



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

TO: Interested Parties / Applicant

DATE: May 14, 2008

RE: Freudenberg NOK General Partnership / 145-25919-00027

FROM: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER.dot12/03/07



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Minor Source Operating Permit Renewal OFFICE OF AIR QUALITY APT

**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.: M145-25919-00027	
Issued by: Original Signed By: Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: May 14, 2008 Expiration Date: May 14, 2018

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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 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
Mailing Address:	1700 Miller Ave., Shelbyville, Indiana 46176
General Source Phone Number:	317-421-3400
SIC Code:	3053
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:

- (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) 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;
- (f) 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;
- (g) seventy-one (71) 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) ten (10) 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) five (5) rubber presses, identified as PT-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
 - (5) ten (10) rubber presses, identified as PT-90 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
 - (6) ten (10) rubber presses, identified as SIM-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
 - (7) twelve (12) transfer rubber presses, identified as Transfer Presses, each with a maximum capacity of processing 34 pounds of rubber per hour;
 - (8) one (1) rubber press, identified as Zone C-02 Press, with a maximum capacity of processing 3 pounds of rubber per hour; and
 - (9) five (5) rubber presses, identified as NT-160 Presses, each with a maximum capacity of processing 14.2 pounds of rubber per hour; and
 - (10) one (1) rubber press, identified as DESMA 110, with a maximum capacity of processing 3.4 pounds of rubber per hour.
 - (11) three (3) rubber presses, identified as IM-60, each with a maximum capacity of processing 7.1 pounds of rubber per hour.
- (h) 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;
- (i) four (4) 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;
- (j) 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.
- (k) 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;
- (l) two (2) 60-inch rubber warm-up mills, identified as 60-inch rubber warm-up mills, each with a maximum capacity of processing 422 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
- (m) 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;
- (n) 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;
- (o) One (1) GS Blue M Electric oven - cures a maximum of one hundred twenty (120) pieces of plastic parts per load for 45 minutes;
- (p) One (1) GS Blue M Electric oven - cures a maximum of one hundred twenty (120) pieces of nylon parts per load for 45 minutes;

- (q) 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, four (4) molding ovens, one (1) rubber press, identified as SIM-30, with a maximum capacity of processing 3.4 pounds of rubber per hour;
- (r) two (2) wet blasters; and
- (s) One (1) dry bead blaster - self contained and including particulate filtration with a 99.0% capture efficiency. Maximum throughput of 624,000 lbs/yr.
- (t) Thirty one (31) space heaters with heat input capacity totaling 11.85 MMBtu/hr.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

-
- (a) This permit, M145-25919-00027, is issued for a fixed term of ten (10) 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, modifications, or amendments of this permit do not affect the expiration date of this permit.
- (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.3 Term of Conditions [326 IAC 2-1.1-9.5]

Notwithstanding the permit term of a permit to construct, a permit to operate, or a permit modification, any condition established in a permit issued pursuant to a permitting program approved in the state implementation plan shall remain in effect until:

- (a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or
- (b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege

This permit does not convey any property rights of any sort or any exclusive privilege.

B.7 Duty to Provide Information

-
- (a) The Permittee shall furnish to IDEM, OAQ, within a reasonable time, any information that IDEM, OAQ may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.
- (b) For information furnished by the Permittee to IDEM, OAQ, the Permittee may include a claim of confidentiality in accordance with 326 IAC 17.1. When furnishing copies of requested records directly to U. S. EPA, the Permittee may assert a claim of confidentiality in accordance with 40 CFR 2, Subpart B.

B.8 Certification

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an "authorized individual" of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- (b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.
- (c) An "authorized individual" is defined at 326 IAC 2-1.1-1(1).

B.9 Annual Notification [326 IAC 2-6.1-5(a)(5)]

- (a) An annual notification shall be submitted by an authorized individual 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) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, IN 46204-2251
- (c) 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.10 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall maintain and implement Preventive Maintenance Plans (PMPs) including the following information on each facility:
 - (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.
- (b) A copy of the PMPs 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 PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) To the extent the Permittee is required by 40 CFR Part 60/63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

B.11 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M145-25919-00027 and issued pursuant to permitting programs approved into the state implementation plan have been either:
 - (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.12 Termination of Right to Operate [326 IAC 2-6.1-7(a)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least ninety (90) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.13 Permit Renewal [326 IAC 2-6.1-7]

- (a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAQ and shall include the information specified in 326 IAC 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least ninety (90) days prior to the date of the expiration of this permit; and
 - (2) 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) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-6.1 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.14 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to amend or modify this permit.

(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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Any such application shall be certified by an "authorized individual" as defined by 326 IAC 2-1.1-1(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.15 Source Modification Requirement

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2.

B.16 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][IC 13-17-3-2][IC 13-30-3-1]

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) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.17 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

- (c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.18 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, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.19 Credible Evidence [326 IAC 1-1-6]

For the purpose of submitting compliance certifications or establishing whether or not the Permittee has violated or is in violation of any condition of this permit, nothing in this permit shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether the Permittee would have been in compliance with the condition of this permit if the appropriate performance or compliance test or procedure had been performed.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

C.1 Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions 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 Open Burning [326 IAC 4-1] [IC 13-17-9]

The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6. The previous sentence notwithstanding, the Permittee may open burn in accordance with an open burning approval issued by the Commissioner under 326 IAC 4-1-4.1.

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and 326 IAC 9-1-2.

C.6 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

C.7 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
MC 61-52 IGCN 1003
Indianapolis, Indiana 46204-2251

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 2-1.1-1(1).

