



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: April 2, 2012

RE: Dow Corning, STI / 113-31193-00055

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

Notice of Decision: Approval - Registration

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 4-21.5-3-4(d) this order is effective when it is served. When served by U.S. mail, the order is effective three (3) calendar days from the mailing of this notice pursuant to IC 4-21.5-3-2(e).

If you wish to challenge this decision, IC 4-21.5-3-7 requires 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
FN-REGIS.dot 1/2/08



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Mr. Robert G. Crosby
Dow Corning, STI
111 South Progress Dr. East
Kendallville, IN 46755

April 2, 2012

Re: 113-31193-00055
Second Registration Revision to
R113-10553-00055

Dear Mr. Crosby:

Dow Corning, STI was issued a Registration No. R113-10553-00055 on March 8, 1999 for a stationary silicone rubber manufacturing facility located at 111 South Progress Dr. East, Kendallville, Indiana. On November 30, 2011, the Office of Air Quality (OAQ) received an application from the source requesting the following changes:

- (a) requesting to replace the base mixing unit M-102.
- (b) introducing new powders in to the SCHR process (also known as pilot process), which will change the emission factors.

Pursuant to 326 IAC 2-5.5-6, a registration revision is hereby approved as described in the attached Technical Support Document (TSD).

The source shall continue to operate according to 326 IAC 2-5.5. Please find the enclosed the revised registration. A copy of the registration is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Bruce Farrar, at (800) 451-6027, press 0 and ask for Bruce Farrar or extension 4-5401, or dial (317) 234-5401.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

IC/bf

Attachment: Revised Registration, Technical Support Document, TSD Appendix A

cc: File - Noble County
Noble County Health Department
Compliance and Enforcement Branch
Billing, Licensing and Training Section



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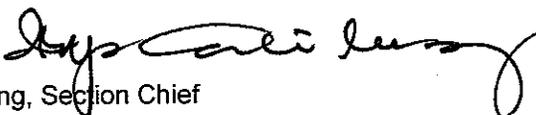
REGISTRATION OFFICE OF AIR QUALITY

Dow Corning, STI
111 South Prograss Drive East
Kendallville, Indiana 46755

Pursuant to 326 IAC 2-5.1 (Construction of New Sources: Registrations) and 326 IAC 2-5.5 (Registrations), (herein known as the Registrant) is hereby authorized to construct and operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this registration.

Registration No. 113-10553-00055	
Original signed by: Paul Dubenetzky, Chief Permits Branch Office of Air Quality	Issuance Date: March 8, 1999

Registration Revision No. 113-12767-00055, issued on December 1, 2000
First Registration Notice-Only Change No. 113-25781-00055, issued on January 30, 2008
Second Registration Notice-Only Change No. 113-27277-00055, issued on January 7, 2009

Second Registration Revision No. 113-31193-00055	
Issued by:  Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: April 2, 2012

SECTION A

SOURCE SUMMARY

This registration 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 Registrant 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 Registrant to obtain additional permits pursuant to 326 IAC 2.

A.1 General Information

The Registrant owns and operates a stationary silicone rubber manufacturing facility.

Source Address:	111 South Progress Drive East, Kendallville, Indiana 46755
General Source Phone Number:	(260) 343-2380
SIC Code:	2822 (Synthetic Rubber (Vulcanized Elastomers))
County Location:	Noble County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) Six (6) sigma blade style mixers, each with a continuous nitrogen purge:
 - (1) Two (2) base mixers, identified as M-101 and M-102, approved for modification in 2012, each with a maximum process rate of 200 pounds per hour, venting through individual dump station baghouse filter systems and then exhausting at ambient temperatures to Stacks M-101 and M-102, respectively; and
 - (2) Four (4) compound mixers with a combined maximum process rate of 451.2 pounds per hour, venting through individual bag filters and then exhausting at ambient temperature: M-103 to Stack M-103; M-104 to Stack M-104; M-105 to Stack M-105, and M-108 to Stack M-108; each with a maximum design flow rate of 5 dscm.
- (b) One (1) outdoor silo for storage of fumed silica products, identified as MH-127, with a capacity of 39,000 pounds, including one (1) diaphragm pump with a dilute phase transfer loading rate of 7,200 lb/hr, with PM emissions controlled by an integral baghouse 11 and exhausted to a bin vent stack identified as Stack MH-127.
- (c) One (1) PRISM silicone rubber manufacturing operation, identified as PRISM, with emissions controlled by a vent condenser, identified as HX-103, and an integral baghouse, identified as DC-103, with emissions exhausting to stack DC-103.
- (d) One (1) 5 micron silica storage silo (MH-140) with capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr with PM emissions controlled with an integral bin vent and exhausting to stack MH-140.
- (e) One (1) 10 micron silica storage silo (MH-142) with a capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr, with PM emission controlled with an integral bin vent and exhausting to stack MH-142.
- (f) Three (3) weigh hoppers, identified as MH-103, MH-104, and MH-105, equipped with integral bin vents that vent to the atmosphere.

- (g) Two (2) compounding mixers (M-106 and M-107) equipped with one (1) weigh hopper (MH-106 and MH-107), each. Both the mixers and the weight hoppers are equipped with integral bin vents that emit into the atmosphere through Stack M-106, M-107, MH-106, and MH-107.
- (h) One (1) rubber compound manufacturing process, consisting of the following emission units:
 - (1) Two (2) bag dump stations, each with a maximum capacity of 0.165 tons of rubber per hour; consisting of one (1) automated bag dump, identified as MH-422 and one (1) manual bag dump, identified as MH-402; with particulate controlled by a bin vent for each, and exhausting to the atmosphere through Stack MH-422 for MH-422 and through Stack MH-402 for MH-402.
 - (2) One (1) weigh hopper, identified as MH-403, with a maximum capacity of 0.165 tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-403.
 - (3) One (1) 600L mixer, identified as M-404, with a maximum capacity of 0.086 tons of rubber per hour, with particulate controlled by a pulse filter, and exhausting to the atmosphere through Stack MH-404.
 - (4) One (1) 110L mixer, identified as M-405, with a maximum capacity of 0.165 tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-405.
- (i) One (1) natural gas-fired boiler, identified as UT-106, with a maximum heat input rate of 3.0 MMBtu/hr, and exhausting to stack UT-106.
- (j) One (1) 3.4 MMBtu/hr natural gas fired steam boiler, identified as UT-126, with emission exhausted through Stack UT-126.

SECTION B

GENERAL CONDITIONS

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

Terms in this registration 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 Effective Date of Registration [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this registration 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.

B.3 Registration Revocation [326 IAC 2-1.1-9]

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

- (a) Violation of any conditions of this registration.
- (b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this registration.
- (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 registration shall not require revocation of this registration.
- (d) For any cause which establishes in the judgment of IDEM, the fact that continuance of this registration is not consistent with purposes of this article.

B.4 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to Registration No. 113-10553-00055 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 registration.

B.5 Annual Notification [326 IAC 2-5.1-2(f)(3)] [326 IAC 2-5.5-4(a)(3)]

Pursuant to 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3):

- (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 registration.
- (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.6 Source Modification Requirement [326 IAC 2-5.5-6(a)]

Pursuant to 326 IAC 2-5.5-6(a), an application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Quality (OAQ) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

B.7 Registrations [326 IAC 2-5.1-2(i)]

Pursuant to 326 IAC 2-5.1-2(i), this registration does not limit the source's potential to emit.

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

- (a) If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, 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 Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

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

The Registrant shall implement the PMPs.

- (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 Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.
- (c) To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emission Limitations and Standards [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

C.1 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 registration:

- (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.2 Fugitive Dust Emissions [326 IAC 6-4]

The Registrant 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).

Compliance Requirements [326 IAC 2-1.1-11]

C.3 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 1.1 11] [326 IAC 2-5.5-4(b)]

C.4 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Registrant 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.

Corrective Actions and Response Steps

C.5 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) The Registrant shall take reasonable response steps to 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 excess emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

- (1) initial inspection and evaluation;
 - (2) recording that operations returned or are returning 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 normal or usual manner of operation.
- (c) A determination of whether the Registrant 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 Registrant shall record the reasonable response steps taken.

Record Keeping and Reporting Requirements [326 IAC 2-5.5-4(b)]

C.6 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.7 General Record Keeping Requirements [326 IAC 2 5.5-4(b)]

- (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 Registrant, the Registrant shall furnish the records to the Commissioner within a reasonable time.

- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Registrant shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) Six (6) sigma blade style mixers, each with a continuous nitrogen purge:
 - (1) Two (2) base mixers, identified as M-101 and M-102, approved for modification in 2012, each with a maximum process rate of 200 pounds per hour, venting through individual dump station baghouse filter systems and then exhausting at ambient temperatures to Stacks M-101 and M-102, respectively; and
 - (2) Four (4) compound mixers with a combined maximum process rate of 451.2 pounds per hour, venting through individual bag filters and then exhausting at ambient temperature: M-103 to Stack M-103; M-104 to Stack M-104; M-105 to Stack M-105, and M-108 to Stack M-108; each with a maximum design flow rate of 5 dscm.
- (b) One (1) outdoor silo for storage of fumed silica products, identified as MH-127, with a capacity of 39,000 pounds, including one (1) diaphragm pump with a dilute phase transfer loading rate of 7,200 lb/hr, with PM emissions controlled by an integral baghouse 11 and exhausted to a bin vent stack identified as Stack MH-127.
- (c) One (1) PRISM silicone rubber manufacturing operation, identified as PRISM, with emissions controlled by a vent condenser, identified as HX-103, and an integral baghouse, identified as DC-103, with emissions exhausting to stack DC-103.
- (d) One (1) 5 micron silica storage silo (MH-140) with capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr with PM emissions controlled with an integral bin vent and exhausting to stack MH-140.
- (e) One (1) 10 micron silica storage silo (MH-142) with a capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr, with PM emission controlled with an integral bin vent and exhausting to stack MH-142.
- (f) Three (3) weigh hoppers, identified as MH-103, MH-104, and MH-105, equipped with integral bin vents that vent to the atmosphere.
- (g) Two (2) compounding mixers (M-106 and M-107) equipped with one (1) weigh hopper (MH-106 and MH-107), each. Both the mixers and the weight hoppers are equipped with integral bin vents that emit into the atmosphere through Stack M-106, M-107, MH-106, and MH-107.
- (h) One (1) rubber compound manufacturing process, consisting of the following emission units:
 - (1) Two (2) bag dump stations, each with a maximum capacity of 0.165 tons of rubber per hour; consisting of one (1) automated bag dump, identified as MH-422 and one (1) manual bag dump, identified as MH-402; with particulate controlled by a bin vent for each, and exhausting to the atmosphere through Stack MH-422 for MH-422 and through Stack MH-402 for MH-402.
 - (2) One (1) weigh hopper, identified as MH-403, with a maximum capacity of 0.165 tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-403.
 - (3) One (1) 600L mixer, identified as M-404, with a maximum capacity of 0.086 tons of

rubber per hour, with particulate controlled by a pulse filter, and exhausting to the atmosphere through Stack MH-404.

(4) One (1) 110L mixer, identified as M-405, with a maximum capacity of 0.165 tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-405.

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

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the particulate matter (PM), PM10 and PM2.5 emissions from facilities listed in the following table shall not exceed the pound per hour emission rates:

Emission Unit ID	PM Limit (lbs/hr)	PM10 Limit (lbs/hr)	PM2.5 Limit (lbs/hr)
MH-103 Weigh Hopper	0.025	0.025	0.025
MH-104 Weigh Hopper	0.025	0.025	0.025
MH-105 Weigh Hopper	0.025	0.025	0.025
MH-106 Weigh Hopper	0.025	0.025	0.025
MH-107 Weigh Hopper	0.025	0.025	0.025
MH-127 Outdoor Silo	0.036	0.036	0.036
MH-140 5 micron silica silo	0.01	0.01	0.01
MH-142 10 micron silica silo	0.01	0.01	0.01
PRISM	0.02	0.02	0.02

Compliance with these PM, PM10 and PM2.5 limits, conjunction with the potential PM, PM10 and PM2.5 emissions from other emission units at this source shall limit PM, PM10 and PM2.5 emissions to less than two hundred fifty (250) tons per year and renders the entire source minor with respect to 326 IAC 2-2 (PSD).

D.1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and control devices shall not exceed the particulate emission rates listed in the table below when operating at the stated process weight rates:

Emission Unit	Process weight rate (tons per hour)	Allowable particulate emission rate (pounds per hour)
M-101 and M-102	0.10 (each)	0.87 (each)
MH-103, MH-104, MH-105, MH-106, and MH-107	0.085 (each)	0.79 (each)
MH-127	3.6	9.67
MH-402 or MH-442, MH-403, MH-405	0.165 (each)	1.23 (each)
MH-140 and MH-142	5.0 (each)	12.05 (each)
PRISM	1.80	6.08

The pound per hour limitation was calculated with the following equation:

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

$$E = 4.10 P^{0.67}$$

Where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the base mixers (M-101 and M-102), the five (5) weight hoppers (MH-103 through MH-107), outdoor silo (MH-127), 5 micron silica silo (MH-140), 10 micron silica silo (MH-142), and the Prism silicone rubber manufacturing operation (DC-103) and their control devices. Section B - Preventive Maintenance Plan contains the Registrant's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.4 Particulate Control

In order to comply with Conditions D.1.1 and D.1.2, the control equipment for particulate control shall be in operation and control emissions from the base mixers (M-101 and M-102), the five (5) weight hoppers (MH-103 through MH-107), outdoor silo (MH-127), 5 micron silica silo (MH-140), 10 micron silica silo (MH-142), and the Prism silicone rubber manufacturing operation (HX-103) at all times when these units are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)]

D.1.5 Visible Emissions Notations

- (a) Visible emission notations are required for the following:
- (1) The outdoor silo (MH-127), 5 micron silica silo (MH-140), 10 micron silica silo (MH-142), stack exhausts, identified as MH-127, MH-140, MH-142, shall be performed during silo loading operations during normal daylight operations.
 - (2) The Base Mixers, identified as M-101 and M-102, and the Prism silicone rubber manufacturing operation (DC-103) stack exhausts, identified as M-101, M-102 and DC-103, shall be performed once per day during normal daylight operations.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Registrant shall take reasonable response. Section C- Response to Excursions or Exceedances contains the Registrant's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.6 Broken or Failed Bag Detection

- (a) For a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Registrant shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Registrant satisfies the requirements of the emergency provisions of this permit (Section C - Response to Excursions or Exceedances).
- (c) For a single compartment baghouses controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Registrant satisfies the requirements of the emergency provisions of this permit (Section C - Response to Excursions or Exceedances). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.7 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.5, the Registrant shall maintain daily records of the visible emission notations of the baghouse stack exhaust. The Registrant shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).
- (b) Section C - General Record Keeping Requirements contains the Registrant's obligations with regard to the records required by this condition.

SECTION D.2

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (i) One (1) natural gas-fired boiler, identified as UT-106, with a maximum heat input rate of 3.0 MMBtu/hr, and exhausting to stack UT-106.
- (j) One (1) 3.4 MMBtu/hr natural gas fired steam boiler, identified as UT-126, with emission exhausted through Stack UT-126.

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

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.2.1 Particulate Emissions [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from UT-106 and UT-126 shall be limited to 0.6 pounds per MMBtu heat input, each.

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

**REGISTRATION
ANNUAL NOTIFICATION**

This form should be used to comply with the notification requirements under 326 IAC 2-5.1-2(f)(3) and 326 IAC 2-5.5-4(a)(3).

Company Name:	Dow Corning, STI
Address:	111 South Progress Drive East
City:	Kendallville, Indiana 46755
Phone Number:	(260) 343-2380
Registration No.:	113-10553-00055

I hereby certify that Dow Corning, STI is :

- still in operation.
- no longer in operation.
- in compliance with the requirements of Registration No. 113-10553-00055.
- not in compliance with the requirements of Registration No. 113-10553-00055.

I hereby certify that Dow Corning, STI is :

Authorized Individual (typed):
Title:
Signature:
Phone Number:
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 COMPLIANCE AND ENFORCEMENT BRANCH FAX NUMBER: (317) 233-6865

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____

CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____

CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____

INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Registration Revision

Source Description and Location

Source Name:	Dow Corning, STI
Source Location:	111 South Progress Drive East, Kendallville, IN 46755
County:	Noble
SIC Code:	2822 (Synthetic Rubber (Vulcanized Elastomers))
Registration No.:	R113-10553-00055
Registration Issuance Date:	March 8, 1999
Registration Revision No.:	113-31193-00055
Permit Reviewer:	Bruce Farrar

On November 30, 2011, the Office of Air Quality (OAQ) received an application from Dow Corning, STI related to a modification to an existing silicone rubber manufacturing facility.

Existing Approvals

The source was issued Registration No. 113-10553-00055 on March 8, 1999. The source has since received the following approvals:

- (a) Second Notice-Only Change No. 113-27277-00055, issued on January 7, 2009; and
- (a) First Notice-Only Change No. 113-25781-00055, issued on January 30, 2008; and
- (c) First Registration Revision No. 113-12767-00055, issued on December 1, 2000.

County Attainment Status

The source is located in Noble County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Unclassifiable or attainment effective June 15, 2004, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM _{2.5} .	

- (a) **Ozone Standards**
 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 and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Noble County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

- (b) **PM_{2.5}**
 Noble County has been classified as attainment for PM_{2.5}. On May 8, 2008 U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM_{2.5} emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct PM_{2.5} significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct PM_{2.5} and SO₂ emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.
- (c) **Other Criteria Pollutants**
 Noble County has been classified as attainment or unclassifiable in Indiana for all other pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

The fugitive emissions of criteria pollutants, hazardous air pollutants, and greenhouse gases are counted toward the determination of 326 IAC 2-5.1-2 (Registrations) applicability.

