	4.41E-03
Dimethyl Phthalate	7.00E-07	7.83E-04	1.88E-02	3.43E-03
Dibutylphthalate	7.20E-06	8.06E-03	1.93E-01	3.53E-02
Ethylbenzene	1.10E-06	1.23E-03	2.95E-02	5.39E-03
Hexachlorobutadiene	3.90E-07	4.37E-04	1.05E-02	1.91E-03
Dichloromethane	5.00E-08	5.60E-05	1.34E-03	2.45E-04
Xylene	1.60E-06	1.79E-03	4.30E-02	7.84E-03
Napthalene	4.00E-06	4.48E-03	1.07E-01	1.96E-02
Hexane	1.64E-05	1.84E-02	4.41E-01	8.04E-02
o-Toluidine	1.50E-07	1.68E-04	4.03E-03	7.35E-04
o-Xylene	1.70E-06	1.90E-03	4.57E-02	8.33E-03
Phenol	1.30E-06	1.46E-03	3.49E-02	6.37E-03
Propylene Oxide	6.10E-06	6.83E-03	1.64E-01	2.99E-02
Tetrachloroethylene	3.10E-06	3.47E-03	8.33E-02	1.52E-02
Toluene	2.70E-06	3.02E-03	7.25E-02	1.32E-02
<b>Total</b>				<b>8.40E-01</b>

Note: Each press is a separate facility.

**Methodology**

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

Potential emissions in tons per year = maximum production rate (lbs/yr) \* e.f. (lb/lb)/2000



One (1) 42 inch rubber warm-up mill @ 700.00 lb/hr capacity  
 One (1) 60 inch rubber warm-up mill @ 422.00 lb/hr capacity  
**Rubber Processing Capacity 1122.00 lb/hr**

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
VOC	6.48E-04	7.27E-01	1.74E+01	3.18E+00
1,1,1 Trichloroethane	4.29E-06	4.81E-03	1.16E-01	2.11E-02
1,2,4 Trichlorobenzene	2.00E-07	2.24E-04	5.39E-03	9.83E-04
1,3 Butadiene	7.50E-06	8.42E-03	2.02E-01	3.69E-02
1,4 Dichlorobenzene	9.20E-06	1.03E-02	2.48E-01	4.52E-02
Methyl Ethyl Ketone	3.00E-06	3.37E-03	8.08E-02	1.47E-02
2,4 Toluene Diamine	2.30E-07	2.58E-04	6.19E-03	1.13E-03
Methyl Isobutyl Ketone	3.10E-06	3.48E-03	8.35E-02	1.52E-02
Acetaldehyde	7.60E-06	8.53E-03	2.05E-01	3.73E-02
Acetonitrile	6.10E-06	6.84E-03	1.64E-01	3.00E-02
Acetophenone	5.71E-05	6.41E-02	1.54E+00	2.81E-01
Acrylonitrile	6.10E-06	6.84E-03	1.64E-01	3.00E-02
Aniline	1.50E-07	1.68E-04	4.04E-03	7.37E-04
Benzene	1.20E-06	1.35E-03	3.23E-02	5.90E-03
Benzidene	8.00E-07	8.98E-04	2.15E-02	3.93E-03
Biphenyl	9.00E-07	1.01E-03	2.42E-02	4.42E-03
Bis (2-ethylhexl) Phthalate	2.60E-06	2.92E-03	7.00E-02	1.28E-02
Carbon Disulfide	4.20E-06	4.71E-03	1.13E-01	2.06E-02
Carbonyl Sulfide	3.80E-06	4.26E-03	1.02E-01	1.87E-02
Chloroethane	3.10E-06	3.48E-03	8.35E-02	1.52E-02
Cumene	2.80E-06	3.14E-03	7.54E-02	1.38E-02
Dibenzofuran	9.00E-07	1.01E-03	2.42E-02	4.42E-03
Dimethyl Phthalate	7.00E-07	7.85E-04	1.88E-02	3.44E-03
Dibutylphthalate	7.20E-06	8.08E-03	1.94E-01	3.54E-02
Ethylbenzene	1.10E-06	1.23E-03	2.96E-02	5.41E-03
Hexachlorobutadiene	3.90E-07	4.38E-04	1.05E-02	1.92E-03
Dichloromethane	5.00E-08	5.61E-05	1.35E-03	2.46E-04
Xylene	1.60E-06	1.80E-03	4.31E-02	7.86E-03
Napthalene	4.00E-06	4.49E-03	1.08E-01	1.97E-02
Hexane	1.64E-05	1.84E-02	4.42E-01	8.06E-02
o-Toluidine	1.50E-07	1.68E-04	4.04E-03	7.37E-04
o-Xylene	1.70E-06	1.91E-03	4.58E-02	8.35E-03
Phenol	1.30E-06	1.46E-03	3.50E-02	6.39E-03
Propylene Oxide	6.10E-06	6.84E-03	1.64E-01	3.00E-02
Tetrachloroethylene	3.10E-06	3.48E-03	8.35E-02	1.52E-02
Toluene	2.70E-06	3.03E-03	7.27E-02	1.33E-02
<b>Total</b>				<b>8.42E-01</b>

Note: Each warm-up mill is a separate facility.