- (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) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed 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 Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

C.8 Performance Testing [326 IAC 3-6]

- (a) 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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 IDEM, OAQ if the Permittee 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.9 Compliance Requirements [326 IAC 2-1.1-11]

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 [326 IAC 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required

monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

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.

C.12 Instrument Specifications [326 IAC 2-1.1-11]

- (a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale.
- (b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.
- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

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.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

- (a) Records of all required monitoring data, reports and support information required by this permit 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 physically present or electronically accessible 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 within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-1.1-11] [326 IAC 2-6.1-2] [IC 13-14-1-13]

- (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
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (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, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

SECTION D.1 EMISSIONS UNIT 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) 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, four (4) molding ovens, one (1) rubber press, identified as SIM-30, with a maximum capacity of processing 3.4 pounds of rubber per hour;

(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)
Mixer #1	0.54	2.71
Mixer #2	0.61	2.94
35L Moriyama Mixer	0.11	0.93
55L Rubber Mixer	0.22	1.49
Lab. Moriyama Mixer	<100 lbs/hr	0.551
Lab. Banbury Mixer BR 1600	<100 lbs/hr	0.551

**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).

Company Name:	Freudenberg - NOK General Partnership
Address:	1700 Miller Ave.
City:	Shelbyville, Indiana 46176
Phone #:	317-421-3400
MSOP #:	M145-25919-00027

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 M145-25919-00027.

not in compliance with the requirements of MSOP M145-25919-00027.

Authorized Individual (typed):
Title:
Signature:
Date:

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.

Noncompliance:

MALFUNCTION REPORT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT OFFICE OF AIR QUALITY FAX NUMBER - 317 233-6865

**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.**

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY: _____ PHONE NO. () _____
LOCATION: (CITY AND COUNTY) _____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP: _____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON: _____

DATE/TIME MALFUNCTION STARTED: ____/____/20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE ____/____/20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER: _____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

MALFUNCTION REPORTED BY: _____ TITLE: _____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
MINOR SOURCE OPERATING PERMIT
CERTIFICATION**

Source Name: Freudenberg - NOK General Partnership
Source Address: 1700 Miller Ave., Shelbyville, Indiana 46176
Mailing Address: 1700 Miller Ave., Shelbyville, Indiana 46176
MSOP No.: M145-25919-00027

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

- Annual Compliance Certification Letter
- Test Result (specify)
- Report (specify)
- Notification (specify)
- Affidavit (specify)
- Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Phone:

Date:

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: 1700 Miller Ave., Shelbyville, Indiana 46176
County: Shelby
SIC Code: 3053
Permit Renewal No.: M145-25919-00027
Permit Reviewer: APT

The Office of Air Quality (OAQ) has reviewed an application from Freudenberg - NOK General Partnership relating to the renewal of a Minor Source Operating Permit (MSOP) for the operation of a rubber parts manufacturing plant. Freudenberg - NOK General Partnership was issued its first MSOP, 145-14928-00027, on April 21, 2003.

Permitted Emission Units and Pollution Control Equipment

This stationary source consists of the following 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) 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;
- (f) 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;
- (g) seventy-one (71) 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) ten (10) 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) five (5) rubber presses, identified as PT-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
 - (5) ten (10) rubber presses, identified as PT-90 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
 - (6) ten (10) rubber presses, identified as SIM-60 Presses, each with a maximum capacity of processing 7.1 pounds of rubber per hour;
 - (7) twelve (12) transfer rubber presses, identified as Transfer Presses, each with a maximum capacity of processing 34 pounds of rubber per hour;
 - (8) one (1) rubber press, identified as Zone C-02 Press, with a maximum capacity of processing 3 pounds of rubber per hour; and
 - (9) five (5) rubber presses, identified as NT-160 Presses, each with a maximum capacity of processing 14.2 pounds of rubber per hour; and
 - (10) one (1) rubber press, identified as DESMA 110, with a maximum capacity of processing 3.4 pounds of rubber per hour.
 - (11) three (3) rubber presses, identified as IM-60, each with a maximum capacity of processing 7.1 pounds of rubber per hour.
- (h) 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;
- (i) four (4) 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;
- (j) 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.
- (k) 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;
- (l) two (2) 60-inch rubber warm-up mills, identified as 60-inch rubber warm-up mills, each with a maximum capacity of processing 422 pounds of rubber per hour, using no control, and exhausting to the atmosphere;
- (m) 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;
- (n) 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;
- (o) One (1) GS Blue M Electric oven - cures a maximum of one hundred twenty (120) pieces of plastic parts per load for 45 minutes;
- (p) One (1) GS Blue M Electric oven - cures a maximum of one hundred twenty (120) pieces of nylon parts per load for 45 minutes;
- (q) 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, four (4) molding ovens, one (1) rubber press, identified as SIM-30, with a maximum capacity of processing 3.4 pounds of rubber per hour;
- (r) two (2) wet blasters; and

- (s) One (1) dry bead blaster - self contained and including particulate filtration with a 99.0% capture efficiency. Maximum throughput of 624,000 lbs/yr.
- (t) Thirty one (31) space heaters with heat input capacity totaling 11.85 MMBtu/hr.

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) MSOP, 145-14928-00027, issued April 21, 2003;
- (b) MSOP - Notice Only Change, 145-18557-00027, issued January 1, 2004;
- (c) MSOP - Notice Only Change, 145-20570-00027, issued February 15, 2005;
- (d) MSOP - Notice Only Change, 145-21992-00027, issued December 6, 2005;
- (e) MSOP - Notice Only Change, 145-22737-00027, issued March 27, 2006;
- (f) MSOP - Notice Only Change, 145-23322-00027, issued August 22, 2006;
- (g) MSOP - Notice Only Change, 145-24091-00027, issued January 24, 2007; and
- (h) MSOP - Notice Only Change, 145-24459-00027, issued May 3, 2007.

