FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) OFFICE OF AIR MANAGEMENT

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
Phone: 1-800-451-6027

Owens Corning
128 W. Eighth Street
Brookville, Indiana 47012

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 and contains the conditions and provisions specified in 326 IAC 2-8 and 40 CFR Part 70.6 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments) and IC 13-15 and IC 13-17 (prior to July 1, 1996, IC 13-1-1-4 and IC 13-7-10).

Operation Permit No.: F047-5160-00005	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Management	Issuance Date:

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SECTION A SOURCE SUMMARY

A.1 General Information

The Permittee owns and operates an Asphalt Felt, Coatings, and Roofing Products production plant.

Responsible Official:	Michael P. Friderichs
Source Address:	128 W. Eighth Street, Brookville, Indiana, 47012
Mailing Address:	128 W. Eighth Street, Brookville, Indiana, 47012
SIC Code:	2952
County Location:	Franklin County
County Status:	Attainment for all criteria pollutants.
Source Status:	Minor Source, PSD Program

A.2 Emission Units and Pollution Control Summary

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

(a) four (4) combustion emission units (EU) consisting of:

(1) one (1) natural gas fired asphalt preheater #1 identified as EU 1.1, rated at 2.5 million British thermal units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 65;

(2) one (1) natural gas fired asphalt preheater #2 (asphalt saturant preheater) identified as EU 1.2, rated at 1.5 million British thermal units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 66;

(3) one (1) natural gas fired filler heater (asphalt saturant preheater) identified as EU 1.3, rated at 2.5 million British thermal units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 15; and

(4) one (1) natural gas fired hot oil heater identified as EU 1.4, rated at 2.1 million British thermal units per hour and using No. 2 fuel oil as a backup, exhausting at one (1) stack identified as 67;

(b) three (3) storage tanks consisting of:

(1) one (1) 40,000 gallon capacity asphalt tank #1 rated at 200 gallons per minute and identified as EU 2.1, with a fiber filter bed to control particulate matter, exhausting at one (1) stack identified as 71;

(2) one (1) 10,000 gallon capacity adhesive tank #7, currently out of service to be placed back in service, rated at 200 gallons per minute and identified as EU 2.2, with particulate matter to be controlled by fiber bed filter and exhausting to one (1) unlabeled stack; and

(3) one (1) 10,000 gallon capacity adhesive tank #7A, to be built, rated at 200 gallons per minute and identified as EU 2.3, with particulate matter to be controlled by fiber bed filter and exhausting to one (1) unlabeled stack;

(c) one (1) 30,000 gallon capacity asphalt tank #2 rated at 200 gallons per minute and identified as EU 3.1, exhausting at one (1) stack identified as 72;

(d) nine (9) storage vessels controlled by twelve (12) baghouses consisting of:

(1) one (1) filler silo #1 rated at 64.2 thousand cubic feet per hour and identified as EU 4.1 with particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 74 and 75;

(2) one (1) filler silo #2 rated at 32.1 thousand cubic feet per hour and identified as EU 4.2, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 77;

(3) one (1) filler silo #4 rated at 64.2 thousand cubic feet per hour and identified as EU 4.3 with particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 80 and 81;

(4) one (1) parting agent silo #3 rated at 32.1 thousand cubic feet per hour and identified as EU 4.4, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 79;

(5) one (1) parting agent use bin rated at 27 thousand cubic feet per hour and identified as EU 4.5, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 14A;

(6) one (1) filler upper surge hopper rated at 54 thousand cubic feet per hour and identified as EU 4.7, with particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 15A and 15B;

(7) one (1) filler lower surge hopper rated at 27 thousand cubic feet per hour and identified as EU 4.8, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 15C;

(8) one (1) surfacing material silo #7 rated at 30 thousand cubic feet per hour and identified as EU 4.10, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 89; and

(9) one (1) surfacing material receiving bin rated at 30 thousand cubic feet per hour and identified as EU 4.11, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 90;

(e) one (1) asphalt filler mixer rated at 300 gallons per minute and identified as EU 5.1;

(f) five (5) facilities with limited production rates consisting of:

(1) six (6) surfacing material silos #1 - 6 identified as EU 4.9, all exhausting at one (1) stack identified as 20;

(2) one (1) asphalt coater (coating rolls) and coating surge tank identified as EU 6.1, exhausting at one stack identified as 36;

(3) one (1) material surfacing applicator (material surfacing area) rated at 471 thousand cubic feet per hour and identified as EU 7.1, with particulate matter controlled by one (1) baghouse, exhausting at one stack identified as 14;

(4) one (1) cooling section identified as EU 7.2, exhausting at two (2) stacks

identified as 41 and 42; and

(5) fugitive emissions from ventilators, identified as ID# 93.

