



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: December 26, 2007

RE: Sperry & rice Manufacturing Company LLC/ 047-24513-00012

FROM: Matthew Stuckey, Deputy 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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NEW SOURCE REVIEW AND MINOR SOURCE OPERATING PERMIT OFFICE OF AIR QUALITY

Sperry & Rice Manufacturing Company, LLC
9146 U.S. 52
Brookville, Indiana 47012

(herein known as the Permittee) is hereby authorized to construct and 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 2-5.1, 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.: M047-24513-00012	
Issued by/Original Signed By: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: December 26, 2007 Expiration Date: December 26, 2012

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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 products manufacturing plant.

Source Address:	9146 U.S. 52, Brookville, Indiana 47012
Mailing Address:	9146 U.S. 52, Brookville, Indiana 47012
General Source Phone Number:	(765) 647-4141
SIC Code:	3061
County Location:	Franklin
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD 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) 3 1/2 inch continuous vulcanization line, identified as EXTMW1 (AC7), constructed in 1999, utilizing the worst-case VOC and HAP emitting rubber compound #10, with a maximum capacity of 476 pounds of rubber per hour, and exhausting to Stack ID: SMW3.
- (b) One (1) 4 1/2 inch continuous vulcanization line, identified as EXTMW2 (AC8), constructed in 1989, utilizing the worst-case VOC and HAP emitting rubber compound #8, with a maximum capacity of 514 pounds of rubber per hour, and exhausting to six (6) stacks (Stack IDs: SMW1, SMW2, SMW4-SMW7).
- (c) One (1) Iron Fireman natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR1, constructed prior to September 21, 1983, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR1.
- (d) One (1) Iron Fireman natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR2, constructed in 1979, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR2.
- (e) One (1) Mohawk natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR3, constructed in 1979, rated at 6.30 MMBtu/hr, and exhausting to Stack ID: SBLR3.
- (f) One (1) Whirl Power natural gas-fired boiler, with No. 2 fuel oil as a back-up fuel, identified as BLR4, constructed in 1979, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR4.

- (g) Two (2) hot and two (2) cold feed rubber extruders, identified as REXT1 through REXT4, constructed in 1968, each with a maximum capacity of 490 pounds of rubber per hour, and exhausting to Stack ID: SREXT.
- (h) One (1) Banbury mixer/mill, identified as BBM, with a maximum capacity of 1,250 pounds per hour, and exhausting to Stack ID: SDCBBM and using the following control device:
 - (i) One (1) multi-compartment baghouse for particulate control with an outlet grain loading of less than 0.03 grains per standard cubic feet and less than 4,000 cubic feet per minute.
- (i) One (1) rubber autoclave, identified as AC1, constructed in 1968, with a maximum capacity of 37.50 pounds of rubber per hour, and exhausting to Stack ID: SAC1.
- (j) One (1) rubber autoclave, identified as AC2, constructed in 1969, with a maximum capacity of 37.50 pounds of rubber per hour, and exhausting to Stack ID: SAC2.
- (k) One (1) No. 2 fuel oil storage tank, identified as FOST, with a maximum storage capacity of 10,000 gallons.
- (l) The following VOC and HAP storage containers:
 - (i) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.
- (m) One (1) warm-up mill, identified as WUM, constructed in 1960, with a maximum capacity of 1,250 pounds per hour, and exhausting fugitively.
- (n) Soapstone dusting operations, identified as DUST, and exhausting to Stack ID: SMW8.
- (o) Water based activities, including the following:
 - (i) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.
- (p) Water related activities, including the following:
 - (i) Production of hot water for on-site personal use not related to any industrial or production process;
 - (ii) Steam traps, vents, leaks, and safety relief valves;
 - (iii) Laundry operations using only water solutions of bleach or detergents;
 - (iv) Boiler water treatment operations, not including cooling towers; and
 - (v) Oxygen scavenging (deaeration) of water.
- (q) Activities related to ventilation, venting equipment, and refrigeration, including the following:
 - (i) Ventilation exhausts, central chiller water systems, refrigeration, and air conditioning equipment, not related to any industrial or production process, including natural draft hoods or ventilating systems that do not remove air pollutants;

- (ii) Stacks and vents from plumbing traps used to prevent the discharge of sewer gases, handling domestic sewage only, excluding those at wastewater treatment plants or those handling any industrial waste; and
 - (iii) Air vents from air compressors.
- (r) Activities related to routine fabrication, maintenance, and repair of buildings, structures, equipment, or vehicles at the source where air emissions from those activities would not be associated with any commercial production process, including the following:
- (i) Painting, including interior and exterior painting of buildings, and solvent use excluding degreasing operations utilizing halogenated organic solvents; and
 - (ii) Brazing, soldering, or welding operations and associated equipment.
- (s) Activities performed using hand-held equipment, including the following:
- (i) Cutting, excluding cutting torches;
 - (ii) Drilling;
 - (iii) Grinding;
 - (iv) Machining wood, metal, or plastic; and
 - (v) Sawing.
- (t) Housekeeping and janitorial activities and supplies, including the following:
- (i) Vacuum cleaning systems used exclusively for housekeeping or custodial activities, or both;
 - (ii) Steam cleaning activities;
 - (iii) Rest rooms and associated cleanup operations and supplies; and
 - (iv) Mobile floor sweepers and floor scrubbers.
- (u) Office related activities, including the following:
- (i) Office supplies and equipment;
 - (ii) Photocopying equipment and associated supplies;
 - (iii) Paper shredding; and
 - (iv) Blueprint machines, photographic equipment, and associated supplies.
- (v) Storage equipment and activities, including the following:
- (i) Pressurized storage tanks and associated piping for Liquid Petroleum Gas (LPG);
 - (ii) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP;
 - (iii) Storage of drums containing maintenance raw materials; and
 - (iv) Portable containers used for the collection, storage, or disposal of materials provided the container capacity is equal to or less than forty-six hundredths (0.46) cubic meters and the container is closed, except when the material is added or removed.
- (w) Activities generating limited amounts of fugitive dust, including the following:
- (i) Road salting and sanding.
- (x) Activities associated with production, including the following:
- (i) Air compressors and pneumatically operated equipment, including hand tools.

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 Revocation of Permits [326 IAC 2-1.1-9(5)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), the Commissioner may revoke this permit if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 when prior to the start of operation, the following requirements are met:

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), verifying that the emission units were constructed as proposed in the application or the permit. The emission units covered in this permit may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emission units differs from the construction proposed in the application, the source may not begin operation until the permit has been revised pursuant to 326 IAC 2 and an Operation Permit Validation Letter is issued.
- (c) The Permittee shall attach the Operation Permit Validation Letter received from the Office of Air Quality (OAQ) to this permit.

B.4 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, M047-24513-00012, 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, 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.5 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.6 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.7 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.8 Property Rights or Exclusive Privilege

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

B.9 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.10 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.11 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.12 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 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.

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

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

- (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.13 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to M047-24513-00012 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.14 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.15 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.16 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.17 Source Modification Requirement

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

B.18 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.19 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.20 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.21 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 construct and 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 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 to use an Indiana Accredited 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) 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
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 Response to Excursions or Exceedances

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.14 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.15 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.16 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.17 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) 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, 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 FACILITY OPERATION CONDITIONS

Emissions Unit Description:

- (a) One (1) 3 1/2 inch continuous vulcanization line, identified as EXTMW1 (AC7), constructed in 1999, utilizing the worst-case VOC and HAP emitting rubber compound #10, with a maximum capacity of 476 pounds of rubber per hour, and exhausting to Stack ID: SMW3.
- (b) One (1) 4 1/2 inch continuous vulcanization line, identified as EXTMW2 (AC8), constructed in 1989, utilizing the worst-case VOC and HAP emitting rubber compound #8, with a maximum capacity of 514 pounds of rubber per hour, and exhausting to six (6) stacks (Stack IDs: SMW1, SMW2, SMW4-SMW7).

(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 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, IDEM, OAQ has determined that the following requirements represent BACT for the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)):

- (a) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed 0.0171 pounds of VOC per pound of rubber produced on the line.

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

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the two (2) continuous vulcanization lines, identified as EXTMW1 (AC7) and EXTMW2 (AC8).

Compliance Determination Requirements

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

- (a) Compliance with the VOC emission limit in Condition D.1.1(a) for the 3 1/2 inch vulcanization line (EXTMW1 (AC7)) shall be determined by the following equation, with compliance determined at the end of each month:

$$\text{VOC Emissions (tons)} = \sum_{n=1}^m \frac{[(\text{Monthly Throughput of each Rubber Compound (lbs/month)}) \times (\text{Emission Factor(s) (lbs/lb)}) / 2,000]}{< 25.0 \text{ tons per twelve (12) consecutive month period}}$$

Where,

n = Month Number (i.e. January = 1, February = 2, etc.); and
m = Total Number of Months in Period.

- (b) Compliance with the VOC emission limit in Condition D.1.1(b) for the 3 1/2 inch vulcanization line (EXTMW1 (AC7)) shall be determined by the following equation, with compliance determined at the end of each month:

$$\text{VOC Emissions (lbs/lb rubber)} = [(\text{Throughput of each Rubber Compound (lbs/hour)}) \times (\text{Emission Factor(s) (lbs/lb)})]$$

< 0.0171 pounds of VOC emitted per pound of rubber produced

* Emission Factor(s) = Vulcanization Line emission factors for each rubber compound processed. Emission factors are specified as follows:

- (1) hot air curing operations:
 - (i) using #10 compound: 0.0163 pounds of VOC per pound of rubber utilized;
 - (ii) using #14 compound: 0.0129 pounds of VOC per pound of rubber utilized;
 - (iii) using #13 compound: 0.0128 pounds of VOC per pound of rubber utilized;
 - (iv) using #3 compound: 0.00762 pounds of VOC per pound of rubber utilized;
 - (v) using #22 compound: 0.00294 pounds of VOC per pound of rubber utilized;
 - (vi) using #11 compound: 0.00184 pounds of VOC per pound of rubber utilized;
 - (vii) using #9 compound: 0.00163 pounds of VOC per pound of rubber utilized;
 - (viii) using #8 compound: 0.000825 pounds of VOC per pound of rubber utilized; and
- (2) mixing operations: 0.000291 pounds of VOC per pound of rubber utilized; and
- (3) milling operations: 0.000425 pounds of VOC per pound of rubber utilized; and
- (4) extruding operations: 0.0000697 pounds of VOC per pound of rubber utilized; or
- (5) other IDEM, OAQ approved emission factor(s).