The following terms and conditions from previous approvals have been determined no longer applicable; therefore, they were not incorporated into this MSOP Renewal:

- (a) 326 IAC 8-3-2 (Cold Cleaner Operations), 326 IAC 8-3-5 (Cold Cleaner Degreaser Operation and Control), 326 IAC 8-3-5(b) (Cold Cleaner Degreaser Operation and Control).

Reason not incorporated: Since the issuance of the previous permit, Freudenberg - NOK General Partnership applied for a Notice Only Change, 145-22737-00027. This NOC was issued on March 27, 2006, in which the removal of the one (1) parts washer, identified as Graymills Clean-O-Matic, was approved. Without this degreasing unit, the aforementioned requirements are no longer applicable to this source.

Enforcement Issue

There are no enforcement actions pending.

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 January 17, 2008.

Emission Calculations

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

Potential To Emit

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	less than 100
PM-10	less than 100
SO ₂	less than 100
VOC	less than 100
CO	less than 100
NO _x	less than 100

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	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective October 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM _{2.5} .	

- (a) Shelby County has been classified as attainment for PM_{2.5}. U.S. EPA has not yet established the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 for PM_{2.5} emissions. Therefore, until the U.S. EPA adopts specific provisions for PSD review for PM_{2.5}

emissions, it has directed states to regulate PM₁₀ emissions as a surrogate for PM_{2.5} emissions. See the State Rule Applicability – Entire Source section.

- (b) Volatile organic compounds (VOCs) and nitrogen oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC emissions and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) Shelby County has been classified as attainment or unclassifiable in Indiana for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (d) On October 25, 2006, the Indiana Air Pollution Control Board finalized a rule revision to 326 IAC 1-4-1 revoking the one-hour ozone standard in Indiana.
- (e) Fugitive Emissions
Since this type of operation is not one of the twenty-eight (28) listed source categories under 326 IAC 2-2 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive emissions are not counted toward determination of PSD applicability.

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) There are no National Emissions Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR Part 63) applicable 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 (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 which is not one of the specifically listed counties, and it is not subject to the provisions of 326 IAC 2-7. Therefore, the source is only subject to section five (5) of this rule, additional information requests. The remaining requirements of 326 IAC 2-6 do not apply to the source, and are not included in this permit.

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 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)
Mixer #1	0.54	2.71	0.99
Mixer #2	0.61	2.94	1.12
35L Moriyama Mixer	0.11	0.93	0.21
55L Rubber Mixer	0.22	1.49	0.40
Lab. Moriyama Mixer	exempt	0.551	exempt
Lab. Banbury Mixer BR 1600	exempt	0.551	exempt

These units are capable of 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.

Conclusion

The operation of this rubber parts manufacturing plant shall be subject to the conditions of the attached proposed **Minor Source Operating Permit 145-25919-00027**.

Appendix A: Emission Calculations

Summary

Company Name: Freudenberg-NOK General Partnership
Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
MSOP Renewal: 145-25919-00027
Reviewer: APT
Date: March 5, 2008

Uncontrolled Potential Emissions (tons/year)									
Pollutant									
Emissions Generating Activity	PM	PM10	SO2	NOx	VOC	CO	Worst case single HAP		Total HAPs
Mold Release Agents	0.35	0.35	-----	-----	23.58	-----	-----	-----	-----
Mixers	11.93	11.93	-----	-----	5.70	-----	-----	-----	-----
Extruders	-----	-----	-----	-----	0.97	-----	Acetophenone	0.53	1.55
Presses	-----	-----	-----	-----	29.56	-----	Acetophenone	0.25	0.73
Plastic Injection/Blow Mold Presses	-----	-----	-----	-----	0.75	-----	-----	-----	-----
Rubber Warm-up Mills	-----	-----	-----	-----	4.38	-----	Acetophenone	0.39	1.14
Post Curing Ovens	-----	-----	-----	-----	0.07	-----	Acetophenone	0.04	0.10
Space Heaters	0.10	0.39	0.03	5.19	0.29	4.36	Hexane	0.09	0.10
wet blasting	neg.	neg.	-----	-----	-----	-----	-----	-----	-----
dry bead blasting	10.93	10.93	-----	-----	-----	-----	-----	-----	-----
Laboratory equipment	0.03	0.03	neg.	neg.	0.43	neg.	neg.	neg.	neg.
TOTAL	23.31	23.60	0.03	5.19	65.73	4.36	Acetophenone	0.53	3.62

Total emissions based on rated capacity at 8,760 hours/year.