A.3 Insignificant Activities

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(20):

(a) one (1) parting agent recycle system rated at 27 thousand cubic feet per hour and identified as EU 4.6;

(b) VOC emissions from pumps, valves , flanges, etc., identified as ID# 92;

(c) fugitive emissions from material unloading, identified as ID# 94.

(d) additional miscellaneous insignificant activities:

(1) natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour. This includes one (1) 0.58 Million British thermal units per hour rated furnace, eleven (11) 0.075 Million British thermal units per hour individually rated furnaces, and one (1) 0.25 million British thermal units per hour rated boiler;

(2) propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British thermal units per hour;

(3) equipment powered by internal combustion engines of capacity equal to or less than five hundred thousand (500,000) British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds two million (2,000,000) British thermal units per hour;

(4) combustion source flame safety purging on startup;

(5) the following VOC and HAP storage containers:

(A) storage tanks with capacity less than or equal to one thousand (1,000) gallons and annual throughputs less than twelve thousand (12,000) gallons;

(B) vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(6) machining where an aqueous cutting coolant continuously floods the machining interface;

(7) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;

(8) cleaners and solvents characterized as follows:

(A) having a vapor pressure equal to or less than 2 kilopascal; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38 ^{o}C (100 ^{o}F)

or;

(B) having a vapor pressure equal to or less than 0.7 kilopascal; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20 ^{o}C (68 ^{o}F);

the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;

(9) the following equipment related to manufacturing activities not resulting in the emission of hazardous air pollutants (HAPs); brazing equipment, cutting torches, soldering equipment welding equipment;

(10) closed loop heating and cooling systems.

(11) noncontact cooling tower systems with forced and induced draft not regulated under NESHAP;

(12) replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(13) process vessel degassing and cleaning to prepare for internal repairs;

(14) paved and unpaved roads and parking lots with public access, identified as ID# 91;

(15) blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;

(16) on-site fire and emergency response training approved by the department;

(17) a laboratory as defined in 326 IAC 2-7-1(20)(C);

(18) ink jet printer;

(19) adhesive use tank #1;

(20) adhesive melt tank #1;

(21) adhesive melt tank #2;

(22) adhesive use tank #2;

(23) laminating adhesive use tank;

(24) laminating adhesive melt tank;

(25) adhesive applicator #1;

(26) adhesive applicator #2; and

(27) laminating adhesive applicator pan.

A.4 FESOP Applicability [326 IAC 2-8-2]
This stationary source, otherwise required to have a part 70 permit as described in 326 IAC 2-7-2(a), has applied to Indiana Department of Environmental Management (IDEM), Office of Air Management (OAM) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permit Conditions Superseded [326 IAC 2]
This permit supersedes the operating conditions of all construction and operating permits issued to this (stationary or portable) source under 326 IAC 2 prior to the effective date of this FESOP.

SECTION B GENERAL CONDITIONS

B.1 General Requirements [IC 13-15] [IC 13-17] (Prior to July 1, 1996: IC 13-7 and IC 13-1-1)
The permittee shall comply with the provisions of IC 13-15 (Permits Generally), IC 13-17 (Air Pollution Control) and the rules promulgated thereunder.

B.2 Definitions [326 IAC 2-8-1]
Terms in this permit shall have the meaning assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, any applicable definitions found in IC 13-11 (prior to July 1, 1996, IC 13-7-2, IC 13-1-1-2), 326 IAC 1-2, and 326 IAC 2-7 shall prevail.

B.3 Permit Term [326 IAC 2-8-4(2)]
This permit is issued for a fixed term of five (5) years from the effective date, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-5-5-3 (prior to July 1, 1996, IC 13-7-10-2.5), of the permit.

B.4 Enforceability [326 IAC 2-8-6]
(a) All terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM.

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

B.5 Termination of Right to Operate [326 IAC 2-8-9]
The expiration of this permit terminates the Permittee's right to operate unless a timely and complete renewal application has been submitted consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-7.