In this case, for each pound of #10 compound that completes the four process steps, the total VOC emissions shall be calculated with 0.0163 pounds of VOC from hot curing, plus 0.000291 pounds of VOC from mixing, plus 0.000425 pounds of VOC from milling, plus 0.0000697 pounds of VOC from extrusion, which equals 0.0171 pounds of VOC emitted per pound of rubber produced, unless otherwise approved by IDEM, OAQ.

Emission factors in (1) through (4) above are from U.S. EPA's AP-42, Volume I, Fifth Edition, Chapter 4, Section 12.

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.1.1.
 - (1) The monthly throughputs of each type of rubber compound utilized for the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7));
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (2) Calendar dates covered in the compliance determination period.
 - (3) The total VOC emissions for each month calculated based on the equation in Condition D.1.3(a).
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.5 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.1.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.2

FACILITY OPERATION CONDITIONS

Emissions Unit Description:

- (c) One (1) Iron Fireman natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR1, constructed prior to September 21, 1983, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR1.
- (d) One (1) Iron Fireman natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR2, constructed in 1979, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR2.
- (e) One (1) Mohawk natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR3, constructed in 1979, rated at 6.30 MMBtu/hr, and exhausting to Stack ID: SBLR3.
- (f) One (1) Whirl Power natural gas-fired boiler, with No. 2 fuel oil as a back-up fuel, identified as BLR4, constructed in 1979, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR4.

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

Emission Limitations and Standards

D.2.1 Particulate [326 IAC 6-2]

Pursuant to 326 IAC 6-2-3(e) (Particulate Emission Limitations for Sources of Indirect Heating) the PM emissions from the four (4) natural gas-fired boilers, identified as BLR1, BLR2, BLR3, and BLR 4, with heat input capacities of 4.20, 4.20, 6.30, 4.20 MMBtu/hr, respectively, shall not exceed 0.6 lb/MMBtu heat input each.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF AIR QUALITY
 COMPLIANCE DATA SECTION**

MSOP Quarterly Report

Source Name: Sperry & Rice Manufacturing Company, LLC
 Source Address: 9146 U.S. 52, Brookville, Indiana 47012
 Mailing Address: 9146 U.S. 52, Brookville, Indiana 47012
 MSOP Permit No.: M047-24513-00012

Facility: 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7))
 Parameter: VOC emissions
 Limit: The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this limit shall be determined in accordance with permit Condition D.1.3.

Quarter: _____ YEAR: _____

Month	Column 1	Column 2	Column 1 + Column 2
	VOC Emissions This Month	VOC Emissions Previous 11 Months	VOC Emissions 12 Month Total
Month 1			
Month 2			
Month 3			

- No deviation occurred in this quarter.
- Deviation/s occurred in this quarter.
 Deviation has been reported on: _____

Submitted by: _____
 Title / Position: _____
 Signature: _____
 Date: _____
 Phone: _____

Attach a signed certification to complete this report.

**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:	Sperry & Rice Manufacturing Company, LLC
Address:	9146 U.S. 52
City:	Brookville, Indiana 47012
Phone #:	(765) 647-4141
MSOP #:	M047-24513-00012

I hereby certify that Sperry & Rice Manufacturing Company, LLC is :

still in operation.

I hereby certify that Sperry & Rice Manufacturing Company, LLC is :

no longer in operation.

in compliance with the requirements of MSOP No.: M047-24513-00012.

not in compliance with the requirements of MSOP No.: M047-24513-00012.

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, PM10, 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:

Mail to: Permit Administration & Development Section
Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

Sperry & Rice Manufacturing Company, LLC
9146 U.S. 52
Brookville, Indiana 47012

Affidavit of Construction

I, _____, being duly sworn upon my oath, depose and say:
(Name of the Authorized Representative)

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____
(Company Name)
4. I hereby certify that Sperry & Rice Manufacturing Company, LLC located at 9146 U.S. 52, Brookville, Indiana 47012, completed construction of the rubber products manufacturing plant on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on March 23, 2007 and as permitted pursuant to New Source Review Permit and Minor Source Operating Permit No.: M047-24513-00012, Plant ID No.: 047-00012 issued on _____.

Further Affiant said not.

I affirm under penalties of perjury that the representations contained in this affidavit are true, to the best of my information and belief.

Signature _____

Date _____

STATE OF INDIANA)
)SS

COUNTY OF _____)

Subscribed and sworn to me, a notary public in and for _____ County and State of Indiana
on this _____ day of _____, 20____. My Commission expires: _____.

Signature _____

Name _____ (typed or printed)

**Indiana Department of Environmental Management
Office of Air Quality**

Addendum to the
Technical Support Document for a New Source Review
and Minor Source Operating Permit (MSOP)

Source Name:	Sperry & Rice Manufacturing Company, LLC
Source Location:	9146 U.S. 52, Brookville, IN 47012
County:	Franklin
SIC Code:	3061
Operation Permit No.:	M047-24513-00012
Permit Reviewer:	Tanya White/EVP

On November 14, 2007, the Office of Air Quality (OAQ) had a notice published in the Brookville Democrat Newspaper, Brookville, Indiana, stating that Sperry & Rice Manufacturing Company, LLC had applied for a New Source Review and Minor Source Operating Permit (MSOP) to continue to operate a rubber products manufacturing plant. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit 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 permit should be issued as proposed.

Upon further review IDEM, OAQ has determined that it is necessary to make the following revisions to the MSOP and associated documents:

Revision 1

IDEM, OAQ has revised permit Condition D.1.1(b) and Appendix B (BACT Analysis) to replace the short-term VOC emission limit from pounds per hour to pounds of VOC per pound of rubber processed (lbs VOC/lb rubber). This revision is being made because if the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) processed rubber compound #10 (worst-case VOC emitting rubber compound utilized for this line) at the maximum capacity of 476 pounds of rubber per hour, the VOC emissions from the line would exceed the current VOC limitation of 5.708 pounds of VOC per hour.

In this case,

Hourly VOC emission rate (lbs/hr) = (Hot Air Curing Emission Factor (lbs VOC/lb rubber) + Mixing Operations Emission Factor (lbs VOC/lb rubber) + Milling Operations Emission Factor (lbs VOC/lb rubber) + Extruding Operations Emission Factor (lbs VOC/lb rubber)) * x Hourly Capacity (lbs rubber/hr)

Where,

Hot Air Curing Emission Factor (lbs VOC/lb rubber) = 1.63E-02 (worst-case when utilizing rubber compound #10)

Mixing Operations Emission Factor (lbs VOC/lb rubber) = 2.91E-04

Milling Operations Emission Factor (lbs VOC/lb rubber) = 4.25E-04

Extruding Operations Emission Factor (lbs VOC/lb rubber) = 6.97E-05

Hourly Capacity (lbs rubber/hr) = 476.00

The maximum hourly VOC emission rate for the line is as follows:

$$\text{Hourly VOC emission rate (lbs/hr)} = (1.63\text{E-}02 + 2.91\text{E-}04 + 4.25\text{E-}04 + 6.97\text{E-}05) \text{ lbs VOC/lb rubber} \times 476 \text{ lbs rubber/hr} = 8.13 \text{ lbs/hr}$$

* Emission factors above are from U.S. EPA's AP-42, Volume I, Fifth Edition, Chapter 4, Section 12.

Additionally, permit Condition D.1.1(b) is being revised in order to simplify this source's ability to comply with a short-term VOC limit. The revised short-term limit in D.1.1(b) is the summation of U.S. EPA's AP-42, Volume I, Fifth Edition, Chapter 4, Section 12 VOC emission factors for Hot Air Curing (utilizing rubber compound #10) plus Mixing Operations plus Milling Operations plus Extruding Operations, which equals 0.0171 ($1.63\text{E-}02 + 2.91\text{E-}04 + 4.25\text{E-}04 + 6.97\text{E-}05 = 0.0171$) pounds of VOC per pound of rubber produced on the line. IDEM, OAQ has made the following changes to the MSOP (additions in bold, deletions in ~~strikeout~~):

D.1.1 Volatile Organic Compounds (VOC) [326 IAC 8-1-6]

Pursuant to 326 IAC 8-1-6, IDEM, OAQ has determined that the following requirements represent BACT for the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)):

- (a) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed ~~5.708~~ **0.0171** pounds of VOC per ~~hour~~ **pound of rubber produced on the line.**

Revision 2

Permit Condition D.1.3(b) is being revised in order to be consistent with the changes to permit Condition D.1.1(b) as described above. Additionally, some of the language in Condition D.1.3(b) is being revised. The equation in permit Condition D.1.3(a) is being revised because the rubber compound throughput was inadvertently in units of pounds per hour (lbs/hour) rather than the correct units of pounds per month (lbs/month). IDEM, OAQ has made the following changes to the MSOP (additions in bold, deletions in ~~strikeout~~):

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2] [326 IAC 8-1-4]

- (a) Compliance with the VOC emission limit in Condition D.1.1(a) for the 3 1/2 inch vulcanization line (EXTMW1 (AC7)) shall be determined by the following equation, with compliance determined at the end of each month:

$$\text{VOC Emissions (tons)} = \sum_{n=1}^m \frac{[(\text{Monthly Throughput of each Rubber Compound Throughputs (lbs/hour month)}) \times (\text{Emission Factor(s) (lbs/lb)})^* / 2,000]}{< 25.0 \text{ tons per twelve (12) consecutive month period}}$$

Where,

n = Month Number (i.e. January = 1, February = 2, etc.); and

m = Total Number of Months in Period.

- (b) Compliance with the VOC emission limit in Condition D.1.1(b) for the 3 1/2 inch vulcanization line (EXTMW1 (AC7)) shall be determined by the following equation, with compliance determined at the end of each month:

$$\text{VOC Emissions (lbs/hour/lb rubber)} = [(\text{Throughput of each Rubber Compound Throughputs (lbs/hour)}) \times (\text{Emission Factor(s)(lbs/lb)})]$$

~~< 5.708~~ **0.0171 pounds of VOC emitted per hour of operation**
pound of rubber produced

*** Emission Factor(s) = Vulcanization Line emission factors for each rubber compound processed.** Emission factors are specified as follows:

- (1) hot air curing operations:
 - (i) using #10 compound: 0.0163 pounds of VOC per pound of rubber utilized;
 - (ii) using #14 compound: 0.0129 pounds of VOC per pound of rubber utilized;
 - (iii) using #13 compound: 0.0128 pounds of VOC per pound of rubber utilized;
 - (iv) using #3 compound: 0.00762 pounds of VOC per pound of rubber utilized;
 - (v) using #22 compound: 0.00294 pounds of VOC per pound of rubber utilized;
 - (vi) using #11 compound: 0.00184 pounds of VOC per pound of rubber utilized;
 - (vii) using #9 compound: 0.00163 pounds of VOC per pound of rubber utilized;
 - (viii) using #8 compound: 0.000825 pounds of VOC per pound of rubber utilized; and
- (2) mixing operations: 0.000291 pounds of VOC per pound of rubber utilized; and
- (3) milling operations: 0.000425 pounds of VOC per pound of rubber utilized; and
- (4) extruding operations: 0.0000697 pounds of VOC per pound of rubber utilized; or
- (5) other IDEM, OAQ approved emission factor(s).