**Appendix A: Emission Calculations
PM and VOC**

From Mixers, Extruders and Presses

Company Name: Freudenberg-NOK General Partnership
Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
MSOP Renewal: 145-25919-00027
Reviewer: APT
Date: March 5, 2008

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	PM Control Efficiency %	Potential Emissions VOC lb/hr	Potential Emissions VOC ton/yr
Mixers	4					11.93	0.12			5.70
Mixer #1	1	1080.0	9.20E-04	4.40E-04	0.99	4.35	4.35E-02	99.00	0.48	2.08
Mixer #2	1	1215.0	9.20E-04	4.40E-04	1.12	4.90	4.90E-02	99.00	0.53	2.34
35L Moriyama Mixer	1	225.0	9.20E-04	4.40E-04	0.21	0.91	9.07E-03	99.00	0.10	0.43
55L Rubber Mixer	1	440.0	9.20E-04	4.40E-04	0.40	1.77	1.77E-02	99.00	0.19	0.85
Extruders	3									0.97
Barwell Rubber Extruders	3	700.0	1.12E-07	1.06E-04	0.00	0.00	n/a	n/a	0.22	0.97
Presses	72									29.56
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	10	7.0	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.47	2.05
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	5	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.24	1.04
PT-90	10	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.47	2.08
SIM-60 Presses	10	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.47	2.08
DESMA 110	1	3.4	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.02	0.10
Transfer Presses	12	34.0	n/a	6.68E-03	n/a	n/a	n/a	n/a	2.73	11.94
NT-160 Presses	5	14.2	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.47	2.08
Zone C-02 Press	1	3.0	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.02	0.09
IM-60	3	7.1	n/a	6.68E-03	n/a	n/a	n/a	n/a	0.14	0.62
Plastic Injection/Blow Mold Presses	6									0.75
Ossberger Plastic injection molding 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 injection molding Press double-head	4	53.4	n/a	1.00E+00	n/a	n/a	n/a	n/a	0.11	0.47
Ossberger Plastic Press single-head	1	100	n/a	1.00E+00	n/a	n/a	n/a	n/a	0.05	0.22
Total						11.93	0.12			36.98

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 Extruders****Company Name: Freudenberg-NOK General Partnership****Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176****MSOP Renewal: 145-25919-00027****Reviewer: APT****Date: March 5, 2008****Barwell Extruders****3 units each @ 700 lb/hr capacity****Rubber Processing Capacity****2100 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	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
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-ethylhexyl) 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
Total				1.55

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

Appendix A: Emission Calculations

HAP Emissions Rubber Presses

Company Name: Freudenberg-NOK General Partnership
Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
MSOP Renewal: 145-25919-00027
Reviewer: APT
Date: March 5, 2008

eight (8) presses, identified as R-100 Boots Presses,
 ten (10) presses, identified as N-50 Boots Presses,
 seven (7) presses, identified as DC-60 Presses,
 five (5) presses, identified as PT-60 Presses,
 ten (10) presses, identified as PT-90 Presses,
 ten (10) presses, identified as SIM-60 Presses,
 twelve (12) transfer presses, identified as Transfer Presses,
 one (1) press, identified as Zone C-02 Press,
 five (5) presses, identified as NT-160 Presses,
 one (1) press, identified as DESMA 110,
 three (3) presses, identified as IM-60,

each @	25.80 lb/hr capacity	206.4
each @	7.00 lb/hr capacity	70
each @	7.10 lb/hr capacity	49.7
each @	7.10 lb/hr capacity	35.5
each @	7.10 lb/hr capacity	71
each @	7.10 lb/hr capacity	49.7
each @	34.00 lb/hr capacity	408
each @	3 lb/hr capacity	3
@	14.2 lb/hr capacity	71
@	3.4 lb/hr capacity	3.4
each @	7.1 lb/hr capacity	21.3

Seventy-one (71) Presses Total

Total Rubber Processing Capacity (lb/hr)

989.00

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
1,1,1 Trichloroethane	4.29E-06	4.24E-03	1.02E-01	1.86E-02
1,2,4 Trichlorobenzene	2.00E-07	1.98E-04	4.75E-03	8.66E-04
1,3 Butadiene	7.50E-06	7.42E-03	1.78E-01	3.25E-02
1,4 Dichlorobenzene	9.20E-06	9.10E-03	2.18E-01	3.99E-02
2,4 Toluene Diamine	2.30E-07	2.27E-04	5.46E-03	9.96E-04
Methyl Isobutyl Ketone	3.10E-06	3.07E-03	7.36E-02	1.34E-02
Acetaldehyde	7.60E-06	7.52E-03	1.80E-01	3.29E-02
Acetonitrile	6.10E-06	6.03E-03	1.45E-01	2.64E-02
Acetophenone	5.71E-05	5.65E-02	1.36E+00	2.47E-01
Acrylonitrile	6.10E-06	6.03E-03	1.45E-01	2.64E-02
Aniline	1.50E-07	1.48E-04	3.56E-03	6.50E-04
Benzene	1.20E-06	1.19E-03	2.85E-02	5.20E-03
Benzidene	8.00E-07	7.91E-04	1.90E-02	3.47E-03
Biphenyl	9.00E-07	8.90E-04	2.14E-02	3.90E-03
Bis (2-ethylhexl) Phthalate	2.60E-06	2.57E-03	6.17E-02	1.13E-02
Carbon Disulfide	4.20E-06	4.15E-03	9.97E-02	1.82E-02
Carbonyl Sulfide	3.80E-06	3.76E-03	9.02E-02	1.65E-02
Chloroethane	3.10E-06	3.07E-03	7.36E-02	1.34E-02
Cumene	2.80E-06	2.77E-03	6.65E-02	1.21E-02
Dibenzofuran	9.00E-07	8.90E-04	2.14E-02	3.90E-03
Dimethyl Phthalate	7.00E-07	6.92E-04	1.66E-02	3.03E-03
Dibutylphthalate	7.20E-06	7.12E-03	1.71E-01	3.12E-02
Ethylbenzene	1.10E-06	1.09E-03	2.61E-02	4.77E-03
Hexachlorobutadiene	3.90E-07	3.86E-04	9.26E-03	1.69E-03
Dichloromethane	5.00E-08	4.95E-05	1.19E-03	2.17E-04
Xylene	1.60E-06	1.58E-03	3.80E-02	6.93E-03
Napthalene	4.00E-06	3.96E-03	9.49E-02	1.73E-02
Hexane	1.64E-05	1.62E-02	3.89E-01	7.10E-02
o-Toluidine	1.50E-07	1.48E-04	3.56E-03	6.50E-04
o-Xylene	1.70E-06	1.68E-03	4.04E-02	7.36E-03
Phenol	1.30E-06	1.29E-03	3.09E-02	5.63E-03
Propylene Oxide	6.10E-06	6.03E-03	1.45E-01	2.64E-02
Tetrachloroethylene	3.10E-06	3.07E-03	7.36E-02	1.34E-02
Toluene	2.70E-06	2.67E-03	6.41E-02	1.17E-02
Total				0.73