B.6 Severability [326 IAC 2-8-4(4)]
(a) The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

(b) Indiana rules from 326 IAC quoted in conditions in this permit are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard.

B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
This permit does not convey any property rights of any sort or any exclusive privilege.

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]
(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

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

(b) The Permittee shall also provide additional information as requested by IDEM, OAM, to

determine the compliance status of the source in accordance with 326 IAC 2-8-5(a).

(c) The Permittee shall furnish to IDEM, OAM, within a reasonable time, any information that the IDEM, OAM may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit.

(d) Upon written request, the Permittee shall also furnish to IDEM, OAM, copies of records required to be kept by this permit. For information claimed to be confidential, the Permittee shall furnish such records directly to both the U.S. EPA and IDEM, OAM, along with a claim of confidentiality.

Such confidentiality claims shall meet the requirements of 40 CFR part 2, Subpart B (when submitting to U.S. EPA) and 326 IAC 17 (when submitting to IDEM, OAM).

B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]
IDEM, OAM may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:

(1) enforcement action;

(2) permit termination, revocation and reissuance or modification; and

(3) denial of a permit renewal application.

(b) It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)]
Any application form, report, or compliance certification submitted under this permit shall contain certification by a responsible official of truth, accuracy, and completeness. This certification and any other certification required under this permit shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

A responsible official is defined at 326 IAC 2-7-1(33).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

(a) The Permittee shall annually certify that the source has complied with the terms and conditions contained in this permit, including emission limitations, standards, and work practices. The certification shall be submitted April 15 to:

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

(b) This annual compliance certification report required by this permit shall be timely if:

(1) Delivered by U.S. mail and postmarked on or before the date it is due; or

(2) Delivered by any other method if it is received and stamped by IDEM, OAM, on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The identification of each term and condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period; and

(5) Such other facts as IDEM, OAM, may require to determine the compliance status of the source.

B.13 Preventive Maintenance Plan [326 IAC 2-8-4(9)] [326 IAC 1-6-3]

(a) The Permittee shall prepare, maintain and implement operation and Preventive Maintenance Plans as necessary including the following information on each:

(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;

(3) Corrective actions that will be implemented in the event an inspection indicates an out of specification situation;

(4) A time schedule for taking such corrective actions including a schedule for devising additional corrective actions for situations that may not have been predicted; and

(5) Identification and quantification of the replacement parts which will be maintained in inventory for quick replacement.

(b) Preventive Maintenance Plans shall be submitted to IDEM, OAM, upon request and shall

be subject to review and approval by IDEM, OAM.

B.14 Emergency Provision [326 IAC 2-8-12]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation, except as provided as follows:

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements of this permit;

(4) The Permittee notified IDEM, OAM, within four (4) daytime business hours after the beginning of the emergency occurrence by telephone or facsimile;

Telephone No.: 1-800-451-6027 (ask for Office of Air Management) or,
Telephone No.: 317-233-0178
Facsimile No.: 317-233-5967

(5) The Permittee submitted written notice or by facsimile of the emergency to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency. The notice shall fulfill the requirement of 326 IAC 2-8-4(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and
(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(C)(33).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an

emergency has the burden of proof.

(d) This emergency provision supersedes any emergency or upset provision contained in 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) IDEM, OAM, may require that the preventive maintenance plan required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.

(f) Failure to notify IDEM, OAM, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency shall constitute a violation of 326 IAC 2-8 and any other applicable rules.

(g) Operations may continue during an emergency only if the following conditions are met:

(1) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

(2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:

(A) the Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and

(B) continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Any operations shall continue no longer than the minimum time required to prevent the situations identified in clause (B) above.

B.15 Deviations from Permit Requirements and/or Conditions [326 IAC 2-8-4(3)(C)(ii)]
Deviations from requirements, (for emergencies see Condition B.14 - Emergency Provision) the probable cause of such deviations, and any corrective actions or preventive measures taken shall be reported to:

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

within ten (10) calendar days from the date of the discovery of the deviation.

Written notification shall be submitted on the attached Deviation Occurrence Reporting Forms.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8(a)]
[326 IAC 2-8-8(b)] [326 IAC 2-8-8(c)]

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause.