**Methodology**

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

Potential emissions in tons per year = maximum production rate (lbs/yr) \* e.f. (lb/lb)/2000

One (1) N-50 Grieve electric post-curing oven @ 72.00 lb/hr capacity  
 One (1) Despatch electric post-curing oven @ 41.00 lb/hr capacity  
 Rubber Processing Capacity 113.00 lb/hr

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
VOC	1.16E-04	1.31E-02	3.15E-01	5.74E-02
1,1,1 Trichloroethane	4.29E-06	4.85E-04	1.16E-02	2.12E-03
1,2,4 Trichlorobenzene	2.00E-07	2.26E-05	5.42E-04	9.90E-05
1,3 Butadiene	7.50E-06	8.48E-04	2.03E-02	3.71E-03
1,4 Dichlorobenzene	9.20E-06	1.04E-03	2.50E-02	4.55E-03
Methyl Ethyl Ketone	3.00E-06	3.39E-04	8.14E-03	1.48E-03
2,4 Toluene Diamine	2.30E-07	2.60E-05	6.24E-04	1.14E-04
Methyl Isobutyl Ketone	3.10E-06	3.50E-04	8.41E-03	1.53E-03
Acetaldehyde	7.60E-06	8.59E-04	2.06E-02	3.76E-03
Acetonitrile	6.10E-06	6.89E-04	1.65E-02	3.02E-03
Acetophenone	5.71E-05	6.45E-03	1.55E-01	2.83E-02
Acrylonitrile	6.10E-06	6.89E-04	1.65E-02	3.02E-03
Aniline	1.50E-07	1.70E-05	4.07E-04	7.42E-05
Benzene	1.20E-06	1.36E-04	3.25E-03	5.94E-04
Benzidene	8.00E-07	9.04E-05	2.17E-03	3.96E-04
Biphenyl	9.00E-07	1.02E-04	2.44E-03	4.45E-04
Bis (2-ethylhexl) Phthalate	2.60E-06	2.94E-04	7.05E-03	1.29E-03
Carbon Disulfide	4.20E-06	4.75E-04	1.14E-02	2.08E-03
Carbonyl Sulfide	3.80E-06	4.29E-04	1.03E-02	1.88E-03
Chloroethane	3.10E-06	3.50E-04	8.41E-03	1.53E-03
Cumene	2.80E-06	3.16E-04	7.59E-03	1.39E-03
Dibenzofuran	9.00E-07	1.02E-04	2.44E-03	4.45E-04
Dimethyl Phthalate	7.00E-07	7.91E-05	1.90E-03	3.46E-04
Dibutylphthalate	7.20E-06	8.14E-04	1.95E-02	3.56E-03
Ethylbenzene	1.10E-06	1.24E-04	2.98E-03	5.44E-04
Hexachlorobutadiene	3.90E-07	4.41E-05	1.06E-03	1.93E-04
Dichloromethane	5.00E-08	5.65E-06	1.36E-04	2.47E-05
Xylene	1.60E-06	1.81E-04	4.34E-03	7.92E-04
Napthalene	4.00E-06	4.52E-04	1.08E-02	1.98E-03
Hexane	1.64E-05	1.85E-03	4.45E-02	8.12E-03
o-Toluidine	1.50E-07	1.70E-05	4.07E-04	7.42E-05
o-Xylene	1.70E-06	1.92E-04	4.61E-03	8.41E-04
Phenol	1.30E-06	1.47E-04	3.53E-03	6.43E-04
Propylene Oxide	6.10E-06	6.89E-04	1.65E-02	3.02E-03
Tetrachloroethylene	3.10E-06	3.50E-04	8.41E-03	1.53E-03
Toluene	2.70E-06	3.05E-04	7.32E-03	1.34E-03
<b>Total</b>				<b>8.48E-02</b>

Note: Each post-curing oven is a separate facility.

**Methodology**

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

Potential emissions in tons per year = maximum production rate (lbs/yr) \* e.f. (lb/lb)/2000

**Appendix A: Emissions Calculations  
VOC and Particulate  
From Mold Release Agents**

**Company Name:** Freudenberg - NOK General Partnership  
**Address:** State Road 44 West, Shelbyville, Indiana  
**MSOP:** 145-14928  
**Plant ID:** 145-00027  
**Reviewer:** Linda Quigley/EVP  
**Date Received:** October 12, 2