In this case, for each pound of #10 compound that completes the four process steps, the total VOC emissions shall be calculated with 0.0163 pounds of VOC from hot curing, plus 0.000291 pounds of VOC from mixing, plus 0.000425 pounds of VOC from milling, plus 0.0000697 pounds of VOC from extrusion, which equals 0.0171 pounds of VOC emitted per pound of rubber produced, unless otherwise approved by IDEM, OAQ.

Emission factors in (1) through (4) above are from U.S. EPA's AP-42, Volume I, Fifth Edition, Chapter 4, Section 12.

Revision 3

Permit Condition D.1.4(a)(4) is being removed from the permit because permit Condition D.1.1 no longer has an hourly VOC emission limit. As such, Condition D.1.4(a)(4) is no longer necessary. IDEM, OAQ has made the following changes to the MSOP (additions in bold, deletions in ~~strikeout~~):

Record Keeping and Reporting Requirements [326 IAC 2-5.1-3(e)(2)] [326 IAC 2-6.1-5(a)(2)]

D.1.4 Record Keeping Requirements

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain records in accordance with (1) through (43) below. Records maintained for (1) through (43) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC emission limit established in Condition D.1.1.
 - (1) The monthly throughputs of each type of rubber compound utilized for the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7));
 - (A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.
 - (2) Calendar dates covered in the compliance determination period.
 - (3) The total VOC emissions for each month calculated based on the equation in Condition D.1.3(a).

~~(4) The total hourly VOC emissions calculated based on the equation in Condition D.1.3(b).~~

- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Revision 4

IDEM, OAQ has made the following change to the MSOP (additions in bold, deletions in ~~strikeout~~):

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION

MSOP Quarterly Report

Source Name: Sperry & Rice Manufacturing Company, LLC
Source Address: 9146 U.S. 52, Brookville, Indiana 47012
Mailing Address: 9146 U.S. 52, Brookville, Indiana 47012
MSOP Permit No.: M047-24513-00012

Facility: 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7))
Parameter: VOC emissions
Limit: The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. Compliance with this limit shall be determined in accordance with permit Condition D.1.3(a).

**Indiana Department of Environmental Management
Office of Air Quality**

Technical Support Document (TSD) for a New Source Review and Minor Source
Operating Permit (MSOP)

Source Background and Description

Source Name:	Sperry & Rice Manufacturing Company, LLC
Source Location:	9146 U.S. 52, Brookville, IN 47012
County:	Franklin
SIC Code:	3061
Operation Permit No.:	M047-24513-00012
Permit Reviewer:	Tanya White/EVP

The Office of Air Quality (OAQ) has reviewed an application from Sperry & Rice Manufacturing Company, LLC relating to the operation of a rubber products manufacturing plant.

History

This source was previously issued Registration No.: 24-01-83-0017 by IDEM, OAQ, prior to January 1, 1983. The Permittee did not register its source in a timely manner by November 25, 2000 as required pursuant to 326 IAC 2-5.5.2(b). During this permit review, it was determined that the potential to emit for this source is greater than the registration thresholds in 326 IAC 2-5.5-1(b)(1). Therefore, the source no longer qualifies for a registration.

Permitted Emission Units and Pollution Control Equipment

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

- (a) Two (2) hot and two (2) cold feed rubber extruders, identified as REXT1 through REXT4, constructed in 1968, each with a maximum capacity of 490 pounds of rubber per hour, and exhausting to Stack ID: SREXT.
- (b) One (1) Banburry mixer/mill, identified as BBM, with a maximum capacity of 1,250 pounds per hour, and exhausting to Stack ID: SDCBBM and using the following control device:
 - (i) One (1) multi-compartment baghouse for particulate control with an outlet grain loading of less than 0.03 grains per standard cubic feet and less than 4,000 cubic feet per minute.
- (c) One (1) Iron Fireman natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR1, constructed prior to September 21, 1983, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR1.
- (d) One (1) Iron Fireman natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR2, constructed in 1979, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR2.
- (e) One (1) Mohawk natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR3, constructed in 1979, rated at 6.30 MMBtu/hr, and exhausting to Stack ID: SBLR3.

- (f) One (1) Whirl Power natural gas-fired boiler, with No. 2 fuel oil as a back-up fuel, identified as BLR4, constructed in 1979, rated at 4.20 MMBtu/hr, and exhausting to Stack ID: SBLR4.
- (g) One (1) No. 2 fuel oil storage tank, identified as FOST, with a maximum storage capacity of 10,000 gallons.
- (h) The following VOC and HAP storage containers:
 - (i) Storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs equal to or less than twelve thousand (12,000) gallons.
- (i) One (1) warm-up mill, identified as WUM, constructed in 1960, with a maximum capacity of 1,250 pounds per hour, and exhausting fugitively.
- (j) Soapstone dusting operations, identified as DUST, and exhausting to Stack ID: SMW8.
- (k) Water based activities, including the following:
 - (i) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to one percent (1%) by volume.
- (l) Water related activities, including the following:
 - (i) Production of hot water for on-site personal use not related to any industrial or production process;
 - (ii) Steam traps, vents, leaks, and safety relief valves;
 - (iii) Laundry operations using only water solutions of bleach or detergents;
 - (iv) Boiler water treatment operations, not including cooling towers; and
 - (v) Oxygen scavenging (deaeration) of water.
- (m) Activities related to ventilation, venting equipment, and refrigeration, including the following:
 - (i) Ventilation exhausts, central chiller water systems, refrigeration, and air conditioning equipment, not related to any industrial or production process, including natural draft hoods or ventilating systems that do not remove air pollutants;
 - (ii) Stacks and vents from plumbing traps used to prevent the discharge of sewer gases, handling domestic sewage only, excluding those at wastewater treatment plants or those handling any industrial waste; and
 - (iii) Air vents from air compressors.
- (n) Activities related to routine fabrication, maintenance, and repair of buildings, structures, equipment, or vehicles at the source where air emissions from those activities would not be associated with any commercial production process, including the following:
 - (i) Painting, including interior and exterior painting of buildings, and solvent use excluding degreasing operations utilizing halogenated organic solvents; and
 - (ii) Brazing, soldering, or welding operations and associated equipment.
- (o) Activities performed using hand-held equipment, including the following:
 - (i) Cutting, excluding cutting torches;
 - (ii) Drilling;

- (iii) Grinding;
 - (iv) Machining wood, metal, or plastic; and
 - (v) Sawing.
- (p) Housekeeping and janitorial activities and supplies, including the following:
- (i) Vacuum cleaning systems used exclusively for housekeeping or custodial activities, or both;
 - (ii) Steam cleaning activities;
 - (iii) Rest rooms and associated cleanup operations and supplies; and
 - (iv) Mobile floor sweepers and floor scrubbers.
- (q) Office related activities, including the following:
- (i) Office supplies and equipment;
 - (ii) Photocopying equipment and associated supplies;
 - (iii) Paper shredding; and
 - (iv) Blueprint machines, photographic equipment, and associated supplies.
- (r) Storage equipment and activities, including the following:
- (i) Pressurized storage tanks and associated piping for Liquid Petroleum Gas (LPG);
 - (ii) Storage tanks, vessels, and containers holding or storing liquid substances that do not contain any VOC or HAP;
 - (iii) Storage of drums containing maintenance raw materials; and
 - (iv) Portable containers used for the collection, storage, or disposal of materials provided the container capacity is equal to or less than forty-six hundredths (0.46) cubic meters and the container is closed, except when the material is added or removed.
- (s) Activities generating limited amounts of fugitive dust, including the following:
- (i) Road salting and sanding.
- (t) Activities associated with production, including the following:
- (i) Air compressors and pneumatically operated equipment, including hand tools.

Unpermitted Emission Units and Pollution Control Equipment

The source also consists of the following unpermitted emission units:

- (a) One (1) 3 1/2 inch continuous vulcanization line, identified as EXTMW1 (AC7), constructed in 1999, utilizing the worst-case VOC and HAP emitting rubber compound #10, with a maximum capacity of 476 pounds of rubber per hour, and exhausting to Stack ID: SMW3.
- (b) One (1) 4 1/2 inch continuous vulcanization line, identified as EXTMW2 (AC8), constructed in 1989, utilizing the worst-case VOC and HAP emitting rubber compound #8, with a maximum capacity of 514 pounds of rubber per hour, and exhausting to six (6) stacks (Stack IDs: SMW1, SMW2, SMW4-SMW7).
- (c) One (1) rubber autoclave, identified as AC1, constructed in 1968, with a maximum capacity of 37.50 pounds of rubber per hour, and exhausting to Stack ID: SAC1.

- (d) One (1) rubber autoclave, identified as AC2, constructed in 1969, with a maximum capacity of 37.50 pounds of rubber per hour, and exhausting to Stack ID: SAC2.

Emission Units and Pollution Control Equipment Removed from the Source

The following emission units and/or pollution control devices were removed from the plant:

- (a) Five (5) rubber autoclaves, identified as AC3, AC4, AC6-AC8; and
- (b) One (1) natural gas-fired boiler with No. 2 fuel oil as a back-up fuel, identified as BLR5, and rated at 4.20 MMBtu/hr.

Existing Approvals

The source was previously operating under Registration No.: 24-01-83-0017 issued by IDEM, OAQ, prior to January 1, 1983.

Enforcement Issue

- (a) IDEM is aware that the Permittee did not apply for a registration in a timely manner.
- (b) IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. The subject equipment is listed in this above under "Unpermitted Emission Units and Pollution Control Equipment".

IDEM is reviewing these matters and will take appropriate action. This proposed permit is intended to satisfy the requirements of the construction permit rules.