The filing of a request by the Permittee for a modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-8-4(5)(C)]

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 (prior to July 1, 1996, in IC 13-7-10-5) or if the commissioner determines any of the following:

(1) That it contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-8-8(a)]

(c) Proceedings by IDEM, OAM, to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practical. [326 IAC 2-8-8(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-8-8(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAM, at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAM, may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, OAM, and shall include, at minimum, the information specified in 326 IAC 2-8-3. Such information shall be included in the application for each emission unit at this source, except those emission units included on the trivial or insignificant activities list contained in 326 IAC 2-7-1(20).

Request for renewal shall be submitted to:

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

(b) Timely Submittal of Permit Renewal [326 IAC 2-5-3]

(1) The Permittee has a duty to submit a timely and complete permit renewal application. A timely renewal application is one that is:

(A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(B) Delivered by U. S. mail and postmarked on or before the date it is due; or

(C) Delivered by any other method if it is received and stamped by IDEM,

OAM, on or before the date it is due.

(2) If IDEM, OAM fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.

(c) Right to Operate After Application of Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAM takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAM, any additional information identified as needed to process the application.

B.18 Administrative Permit Amendment [326 IAC 2-8-10]

(a) An administrative permit amendment is a FESOP revision that makes changes of the type specified under 326 IAC 2-8-10(a).

(b) An administrative permit amendment may be made by IDEM, OAM, consistent with the procedures specified under 326 IAC 2-8-10(b).

(c) The Permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Minor Permit Modification [326 IAC 2-8-11(a)] [326 IAC 2-8-11(b)(1) and (2)]

(a) A permit modification is any revision to this permit that cannot be accomplished as an administrative permit amendment under 326 IAC 2-8-10.

(b) Minor permit modification procedures shall follow the procedures specified under 326 IAC 2-8-11(b)(1)(A) through (F).

(c) An application requesting the use of minor modification procedures shall meet the requirements of 326 IAC 2-8-3(c) and shall include the information required in 326 IAC 2-8-11(b)(3)(A) through (D).

(d) The Permittee may make the change proposed in its minor permit modification application immediately after it files such application unless the change is subject to the construction permit requirements of 326 IAC 2-1, 326 IAC 2-2, or 326 IAC 2-3. After the Permittee makes the change allowed under minor permit modification procedures, and until IDEM, OAM takes any of the actions specified in 326 IAC 2-8-11(b)(5), the Permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this period, the Permittee need not comply with the existing permit terms and conditions it seeks to modify. If the Permittee fails to comply with its proposed permit terms and conditions during this time period, the existing permit terms and conditions it seeks to modify may be enforced against it. [326 IAC 2-8-11(b)(6)]

B.20 Significant Permit Modification [326 IAC 2-8-11(d)]

(a) Significant modification procedures shall be used for applications requesting permit modifications that do not qualify as minor permit modifications or as administrative amendments.

(b) Any significant change in existing monitoring permit terms or conditions and every relaxation of reporting or record keeping permit terms or conditions of this permit shall be considered significant.

(c) Nothing in 326 IAC 2-8-11(d) shall be construed to preclude the Permittee from making changes consistent with 326 IAC 2-8 that would render existing permit compliance terms and conditions irrelevant.

(d) Significant modifications of this permit shall meet all requirements of 326 IAC 2-8, including those for application, public participation, and review by the U.S. EPA, as they apply to permit issuance and renewal.

B.21 Permit Revision Under Economic Incentives and Other Programs [326 IAC 2-8-11(b)(2)] Notwithstanding 326 IAC 2-8-11(b)(1)(D)(i) and 326 IAC 2-8-11(c)(1), minor permit modification procedures may be used for modifications of this permit involving the use of economic incentives, marketable FESOP's, emissions trading, and other similar approaches to the extent that such minor permit modification procedures are explicitly provided for in the applicable State Implementation Plan (SIP) or in applicable requirements promulgated by the U.S. EPA.

B.22 Operational Flexibility [326 IAC 2-8-15]

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-8-15(b) through (d), without prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) The changes do not result in emissions which exceed the emissions allowable under this permit (whether expressed therein as a rate of emissions or in terms of total emissions);

(3) The Permittee notifies the:

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

and

United States Environmental Protection Agency, Region V
Air and Radiation Division, Regulation Development Branch - Indiana (AR-18J)
77 West Jackson Boulevard
Chicago, Illinois 60604-3590

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit. The notification which shall be submitted by the Permittee does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(C)(33); and

(4) The Permittee maintains records on-site which document, on a rolling five (5) year basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review. Such records shall consist of all information required to be submitted to IDEM, OAM, in the notices specified in 326 IAC 2-8-15(b)(1), (c)(1), and (d).