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

Addendum to Appendix A: Emissions Calculations

VOC and Particulate
From Mold Release Agents

Company Name: Freudenberg-NOK General Partnership
 Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
 MSOP Renewal: 145-25919-00027
 Reviewer: APT
 Date: March 5, 2008

Potential Emissions

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 12 Presses	RR-5 Hot NF	7.01	98.00%	0.0%	98.0%	0.0%	0.00%	1.40E-03	408.00	6.87	6.87	3.92	94.18	17.19	0.32	10%	
	McLube 1711L Aerosol	7.58	97.00%	0.0%	97.0%	0.0%	0.00%	8.38E-05	408.00	7.35	7.35	0.25	6.03	1.10	0.03	10%	
N50 Presses & TPE	McLube 1725L Aerosol	7.08	97.00%	0.0%	97.0%	0.0%	0.00%	1.67E-05	227.00	6.87	6.87	0.03	0.62	0.11	0.00	10%	
Rubber Dip Bath for #1 Mixer	Quickote CLM Wet	8.27	8.00%	0.0%	8.0%	0.0%	0.00%	3.92E-04	1080.00	0.66	0.66	0.28	6.72	1.23	0.00	100%	
	Crystal 2000	8.33	1.00%	0.0%	1.0%	0.0%	0.00%	5.01E-03	745.00	0.08	0.08	0.31	7.46	1.36	0.00	100%	
Rubber Dip Bath for #2 Mixer	Quickote CLM Wet	8.27	8.00%	0.0%	8.0%	0.0%	0.00%	3.92E-04	1080.00	0.66	0.66	0.28	6.72	1.23	0.00	100%	
	Crystal 2000	8.33	1.00%	0.0%	1.0%	0.0%	0.00%	5.01E-03	745.00	0.08	0.08	0.31	7.46	1.36	0.00	100%	
Total												5.38	129.20	23.58	0.35		

Note: Each Press is considered a separate facility.

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: Emission Calculations
VOC and HAP Emissions from Rubber Mills

Company Name: Freudenberg-NOK General Partnership
Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
MSOP Renewal: 145-25919-00027
Reviewer: APT
Date: March 5, 2008

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

Freudenberg-NOK General Partnership
 Shelbyville, Indiana

One (1) 42 inch rubber warm-up mill @ 700.00 lb/hr capacity
two (2) 60 inch rubber warm-up mill Each @ 422.00 lb/hr capacity
Rubber Processing Capacity 1544.00 lb/hr

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
VOC	6.48E-04	1.00E+00	2.40E+01	4.38E+00
1,1,1 Trichloroethane	4.29E-06	6.62E-03	1.59E-01	2.90E-02
1,2,4 Trichlorobenzene	2.00E-07	3.09E-04	7.41E-03	1.35E-03
1,3 Butadiene	7.50E-06	1.16E-02	2.78E-01	5.07E-02
1,4 Dichlorobenzene	9.20E-06	1.42E-02	3.41E-01	6.22E-02
2,4 Toluene Diamine	2.30E-07	3.55E-04	8.52E-03	1.56E-03
Methyl Isobutyl Ketone	3.10E-06	4.79E-03	1.15E-01	2.10E-02
Acetaldehyde	7.60E-06	1.17E-02	2.82E-01	5.14E-02
Acetonitrile	6.10E-06	9.42E-03	2.26E-01	4.13E-02
Acetophenone	5.71E-05	8.82E-02	2.12E+00	3.86E-01
Acrylonitrile	6.10E-06	9.42E-03	2.26E-01	4.13E-02
Aniline	1.50E-07	2.32E-04	5.56E-03	1.01E-03
Benzene	1.20E-06	1.85E-03	4.45E-02	8.12E-03
Benzidene	8.00E-07	1.24E-03	2.96E-02	5.41E-03
Biphenyl	9.00E-07	1.39E-03	3.34E-02	6.09E-03
Bis (2-ethylhexl) Phthalate	2.60E-06	4.01E-03	9.63E-02	1.76E-02
Carbon Disulfide	4.20E-06	6.48E-03	1.56E-01	2.84E-02
Carbonyl Sulfide	3.80E-06	5.87E-03	1.41E-01	2.57E-02
Chloroethane	3.10E-06	4.79E-03	1.15E-01	2.10E-02
Cumene	2.80E-06	4.32E-03	1.04E-01	1.89E-02
Dibenzofuran	9.00E-07	1.39E-03	3.34E-02	6.09E-03
Dimethyl Phthalate	7.00E-07	1.08E-03	2.59E-02	4.73E-03
Dibutylphthalate	7.20E-06	1.11E-02	2.67E-01	4.87E-02
Ethylbenzene	1.10E-06	1.70E-03	4.08E-02	7.44E-03
Hexachlorobutadiene	3.90E-07	6.02E-04	1.45E-02	2.64E-03
Dichloromethane	5.00E-08	7.72E-05	1.85E-03	3.38E-04
Xylene	1.60E-06	2.47E-03	5.93E-02	1.08E-02
Napthalene	4.00E-06	6.18E-03	1.48E-01	2.71E-02
Hexane	1.64E-05	2.53E-02	6.08E-01	1.11E-01
o-Toluidine	1.50E-07	2.32E-04	5.56E-03	1.01E-03
o-Xylene	1.70E-06	2.62E-03	6.30E-02	1.15E-02
Phenol	1.30E-06	2.01E-03	4.82E-02	8.79E-03
Propylene Oxide	6.10E-06	9.42E-03	2.26E-01	4.13E-02
Tetrachloroethylene	3.10E-06	4.79E-03	1.15E-01	2.10E-02
Toluene	2.70E-06	4.17E-03	1.00E-01	1.83E-02
Total	VOC	4.38	HAPS	1.14