Stack Summary

Stack ID	Operation	Diameter (feet)	Height (feet)	Flow Rate (acfm)	Temperature (°F)
SREXT	Hot and Cold Feed Rubber Extruders (REXT1-REXT4)	0.67	21.00	4,380	60
SMW3	Vulcanization Line (EXTMW1 (AC7))	2.00	20.00	1,180	200
SMW1	Vulcanization Line (EXTMW2 (AC8))	0.67	22.00	4,380	200
SMW2		1.00	24.00	4,380	200
SMW4		0.67	24.00	4,380	200
SMW5		0.67	24.00	4,380	200
SMW6		1.00	24.00	4,380	200
SMW7		1.00	24.00	4,380	200
SDCBBM		Banburry Mixer/Mill (BBM)	0.67	16.00	4,380
SMW8	Soapstone Dusting Operation (DUST)	0.67	21.00	4,380	60
SAC1	Rubber Autoclave (AC1)	0.17	11.00	4,380	325
SAC2	Rubber Autoclave (AC2)	0.17	11.00	4,380	325
SBLR1	Natural Gas-Fired Boiler (BLR1)	1.00	23.00	4,380	400
SBLR2	Natural Gas-Fired Boiler (BLR2)	1.00	22.00	4,380	400
SBLR3	Natural Gas-Fired Boiler (BLR3)	1.67	20.00	4,380	400
SBLR4	Natural Gas-Fired Boiler (BLR4)	1.00	22.00	4,380	400

Recommendation

The staff recommends to the Commissioner that this New Source Review and MSOP 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.

An application for the purposes of this review was received on March 23, 2007. Additional information was received on August 14, 2007.

Emission Calculations

See Appendix A of this document for detailed emission calculations (pages 1 through 9).

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/yr)
PM	4.85
PM10	5.62
SO ₂	8.40
VOC	38.24
CO	6.82
NO _x	11.83

HAPs	Potential to Emit (tons/yr)
Carbon Disulfide	9.58
Manganese	0.0001
Hexane	0.15
Total HAPs	12.00

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM10, SO₂, VOC, CO, and NO_x are less than 100 tons per year and the potential to emit of SO₂ and VOC are greater than 25 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. An MSOP will be issued.
- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is less than ten (10) tons per year and the potential to emit of a combination of HAPs is less than twenty-five (25) tons per year.

County Attainment Status

The source is located in Franklin County.

Pollutant	Status
PM2.5	Attainment
PM10	Attainment
SO ₂	Attainment
NO ₂	Attainment
8-hour Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) 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.
- (b) Volatile organic compounds (VOC) 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 are considered when evaluating the rule applicability relating to ozone. Franklin County has been designated as attainment or unclassifiable 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.

- (c) Franklin 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.
- (d) Franklin County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.
- (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 particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD applicability.

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	Potential to Emit (tons/yr)
PM	3.87
PM ₁₀	4.64
SO ₂	8.40
VOC	27.59
CO	6.82
NO _x	11.83

HAPs	Potential to Emit (tons/yr)
Carbon Disulfide	< 10
Total HAPs	12.00

- (a) This existing source is not a major stationary source for PSD purposes because no attainment regulated pollutant is emitted at a rate of 250 tons per year or greater and it is not one of the 28 listed source categories.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This source is 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 per year.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 or 40 CFR Part 60) included in this permit for this source.

- (b) The requirements of the New Source Performance Standards (40 CFR Part 60, Subpart D, Subpart Da, Subpart Db, and Subpart Dc) are not included in the permit for the four (4) natural gas-fired boilers (BLR1-BLR4), using No. 2 fuel oil as a back-up fuel, because each boiler has a maximum heat input capacity of less than 10 MMBtu/hr.
- (c) The requirements of the New Source Performance Standard for Volatile Organic Liquid (40 CFR Part 60, Subpart Kb) apply to each storage vessel with a capacity of greater than or equal to 75 cubic meters that is used to store volatile organic liquids for which construction, reconstruction, or modification commenced after July 23, 1984. The one (1) 10,000 gallon No. 2 fuel oil storage tank is not subject to this rule because the tank has a capacity of less than 75 cubic meters.
- (d) The requirements of the New Source Performance Standard for VOC Emissions from the Polymer Manufacturing Industry (40 CFR Part 60, Subpart DDD) apply to facilities involved in the manufacture of polypropylene, polyethylene, polystyrene, or poly (ethylene terephthalate). This source manufactures rubber extruded products using raw and synthetic materials and does not manufacture any of the listed polymers. Therefore, the requirements of 40 CFR Part 60, Subpart DDD do not apply to this source.
- (e) There are no National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20, 40 CFR Part 61, and 326 IAC Part 63) included in this permit for this source.
- (f) The requirements of the National Emission Standards for Hazardous Emissions: Group I Polymers and Resins, 40 CFR Part 63, Subpart U, apply to sources that manufacture elastomers, which are located at a major source of hazardous air pollutants (HAPs). This source does not manufacture elastomer products. This source uses elastomers in the manufacturing of rubber products. Additionally, this source is not a major source of HAPs. Therefore, the requirements of 40 CFR Part 63, Subpart U do not apply to this source.
- (g) The requirements of the National Emissions Standards for Hazardous Rubber Tire Manufacturing, 40 CFR Part 63, Subpart XXXX, apply to sources that manufacture rubber tires, which are located at a major source of hazardous air pollutants (HAPs). This source does not produce rubber tires and/or components that are integral to rubber tires. Components of rubber tires include, but are not limited to, rubber compounds, sidewalls, tread, tire beads, tire cord and liners. Other components often associated with rubber tires but not integral to the tire, such as wheels, inner tubes, tire bladders, and valve stems, are not components of rubber tires or tire cord and are not subject to this subpart. This source does utilize rubber tire parts in their extrusion process. However, this source does not manufacture rubber tires, tire cords, or any rubber tire components as final products, and the source does not apply puncture sealant. Additionally, this source is not a major source of HAPs. Therefore, the requirements of 40 CFR Part 63, Subpart XXXX do not apply to the source.
- (h) Pursuant to 40 CFR 63.5780 (National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production), the requirements of 40 CFR Part 63, Subpart WWWW applies to reinforced plastic composites production at major sources of HAP emissions. Reinforced plastic composites production is limited to operations in which reinforced and/or nonreinforced plastic composites or plastic molding compounds are manufactured using thermoset resins and/or gel coats that contain styrene to produce plastic compounds. This source manufactures extruded rubber products and does not manufacture any reinforced plastics composites. Therefore, the requirements of 40 CFR Part 63, Subpart WWWW do not apply to this source.

- (i) Pursuant to 40 CFR 63.460 (National Emissions Standards for Hazardous Air Pollutants for Halogenated Solvent Cleaning), the requirements of 40 CFR Part 63, Subpart T apply to each individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machine that uses any halogenated solvents, in a concentration of greater than 5 percent by weight, as a cleaning and/or drying agent. This source does not use any solvent cleaner that contain halogenated materials in concentrations greater than 5 percent by weight. Therefore, the requirements of 40 CFR Part 63, Subpart T do not apply to this source.
- (j) The requirements of the National Emission Standards for Hazardous Emissions for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR Part 63, Subpart MMMM, apply to miscellaneous metal parts and products surface coating facilities, which are located at a major source of hazardous air pollutants (HAPs). This source does not apply surface coatings to any miscellaneous metal parts and products. Additionally, this source is not a major source of HAPs. Therefore, the requirements of 40 CFR Part 63, Subpart MMMM do not apply to this source.
- (k) The requirements of the National Emission Standards for Hazardous Emissions for Surface Coating of Plastic Parts and Products, 40 CFR Part 63, Subpart PPPP, apply to plastic parts and products surface coating facilities, which are located at a major source of hazardous air pollutants (HAPs). This source does not apply surface coatings to any plastic parts and products. Additionally, this source is not a major source of HAPs. Therefore, the requirements of 40 CFR Part 63, Subpart PPPP do not 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 uncontrolled potential emissions of all criteria pollutants are less than 250 tons per year. The uncontrolled potential emissions of particulate matter (PM) are also less than 250 tons per year. Additionally, this source is not one of the 28 listed source categories under 326 IAC 2-2-1(gg). Therefore, this source is not subject to the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)).

326 IAC 2-6 (Emission Reporting)

Pursuant to 326 IAC 2-6-1, this source is not subject to this rule because it is not required to have an operating permit under 326 IAC 2-7 (Part 70), it is not located in Lake, LaPorte, or Porter counties, and it does not emit lead into the ambient air at levels equal to or greater than 5 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 the 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.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

This source will emit less than 10 tons per year of a single HAP and less than 25 tons per year of a combination of HAPs. Therefore, the requirements of 326 IAC 2-4.1 do not apply.

State Rule Applicability – Individual Facilities

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

- (a) The Banbury mixer/mill, identified as BBM, has an uncontrolled potential to emit of PM less than 0.551 pounds per hour. Pursuant to 326 IAC 6-3-1(b)(14), operations that have an uncontrolled potential to emit of PM less than 0.551 pounds per hour are exempt from the requirements of 326 IAC 6-3-2.
- (b) The welding operations utilize less than six hundred twenty-five (625) pounds of rod or wire per day. Pursuant to 326 IAC 6-3-1(b)(9), the welding operations are exempt from the requirements of 326 IAC 6-3.
- (c) The four extruders, identified as REXT1-REXT4, have a combined uncontrolled potential to emit of PM less than 0.551 pounds per hour. Pursuant to 326 IAC 6-3-1(b)(14), operations that have an uncontrolled potential to emit of PM less than 0.551 pounds per hour are exempt from the requirements of 326 IAC 6-3-2.
- (d) The soapstone dusting operations, identified as DUST, have an uncontrolled potential to emit of PM less than 0.551 pounds per hour. Pursuant to 326 IAC 6-3-1(b)(14), operations that have an uncontrolled potential to emit of PM less than 0.551 pounds per hour are exempt from the requirements of 326 IAC 6-3-2.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-3(a) (Particulate Matter Emission Limitations for Sources of Indirect Heating), indirect heating units which have a heat input capacity of 10 MMBtu/hr or less and which began operation before September 21, 1983, are subject to this rule. The four (4) boilers, identified as BLR1, BLR2, BLR3, and BLR4, with heat input ratings of 4.2, 4.2, 6.3, and 4.2 MMBtu per hour, respectively, each constructed prior to September 21, 1983, firing natural gas or No. 2 fuel oil, are subject to 326 IAC 6-2-3. Pursuant to this rule particulate emissions shall be limited by the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

$$Pt = \frac{50 \times 0.67 \times 21.14}{76.5 \times 18.9^{0.75} \times 4^{0.25}} = 0.94 \text{ lb/MMBtu}$$

Where:

Pt = Pounds of particulate matter emitted per million Btu heat input (lb/MMBtu).