Status of the Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed revision, after consideration of all enforceable limits established in the effective permits:

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)							
	PM	PM10	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
M-101 Base Mixer	3.35	2.61	-	-	-	-	-	-
M-102 Base Mixer	3.35	2.61	-	-	-	-	-	-
M-103 Compound Mixer	0.29	0.29	-	-	-	-	-	-
M-104 Compound Mixer	0.07	0.07	-	-	-	-	-	-
M-105 Compound Mixer	0.29	0.29	-	-	-	-	-	-
M-108 Compound Mixer	0.07	0.07	-	-	-	-	-	-
M-106 Compound Mixer	0.88	0.88	-	-	-	-	-	-
M-107 Compound Mixer	0.88	0.88	-	-	-	-	-	-
MH-103 Weigh Hopper	0.11	0.11	-	-	-	-	-	-
MH-104 Weigh Hopper	0.11	0.11	-	-	-	-	-	-
MH-105 Weigh Hopper	0.11	0.11	-	-	-	-	-	-
MH-106 Weigh Hopper	0.11	0.11	-	-	-	-	-	-
MH-107 Weigh Hopper	0.11	0.11	-	-	-	-	-	-
MH-127 Outside Silo	0.16	0.16	-	-	-	-	-	-
MH-140 5 micron silica silo	0.05	0.05	-	-	-	-	-	-
MH-142 10 micron silica silo	0.05	0.05	-	-	-	-	-	-
PRISM	0.08	0.08	-	-	-	-	-	-
Natural Gas Combustion	0.05	0.21	0.02	2.80	0.15	2.35	0.053	0.050 (Hexane)
Plant Atmosphere	0.79	0.75	-	-	-	-	-	-
MH-402 Bag Dump Station	0.67	0.67	-	-	-	-	-	-
MH-403 Weigh Hopper	0.67	0.67	-	-	-	-	-	-
M-404 600L Mixer	0.674	0.674	-	-	6.35	-	6.35	6.35 (Methanol)
M-405 110L Mixer	0.004	0.004	-	-	-	-	-	-

Process/ Emission Unit	Potential To Emit of the Entire Source Prior to Revision (tons/year)							
	PM	PM10	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Total PTE of Entire Source	12.94	11.59	0.02	2.80	6.51	2.35	6.40	6.35 (Methanol)
Exemptions Levels**	5	5	10	10	10	25	25	10
Registration Levels**	25	25	25	25	25	100	25	10

- = negligible
 These emissions are based upon Registration No.: 113-25781-00055 issued on January 30, 2008.
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

Description of Proposed Revision

The Office of Air Quality (OAQ) has reviewed an application, submitted by Dow Corning, STI on November 30, 2011.

The registrant requested to replace the base mixing unit M-102. This replacement will increase both the throughput of the base mixing units M-101 and M-102 to 400 lbs per hour from the current 153 lbs per hour. Each unit has a process weight capability of 200 lbs per hour.

The registrant will be introducing new powders in to the SCHR process (also known as pilot process), which will change the emission factors. The process weight (recipe with largest throughput and greatest amount of powder) has changed from 308 lbs/hour to 330 lbs/hour for emission units MH-403, MH 403 and MH-405. The change in powder to a magnesium oxide changes the emission factor from AP 42, Chapter 11.23 (Taconite Ore Processing) to AP-42 Chapter 11.24 (Metallic Mineral Processing) for the above emission units. The 600L Mixer (M-404) will not be used for the new powder mixture.

The following is a list of the modified emission unit and pollution control device:

- (a) One base mixer, identified as M-102, approved for modification in 2012, with a maximum process rate of 200 pounds per hour, venting through individual dump station baghouse filter systems and then exhausting at ambient temperatures to M-102.
- (b) One (1) rubber compound manufacturing process, consisting of the following emission units:
 - (1) Two (2) bag dump stations, with a maximum capacity of 0.165 tons of rubber per hour; consisting of one (1) automated bag dump, identified as MH-422 and one (1) manual bag dump, identified as MH-402; with particulate controlled by a bin vent for each, and exhausting to the atmosphere through Stack MH-422 for MH-422 and through Stack MH-402 for MH-402.
 - (2) One (1) weigh hopper, identified as MH-403, with a maximum capacity of 0.165 tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-403.
 - (3) One (1) 110L mixer, identified as M-405, with a maximum capacity of 0.165 tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-405.

Enforcement Issues

There are no pending enforcement actions related to this revision.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

- (a) On January 23, 2012 and February 3, 2012, Dow Corning STI conducted a mass balance test on the base mixers. Results showed the following:

Base Mixers		
Emission Unit	lb PM/1000 lbs (Uncontrolled)	lb PM/1000 lbs (Controlled)
Bag Dump	3.333	0.017
Carryover Weigh Hopper	0.068	-
Carryover Mixer	0.563	0.003
Filter (not captured)	0.020	-
Total:	3.985	0.020

- (b) The emission factor and the process weight have changed for emission units MH-402, MH-403 and MH-405 SHCR process (pilot process).

Permit Level Determination – Registration Revision

The following table is used to determine the appropriate permit level under 326 IAC 2-5.5-6. This table reflects the PTE before controls of the proposed revision.

Process/ Emission Unit	PTE of Proposed Revision (tons/year)									
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
M-101 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
M-102 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
MH-402 Bag Dump Station	0.002	0.003	0.003	-	-	-	-	-	-	-
MH-403 Weigh Hopper	0.002	0.003	0.003	-	-	-	-	-	-	-
M-405 110L Mixer	0.002	0.001	0.001	-	-	-	-	-	-	-
Natural Gas Combustion								3,384		
Total PTE of Proposed Revision	6.99	6.99	6.99	0.00	0.00	0.00	0.00	3,384	0.00	0.00

-. = negligible
 PM/PM10/PM2.5 emission factor based on mass balance test conducted February, 2012.
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

This Registration is being revised through a Registration Revision pursuant to 326 IAC 2-5.5.6(g), because the revision involves a modification that may result in an increase in actual emissions (326 IAC 2-5.5-6(d)(11)(C)) and addition of PSD monitoring requirements, which are not described in 326 IAC 2-5.5.6(d) (Registration Notice-Only Changes).

PTE of the Entire Source After Issuance of the Registration Revision

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units.

Process/ Emission Unit	Potential To Emit of the Entire Source with the Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
M-101 Base Mixer	3.35 3.49	2.64 3.49	3.49	-	-	-	-	-	-	-
M-102 Base Mixer	3.35 3.49	2.64 3.49	3.49	-	-	-	-	-	-	-
M-103 Compound Mixer	0.29	0.29	0.29	-	-	-	-	-	-	-
M-104 Compound Mixer	0.07	0.07	0.07	-	-	-	-	-	-	-
M-105 Compound Mixer	0.29	0.29	0.29	-	-	-	-	-	-	-
M-108 Compound Mixer	0.07	0.07	0.07	-	-	-	-	-	-	-
M-106 Compound Mixer	0.88	0.88	0.88	-	-	-	-	-	-	-
M-107 Compound Mixer	0.88	0.88	0.88	-	-	-	-	-	-	-
MH-103 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-104 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-105 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-106 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-107 Weigh Hopper	0.11	0.11	0.11	-	-	-	-	-	-	-
Outside Silo	0.16	0.16	0.16	-	-	-	-	-	-	-
5 micron silica silo	0.05	0.05	0.05	-	-	-	-	-	-	-
10 micron silica silo	0.05	0.05	0.05	-	-	-	-	-	-	-
Prism	0.08	0.08	0.08	-	-	-	-	-	-	-
Natural Gas Combustion	0.05	0.21	0.21	0.02	2.80	0.15	2.35	3,384	0.053	0.050 (Hexane)
Plant Atmosphere	0.79	0.75	0.75	-	-	-	-	-	-	-
MH-402 Bag Dump Station	0.67 0.002	0.67 0.003	0.003	-	-	-	-	-	-	-

Process/ Emission Unit	Potential To Emit of the Entire Source with the Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
MH-403 Weigh Hopper	0.67 0.002	0.67 0.003	0.003	-	-	-	-	-	-	-
M-404 600L Mixer	0.674	0.674	0.674	-	-	6.35	-	-	6.35	6.35 (Methanol)
M-405 110L Mixer	0.67 0.002	0.67 0.003	0.001	-	-	-	-	-	-	-
Total PTE of Entire Source	11.88	12.00	12.00	0.02	2.80	6.51	2.35	3,384	<25	<10
Exemptions Levels	5	5	5	10	10	5	25	100,000	25	10
Registration Levels	25	25	25	25	25	25	100	100,000	25	10
negl. = negligible *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant". **The 100,000 CO ₂ e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.										

The table below summarizes the potential to emit of the entire source after issuance of this revision, reflecting all limits, of the emission units. (Note: the table below was generated from the above table, with bold text un-bolded and strikethrough text deleted)

Process/ Emission Unit	Potential To Emit of the Entire Source with the Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
M-101 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
M-102 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
M-103 Compound Mixer	0.29	0.29	0.29	-	-	-	-	-	-	-
M-104 Compound Mixer	0.07	0.07	0.07	-	-	-	-	-	-	-
M-105 Compound Mixer	0.29	0.29	0.29	-	-	-	-	-	-	-
M-108 Compound Mixer	0.07	0.07	0.07	-	-	-	-	-	-	-
M-106 Compound Mixer	0.88	0.88	0.88	-	-	-	-	-	-	-
M-107 Compound Mixer	0.88	0.88	0.88	-	-	-	-	-	-	-
MH-103 Weigh Hopper	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-104 Weigh Hopper	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-105 Weigh Hopper	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-106 Weigh Hopper	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-107 Weigh Hopper	0.11	0.11	0.11	-	-	-	-	-	-	-
Outside Silo	0.16	0.16	0.16	-	-	-	-	-	-	-
5 micron silica silo	0.05	0.05	0.05	-	-	-	-	-	-	-
10 micron silica silo	0.05	0.05	0.05	-	-	-	-	-	-	-

Process/ Emission Unit	Potential To Emit of the Entire Source with the Revision (tons/year)									
	PM	PM10*	PM2.5	SO ₂	NO _x	VOC	CO	GHGs as CO ₂ e**	Total HAPs	Worst Single HAP
Prism	0.08	0.08	0.08	-	-	-	-	-	-	-
Natural Gas Combustion	0.05	0.21	0.21	0.02	2.80	0.15	2.35	3,384	0.053	0.050 (Hexane)
Plant Atmosphere	0.79	0.75	0.75	-	-	-	-	-	-	-
MH-402 Bag Dump Station	0.002	0.003	0.003	-	-	-	-	-	-	-
MH-403 Weigh Hopper	0.002	0.003	0.003	-	-	-	-	-	-	-
M-404 600L Mixer	0.674	0.674	0.674	-	-	6.35	-	-	6.35	6.35 (Methanol)
M-405 110L Mixer	0.002	0.003	0.001	-	-	-	-	-	-	-
Total PTE of Entire Source	11.88	12.00	12.00	0.02	2.80	6.51	2.35	3,384	<25	<10
Exemptions Levels	5	5	5	10	10	5	25	100,000	25	10
Registration Levels	25	25	25	25	25	25	100	100,000	25	10

negl. = negligible
 *Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".
 **The 100,000 CO₂e threshold represents the Title V and PSD subject to regulation thresholds for GHGs in order to determine whether a source's emissions are a regulated NSR pollutant under Title V and PSD.