Process	Material	Density (Lb/Gal)	Weight % Volatile (H2O & Organics)	Weight % Water	Weight % Organics	Volume % Water	Volume % Non-Volatiles (solids)	Gal of Mat. (gal/lb of rubber)	Maximum (lb of rubber/hour)	Pounds VOC per gallon of coating less water	Pounds VOC per gallon of coating	Potential VOC pounds per hour	Potential VOC pounds per day	Potential VOC tons per year	Particulate Potential (ton/yr)	Transfer Efficiency
Transfer Molding 19 Presses	RR-5 Hot NF	7.01	98.00%	0.0%	98.0%	0.0%	0.00%	1.40E-03	646.000	6.87	6.87	6.21	149.11	27.21	0.50	10%
	RR-5 Hot, No ODCs	6.26	100.00%	0.0%	100.0%	0.0%	0.00%	1.40E-03	646.000	6.26	6.26	5.66	135.88	24.80	0.00	10%
	McLube 1711L Aerosol	7.58	97.00%	0.0%	97.0%	0.0%	0.00%	8.38E-05	646.000	7.35	7.35	0.40	9.55	1.74	0.05	10%
	McLube 1725L Aerosol	7.08	97.00%	0.0%	97.0%	0.0%	0.00%	1.67E-05	227.000	6.87	6.87	0.03	0.62	0.11	0.00	10%
N50 Presses & TPE Rubber Dip Bath for #1 Mixer	Quickote CLM Wet	8.27	80.00%	0.0%	80.0%	0.0%	0.00%	3.92E-04	1080.000	6.62	6.62	2.80	67.22	12.27	0.00	100%
	Crystal 2000	8.33	1.00%	0.0%	1.0%	0.0%	0.00%	5.01E-03	745.000	0.08	0.08	0.31	7.46	1.36	0.00	100%
Rubber Dip Bath for #2 Mixer	Quickote CLM Wet	8.27	80.00%	0.0%	80.0%	0.0%	0.00%	3.92E-04	1080.000	6.62	6.62	2.80	67.22	12.27	0.00	100%
	Crystal 2000	8.33	1.00%	0.0%	1.0%	0.0%	0.00%	5.01E-03	745.000	0.08	0.08	0.31	7.46	1.36	0.00	100%

Note: Each Press is considered a separate facility.

**18.52                      444.54                      56.33                      0.55**

**Potential Emissions**

**METHODOLOGY**

Pounds of VOC per Gallon Coating less Water = (Density (lb/gal) \* Weight % Organics) / (1-Volume % water)

Pounds of VOC per Gallon Coating = (Density (lb/gal) \* Weight % Organics)

Potential VOC Pounds per Hour = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr)

Potential VOC Pounds per Day = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (24 hr/day)

Potential VOC Tons per Year = Pounds of VOC per Gallon coating (lb/gal) \* Gal of Material (gal/unit) \* Maximum (units/hr) \* (8760 hr/yr) \* (1 ton/2000 lbs)

Particulate Potential Tons per Year = (units/hour) \* (gal/unit) \* (lbs/gal) \* (1-Weight % Volatiles) \* (1-Transfer efficiency) \* (8760 hrs/yr) \* (1 ton/2000 lbs)

**Appendix A: Emissions Calculations  
 Natural Gas Combustion Only  
 MM BTU/HR <100  
 Space Heaters/HVAC Units**

**Company Name: Freudenberg - NOK General Partnership  
 Address City IN Zip: State Road 44 West, Shelbyville, Indiana  
 MSOP: 145-14928  
 Pit ID: 145-00027  
 Reviewer: Linda Quigley/EVP  
 Application Received: October 12, 2000**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
11.85	103.81

Heat Input Capacity includes thirty one (31) space heaters totaling 11.85 MMBtu/hr.

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.10	0.39	0.03	5.19	0.29	4.36

\*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.  
 \*\*Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

**Methodology**

All emission factors are based on normal firing.  
 MMBtu = 1,000,000 Btu  
 MMCF = 1,000,000 Cubic Feet of Gas  
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu  
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)  
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

See page 9 for HAPs emissions calculations.

**Appendix A: Emissions Calculations**  
**Natural Gas Combustion Only**  
**MM BTU/HR <100**  
**Space Heaters/HVAC Units**  
**HAPs Emissions**

**Company Name: Freudenberg - NOK General Partnership**  
**Address City IN Zip: State Road 44 West, Shelbyville, Indiana**  
**MSOP: 145-14928**  
**Pit ID: 145-00027**  
**Reviewer: Linda Quigley/EVP**  
**Application Received: October 12, 2000**

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	1.090E-04	6.228E-05	3.893E-03	9.343E-02	1.765E-04

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	2.595E-05	5.709E-05	7.266E-05	1.972E-05	1.090E-04

Methodology is the same as page 8.

The five highest organic and metal HAPs emission factors are provided above. Additional HAPs emission factors are available in AP-42, Chapter 1.4.

### Insignificant Activities

Company Name: Freudenberg - NOK General Partnership  
Address City IN Zip: State Road 44 West, Shelbyville, Indiana  
MSOP: 145-14928  
Pit ID: 145-00027  
Reviewer: Linda Quigley/EVP  
Application Received: October 12, 2000

This source also consists of the following insignificant activity:

**Vacublast Mold Cleaning Grit Blaster**

The maximum capacity of the unit is 2,400 lb/hr. The airflow through the unit is 850 cfm.

$$\begin{aligned} \text{PM} = \text{PM-10} &= \frac{(003 \text{ gr})(850 \text{ cfm})(60 \text{ min})(1 \text{ lb})}{(\text{cf}) \quad (\text{min}) \quad (\text{hr}) \quad (7000 \text{ gr})} \\ &= 0.22 \text{ lb/hr} \\ &= 0.96 \text{ ton/yr} \end{aligned}$$