C = Maximum ground level concentration with respect to distance from the point source at the "critical" wind speed for level terrain. This shall equal 50 micrograms per cubic meter (μm^3) for a period not to exceed a sixty (60) minute time period.

Q = Total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input.

N = Number of stacks in fuel burning operation.

a = Plume rise factor which is used to make allowance for less than theoretical plume rise. The value 0.67 shall be used for Q less than or equal to 1,000 MMBtu/hr heat input. The value 0.8 shall be used for Q greater than 1,000 MMBtu/hr heat input.

h = Stack height in feet. The stack heights for the associated boilers, identified as BLR1, BLR 2, BLR 3, and BLR 4, are 23, 22, 20, and 22 feet, respectively. Therefore, the average stack height calculated as follows is 21.14:

$$h = \frac{\sum_{i=1}^n (H_i * pa_i * Q_i)}{\sum_{i=1}^n (pa_i * Q_i)}$$

Where:

pa_i = Emission rate in lb/MMBtu using the emission factor from AP-42;
H_i = Stack height in feet for each boiler;
Q_i = Maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input of each boiler.

The allowable particulate emission rate from each boiler, based on the above equation, is 0.94 pounds per MMBtu heat input. However, pursuant to 326 IAC 6-2-3(e), the allowable particulate emission rate for any facility which has 250 MMBtu per hour heat input or less and which began operation after June 8, 1972, shall not exceed 0.6 pounds per MMBtu heat input. Therefore, the allowable particulate emission rate for the four boilers (BLR1, BLR2, BLR3, and BLR4) is 0.6 pounds of PM per MMBtu heat input each.

Boiler PM Compliance Determination (Natural Gas):

1.9 lb/MMscf * 1/1,020 (scf/Btu) = 0.0019 lb PM/MMBtu

Boiler PM Compliance Determination (No. 2 Fuel Oil):

2.0 lb/kgal * 1Kgal/1,000 gal * 1/140,000 gal/Btu * 1,000,000 Btu/MMBtu = 0.01 lb PM/MMBtu

The boilers (BLR1, BLR2, BLR3, and BLR 4) emit a maximum of 0.01 pounds of PM per MMBtu heat input each. Therefore, the boilers are able to comply with 326 IAC 6-2-3.

326 IAC 7-1.1 (Sulfur Dioxide Emission Limitations)

Pursuant to 326 IAC 7-1.1, the combustion units (Boilers BLR1, BLR2, BLR3, and BLR4) at this source are not subject to the sulfur dioxide emission limitations and other requirements under 326 IAC 2, 326 IAC 7-1.1-2, 326 IAC 7-2, 326 IAC 7-4, 326 IAC 7-4.1, and 326 IAC 12 because the potential to emit of SO₂ for each of the combustions units are less than 25 tons per year and less than 10 pounds per hour.

326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)

The requirements of 326 IAC 8-4-3 apply to petroleum liquid storage vessels with capacities greater than 39,000 gallons contain VOCs whose true vapor pressure is greater than 10.5 kPa, which were installed after January 1, 1980. The construction date of the one (1) 10,000 gallon No. 2 fuel oil storage tank is unknown. However, even though this storage vessel may have been constructed after January 1, 1980, the requirements of 326 IAC 8-4-3 do not apply because the storage tank has a capacity of less than 39,000 gallons.

326 IAC 8-1-6 (New facilities: General Reduction Requirements)

The requirements of 326 IAC 8-1-6 are applicable to facilities constructed after January 1, 1980 and which have the potential to emit of 25 tons per year or more of VOCs. The two (2) continuous vulcanization lines, identified as EXTMW1 (AC7) and EXTMW2 (AC8), were each constructed after January 1, 1980. However, only one of the two vulcanization lines (EXTMW1 (AC7)) has a potential to emit of VOCs greater than 25 tons per year (See Appendix A, Page 7). Since the vulcanization line EXTMW1 (AC7) was constructed and operated prior to receipt of the proper permit, the source cannot opt out of the BACT analysis as allowed under 326 IAC 8-1-6 by limiting VOC emissions below 15 lbs per day.

Pursuant to 326 IAC 8-1-6, IDEM, OAQ has determined that the following requirements represent BACT for the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)):

- (a) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed 5.708 pounds of VOC per hour.

Refer to Appendix B for the 326 IAC 8-1-6 (BACT) analysis.

- (1) Compliance with the VOC emission limits in (a) above for the 3 1/2 inch vulcanization line (EXTMW1 (AC7)) shall be determined by the following equation, with compliance determined at the end of each month:

$$\text{VOC Emissions (tons)} = \sum_{n=1}^m \left[\frac{\text{(Rubber Compound Throughputs (lbs/hour) x Emission Factor(s)(lbs/lb)}}{2,000} \right] < 25.0 \text{ tons per twelve (12) consecutive month period}$$

Where,

n = Month Number (i.e. January = 1, February = 2, etc.); and
m = Total Number of Months in Period.

- (2) Compliance with the VOC emission limits in (b) above for the 3 1/2 inch vulcanization line (EXTMW1 (AC7)) shall be determined by the following equation, with compliance determined at the end of each month:

$$\text{VOC Emissions (lbs/hour)} = \left[\text{(Rubber Compound Throughputs (lbs/hour) x Emission Factor(s)(lbs/lb)} \right] < 5.708 \text{ pounds per hour of operation}$$

*Emission factors are specified as follows:

- (1) hot air curing operations:
 - (i) using #10 compound: 0.0163 pounds of VOC per pound of rubber utilized;
 - (ii) using #14 compound: 0.0129 pounds of VOC per pound of rubber utilized;
 - (iii) using #13 compound: 0.0128 pounds of VOC per pound of rubber utilized;
 - (iv) using #3 compound: 0.00762 pounds of VOC per pound of rubber utilized;
 - (v) using #22 compound: 0.00294 pounds of VOC per pound of rubber utilized;
 - (vi) using #11 compound: 0.00184 pounds of VOC per pound of rubber utilized;
 - (vii) using #9 compound: 0.00163 pounds of VOC per pound of rubber utilized;
 - (viii) using #8 compound: 0.000825 pounds of VOC per pound of rubber utilized; and
- (2) mixing operations: 0.000291 pounds of VOC per pound of rubber utilized; and
- (3) milling operations: 0.000425 pounds of VOC per pound of rubber utilized; and
- (4) extruding operations: 0.0000697 pounds of VOC per pound of rubber utilized; or
- (5) other IDEM, OAQ approved emission factor(s).

Emission factors in (1) through (4) above are from U.S. EPA's AP-42, Volume I, Fifth Edition, Chapter 4, Section 12.

326 IAC 8-6 (Organic Solvent Emission Limitations)

This rule applies to sources existing as of January 1, 1980, located in Lake and Marion Counties, as well as to sources commencing operation after October 7, 1974 and prior to January 1, 1980 that are located anywhere in the state, with potential VOC emissions of 100 tons per year or more, and not regulated by any other provision of Article 8. The source was in operation before October 7, 1974 and the potential emissions of VOC are less than 100 tons per year. Therefore, this rule does not apply to this source.

There are no other Article 8 (326 IAC 8) rules applicable to this source.

Conclusion

The continued operation of this rubber products manufacturing plant shall be subject to the conditions of this New Source Review and Minor Source Operating Permit No.: M047-24513-00012.

Appendix A: Emission Calculations
Emissions Summary

Company Name: Sperry & Rice Manufacturing Company, LLC
 Address: 9146 U.S. 52, Brookville, IN 47012
 Permit Number: M047-24513-00012
 Reviewer: Tanya White/EVP
 Date: 08/20/07

Potential to Emit (tons/year)						
Pollutant	Emissions Generating Activity					
	Boilers (Natural Gas/No. 2 Fuel Oil Combustion)	Banbury Mixer/Mill (BBM), Rubber Extruders (REXT 1 - REXT 4), and Autoclaves (AC1 and AC2)	Two Vulcanization Lines (EXTMW1 (AC7) and EXTMW2 (AC8))	Soapstone Dusting Operations	Welding Operations	Total
PM	1.18	1.22	1.25	1.20	0.0018	4.85
PM-10	1.95	1.22	1.25	1.20	0.0018	5.62
SO ₂	8.40	0.00	0.00	0.00	0.00	8.40
NO _x	11.83	0.00	0.00	0.00	0.00	11.83
VOC	0.45	0.25	37.54	0.00	0.00	38.24
CO	6.82	0.00	0.00	0.00	0.00	6.82
total HAPs	0.15	2.70	9.14	0.00	0.0001	12.00
worst-case single HAP	0.15	2.31	7.27	0.00	0.0001	9.58
Hexane						Carbon Disulfide
Total emissions based on rated capacity at 8,760 hours/year without controls and limitations.						Carbon Disulfide

Controlled/Limited Potential to Emit (tons/year)						
Pollutant	Emissions Generating Activity					
	Boilers (Natural Gas/No. 2 Fuel Oil Combustion)	Banbury Mixer/Mill (BBM), Rubber Extruders (REXT 1 - REXT 4), and Autoclaves (AC1 and AC2)	Two Vulcanization Lines (EXTMW1 (AC7) and EXTMW2 (AC8))*	Soapstone Dusting Operations	Welding Operations	Total
PM	1.18	0.23	1.25	1.20	0.0018	3.87
PM-10	1.95	0.23	1.25	1.20	0.0018	4.64
SO ₂	8.40	0.00	0.00	0.00	0.00	8.40
NO _x	11.83	0.00	0.00	0.00	0.00	11.83
VOC	0.45	0.25	26.90	0.00	0.00	27.59
CO	6.82	0.00	0.00	0.00	0.00	6.82
total HAPs	0.15	2.70	9.14	0.00	0.0001	12.00
worst-case single HAP	0.15	2.31	7.27	0.00	0.0001	9.58
Hexane						Carbon Disulfide
Total emissions based on rated capacity at 8,760 hours/year, after enforceable controls and limitations.						Carbon Disulfide

* The emission of VOC from the 3 1/2 inch vulcanization line (EXTMW1 (AC7)) is limited to less than twenty-five (25) tons per year in order to comply with 326 IAC 8-1-6 (BACT).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MMBtu/hr <100
Small Boilers (BLR1, BLR2, BLR3, BLR4)

Company Name: Sperry & Rice Manufacturing Company, LLC
Address: 9146 U.S. 52, Brookville, IN 47012
Permit Number: M047-24513-00012
Reviewer: Tanya White/EVP
Date: 08/20/07