- (a) This revision will not change the registration status of the source, because the limited potential to emit of PM, PM10 and PM2.5 from the entire source will still be within the ranges listed in 326 IAC 2-5.5-1(b)(1) and the PTE of all other regulated criteria pollutants will still be less than the ranges listed in 326 IAC 2-5.5-1(b)(1). Therefore, the source will still be subject to the provisions of 326 IAC 2-5.5 (Registrations).
- (b) This revision to an existing PSD minor stationary source will not change the PSD minor status, because the potential to emit PM, PM10 and PM2.5 is limited to less than 250 tons per year, the potential to emit all other attainment regulated criteria pollutants are less than 250 tons per year, the potential to emit greenhouse gases (GHGs) is less than the PSD subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year, and this source is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

The PTE of PM, PM10 and PM2.5 before controls is 901 tons per year (PM) and 899 tons per year (PM10 and PM2.5) tons per year. Permit level is determined after control for integral process, however, in this case, the before control PTE is greater than 250 tons per year of particulate and would be subject to 326 IAC 2-2.

- (a) Particulate matter (PM) from facilities listed in the following table shall not exceed the pound per hour emission rates:

Emission Unit ID	PM Limit (lbs/hr)
MH-103 Weigh Hopper	0.025
MH-104 Weigh Hopper	0.025
MH-105 Weigh Hopper	0.025
MH-106 Weigh Hopper	0.025
MH-107 Weigh Hopper	0.025
MH-127 Outdoor Silo	0.037
MH-140 5 micron silica silo	0.01
MH-142 10 micron silica silo	0.01

Emission Unit ID	PM Limit (lbs/hr)
PRISM	0.02

- (b) PM10 from facilities listed in the following table shall not exceed the pound per hour emission rates:

Emission Unit ID	PM10Limit (lbs/hr)
MH-103 Weigh Hopper	0.025
MH-104 Weigh Hopper	0.025
MH-105 Weigh Hopper	0.025
MH-106 Weigh Hopper	0.025
MH-107 Weigh Hopper	0.025
MH-127 Outdoor Silo	0.037
MH-140 5 micron silica silo	0.01
MH-142 10 micron silica silo	0.01
HX-103 PRISM	0.02

- (c) PM2.5 from facilities listed in the following table shall not exceed the pound per hour emission rates:

Emission Unit ID	PM2.5 Limit (lbs/hr)
MH-103 Weigh Hopper	0.025
MH-104 Weigh Hopper	0.025
MH-105 Weigh Hopper	0.025
MH-106 Weigh Hopper	0.025
MH-107 Weigh Hopper	0.025
MH-127 Outdoor Silo	0.037
MH-140 5 micron silica silo	0.01
MH-142 10 micron silica silo	0.01
HX-103 PRISM	0.02

Pursuant to 326 IAC 2-2, the baghouses shall be in operation at all times that the controlled the above listed operations are in operation and shall operate within manufacturer's specifications.

Compliance with these limits, combined with the potential to emit PM, PM10 and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM10 and PM2.5 to less than 250 tons per 12 consecutive month period and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Note: These are new applicable requirements.

- (c) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit of any single HAP will still be less than ten (10) tons per year and the PTE of a combination of HAPs will still be less than twenty-five (25) tons per year. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA) and not subject to the provisions of 326 IAC 2-7.
- (d) This revision will not change the minor status of the source, because the uncontrolled/unlimited potential to emit greenhouse gases (GHGs) will still be less than the Title V subject to regulation threshold of one hundred thousand (100,000) tons of CO₂ equivalent emissions (CO₂e) per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Federal Rule Applicability Determination

The federal rules applicable to the existing emission units at this source will not change as a result of this revision.

The federal rule applicability for this revision is as follows:

New Source Performance Standards (NSPS)

- (a) The requirements of the New Source Performance Standard for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included for this proposed revision, since the units are less than 2.9 MW (10 MMBtu/hr) total.
- (b) The requirements of the New Source Performance Standard for the Rubber Tire Manufacturing Industry, 40 CFR 60, Subpart BBB (3B) (326 IAC 12), are not included for this proposed revision, because the source is not a rubber tire manufacturer.
- (c) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included for this proposed revision.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJ (5J), are not included for this proposed revision, because the boilers are natural gas-fired and exempt pursuant to 40 CFR 63.11195(e).
- (e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Chemical Manufacturing Area Sources, 40 CFR 63, Subpart VVVVVV (6V), are not included for this proposed revision, because source does not produce any of the HAPs identified in table 1 of subpart VVVVVV (6V).
- (f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included for this proposed revision.

Compliance Assurance Monitoring (CAM)

- (g) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the potential to emit of the source is limited to less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability Determination

The state rules applicable to the existing emission units at this source will not change as a result of this revision.

The following state rules are applicable to the proposed revision:

- (a) 326 IAC 2-5.5 (Registrations)
Registration applicability is discussed under the Permit Level Determination – Registration section above.

- (b) 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The proposed revision is not subject to the requirements of 326 IAC 2-4.1, since the unlimited potential to emit of HAPs from the modified units is less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs.
- (c) 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, Porter, or LaPorte County, 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.
- (d) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) 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.
 - (2) 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.
- (e) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source 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.

Base Mixer M-101

- (f) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the base mixer (M-101) shall not exceed 0.87 pounds per hour when operating at a process weight rate of 0.10 tons per hour. The pound per hour limitation was calculated with the following equation:

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

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

The baghouse shall be in operation at all times the base mixer (M-101) is in operation, in order to comply with this limit.

- (g) There are no 326 IAC 8 Rules that are applicable to the unit.

Base Mixer M-102

- (h) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the base mixer (M-102) shall not exceed 0.87 pounds per hour when operating at a process weight rate of 0.10 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per

hour shall be accomplished by use of the equation:

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

The baghouse shall be in operation at all times the base mixer (M-102) is in operation, in order to comply with this limit.

Pilot Process (MH-402, MH403, MH-405)

- (i) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
 Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) the particulate from the processes listed in the table below shall be limited by the following:

Emission Unit	Process Weight Rate (lbs/hr)	Process Weight Rate (tons/hr)	Allowable PM Limit (lbs/hr)
MH-402 bag dump station	330	0.165	1.23
MH-403 weigh hopper	330	0.165	1.23
M-405 110L mixer	330	0.165	1.23

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

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

Based on calculations, the baghouses are not needed to comply with this limit.

The source has introduced new powders in this process. The powder blending process results in new materials and due to the recipes of the products varying amounts of powder throughput. Therefore, the emission factors and process output have been updated for MH-402, MH-403 and MH-405.

- (j) There are no 326 IAC 8 Rules that are applicable to the unit.

Compliance Determination, Monitoring and Testing Requirements
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- (a) The compliance determination and monitoring requirements applicable to this proposed revision are as follows:

Emission Unit/Control	Operating Parameters	Frequency
Silos/MH-127, MH-140, MH-142 ¹	Visible notation	when silo is loading
Prism/DC-103	Visible notation	daily
Base Mixers/M-101, M-102	Visible notation	daily

- (1) The Silos (MH-127, MH-140 and MH-142) only produce possible particulate emissions when the silos are being loaded. When the silos are feeding the other operations material of the process, material is transferred from the bottom and particulate emissions are not created.

- (2) There is no compliance monitoring requirements for the weigh hoppers (MH-103, MH-104, MH-105, MH-106 and MH-107) operate only a few minutes per day. Therefore, it is impractical for daily visible notation.
- (b) There are no testing requirements applicable to this proposed revision.

Proposed Changes

- (a) The following changes listed below are due to the proposed revision. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

A.2 Emission Units and Pollution Control Equipment Summary

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

- (a) ~~Seven (7)~~ **Six (6)** sigma blade style mixers, each with a continuous nitrogen purge:
 - (1) Two (2) base mixers, identified as M-101 and M-102, **approved for modification in 2012, each** with a maximum process rate of ~~453~~ **200** pounds per hour, venting through individual dump station baghouse filter systems and then exhausting at ambient temperatures to Stacks M-101 and M-102, respectively; and
- (b) One (1) outdoor silo for storage of fumed silica products, identified as MH-127, with a capacity of 39,000 pounds, including one (1) diaphragm pump with a dilute phase transfer loading rate of 7,200 lb/hr, with PM emissions controlled by **an integral** baghouse 11 and exhausted to a bin vent stack identified as Stack MH-127.
- (c) One (1) PRISM silicone rubber manufacturing operation, identified as PRISM, with emissions controlled by a vent condenser, identified as HX-103, and **an integral** baghouse, identified as DC-103, with emissions exhausting to stack DC-103.
- (d) One (1) 5 micron silica storage silo (MH-140) with capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr with PM emissions controlled with **an integral** bin vent and exhausting to stack MH-140.
- (e) One (1) 10 micron silica storage silo (MH-142) with a capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr, with PM emission controlled with **an integral** bin vent and exhausting to stack MH-142.
- (f) Three (3) weigh hoppers, identified as MH-103, MH-104, and MH-105, equipped with **integral** bin vents that vent to the atmosphere.
- (g) Two (2) compounding mixers (M-106 and M-107) equipped with one (1) weigh hopper (MH-106 and MH-107), each. Both the mixers and the weight hoppers are equipped with **integral** bin vents that emit into the atmosphere through Stack M-106, M-107, MH-106, and MH-107.
- (h) One (1) rubber compound manufacturing process, consisting of the following emission units:
 - (1) Two (2) bag dump stations, each with a maximum capacity of ~~0.086~~ **0.165** tons of rubber per hour; consisting of one (1) automated bag dump, identified as MH-422 and one (1) manual bag dump, identified as MH-402; with particulate controlled by a bin vent for each, and exhausting to the atmosphere through Stack MH-422 for MH-422 and through Stack MH-402 for MH-402.