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

Appendix A: Emission Calculations
VOC & HAP Emissions from Curing Ovens

Company Name: Freudenberg-NOK General Partnership
Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
MSOP Renewal: 145-25919-00027
Reviewer: APT
Date: March 5, 2008

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
 Two (2) GS Blue M Electric ovens @ 28.8 lb/hr capacity (for both)
 Rubber Processing Capacity 141.80 lb/hr

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
VOC	1.16E-04	1.64E-02	3.95E-01	7.20E-02
1,1,1 Trichloroethane	4.29E-06	6.08E-04	1.46E-02	2.66E-03
1,2,4 Trichlorobenzene	2.00E-07	2.84E-05	6.81E-04	1.24E-04
1,3 Butadiene	7.50E-06	1.06E-03	2.55E-02	4.66E-03
1,4 Dichlorobenzene	9.20E-06	1.30E-03	3.13E-02	5.71E-03
2,4 Toluene Diamine	2.30E-07	3.26E-05	7.83E-04	1.43E-04
Methyl Isobutyl Ketone	3.10E-06	4.40E-04	1.05E-02	1.93E-03
Acetaldehyde	7.60E-06	1.08E-03	2.59E-02	4.72E-03
Acetonitrile	6.10E-06	8.65E-04	2.08E-02	3.79E-03
Acetophenone	5.71E-05	8.10E-03	1.94E-01	3.55E-02
Acrylonitrile	6.10E-06	8.65E-04	2.08E-02	3.79E-03
Aniline	1.50E-07	2.13E-05	5.10E-04	9.32E-05
Benzene	1.20E-06	1.70E-04	4.08E-03	7.45E-04
Benzidene	8.00E-07	1.13E-04	2.72E-03	4.97E-04
Biphenyl	9.00E-07	1.28E-04	3.06E-03	5.59E-04
Bis (2-ethylhexl) Phthalate	2.60E-06	3.69E-04	8.85E-03	1.61E-03
Carbon Disulfide	4.20E-06	5.96E-04	1.43E-02	2.61E-03
Carbonyl Sulfide	3.80E-06	5.39E-04	1.29E-02	2.36E-03
Chloroethane	3.10E-06	4.40E-04	1.05E-02	1.93E-03
Cumene	2.80E-06	3.97E-04	9.53E-03	1.74E-03
Dibenzofuran	9.00E-07	1.28E-04	3.06E-03	5.59E-04
Dimethyl Phthalate	7.00E-07	9.93E-05	2.38E-03	4.35E-04
Dibutylphthalate	7.20E-06	1.02E-03	2.45E-02	4.47E-03
Ethylbenzene	1.10E-06	1.56E-04	3.74E-03	6.83E-04
Hexachlorobutadiene	3.90E-07	5.53E-05	1.33E-03	2.42E-04
Dichloromethane	5.00E-08	7.09E-06	1.70E-04	3.11E-05
Xylene	1.60E-06	2.27E-04	5.45E-03	9.94E-04
Napthalene	4.00E-06	5.67E-04	1.36E-02	2.48E-03
Hexane	1.64E-05	2.33E-03	5.58E-02	1.02E-02
o-Toluidine	1.50E-07	2.13E-05	5.10E-04	9.32E-05
o-Xylene	1.70E-06	2.41E-04	5.79E-03	1.06E-03
Phenol	1.30E-06	1.84E-04	4.42E-03	8.07E-04
Propylene Oxide	6.10E-06	8.65E-04	2.08E-02	3.79E-03
Tetrachloroethylene	3.10E-06	4.40E-04	1.05E-02	1.93E-03
Toluene	2.70E-06	3.83E-04	9.19E-03	1.68E-03
Total	VOC	0.07	HAPS	0.10

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
Natural Gas Combustion Only
MM BTU/HR <100
Space Heaters/HVAC Units

Company Name: Freudenberg-NOK General Partnership
Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
MSOP Renewal: 145-25919-00027
Reviewer: APT
Date: March 5, 2008

Heat Input Capacity Potential Throughput
MMBtu/hr 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

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	Worst Case Single HAP
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.090E-04	6.228E-05	3.893E-03	9.343E-02	1.765E-04	0.09

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel	Combined HAPs (tpy)
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.595E-05	5.709E-05	7.266E-05	1.972E-05	1.090E-04	0.10

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

Insignificant activities

PM from one (1) dry bead blaster

Company Name: Freudenberg-NOK General Partnership
 Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
 MSOP Renewal: 145-25919-00027
 Reviewer: APT
 Date: March 5, 2008

Table 1 - Emission Factors for Abrasives

Abrasive	Emission Factor	
	lb PM / lb abrasive	lb PM10 / lb PM
Sand	0.041	0.70
Grit	0.010	0.70
Steel Shot	0.004	0.86
Other	0.010	