Heat Input Capacity
MMBtu/hr

18.90

Potential Throughput
MMCF/yr

162.32

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM-10*	SO ₂	NOx	VOC	CO
1.90	7.60	0.60	100.00	5.50	84.00	
Potential Emissions in tons/yr	0.15	0.62	0.05	**see below	0.45	6.82

*PM emission factor is filterable PM only. PM-10 emission factor is filterable and condensable PM-10 combined.
 **Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

Worst-case pollutants for natural gas combustion are VOC and CO. Worst-case pollutants for No. 2 fuel oil combustion are PM/PM-10, SO₂, and NOx. All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu
 MMCF = 1,000,000 Cubic Feet of Gas
 *PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 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)
 Potential Emissions (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
 See next page for HAP emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MMBtu/hr <100
Small Boilers (BLR1, BLR2, BLR3, BLR4)
HAP Emissions

Company Name: Sperry & Rice Manufacturing Company, LLC
Address: 9146 U.S. 52, Brookville, IN 47012
Permit Number: M047-24513-00012
Reviewer: Tanya White/EVP
Date: 08/20/07

		HAPs - Organics			
Emission Factor in lb/MMCF	Benzene 2.10E-03	Dichlorobenzene 1.20E-03	Formaldehyde 7.50E-02	Hexane 1.80E+00	Toluene 3.40E-03
Potential Emissions in tons/yr	1.70E-04	9.74E-05	6.09E-03	1.46E-01	2.76E-04

		HAPs - Metals			
Emission Factor in lb/MMCF	Lead 5.00E-04	Cadmium 1.10E-03	Chromium 1.40E-03	Manganese 3.80E-04	Nickel 2.10E-03
Potential Emissions in tons/yr	4.06E-05	8.93E-05	1.14E-04	3.08E-05	1.70E-04

Methodology is the same as previous page.

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

**Appendix A: Emissions Calculations
No. 2 Fuel Oil Boiler (< 100 MMBtu/hr) (Back-up Fuel)
Small Boilers (BLR1, BLR2, BLR3, BLR4)**

Company Name: Sperry & Rice Manufacturing Company, LLC
Address: 9146 U.S. 52, Brookville, IN 47012
Permit Number: M047-24513-00012
Reviewer: Tanya White/EVP
Date: 08/20/07

Heat Input Capacity Potential Throughput
 MMBtu/hr kgals/year S = Weight % Sulfur

18.90
1182.60
0.10

	Pollutant					
	PM*	PM-10	SO ₂	NOx	VOC	CO
Emission Factor in lb/kgal	2.00	3.30	14.20 <i>(142.0S)</i>	20.00	0.34	5.00
Potential Emissions in tons/yr	1.18	1.95	8.40	11.83	0.20	2.96

Methodology

Worst-case pollutants for natural gas combustion are VOC and CO. Worst-case pollutants for No. 2 fuel oil combustion are PM/PM-10, SO₂, and NOx.

1 gallon of No. 2 Fuel Oil has a heating value of 140,000 Btu

Potential Throughput (kgals/year) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1kgal per 1000 gallon x 1 gal per 0.140 MM Btu

*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see errata file)

Potential Emissions (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton

See next page for HAP emission calculations.

Appendix A: Emissions Calculations
No. 2 Fuel Oil Boiler (< 100 MMBtu/hr)
Small Boilers (BLR1, BLR2, BLR3, BLR4)
HAP Emissions

Company Name: Sperry & Rice Manufacturing Company, LLC
Address: 9146 U.S. 52, Brookville, IN 47012
Permit Number: M047-24513-00012
Reviewer: Tanya White/EVP
Date: 08/20/07

		HAPs - Metals				
		Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/MMBtu		4.00E-06	3.00E-06	3.00E-06	3.00E-06	9.00E-06
Potential Emissions in tons/yr		3.31E-04	2.48E-04	2.48E-04	2.48E-04	7.45E-04

		HAPs - Metals (continued)			
		Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/MMBtu		3.00E-06	6.00E-06	3.00E-06	1.50E-05
Potential Emissions in tons/yr		2.48E-04	4.97E-04	2.48E-04	1.24E-03

Methodology is the same as previous page.
 No data was available in AP-42 for organic HAPs.
 Potential Emissions (tons/year) = Throughput (MMBtu/hr) x Emission Factor (lb/MMBtu) x 8,760 hrs/yr / 2,000 lb/ton

Appendix A: Emissions Calculations
 Banbury Mixer/Mill (BBM), Rubber Extruders (REXT1 through REXT4) and Autoclaves (AC1 and AC2)

Company Name: Sperry & Rice Manufacturing Company, LLC
 Address: 9146 U.S. 52, Brookville, IN 47012
 Permit Number: M047-24513-00012
 Reviewer: Tanya White/EVP
 Date: 08/20/07

Emission Unit	Maximum Process Throughput (lb/hr)	Maximum Process Throughput (lb/yr)	# 8 Compound VOC Emission Factor (lb/lb rubber)*	Total HAPs Emission Factor (lb/lb rubber)	Carbon Disulfide HAP Emission Factor (lb/lb rubber)	PMPM-10 Emission Factor (lb/lb rubber)	Total VOC Emissions (tons/yr)	Total HAP Emissions (tons/yr)	Carbon Disulfide HAP Emissions (tons/yr)	Particulate (PMPM-10) Control Device	PMPM-10 Emissions (tons/yr)	Controlled PMPM-10 Emissions (tons/yr)**
Autoclave Curing (AC 1 and AC2)	75.00	657,000	6.65E-05	6.04E-03	5.93E-03	0.00E+00	0.02	1.98	1.95	None	0.00	0.00
Banbury Mixing (BBM)**	1,250.00	10,950,000	1.47E-05	5.58E-05	2.81E-05	2.22E-04	0.08	0.31	0.15	Baghouse	1.22	0.23
Banbury Milling (BBM)	1,250.00	10,950,000	2.14E-05	2.89E-05	1.45E-05	0.00E+00	0.12	0.16	0.08	None	0.00	0.00
Extruders (REXT 1 through REXT4)	1,960.00	17,169,600	3.52E-06	2.99E-05	1.50E-05	2.67E-08	0.03	0.26	0.13	None	0.00	0.00
Potential to Emit (tons/yr) =							0.25	2.70	2.31		1.22	0.23

Methodology
 Potential to Emit (tons/yr) = Maximum Process Throughput (lb/yr) x Emission Factor (lb/lb rubber) x 1/2000 (ton/lbs)
 Emission Factors are from AP-42, Volume I, Fifth Edition, Chapter 4, Section 12.
 *Rubber compound #10 cannot be processed in the autoclaves (AC1 and AC2). Therefore the worst-case emission estimates are based on rubber compound #9.
 **The particulate emissions from the Banbury Mixer/Mill are controlled by a baghouse. The control efficiency has conservatively been estimated at 81% (Overall Control Efficiency = 90% Capture x 90% Control = 81%)
 ***Controlled PMPM-10 Emissions (tons/yr) = Maximum Process Throughput (lb/yr) x PMPM-10 Emission Factor (lb/lb rubber) x 1/2000 (ton/lbs)) x (1-Overall Control Efficiency)

Appendix A: Emissions Calculations
Two Vulcanization Lines (EXTMW1 (AC 7) and EXTMW2 (AC8))

Company Name: Sperry & Rice Manufacturing Company, LLC
Address: 9146 U.S. 52, Brookville, IN 47012
Permit Number: M047-24513-00012
Reviewer: Tanya White/EVP
Date: 08/20/07

1. 3 1/2 inch vulcanization line (EXTMW1 (AC7)) (Compound #10)

Emission Unit	Maximum Process Throughput (lb/hr)	Maximum Process Throughput (lb/yr)	# 10 Compound VOC Emission Factor (lb/lb rubber)	# 8 Compound VOC Emission Factor (lb/lb rubber)	PM/PM-10 Emission Factor (lb/lb rubber)	Total HAPs Emission Factor (lb/lb rubber)	Carbon Disulfide HAP Emission Factor (lb/lb rubber)	VOC Emissions (tons/yr)	PM/PM-10 Emissions (tons/yr)	Total HAPs Emissions (tons/yr)	Carbon Disulfide HAP Emissions (tons/yr)
Hot Air Curing											
3 1/2 vulcanization line (EXTMW1)	476.00	4,169,760	1.63E-02	-	0.00E+00	2.96E-03	2.52E-03	34.01	0.00	6.17	5.25
Mixing											
To 3 1/2 vulcanization line (EXTMW1)	476.00	4,169,760	2.91E-04	-	3.58E-04	1.20E-04	1.03E-04	0.61	0.75	0.25	0.21
Milling											
To 3 1/2 vulcanization line (EXTMW1)	476.00	4,169,760	4.25E-04	-	6.96E-08	6.22E-05	5.32E-05	0.89	0.00	0.13	0.11
Extrusion											
To 3 1/2 vulcanization line (EXTMW1)	476.00	4,169,760	6.97E-05	-	4.32E-08	6.43E-05	5.49E-05	0.15	0.00	0.13	0.11
Potential to Emit (tons/yr) from EXTMW1 = 1.71E-02 3.58E-04 3.21E-03 2.73E-03 35.64 0.75 6.69 5.69											

2. 4 1/2 inch vulcanization line (EXTMW2 (AC8)) (Compound #8)

Emission Unit	Maximum Process Throughput (lb/hr)	Maximum Process Throughput (lb/yr)	# 10 Compound VOC Emission Factor (lb/lb rubber)	# 8 Compound VOC Emission Factor (lb/lb rubber)	PM/PM-10 Emission Factor (lb/lb rubber)	Total HAPs Emission Factor (lb/lb rubber)	Carbon Disulfide HAP Emission Factor (lb/lb rubber)	VOC Emissions (tons/yr)	PM/PM-10 Emissions (tons/yr)	Total HAPs Emissions (tons/yr)	Carbon Disulfide HAP Emissions (tons/yr)
Hot Air Curing											
4 1/2 vulcanization line (EXTMW2)*	514.00	4,502,640	-	8.25E-04	0.00E+00	9.76E-04	6.43E-04	1.86	0.00	2.20	1.45
Mixing											
To 4 1/2 vulcanization line (EXTMW2)*	514.00	4,502,640	-	1.47E-05	2.22E-04	5.58E-05	2.81E-05	0.03	0.50	0.13	0.06
Milling											
To 4 1/2 vulcanization line (EXTMW2)*	514.00	4,502,640	-	2.14E-05	0.00E+00	2.88E-05	1.45E-05	0.00	0.00	0.07	0.03
Extrusion											
To 4 1/2 vulcanization line (EXTMW2)*	514.00	4,502,640	-	3.52E-06	2.67E-08	2.99E-05	1.50E-05	0.01	0.00	0.07	0.03
Potential to Emit (tons/yr) from EXTMW2 = 8.65E-04 2.22E-04 1.09E-03 7.01E-04 1.90 0.50 2.46 1.58											

Methodology

Potential to Emit (tons/yr) = Maximum Process Throughput (lb/yr) x Emission Factor (lb/lb rubber) x 1/2000 (ton/lbs)
Emission Factors are from AP-42, Volume I, Fifth Edition, Chapter 4, Section 12.