- (2) One (1) weigh hopper, identified as MH-403, with a maximum capacity of ~~0.086~~ **0.165** tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-403.
- (3) One (1) 600L mixer, identified as M-404, with a maximum capacity of 0.086 tons of rubber per hour, with particulate controlled by a pulse filter, and exhausting to the atmosphere through Stack MH-404.
- (4) One (1) 110L mixer, identified as M-405, with a maximum capacity of ~~0.086~~ **0.165** tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-405.

SECTION D.1

OPERATION CONDITIONS

Facility Description [326 IAC 2-5.1-2(f)(2)] [326 IAC 2-5.5-4(a)(2)]:

- (a) ~~Seven (7)~~ **Six (6)** sigma blade style mixers, each with a continuous nitrogen purge:
 - (1) Two (2) base mixers, identified as M-101 and M-102, **approved for modification in 2012, each** with a maximum process rate of ~~453~~ **200** pounds per hour, venting through individual dump station baghouse filter systems and then exhausting at ambient temperatures to Stacks M-101 and M-102, respectively; and
 - (2) Four (4) compound mixers with a combined maximum process rate of 451.2 pounds per hour, venting through individual bag filters and then exhausting at ambient temperature: M-103 to Stack M-103; M-104 to Stack M-104; M-105 to Stack M-105, and M-108 to Stack M-108; each with a maximum design flow rate of 5 dscm.
- (b) One (1) outdoor silo for storage of fumed silica products, identified as MH-127, with a capacity of 39,000 pounds, including one (1) diaphragm pump with a dilute phase transfer loading rate of 7,200 lb/hr, with PM emissions controlled by **an integral** baghouse 11 and exhausted to a bin vent stack identified as Stack MH-127.
- (c) One (1) PRISM silicone rubber manufacturing operation, identified as PRISM, with emissions controlled by a vent condenser, identified as HX-103, and **an integral** baghouse, identified as DC-103, with emissions exhausting to stack DC-103.
- (d) One (1) 5 micron silica storage silo (MH-140) with capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr with PM emissions controlled with **an integral** bin vent and exhausting to stack MH-140.
- (e) One (1) 10 micron silica storage silo (MH-142) with a capacity of 100,000 lbs including one (1) pneumatic transporter with a maximum rate of 3,000 lbs/hr, with PM emission controlled with **an integral** bin vent and exhausting to stack MH-142.
- (f) Three (3) weigh hoppers, identified as MH-103, MH-104, and MH-105, equipped with **integral** bin vents that vent to the atmosphere.
- (g) Two (2) compounding mixers (M-106 and M-107) equipped with one (1) weigh hopper (MH-106 and MH-107), each. Both the mixers and the weight hoppers are equipped with **integral** bin vents that emit into the atmosphere through Stack M-106, M-107, MH-106, and MH-107.

- (h) One (1) rubber compound manufacturing process, consisting of the following emission units:
- (1) Two (2) bag dump stations, each with a maximum capacity of ~~0.086~~ **0.165** tons of rubber per hour; consisting of one (1) automated bag dump, identified as MH-422 and one (1) manual bag dump, identified as MH-402; with particulate controlled by a bin vent for each, and exhausting to the atmosphere through Stack MH-422 for MH-422 and through Stack MH-402 for MH-402.
 - (2) One (1) weigh hopper, identified as MH-403, with a maximum capacity of ~~0.086~~ **0.165** tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-403.
 - (3) One (1) 600L mixer, identified as M-404, with a maximum capacity of 0.086 tons of rubber per hour, with particulate controlled by a pulse filter, and exhausting to the atmosphere through Stack MH-404.
 - (4) One (1) 110L mixer, identified as M-405, with a maximum capacity of ~~0.086~~ **0.165** tons of rubber per hour, with particulate controlled by a bin vent, and exhausting to the atmosphere through Stack MH-405.
- (The information describing the process contained in this emissions unit description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-5.1-2(f)(1)] [326 IAC 2-5.5-4(a)(1)]

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render 326 IAC 2-2 not applicable, the articulate matter (PM), PM10 and PM2.5 emissions from facilities listed in the following table shall not exceed the pound per hour emission rates:

Emission Unit ID	PM Limit (lbs/hr)	PM10 Limit (lbs/hr)	PM2.5 Limit (lbs/hr)
MH-103 Weigh Hopper	0.025	0.025	0.025
MH-104 Weigh Hopper	0.025	0.025	0.025
MH-105 Weigh Hopper	0.025	0.025	0.025
MH-106 Weigh Hopper	0.025	0.025	0.025
MH-107 Weigh Hopper	0.025	0.025	0.025
MH-127 Outdoor Silo	0.036	0.036	0.036
MH-140 5 micron silica silo	0.01	0.01	0.01
MH-142 10 micron silica silo	0.01	0.01	0.01
PRISM	0.02	0.02	0.02

Compliance with these PM, PM10 and PM2.5 limits, conjunction with the potential PM, PM10 and PM2.5 emissions from other emission units at this source shall limit PM, PM10 and PM2.5 emissions to less than two hundred fifty (250) tons per year and renders the entire source minor with respect to 326 IAC 2-2 (PSD).

D.1.1D1.2 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the particulate emission rate from the following emission units and control devices shall not exceed the particulate emission rates listed in the table below when operating at the stated process weight rates:

Emission Unit	Process weight rate (tons per hour)	Allowable particulate emission rate (pounds per hour)
M-101 and M-102	0.077 0.10 (each)	0.73 0.87 (each)
MH-103, MH-104, MH-105, MH-106, and MH-107	0.085 (each)	0.79 (each)
MH-127	3.6	9.67
MH-402 or MH-442, MH-403, MH-405	0.165 (each)	1.23 (each)
MH-140 and MH-142	5.0 (each)	12.05 (each)
PRISM	1.80	6.08

The pound per hour limitation was calculated with the following equation:

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

$$E = 4.10 P^{0.67}$$

Where E = rate of emission in pounds per hour; and
 P = process weight rate in tons per hour

D.1.3 Preventive Maintenance Plan [326 IAC 1-6-3]

A Preventive Maintenance Plan is required for the base mixers (M-101 and M-102), the five (5) weight hoppers (MH-103 through MH-107), outdoor silo (MH-127), 5 micron silica silo (MH-140), 10 micron silica silo (MH-142), and the PRISM silicone rubber manufacturing operation (DC-103) and their control devices. Section B - Preventive Maintenance Plan contains the Registrant's obligation with regard to the preventive maintenance plan required by this condition.

Compliance Determination Requirements [326 IAC 2-5.1-2(g)] [326 IAC 2-5.5-4(b)]

D.1.2.4 Particulate Control

In order to comply with Conditions D.1.1 and D.1.2, the control equipment for particulate control shall be in operation and control emissions from the base mixers (M-101 and M-102), the five (5) weight hoppers (MH-103 through MH-107), outdoor silo (MH-127), 5 micron silica silo (MH-140), 10 micron silica silo (MH-142), and the Prism silicone rubber manufacturing operation (HX-103) at all times when these units are in operation.

Compliance Monitoring Requirements [326 IAC 2-5.1-3(e)(2)]

D.1.5 Visible Emissions Notations

- (a) Visible emission notations are required for the following:
- (1) The outdoor silo (MH-127), 5 micron silica silo (MH-140), 10 micron silica silo (MH-142), stack exhausts, identified as MH-127, MH-140, MH-142, shall be performed during silo loading operations during normal daylight operations.
 - (2) The Base Mixers, identified as M-101 and M-102, and the Prism silicone rubber manufacturing operation (DC-103) stack exhausts, identified as M-101, M-102 and DC-103, shall be performed once per day during normal daylight operations.

A trained employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) If abnormal emissions are observed, the Registrant shall take reasonable response. Section C- Response to Excursions or Exceedances contains the Registrant's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.6 Broken or Failed Bag Detection

- (a) For a multi-compartment baghouse, if operations will continue for ten (10) days or more after the failure is observed before the failed units will be repaired or replaced, the Registrant shall promptly notify the IDEM, OAQ of the expected date the failed units will be repaired or replaced. The notification shall also include the status of the applicable compliance monitoring parameters with respect to normal, and the results of any response actions taken up to the time of notification.
- (b) For a single compartment baghouse controlling emissions from a process operated continuously, a failed unit and the associated process shall be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Registrant satisfies the requirements of the emergency provisions of this permit (Section C - Response to Excursions or Exceedances).
- (c) For a single compartment baghouses controlling emissions from a batch process, the feed to the process shall be shut down immediately until the failed unit has been repaired or replaced. The emissions unit shall be shut down no later than the completion of the processing of the material in the line. Operations may continue only if the event qualifies as an emergency and the Registrant satisfies the requirements of the emergency provisions of this permit (Section C - Response to Excursions or Exceedances). Bag failure can be indicated by a significant drop in the baghouse's pressure reading with abnormal visible emissions, by an opacity violation, or by other means such as gas temperature, flow rate, air infiltration, leaks, dust traces or triboflows.