Table 2 - Density of Abrasives (lb/ft3)

Abrasive	Density (lb/ft3)
Al oxides	160
Sand	99
Steel	487

Table 3 - Sand Flow Rate (FR1) Through Nozzle (lb/hr)

Flow rate of Sand Through a Blasting Nozzle as a Function of Nozzle pressure and Internal Diameter

Internal diameter, in	Nozzle Pressure (psig)							
	30	40	50	60	70	80	90	100
1/8	28	35	42	49	55	63	70	77
3/16	65	80	94	107	122	135	149	165
1/4	109	138	168	195	221	255	280	309
5/16	205	247	292	354	377	420	462	507
3/8	285	355	417	477	540	600	657	720
7/16	385	472	560	645	755	820	905	940
1/2	503	615	725	835	945	1050	1160	1265
5/8	820	990	1170	1336	1510	1680	1850	2030
3/4	1140	1420	1670	1915	2160	2400	2630	2880
1	2030	2460	2900	3340	3780	4200	4640	5060

Calculations

Adjusting Flow Rates for Different Abrasives and Nozzle Diameters

Flow Rate (FR) = Abrasive flow rate (lb/hr) with internal nozzle diameter (ID)

FR1 = Sand flow rate (lb/hr) with internal nozzle diameter (ID1) From Table 3 =

D = Density of abrasive (lb/ft3) From Table 2 =

D1 = Density of sand (lb/ft3) =

ID = Actual nozzle internal diameter (in) =

ID1 = Nozzle internal diameter (in) from Table 3 =

99

Flow Rate (FR) (lb/hr) = 249.600 per nozzle

Uncontrolled Emissions (E, lb/hr)

EF = emission factor (lb PM/ lb abrasive) From Table 1 =

FR = Flow Rate (lb/hr) =

w = fraction of time of wet blasting =

N = number of nozzles =

0.010
249.600
0 %
1

Uncontrolled Emissions =	2.50 lb/hr
	10.93 ton/yr

METHODOLOGY

Emission Factors from STAPPA/ALAPCO "Air Quality Permits", Vol. I, Section 3 "Abrasive Blasting" (1991 edition)

Ton/yr = lb/hr X 8760 hr/yr X ton/2000 lbs

Flow Rate (FR) (lb/hr) = FR1 x (ID/ID1)2 x (D/D1)

E = EF x FR x (1-w/200) x N

w should be entered in as a whole number (if w is 50%, enter 50)

Appendix A: Emission Calculations

Laboratory Components
 Company Name: Freudenberg-NOK General Partnership
 Address City IN Zip: 1700 Miller Ave., Shelbyville, Indiana 46176
 MSOP Renewal: 145-25919-00027
 Reviewer: APT
 Date: March 5, 2008

Mixers, Presses, and Injection/Blow Mold Presses

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 ton/yr	Potential PM	Controlled Potential Emissions PM ton/yr	Control Efficiency %	Potential Emissions VOC lb/hr	Potential Emissions VOC ton/yr
Mixers	4					0.03		0.00			0.01
Branbury Mixer BR 1600	1	3.4	9.20E-04	4.40E-04	0.00	0.01		1.37E-04	99.00	0.00	0.01
Moriyama Mixer	1	3.4	9.20E-04	4.40E-04	0.00	0.01		1.37E-04	99.00	0.00	0.01
Presses	1										0.30
SIM-30, rubber press	1	3.4	n/a	6.68E-03	n/a	n/a		n/a	n/a	0.07	0.30
Plastic Injection/Blow Mold Presses	3										0.02
electric molding press	3	3.4	n/a	1.00E+00	n/a	n/a		n/a	n/a	0.01	0.02
Total						0.03		0.00			0.33

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

VOC and HAP Emissions from Rubber Mills

One (1) Lab mill with 12" drop mill @ 3.40 lb/hr capacity
 One (1) Lab mill with 16" drop mill @ 3.40 lb/hr capacity
 Rubber Processing Capacity 10.20 lb/hr

VOC & HAP Emissions from Curing Ovens

four (4) molding ovens @ 3.40 lb/hr capacity
 Rubber Processing Capacity 3.40 lb/hr