* The 4 1/2 inch vulcanization line cannot process rubber compound #10 and processes compound #8 at the highest production rate.

**Appendix A: Emissions Calculations
Soapstone Dusting Operations (DUST)**

Company Name: Sperry & Rice Manufacturing Company, LLC

Address: 9146 U.S. 52, Brookville, IN 47012

Permit Number: M047-24513-00012

Reviewer: Tanya White/EVP

Date: 08/20/07

Maximum Process Throughput (lb/hr)	Maximum Process Throughput (lb/yr)	PM/PM-10 Emission Factor (lb/lb rubber)	PM/PM-10 Emissions (tons/yr)
5.50	48,180.00	5.00E-02	1.20

Methodology

Potential Emissions (tons/yr) = Process Throughput (lb/yr) x Emission Factor (lb/lb rubber) x 1/2000 (ton/lbs)
Emission Factors are from the Rubber Manufacturers Association Emission Factors Project (September 1996)

Appendix A: Emissions Calculations
Welding

Company Name: Sperry & Rice Manufacturing Company, LLC
 Address: 9146 U.S. 52, Brookville, IN 47012
 Permit Number: M047-24513-00012
 Reviewer: Tanya White/EVP
 Date: 08/20/07

PROCESS	Number of Stations	Max. electrode consumption per station (lbs/hr)	EMISSION FACTORS* (lb pollutant/lb electrode)				EMISSIONS (lbs/hr)					HAPS (lbs/hr)	
			PM = PM10	Mn	Ni	Cr	PM = PM10	Mn	Ni	Cr			
WELDING													
Shielded Metal Arc Welding (E308)	1	0.005707763	0.0108	0.000252	0.000043	0.000394	6.16E-05	1.44E-06	2.45E-07	2.26E-06	3.93E-06		
Shielded Metal Arc Welding (E7018)	1	0.017129288	0.0184	0.001103	0.000002	0.000006	3.15E-04	1.76E-05	3.42E-08	1.03E-07	1.78E-05		
Gas Metal Welding (E70S)	1	0.005707763	0.0052	0.000318	0.000001	0.000001	2.97E-05	1.82E-06	5.71E-09	5.71E-09	1.83E-06		
EMISSION TOTALS													
Potential Emissions lbs/hr							4.06E-04	2.09E-05	2.85E-07	2.36E-06	2.35E-05		
Potential Emissions lbs/day							9.75E-03	5.01E-04	6.85E-06	5.66E-05	5.66E-04		
Potential Emissions tons/year							1.78E-03	9.15E-05	1.29E-06	1.03E-05	1.03E-04		

METHODOLOGY

*Emission factors are default values for carbon steel unless a specific electrode type is noted in the process column.
 Using AWS average values: $(0.25 \text{ g/min}) / (3.6 \text{ m/min}) \times (0.0022 \text{ lb/g}) / (39.37 \text{ in./m}) \times (1,000 \text{ in.}) = 0.0039 \text{ lb/l,000 in. cut, 8 mm thick}$
 Welding emissions, lb/hr: $(\# \text{ of stations}) \times (\text{max. lbs of electrode used/hr/station}) \times (\text{emission factor, lb. pollutant/lb. of electrode used})$
 Emissions, lbs/day = emissions, lbs/hr x 24 hrs/day
 Emissions, tons/yr = emissions, lb/hr x 8,760 hrs/year x 1 ton/2,000 lbs.

APPENDIX B: BACT ANALYSIS

Source Background and Description

Source Name:	Sperry & Rice Manufacturing Company, LLC
Source Location:	9146 U.S. 52, Brookville, IN 47012
County:	Franklin
SIC Code:	3061
Operation Permit No.:	M047-24513-00012
Permit Reviewer:	Tanya White/EVP

The Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has performed the following Best Available Control Technology (BACT) review for a rubber products manufacturing plant. Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction Requirements), BACT is required for all facilities constructed after January 1, 1980 that have potential VOC emissions of equal to or greater than twenty-five (25) tons per year and are not regulated by any other rules in 326 IAC 8. Based on the calculations (see Appendix A) and the analysis of applicable state regulations (see State Rule Applicability section of the Technical Support Document (TSD)), the following facility is subject to the requirements of 326 IAC 8-1-6:

- 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7))

This facility is subject to the requirements of 326 IAC 8-1-6 because it was constructed after January 1, 1980, it is not regulated by any other rules in 326 IAC 8, and it did not have any federally enforceable limitations to restrict VOC emissions to less than twenty-five (25) tons per year prior to the facility being constructed or operated.

BACT Analysis

IDEM conducts BACT analyses in accordance with the "Top-Down" Best Available Control Technology Guidance Document outlined in the 1990 draft U.S. EPA New Source Review Workshop Manual, which outlines the steps for conducting a top-down BACT analysis. Those steps are listed below.

- (1) Identify alternative emission control techniques;
- (2) Technical Feasibility Analysis of BACT Options;
- (3) Rank remaining control technologies by control effectiveness;
- (4) The BACT Selection Process; and
- (5) Selecting BACT.

Also in accordance with the "Top-Down" Best Available Control Technology Guidance Document outlined in the 1990 draft U.S. EPA New Source Review Workshop Manual, BACT analyses take into account the energy, environmental, and economic impacts on the source. Emission reductions may be determined through the application of available control techniques, process design, and/or operational limitations. Such reductions are necessary to demonstrate that the emissions remaining after application of BACT will not cause or contribute to air pollution thereby protecting public health and the environment.

Step 1 - Identify Alternative Emission Control Techniques

The first step in evaluating potential applicable control technologies involved a review of control technology determinations made for permitted extruded rubber products manufacturing plants. The U.S. EPA's RACT /BACT /LAER clearinghouse (RBLC) database was searched for the purpose of identifying comparable sources that have implemented BACT for similar type facilities. This search was performed as follows:

- A basic search was first conducted by using process type keyword of "Curing" using the permit dates from January 1, 1987 to July 3, 2007. VOC was selected as a pollutant of concern and the search was performed for facilities in all states. Thirty-one (31) facilities and forty-two (42) processes were identified that matched the search criteria. No extruded rubber products manufacturing facilities were identified. The type of facilities that were identified included tire manufacturing, wool fiberglass manufacturing, auto assembly plant, iron foundry castings manufacturing, equipment painting, insulation and building products manufacturing, plastic shingles manufacturing, metal parts coating, and automotive fluid filter paper inner cartridge manufacturing. The process types for which VOC BACT limits were established at these facilities included rubber mixing, bonded forming and curing, curing drying, tire curing, core curing, paint curing, furnace curing, and coating and curing operations. None of these facilities are representative of operations and processes at Sperry & Rice Manufacturing Company's Brookville Plant.
- An advanced search was then conducted by using SIC Code (3061), which is the SIC code for Sperry & Rice Manufacturing Company's Brookville Plant, and VOC was selected as the pollutant of concern. Two facilities and three processes were identified that matched the search criteria. Both facilities that were identified were rubber tire manufacturing facilities. The process types at these facilities were injection molding presses and primer/adhesive usage operations. Therefore, this search also did not result in any relevant BACT analyses.
- Finally, a RBLC search was conducted specifically searching for "Extrusion" as the keyword for process type and VOC was selected as pollutant type. Twenty (20) facilities and twenty-five (25) processes were identified that matched the search criteria. The only relevant process types identified were rubber extrusion lines and extrusion/converting line. However, the facilities at which these process types were present were GenCorp Automotive (Grant County, IN) and 3M, Inc. (McLoed County, MN). GenCorp Automotive is a vehicle sealing system, reinforced plastic components, and vibration control products manufacturing facility and 3M is a pressure sensitive tape manufacturing facility. Therefore, no relevant facilities to the Brookville Plant were identified as a result of this search.

Based on the findings above, no similar facilities or facilities with similar process types were identified in the RBLC database as using any type of add-on control device.

Besides the RBLC database review, air permits for primary competitors to Sperry & Rice Manufacturing Company were searched to determine whether they have an emission limit identified as "BACT" or whether they installed control devices in obtaining their air quality permits. The facilities provided and the search results are provided in Table 1. Upon reviewing the online permits of six facilities, 326 IAC 8-1-6 or a similar rule was applicable to one facility – Cooper Standard Automotive. Refer to Appendix B of the Title V permit for Cooper Standard Automotive located in Indiana.¹ Cooper Standard Automotive is a molded rubber products manufacturing facility and is not representative of Sperry & Rice Manufacturing Company's Brookville Plant. For this BACT analysis, IDEM, OAQ approved a synthetic VOC emission limit as BACT and an add-on control device was not required.

¹ Source: <http://permits.air.idem.in.gov/15942f.pdf>

TABLE 1. RESULTS OF BACT SEARCH FOR COMPETITORS OF SPERRY & RICE MANUFACTURING COMPANY

Competitors	Search Results
Lauren Manufacturing Company 2228 Reiser Avenue SE New Philadelphia, Ohio 44663	The Ohio EPA does not have any air quality permits for Lauren Manufacturing.
Cooper Standard Automotive 207 South West St. Auburn, IN 46706	Identified on IDEM's system with Permit # 033-15942, Plant 00013. Classified as a Title V Major Source, PSD Major, and HAPs Major. Control technologies were investigated; however, they were not cost effective and impractical for a number of reasons. ²
Griffith Rubber Mills 410 N. Lee St. and 400 Taylor St. Garrett, IN 46738	Identified on IDEM's system with Permit # 033-17355, Plant 00080. Classified as a FESOP Source. Uses a sulfur cure rubber. Potential emissions of the curing lines were less than 25 TPY, thus 326 IAC 8-1-6 was not applicable.
GDx Automotive 1 General St. Wabash, IN 46992	Identified on IDEM's system with Permit # T169-5650-000004. Classified as a Major Title V Source, minor PSD Source, and Major HAP Source. Potential emissions of the curing lines were less than 25 TPY, thus 326 IAC 8-1-6 was not applicable.
Unitek Sealing Solutions 315 Brighton St. LaPorte, IN 46350	Not found.
Nishikawa Standard 2808 Adams Center Rd. Ft. Wayne, IN	Identified on IDEM's system with Permit # 003-13845, Plant 00229. Classified as an MSOP. Potential emissions of the rubber surface coating operations were less than 25 TPY, thus 326 IAC 8-1-6 was not applicable.