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

D.1.7 Record Keeping Requirements

- (a) To document the compliance status with Condition D.1.5, the Registrant shall maintain daily records of the visible emission notations of the baghouse stack exhaust. The Registrant shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (i.e. the process did not operate that day).

- (b) Section C - General Record Keeping Requirements contains the Registrant's obligations with regard to the records required by this condition.**

MALFUNCTION REPORT

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865**

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

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

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

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

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

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

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

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

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

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

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____

MEASURES TAKEN TO MINIMIZE EMISSIONS: _____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES: _____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS: _____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT: _____
INTERIM CONTROL MEASURES: (IF APPLICABLE) _____

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

MALFUNCTION RECORDED BY: _____ DATE: _____ TIME: _____

*SEE PAGE 2

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

326 IAC 1-6-1 Applicability of rule

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

326 IAC 1-2-39 "Malfunction" definition

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

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

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

- (b) Upon further review, IDEM, OAQ has decided to make the following changes to the permit. Deleted language appears as ~~strikethrough~~ text and new language appears as **bold** text:

(1) *IDEM has begun implementing a new procedure and will no longer list the mailing address of the registrant. The registration is revised as follows:*

A.1 General Information

The Registrant owns and operates a stationary silicone rubber manufacturing facility.

Source Address:	111 South Progress Drive East, Kendallville, Indiana 46755
Mailing Address:	P.O. Box 369, Kendallville, Indiana 46755
General Source Phone Number:	(260) 343-2380
SIC Code:	2822
County Location:	Noble County
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Registration

(2) *A Preventive Maintenance Plan (PMP) is required in Section D.1, therefore instructions and requirements for a PMP have been added to Section B.*

B.8 Preventive Maintenance Plan [326 IAC 1-6-3]

(a) **If required by specific condition(s) in Section D of this registration, the Registrant shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this registration or ninety (90) days after initial start-up, whichever is later, 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 Registrant's control, the PMPs cannot be prepared and maintained within the above time frame, the Registrant may extend the date an additional ninety (90) days provided the Registrant notifies:

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

The Registrant shall implement the PMPs.

- (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 Registrant to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions.**

- (c) **To the extent the Registrant is required by 40 CFR Part 60 or 40 CFR Part 63 to have an Operation Maintenance, and Monitoring (OMM) Plan for a unit, such OMM Plan is deemed to satisfy the PMP requirements of 326 IAC 1-6-3 for that unit.**
- (3) *The registrant has compliance requirements in Section D.1, therefore instructions and requirements for compliance and compliance monitoring requirements have been added to Section C.*

Compliance Requirements [326 IAC 2-1.1-11]

C.3 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 1.1 11] [326 IAC 2-5.5-4(b)]

C.4 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Registrant 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.

Corrective Actions and Response Steps

C.5 Response to Excursions or Exceedances

Upon detecting an excursion where a response step is required by the D Section or an exceedance of a limitation in this permit:

- (a) **The Registrant shall take reasonable response steps to 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 excess emissions.**
- (b) **The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:**
 - (1) **initial inspection and evaluation;**
 - (2) **recording that operations returned or are returning 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 normal or usual manner of operation.**
- (c) **A determination of whether the Registrant 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 Registrant shall record the reasonable response steps taken.

Record Keeping and Reporting Requirements [326 IAC 2-5.5-4(b)]

C.6 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.7 General Record Keeping Requirements [326 IAC 2 5.5-4(b)]

- (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 Registrant, the Registrant shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, for all record keeping requirements not already legally required, the Registrant shall be allowed up to ninety (90) days from the date of permit issuance or the date of initial start-up, whichever is later, to begin such record keeping.

Conclusion and Recommendation

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 November 30, 2011. Additional information was received on February 16, 2012.

The construction and operation of this proposed revision shall be subject to the conditions of the attached proposed Registration Revision No. 113-31193-00055. The staff recommends to the Commissioner that this Registration Revision be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Bruce Farrar at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-5401 or toll free at 1-800-451-6027 extension 4-5401.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem

**Appendix A: Emissions Calculations
Summary of Emissions**

**Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011**

Potential to Emit of Entire Source Prior to Revision (tons/yr)								
Process	PM	PM10	SO ₂	NOx	VOC	CO	Total HAPs	Single HAP
M-101 Base Mixer**	3.35	2.61	-	-	-	-	-	-
M-102 Base Mixer**	3.35	2.61	-	-	-	-	-	-
M-103 Compound Mixer**	0.29	0.29	-	-	-	-	-	-
M-104 Compound Mixer**	0.07	0.07	-	-	-	-	-	-
M-105 Compound Mixer**	0.29	0.29	-	-	-	-	-	-
M-108 Compound Mixer**	0.07	0.07	-	-	-	-	-	-
M-106 Compound Mixer**	0.88	0.88	-	-	-	-	-	-
M-107 Compound Mixer**	0.88	0.88	-	-	-	-	-	-
MH-103 Weigh Hopper*	0.11	0.11	-	-	-	-	-	-
MH-104 Weigh Hopper*	0.11	0.11	-	-	-	-	-	-
MH-105 Weigh Hopper*	0.11	0.11	-	-	-	-	-	-
MH-106 Weigh Hopper*	0.11	0.11	-	-	-	-	-	-
MH-107 Weigh Hopper*	0.11	0.11	-	-	-	-	-	-
Outside Silo (MH-127)*	0.16	0.16	-	-	-	-	-	-
5 micron silica silo (MH-140)*	0.05	0.05	-	-	-	-	-	-
10 micron silica silo (MH-142)*	0.05	0.05	-	-	-	-	-	-
Prism*	0.08	0.08	-	-	-	-	-	-
Natural Gas Combustion**	0.05	0.21	0.02	2.80	0.15	2.35	0.053	0.050
Plant Atmosphere*	0.79	0.75	-	-	-	-	-	-
MH-402 Bag Dump Station**	0.67	0.67	-	-	-	-	-	-
MH-403 Weigh Hopper**	0.67	0.67	-	-	-	-	-	-
M-404 600L Mixer**	0.674	0.674	-	-	6.35	-	6.35	6.35
M-405 110L Mixer**	0.004	0.004	-	-	-	-	-	-
Total	12.94	11.59	0.02	2.80	6.51	2.35	6.40	<10

*Potential to Emit obtained from TSD Permit No: 113-12767-00055, issued on December 1, 2000

**Potential to Emit obtained from TSD Permit No: 113-25781-00055, issued on January 30, 2008

Uncontrolled Potential to Emit of Modification (tons/yr)										
Process	PM	PM10	PM2.5	SO ₂	NOx	VOC	CO	GHG as CO ₂ e	Total HAPs	Single HAP
M-101 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
M-102 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
MH-402 Bag Dump Station	0.002	0.003	0.003	-	-	-	-	-	-	-
MH-403 Weigh Hopper	0.002	0.003	0.003	-	-	-	-	-	-	-
M-405 110L Mixer	0.002	0.001	0.001	-	-	-	-	-	-	-
Natural Gas Combustion								3,384		
Total	6.99	6.99	6.99	0.00	0.00	0.00	0.00	3,384	0.00	0.00

**Appendix A: Emissions Calculations
Summary of Emissions**

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Potential to Emit of Entire Source after Issuance (tons/yr)										
Process	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	GHG as CO ₂ e	Total HAPs	Single HAP
M-101 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
M-102 Base Mixer	3.49	3.49	3.49	-	-	-	-	-	-	-
M-103 Compound Mixer	0.29	0.29	0.29	-	-	-	-	-	-	-
M-104 Compound Mixer	0.07	0.07	0.07	-	-	-	-	-	-	-
M-105 Compound Mixer	0.29	0.29	0.29	-	-	-	-	-	-	-
M-108 Compound Mixer	0.07	0.07	0.07	-	-	-	-	-	-	-
M-106 Compound Mixer	0.88	0.88	0.88	-	-	-	-	-	-	-
M-107 Compound Mixer	0.88	0.88	0.88	-	-	-	-	-	-	-
MH-103 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-104 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-105 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-106 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
MH-107 Weigh Hopper*	0.11	0.11	0.11	-	-	-	-	-	-	-
Outside Silo*	0.16	0.16	0.16	-	-	-	-	-	-	-
5 micron silica silo*	0.05	0.05	0.05	-	-	-	-	-	-	-
10 micron silica silo*	0.05	0.05	0.05	-	-	-	-	-	-	-
Prism*	0.08	0.08	0.08	-	-	-	-	-	-	-
Natural Gas Combustion	0.05	0.21	0.21	0.02	2.80	0.15	2.35	3,384	0.053	0.050
Plant Atmosphere	0.79	0.75	0.75	-	-	-	-	-	-	-
MH-402 Bag Dump Station	0.002	0.003	0.003	-	-	-	-	-	-	-
MH-403 Weigh Hopper	0.002	0.003	0.003	-	-	-	-	-	-	-
M-404 600L Mixer	0.674	0.674	0.674	-	-	6.35	-	-	6.35	6.35
M-405 110L Mixer	0.002	0.001	0.001	-	-	-	-	-	-	-
Total	11.88	12.00	12.00	0.02	2.80	6.51	2.35	3,384	<25	<10

* These baghouses are considered integral to the process, therefore PTE after controls is used for permit level determination.