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
VOC	6.48E-04	6.61E-03	1.59E-01	2.90E-02
1,1,1 Trichloroethane	4.29E-06	4.38E-05	1.05E-03	1.92E-04
1,2,4 Trichlorobenzene	2.00E-07	2.04E-06	4.90E-05	8.94E-06
1,3 Butadiene	7.50E-06	7.65E-05	1.84E-03	3.35E-04
1,4 Dichlorobenzene	9.20E-06	9.38E-05	2.25E-03	4.11E-04
2,4 Toluene Diamine	2.30E-07	2.35E-06	5.63E-05	1.03E-05
Methyl Isobutyl Ketone	3.10E-06	3.16E-05	7.59E-04	1.38E-04
Acetaldehyde	7.60E-06	7.75E-05	1.86E-03	3.40E-04
Acetonitrile	6.10E-06	6.22E-05	1.49E-03	2.73E-04
Acetophenone	5.71E-05	5.82E-04	1.40E-02	2.55E-03
Acrylonitrile	6.10E-06	6.22E-05	1.49E-03	2.73E-04
Aniline	1.50E-07	1.53E-06	3.67E-05	6.70E-06
Benzene	1.20E-06	1.22E-05	2.94E-04	5.36E-05
Benzidene	8.00E-07	8.16E-06	1.96E-04	3.57E-05
Biphenyl	9.00E-07	9.18E-06	2.20E-04	4.02E-05
Bis (2-ethylhexyl) Phthalate	2.60E-06	2.65E-05	6.36E-04	1.16E-04
Carbon Disulfide	4.20E-06	4.28E-05	1.03E-03	1.88E-04
Carbonyl Sulfide	3.80E-06	3.88E-05	9.30E-04	1.70E-04
Chloroethane	3.10E-06	3.16E-05	7.59E-04	1.38E-04
Cumene	2.80E-06	2.86E-05	6.85E-04	1.25E-04
Dibenzofuran	9.00E-07	9.18E-06	2.20E-04	4.02E-05
Dimethyl Phthalate	7.00E-07	7.14E-06	1.71E-04	3.13E-05
Dibutylphthalate	7.20E-06	7.34E-05	1.76E-03	3.22E-04
Ethylbenzene	1.10E-06	1.12E-05	2.69E-04	4.91E-05
Hexachlorobutadiene	3.90E-07	3.98E-06	9.55E-05	1.74E-05
Dichloromethane	5.00E-08	5.10E-07	1.22E-05	2.23E-06
Xylene	1.60E-06	1.63E-05	3.92E-04	7.15E-05
Napthalene	4.00E-06	4.08E-05	9.79E-04	1.79E-04
Hexane	1.64E-05	1.67E-04	4.01E-03	7.33E-04
o-Toluidine	1.50E-07	1.53E-06	3.67E-05	6.70E-06
o-Xylene	1.70E-06	1.73E-05	4.16E-04	7.59E-05
Phenol	1.30E-06	1.33E-05	3.18E-04	5.81E-05
Propylene Oxide	6.10E-06	6.22E-05	1.49E-03	2.73E-04
Tetrachloroethylene	3.10E-06	3.16E-05	7.59E-04	1.38E-04
Toluene	2.70E-06	2.75E-05	6.61E-04	1.21E-04
Total	VOC	0.03	HAPS	0.01

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

Pollutant	Emission Factor lb/lb	Hourly Emissions lb/hr	Daily Emissions lb/day	Potential Emissions tons/yr
VOC	1.16E-04	3.94E-04	9.47E-03	1.73E-03
1,1,1 Trichloroethane	4.29E-06	1.46E-05	3.50E-04	6.39E-05
1,2,4 Trichlorobenzene	2.00E-07	6.80E-07	1.63E-05	2.98E-06
1,3 Butadiene	7.50E-06	2.55E-05	6.12E-04	1.12E-04
1,4 Dichlorobenzene	9.20E-06	3.13E-05	7.51E-04	1.37E-04
2,4 Toluene Diamine	2.30E-07	7.82E-07	1.88E-05	3.43E-06
Methyl Isobutyl Ketone	3.10E-06	1.05E-05	2.53E-04	4.62E-05
Acetaldehyde	7.60E-06	2.58E-05	6.20E-04	1.13E-04
Acetonitrile	6.10E-06	2.07E-05	4.98E-04	9.08E-05
Acetophenone	5.71E-05	1.94E-04	4.66E-03	8.50E-04
Acrylonitrile	6.10E-06	2.07E-05	4.98E-04	9.08E-05
Aniline	1.50E-07	5.10E-07	1.22E-05	2.23E-06
Benzene	1.20E-06	4.08E-06	9.79E-05	1.79E-05
Benzidene	8.00E-07	2.72E-06	6.53E-05	1.19E-05
Biphenyl	9.00E-07	3.06E-06	7.34E-05	1.34E-05
Bis (2-ethylhexyl) Phthalate	2.60E-06	8.84E-06	2.12E-04	3.87E-05
Carbon Disulfide	4.20E-06	1.43E-05	3.43E-04	6.25E-05
Carbonyl Sulfide	3.80E-06	1.29E-05	3.10E-04	5.66E-05
Chloroethane	3.10E-06	1.05E-05	2.53E-04	4.62E-05
Cumene	2.80E-06	9.52E-06	2.28E-04	4.17E-05
Dibenzofuran	9.00E-07	3.06E-06	7.34E-05	1.34E-05
Dimethyl Phthalate	7.00E-07	2.38E-06	5.71E-05	1.04E-05
Dibutylphthalate	7.20E-06	2.45E-05	5.88E-04	1.07E-04
Ethylbenzene	1.10E-06	3.74E-06	8.98E-05	1.64E-05
Hexachlorobutadiene	3.90E-07	1.33E-06	3.18E-05	5.81E-06
Dichloromethane	5.00E-08	1.70E-07	4.08E-06	7.45E-07
Xylene	1.60E-06	5.44E-06	1.31E-04	2.38E-05
Napthalene	4.00E-06	1.36E-05	3.26E-04	5.96E-05
Hexane	1.64E-05	5.58E-05	1.34E-03	2.44E-04
o-Toluidine	1.50E-07	5.10E-07	1.22E-05	2.23E-06
o-Xylene	1.70E-06	5.78E-06	1.39E-04	2.53E-05
Phenol	1.30E-06	4.42E-06	1.06E-04	1.94E-05
Propylene Oxide	6.10E-06	2.07E-05	4.98E-04	9.08E-05
Tetrachloroethylene	3.10E-06	1.05E-05	2.53E-04	4.62E-05
Toluene	2.70E-06	9.18E-06	2.20E-04	4.02E-05
Total	VOC	0.07	HAPS	0.00

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

Lab. Emission Totals	PM	PM10	SO ₂	NO _x	VOC	CO
	0.03	0.03	0	0	0.43	0