Although no similar facilities or facilities with similar process types were identified in the RBLC or through permit searches as using any type of add-on control device, two generally applicable VOC control technologies that may potentially technical feasible were evaluated:³

- Regenerative/recuperative thermal oxidation system having 95% destruction efficiency.
- Carbon Adsorption.

² Cooper Standard Automotive (Cooper) operates a stationary mixed rubber and molded rubber products manufacturing plant. Note that BACT analysis was performed for chain-on-edge lines (high speed conveyORIZED adhesive coating lines) and rubber injection molding presses. Neither of these are representative of 3 ½ CV line at the Brookville Plant. Moreover, the VOC BACT for affected operations at Cooper is combination of emission limits, work practice standards, and rubber throughput limits along with appropriate recordkeeping for compliance demonstration. No performance testing requirements are included in the permit.

³ In addition to these control technologies, "Best Management Practices" were also evaluated as a potential option to satisfy BACT requirements.

Step 2 - Eliminate technically infeasible control options and rank control technologies by control effectiveness

Carbon adsorption is a process where VOCs are adsorbed onto activated carbon. Economics usually favor regenerative carbon adsorption process when the VOCs are insoluble in water and are liquids at room temperatures. Dehumidification is required for humid streams to have desired capacity. Carbon adsorption provides VOC removal efficiencies up to 95%. The organics emitted during the curing process may be soluble in water and may remain in gaseous phase even at room temperatures. Therefore, carbon adsorption is considered a technically infeasible control option.

In a thermal oxidizer, the VOC-laden air stream is heated to gas temperatures several hundred degrees Fahrenheit above the auto ignition temperatures of the organic compounds that need to be oxidized. Due to these very high temperatures, thermal oxidizers have refractory-lined combustion chambers, which increase their weight and size considerably. Regenerative thermal oxidation (RTO) systems are the most expensive thermal oxidizers to build, but the added capital expense is offset by savings in auxiliary fuel. In an RTO, the VOC-laden gas stream is held at the elevated temperature for residence times ranging from a fraction of a second to more than two seconds. Temperatures of the exhaust gas from the refractory-lined combustion chambers are often 1,000 to 2,000°F. Thermal oxidizers usually provide VOC destruction efficiencies that exceed 95% and often exceed 99%. Thermal oxidizers have the broadest applicability of all the VOC control devices. They can be used for almost any VOC compound. Thermal oxidizers can also be used for gas streams having VOC concentrations at the very low concentration range of less than 10 ppm up to very high concentrations approaching 10,000 ppm. RTOs can also control emissions of water soluble organic compounds and that have high vapor pressures even at room temperatures. Due to the high level of control that can be achieved by a RTO and suitability of a RTO to control VOC vent stream from Sperry & Rice Manufacturing Company's Brookville Plant, it was further evaluated as a feasible control. RTOs also provide the highest expected control efficiency of any potentially feasible technologies.

Step 3 - Evaluate the most effective controls and document results and Step 4- Determination of the energy, environmental, and economic impacts of each control technology

As part of this analysis, the cost of the VOC control equipment (RTO) is estimated. This cost includes the initial capital cost of the various components intrinsic to the complete system, and the estimated annual operating costs. The estimated total capital cost was calculated using a factoring method of determining direct and indirect installation costs. The basic equipment costs were calculated based on the guidance provided in U.S. EPA's *Air Pollution Control Cost Manual*.⁴ Annualized costs were also developed based on information from the Control Cost Manual and information available in relevant literature. To annualize the capital cost, a capital recovery factor based on an interest rate of 7% and an equipment life of 10 years is used. The cost effectiveness of the RTO is calculated as the ratio of the total annualized cost to the amount of VOC (tons) removed per year. Note that the cost effectiveness calculation only accounts for the portion of VOC removed by the RTO. A summary of the cost figures determined in the analysis is provided in the Table 2 below:

⁴ U.S. EPA's *Air pollution Control Cost Manual*, Sixth Edition, EPA/452/B-02-001, January 2002.

TABLE 2: SUMMARY OF COST ANALYSIS

Process	Total Capital Cost (\$)	Total Annualized Costs (\$/yr)	VOC Removal from Add-on Control (tpy)	Cost Effectiveness (\$/ton VOC removed)
3 1/2 inch continuous vulcanization line (EXTMW1 (AC7))	950,232	970,065	33.96	28,649

Based on the cost analysis completed, a regenerative/recuperative oxidation and catalytic oxidation system would impose an annual cost of \$28,649 per ton of VOC removed. This amount resides well above costs that are considered economically feasible in BACT analyses. Moreover, no similar sources or sources with similar operations were identified as using any type of add-on control device.

Given that no add-on control option was determined to be both technically and economically feasible, Sperry & Rice Manufacturing Company proposes the following permit condition to be equivalent to BACT:

- VOC emissions from the 3 inch continuous vulcanization line (EXTMW1 (AC7)) shall be limited to less than 25 TPY.⁵

A cost analysis was performed for the above scenarios by utilizing the U.S. EPA's *Air Pollution Control Cost Manual*, Office of Air Quality Planning and Standards, Sixth Edition, EPA/452/B-02-001, January, 2002.

⁵ Sperry & Rice Manufacturing Company would keep necessary monthly records of previous 12-month rubber processing rate to comply with this emission limit.

CAPTIAL COSTS	DATA	BASIS/NOTES
1. PURCHASE EQUIPMENT COSTS		Eqn. 2.33, Page 2-38 and adjusted for escalation using CPI conversion factor (from American Institute for Economic Research)
a. Basic Equipment & Auxiliaries	\$485,207	0.1A
b. Instrumentation and Controls	\$48,521	0.06A
c. Taxes	\$29,112	0.05A
d. Freight	\$24,260	
Total Purchased Equipment Cost (B)	\$587,101	
2. DIRECT INSTALLATION COSTS		
a. Foundations & Supports	\$46,968	0.08B
b. Erection & Handling	\$82,194	0.14B
c. Electrical	\$23,484	0.04B
d. Piping in Excess of Capture System	\$11,742	0.02B
e. Insulation	\$5,871	0.01B
f. Painting	\$5,871	0.01B
g. Site Preparation (including concrete slab preparation, prefilter, and natural gas service costs)	\$5,000	
1. Concrete slab preparation and construction	\$5,000	
2. Prefilter	\$0	
3. Natural Gas Service (to the oxidizer burners)	\$0	
h. Buildings	\$0	
Total Direct Installation Costs	\$181,130	
Total Direct Costs (TDC) (Purchased + Installation)	\$768,231	
INDIRECT COSTS		
3. Engineering & Supervision	\$58,710	0.10B
4. Construction & Field Expenses	\$29,355	0.05B
5. Contractor Fees	\$58,710	0.10B
6. Start Up Costs	\$11,742	0.02B
7. Performance Test	\$5,871	0.01B
8. Contingency	\$17,613	0.03B
Total Indirect Costs	\$182,001	
Total Installed Capital Costs	\$950,232	
ANNUALIZED COSTS		
Direct Operating Costs		

1. Operating Labor	\$89,921	Based on guidance in Table 2.10 of the OAQPS manual
a. Number of Employees (Portion of Employee)	0.5	0.5 hrs/shift
b. Cost/Employee/Hour with Benefits	20.53	\$20.53/hr
c. Operating Hours/Year	8,760	
2. Supervisory Labor	\$13,488	15% of operation labor
3. Maintenance Labor & Materials	\$179,843	Labor is 0.5 hrs/shift and Materials Cost is 100% of Maintenance Labor
4. Replacement Parts	\$29,355	5% of Basic Capital Costs
5. Utilities	\$392,523	
a. Natural Gas	\$386,754	Based on EIA, Annual 2005 Data
b. Electricity - Control Device - Vendor Quoted (98,112 kWh/year)	\$5,769	Blower capacity 15 HP that is equivalent to 11.2 kW
c. Water	-	
d. Air	-	
Total Direct Operating Costs	\$705,130	
Indirect Operating Costs		
6. Overhead	\$169,951	60% of Sum of Operating Labor, Supervisor Labor, and Maintenance Labor & Materials
7. Property Tax	\$9,502	0.01 x Capital Cost
8. Insurance	\$9,502	0.01 x Capital Cost
9. Administrative Costs	\$19,005	0.02 x Capital Cost
10. Capital Recovery Factor (CRF) 0.1424	\$135,292	Capital Recovery Cost = CFR x Total Installed Capital Cost, $CRF = i(1+i)^n / (1+i)^n - 1$
Interest 7%		
Equipment Life 10 years		
Total Indirect Operating Costs	\$343,252	
Heat Recovery Credit	(\$78,318)	
a. Heat Input - Annually - MMBtu/yr	43,800	Heat input for RTO is 5 MMBtu/hr
b. Unit Heat Efficiency - Heat Output of Control Device	90%	
c. Heat Available for Recovery	39,420	
d. Heat Exchanger Efficiency for Heat Recovery	45%	
e. Percent Heat Recovery/Year (6 months)	50%	
f. Heat Value Recovered - MMBtu/Year	8,870	
g. Cost/MMBtu	\$8.83	
Total Annualized Costs	\$970,065	
Uncontrolled VOC Emissions (PTE)	35.64	tons/yr

Average Capture Efficiency of Collection Equipment	100%	
Collected VOC Emissions to Control Device	35.64	tons/yr
Control Efficiency	95%	
TPY VOC Removed at Control Efficiency	33.86	tons/yr
Average Overall Capture & Control Efficiency	95%	
Cost Effectiveness, \$/Ton VOC Removed	\$28,649	

Step 5 - Select BACT

Sperry & Rice Manufacturing Company has requested a federally enforceable limit of VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) of twenty-five (25) tons per year. Pursuant to 326 IAC 8-1-6, IDEM, OAQ has determined that the following requirements represent BACT for the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)):

- (a) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed twenty-five (25) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.
- (b) The total VOC emissions from the 3 1/2 inch continuous vulcanization line (EXTMW1 (AC7)) shall not exceed 0.0171 pounds of VOC per pound of rubber produced on the line.