Appendix A: Emissions Calculations

Existing Mixers

PM/PM10 Emissions

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Potential to Emit after Modification of Mixers (tons/year)						
Process	Material Usage (lbs/hr)	PM/PM10/PM2.5 Emission Factor (lb PM/1000 lb)	Uncontrolled PM Emissions (lb/hr)	Uncontrolled PM Emissions (tons/yr)	Control Efficiency %	Controlled PM Emissions (lb/hr)
M-101 Base Mixer	200	3.985	0.797	3.49	99.90%	0.0008
M-102 Base Mixer	200	3.985	0.797	3.49	99.90%	0.0008
Total				6.98		0.0016

Methodology

PM/PM10/PM2.5 Emission Factors based on Mass Balance Test conducted February 3, 2012.

Uncontrolled PM/PM10/PM2.5 Emissions (lb/hr) = material usage (tons/hr) * PM/PM10 Emission Factor (lb/ton)

Uncontrolled PM/PM10/PM2.5 Emissions (tons/yr) = material usage (tons/hr) * PM/PM10/PM2.5 Emission Factor (lb/ton) * 1/2000 (ton/lbs) * 8760 (hrs/yr)

Controlled PM/PM10/PM2.5 Emissions (lb/hr) = Uncontrolled PM/PM10/PM2.5 emissions (lb/hr) * (1 - % Control Efficiency)

Controlled PM/PM10/PM2.5 Emissions (tons/yr) = Uncontrolled PM/PM10/PM2.5 emissions (tons/yr) * (1 - % Control Efficiency)

Appendix A: Emissions Calculations

Existing Mixers

PM/PM10 Emissions

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Potential to Emit of Existing Mixers (tons/year)												
Process	Material Usage (lbs/hr)	PM Emission Factor (lb PM/lb)	PM10 Emission Factor (lb PM/lb)	Uncontrolled PM Emissions (lb/hr)	Uncontrolled PM10 Emissions (lb/hr)	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM10 Emissions (tons/yr)	Control Efficiency %	Controlled PM Emissions (lb/hr)	Controlled PM10 Emissions (lb/hr)	Controlled PM Emissions (tons/yr)	Controlled PM10 Emissions (tons/yr)
M-101 Base Mixer	76.5	0.01	0.0078	0.765	0.597	3.35	2.61	0.00%	0.7650	0.5967	3.3507	2.6135
M-102 Base Mixer	76.5	0.01	0.0078	0.765	0.597	3.35	2.61	0.00%	0.7650	0.5967	3.3507	2.6135
M-103 Compound Mixer	112.8	5.87E-04	5.87E-04	0.066	0.066	0.29	0.29	99.50%	3.31E-04	3.31E-04	1.45E-03	1.45E-03
M-104 Compound Mixer	112.8	1.50E-04	1.50E-04	0.017	0.017	0.07	0.07	99.50%	8.46E-05	8.46E-05	3.71E-04	3.71E-04
M-105 Compound Mixer	112.8	5.87E-04	5.87E-04	0.066	0.066	0.29	0.29	99.50%	3.31E-04	3.31E-04	1.45E-03	1.45E-03
M-108 Compound Mixer	112.8	1.50E-04	1.50E-04	0.017	0.017	0.07	0.07	99.50%	8.46E-05	8.46E-05	3.71E-04	3.71E-04
M-106 Compound Mixer	342.5	5.84E-04	5.84E-04	0.200	0.200	0.88	0.88	99.50%	1.00E-03	1.00E-03	4.38E-03	4.38E-03
M-107 Compound Mixer	342.5	5.84E-04	5.84E-04	0.200	0.200	0.88	0.88	99.50%	1.00E-03	1.00E-03	4.38E-03	4.38E-03
Total						9.18	7.71				6.71	5.24

Methodology

PM/PM10 Emission Factors from Dow Corning Revision to the Registration TSD Permit No: 113-12767-00055, issued on December 1, 2000

Uncontrolled PM/PM10 Emissions (lb/hr) = material usage (tons/hr) * PM/PM10 Emission Factor (lb/ton)

Uncontrolled PM/PM10 Emissions (tons/yr) = material usage (tons/hr) * PM/PM10 Emission Factor (lb/ton) * 1/2000 (ton/lbs) * 8760 (hrs/yr)

Controlled PM/PM10 Emissions (lb/hr) = Uncontrolled PM/PM10 emissions (lb/hr) * (1 - % Control Efficiency)

Controlled PM/PM10 Emissions (tons/yr) = Uncontrolled PM/PM10 emissions (tons/yr) * (1 - % Control Efficiency)

**Appendix A: Emissions Calculations
PM/PM10/PM2.5 for Silos**

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Emission Unit	Grain Loading (gr/scf)	Flow Rate (acfm)	Control Efficiency %	PTE before Controls (tons/year)	PTE After Controls (tons/year)
MH-103 Weigh Hopper	0.02	150	99.90%	112.63	0.11
MH-104 Weigh Hopper	0.02	150	99.90%	112.63	0.11
MH-105 Weigh Hopper	0.02	150	99.90%	112.63	0.11
MH-106 Weigh Hopper	0.02	150	99.90%	112.63	0.11
MH-107 Weigh Hopper	0.02	150	99.90%	112.63	0.11
Total Particulate				563.14	0.11

Assume PM = PM10 and PM2.5

The determination for the weigh hopper (MH-103 through MH-107) baghouses as integral was made pursuant to Registration 113-12767-00055, issued on December 1, 2000.

Therefore, the permitting level was determined using the potential to emit after the baghouse.

Methodology:

PM/PM10/PM2.5 after control = (gr/scf) * (dscfm) *(1 lb/7000 grains) * (60 minute/ 1 hour) * (8760 hours/1 year) * (1 ton/2000 lbs)

PM/PM10/PM2.5 before control = ((gr/scf) * (dscfm) *(1 lb/7000 grains) * (60 minute/ 1 hour) * (8760 hours/1 year) * (1 ton/2000 lbs)) / (1 - Control efficiency %)

Appendix A: Emissions Calculations

Pilot Process

PM/PM10/PM2.5 Emissions

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Current Pilot Process

Process	Material Usage (tons/hr)	PM Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	Uncontrolled PM Emissions (lb/hr)	Uncontrolled PM10 Emissions (lb/hr)	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM10 Emissions (tons/yr)	Control Efficiency %	Controlled PM Emissions (lb/hr)	Controlled PM10 Emissions (lb/hr)	Controlled PM Emissions (tons/yr)	Controlled PM10 Emissions (tons/yr)
MH-402 Bag Dump Station*	0.086	1.79	1.79	0.154	0.154	0.67	0.67	99.50%	0.0008	0.0008	0.0034	0.0034
MH-403 Weigh Hopper*	0.086	1.79	1.79	0.154	0.154	0.67	0.67	99.50%	0.0008	0.0008	0.0034	0.0034
M-404 600L Mixer*	0.086	1.79	1.79	0.154	0.154	0.67	0.67	99.90%	1.54E-04	1.54E-04	6.74E-04	6.74E-04
M-405 110L Mixer**	0.086	0.011	0.011	0.001	0.001	0.004	0.004	99.50%	4.73E-06	4.73E-06	2.07E-05	2.07E-05
Total						2.03	2.03				0.0074	0.0074

Methodology

*PM/PM10 Emission Factor from AP 42, Chapter 11.23, Table 11.23.3, SCC 3-03-023-45 (3.2 lb/ton)
 *PM/PM10 Emission Factor = 3.2 (lb/ton) * 0.08 (tons of powder/batch) * 1/0.143 (tons of rubber/batch) = 1.79 (lb/ton)
 **PM/PM10 Emission Factor from AP 42, Chapter 9.9.1, Table 9.9.1-1, SCC 3-02-005-40 (0.025 lb/ton)
 **PM/PM10 Emission Factor = 0.025 (lb/ton) * 0.06 (tons of guar gum/batch) * 1/0.143 (tons of rubber/batch) = 0.011 (lb/ton)
 Uncontrolled PM/PM10 Emissions (lb/hr) = material usage (tons/hr) * PM/PM10 Emission Factor (lb/ton)
 Uncontrolled PM/PM10 Emissions (tons/yr) = material usage (tons/hr) * PM/PM10 Emission Factor (lb/ton) * 1/2000 (ton/lbs) * 8760 (hrs/yr)
 Controlled PM/PM10 Emissions (lb/hr) = Uncontrolled PM/PM10 emissions (lb/hr) * (1 - % Control Efficiency)
 Controlled PM/PM10 Emissions (tons/yr) = Uncontrolled PM/PM10 emissions (tons/yr) * (1 - % Control Efficiency)

Proposed Pilot Process

Process	Material Usage (tons/hr)	PM Emission Factor (lb/ton)	PM10 Emission Factor (lb/ton)	Uncontrolled PM Emissions (lb/hr)	Uncontrolled PM10 Emissions (lb/hr)	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM10 Emissions (tons/yr)	Control Efficiency %	Controlled PM Emissions (lb/hr)	Controlled PM10 Emissions (lb/hr)	Controlled PM Emissions (tons/yr)	Controlled PM10 Emissions (tons/yr)
MH-402 Bag Dump Station ¹	0.165	0.01	0.004	0.002	0.001	0.01	2.89E-03	99.50%	0.0000	0.0000	0.0000	0.0000
MH-403 Weigh Hopper ¹	0.165	0.01	0.004	0.002	0.001	0.01	2.89E-03	99.50%	0.0000	0.0000	0.0000	0.0000
M-404 600L Mixer ²	0.086	1.79	1.79	0.154	0.154	0.67	0.67	99.90%	1.54E-04	1.54E-04	6.74E-04	6.74E-04
M-405 110L Mixer ¹	0.165	0.01	0.004	0.002	0.001	0.007	2.89E-03	99.50%	8.25E-06	3.30E-06	3.61E-05	1.45E-05
Total						0.70	0.68				0.0008	0.0007

Assume PM10 = PM2.5

1. PM/PM10 Emission Factors from AP-42, 11.24 (Metallic Minerals Processing) Table 11.24-2 (SCC 3-03-024-08) dated 01/1995.
2. PM/PM10 Emission Factor from AP 42, Chapter 11.23 (Taconite Ore Processing), Table 11.23.3, SCC 3-03-023-45 (3.2 lb/ton)

Methodology

2. PM/PM10 Emission Factor = 3.2 (lb/ton) * 0.08 (tons of powder/batch) * 1/0.143 (tons of rubber/batch) = 1.79 (lb/ton)
 Uncontrolled PM/PM10 Emissions (lb/hr) = material usage (tons/hr) * PM/PM10 Emission Factor (lb/ton)
 Uncontrolled PM/PM10 Emissions (tons/yr) = material usage (tons/hr) * PM/PM10 Emission Factor (lb/ton) * 1/2000 (ton/lbs) * 8760 (hrs/yr)
 Controlled PM/PM10 Emissions (lb/hr) = Uncontrolled PM/PM10 emissions (lb/hr) * (1 - % Control Efficiency)
 Controlled PM/PM10 Emissions (tons/yr) = Uncontrolled PM/PM10 emissions (tons/yr) * (1 - % Control Efficiency)

Appendix A: Emissions Calculations

Pilot Process

VOC/HAPs Emissions

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Process	Material Usage (tons/hr)	VOC Emission Factor (lbs/ton)	VOC Emissions (lbs/hr)	VOC Emissions (tons/yr)	Methanol Emission Factor (lbs/ton)	Methanol Emissions (lbs/hr)	Methanol Emissions (tons/yr)
M-404 600L Mixer	0.086	21.309	1.83	8.03	16.863	1.45	6.35

Methodology

VOC/HAP Emission Factors provided by source based on testing at the facility

VOC Emissions (tons/yr) = material usage (tons/hr) * VOC emission factor (lbs/ton) * 1/2000 (ton/lbs) * 8760 (hrs/yr)

HAP Emissions (tons/yr) = material usage (tons/hr) * HAP emission factor (lbs/ton) * 1/2000 (ton/lbs) * 8760 (hrs/yr)

**Appendix A: Emissions Calculations
PM/PM10/PM2.5 for Silos**

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Emission Unit	Grain Loading (gr/scf)	Flow Rate (dscfm)	Control Efficiency %	PTE before Controls (tons/year)	PTE After Controls (tons/year)
Outdoor Silo (MH-127) ¹	0.07	60	99.90%	157.68	0.16
5 micron silica silo (MH-140) ²	0.02	60	99.90%	45.05	0.05
10 micron silica silo (MH-142) ²	0.02	60	99.90%	45.05	0.05
Total Particulate				247.78	0.16

Assume PM = PM10 and PM2.5

1. The determination for the MH-130 baghouse as integral was made pursuant to Exemption 113-9700-00055, issued on May 20, 1998
 2. The determination for the MH-140 and MH-142 baghouses as integral was made pursuant to Registration 113-12767-00055, issued on December 1, 2000.
- Therefore, the permitting level was determined using the potential to emit after the baghouse.

Methodology:

PM/PM10/PM2.5 after control = (gr/scf) * (dscfm) * (1 lb/7000 grains) * (60 minute/ 1 hour) * (8760 hours/1 year) * (1 ton/2000 lbs)

PM/PM10/PM2.5 before control = ((gr/scf) * (dscfm) * (1 lb/7000 grains) * (60 minute/ 1 hour) * (8760 hours/1 year) * (1 ton/2000 lbs)) / (1 - Control efficiency %)

**Appendix A: Emissions Calculations
PM/PM10/PM2.5 for PRISM (HX-103)**

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Emission Unit	Grain Loading (gr/scf)	Flow Rate (acfm)	Control Efficiency %	PTE before Controls (tons/year)	PTE After Controls (tons/year)
PRISM (HX-103) ¹	0.001	2,080	99.90%	78.09	0.08
Total Particulate				78.09	0.08

Assume PM = PM10 and PM2.5

1. The determination for the PRISM baghouse as integral was made pursuant to Registration 113-10553-00055, issued on March 8, 1999. Therefore, the permitting level was determined using the potential to emit after the baghouse.

Methodology:

PM/PM10/PM2.5 after control = (gr/scf) * (acfm) * (1 lb/7000 grains) * (60 minute/ 1 hour) * (8760 hours/1 year) * (1 ton/2000 lbs)

PM/PM10/PM2.5 before control = ((gr/scf) * (acfm) * (1 lb/7000 grains) * (60 minute/ 1 hour) * (8760 hours/1 year) * (1 ton/2000 lbs)) / (1 - Control efficiency %)

**Appendix A: Emissions Calculations
PM/PM10/PM2.5 for Plant**

Company Name: Dow Corning, STI
Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Emission Unit	Particulate (lbs/day)	PM10 (lbs/day)	PM (tons/year)	PM10 (tons/year)
Plant	4.338	4.12	0.79	0.75
Total			0.79	0.75

Assume PM10 = PM2.5

Particulate was determined by the source in Registration 113-5755-00055 issued October 9, 1996.

313 pounds of particulate was collected in 116 dyas by the two plant atmosphere filter units. Each unit has a 99.9% efficiency.

The normal production rate of silicone is 2333 lb/hr with a 5 day week, 24 hours per day. The maximum production rate for a 7 day week is 2678 lb/hr.

lbs PM/days = lbs PM per day

PM Before Control = lb/day collected * (1 + (1 - collection efficiency))

Maximum Capacity Factor = max. prod. rate/avg. production rate

Maximum Plant Atmosphere Particulate = particulate before controls * max. capacity factor

Maximum Plant Atmosphere PM10 = PM lbs/day * 95% (PM10)

Methodology:

313 lbs PM/116 days = 2.698 lbs PM per day

PM Before Control = 2.698 lbs/day * (1 + (1-0.995)) = 2.711

Maximum Capacity Factor = (2678 lbs/7 days) / (2333 lbs/5day) = 1.6

Maximum Plant Atmosphere Particulate = 2.711 lbs/day * 1.6 = 4.338 lbs/day

Maximum Plant Atmosphere PM10 = 4.338 lbs/day PM * 0.95 = 4.12

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Company Name: Dow Corning, STI
Company Address: 111 S Progress Drive, Kendallville, IN 46755
Permit Number: 113-10553-00055
Revision Number: 113-31193-00055
Reviewer: Bruce Farrar
Date: November 30, 2011

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

6.4

56.1

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.1	0.2	0.02	2.8	0.2	2.4

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.

**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Emission Factor in lb/MMcf	HAPs - Organics				
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	5.887E-05	3.364E-05	2.102E-03	5.046E-02	9.531E-05

Emission Factor in lb/MMcf	HAPs - Metals				
	Lead	Cadmium	Chromium	Manganese	Nickel
	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.402E-05	3.084E-05	3.924E-05	1.065E-05	5.887E-05

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

The five highest organic and metal HAPs emission factors are provided above.

Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Appendix A: Emissions Calculations

Natural Gas Combustion Only

MM BTU/HR <100

Greenhouse Gas Emissions

Company Name: Dow Corning, STI

Address City IN Zip: 111 S Progress Drive, Kendallville, IN 46755

Permit Number: 113-10553-00055

Revision Number: 113-31193-00055

Reviewer: Bruce Farrar

Date: November 30, 2011

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	3,364	0.1	0.1
Summed Potential Emissions in tons/yr	3,364		
CO2e Total in tons/yr	3,384		

Methodology

The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.

Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.

Greenhouse Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

CO2e (tons/yr) = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Robert Crosby
Dow Corning, STI
111 S Progress Dr East
Kendallville, IN 46755

DATE: April 2, 2012

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

SUBJECT: Final Decision
Registration - Revision
113-31193-00055

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Janice Worden (Site Manager)
Nicole Galavotti (Shield Environmental Associates, Inc)
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

Final Applicant Cover letter.dot 11/30/07

Mail Code 61-53

IDEM Staff	MIDENNEY 4/2/2012 Dow Corning STI 113-31193-00055 (final)		Type of Mail: CERTIFICATE OF MAILING ONLY	AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204		

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee	Remarks
1		Robert G. Crosby Dow Corning STI 111 S Progress Dr. E Kendallville IN 46755 (Source CAATS) via confirm delivery										
2		Janice D. Worden Site Mgr Dow Corning STI 111 S Progress Dr. E Kendallville IN 46755 (RO CAATS)										
3		Noble County Board of Commissioners 101 North Orange Street Albion IN 46701 (Local Official)										
4		Noble County Health Department 2090 N. State Rd 9, Suite C Albion IN 46701-9566 (Health Department)										
5		Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 (Affected Party)										
6		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 (Affected Party)										
7		Kendallville City Council and Mayors Office 234 S. Main Street Kendallville IN 46755 (Local Official)										
8		Nicole Galavotti Shield Environmental Associates, Inc. 948 Floyd Drive Lexington KY 40505 (Consultant)										
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