(b) For each such change, the required written notification shall include the following:

(1) A brief description of the change within the source;

(2) The date on which the change will occur;

(3) Any change in emissions; and

(4) Any permit term or condition that is no longer applicable as a result of the change.

(c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints in section (a) of this condition and those in 326 IAC 2-8-15(c).

(d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7) and subject to the constraints in section (a) of this condition and those in 326 IAC 2-8-15(d).

B.23 Construction Permit Requirement [326 IAC 2-1]
Prior to any change in the operation which may result in an increase in allowable emissions exceeding those specified in 326 IAC 2-1-1 (Construction and Operating Permit Requirements), the change must be approved by the Office of Air Management (OAM).

B.24 Inspection and Entry [326 IAC 2-8-5(a)(2)]
Upon presentation of IDEM identification cards, credentials, and other documents as may be required by law, the Permittee shall allow IDEM, OAM, U.S. EPA, or an authorized representative to perform the following:

(a) Enter upon the Permittee's premises where a FESOP source is located or emissions related activity is conducted, or where records are kept under the conditions of this permit;

(b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) Sample or monitor, at reasonable times, substances or parameters for the purpose of demonstrating compliance with this permit or applicable requirements; and

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of demonstrating compliance with this permit or applicable requirements. [326 IAC 2-8-5(a)(4)]

B.25 Annual Fee Payment [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

(a) The Permittee shall pay annual fees to IDEM, OAM, consistent with the fee schedule established in 326 IAC 2-8-16.

(b) Failure to pay may result in administrative enforcement action, revocation of this permit, referral to the Office of Attorney General for collection, or other appropriate measures.

(c) The Permittee shall pay the annual fee within thirty (30) calendar days of receipt of a billing by IDEM, OAM or in a time period that is consistent with the payment schedule issued by IDEM, OAM.

(d) If the Permittee does not receive a bill from IDEM, OAM, thirty (30) calendar days before due date, the Permittee shall call the following telephone numbers: 1-800-451-6027 or 317-233-0179 (ask for OAM, Data Support Section), to determine the appropriate permit fee. The applicable fee is due April 1 of each year.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations [326 IAC 2-8-4(1)]

C.1 Overall Source Limit (326 IAC 2-8)
Pursuant to 326 IAC 2-8, emissions of any regulated pollutant from the entire source shall not exceed 99 tons per 365 day period. Emissions of hazardous air pollutants (HAPs) from the entire source shall not exceed 9 tons of any individual HAP per 365 day period or 24 tons of any combination of HAPs per 365 day period. Emissions shall include those from all emission points at the source including those that are insignificant as defined in 326 IAC 2-7-1 (20). The source shall be allowed to add insignificant activities not already listed in this permit, as long as the total emissions from the source do not exceed the above specified limits. In the event that any condition or combination of conditions in Section D of this permit differs from the above, the most restrictive limit will prevail.

C.2 Opacity
Pursuant to 326 IAC 5-1-2 (Visible Emissions Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), visible emissions shall meet the following:

(a) Visible emissions shall not exceed an average of 40 percent opacity in 24 consecutive readings,

(b) Visible emissions shall not exceed 60 percent opacity for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period,

(c) Unless otherwise stated in Section D.

C.3 Open Burning
The Permittee shall not open burn any material except as provided in 326 IAC 4-1-3, 326 IAC 4-1-4 or 326 IAC 4-1-6.

C.4 Fugitive Dust Emissions
The Permittee shall be in violation of 326 IAC 6-4 if any of the criteria specified in 326 IAC 6-4-2 (1) through (4) are violated.

C.5 Operation of Equipment [326 IAC 2-8-5(a)(4)]

(a) All equipment that potentially might emit pollutants into the ambient air shall be properly operated and maintained.

(b) Unless otherwise stated in this permit, all air pollution control equipment listed in this permit shall be operated at all times that the emission unit(s) vented to the control equipment is in operation.

(c) The permittee shall perform all necessary maintenance and make all necessary attempts to keep all air pollution control equipment in proper operating condition at all times.

Testing [326 IAC 2-8-4(3)]

C.6 Performance Testing

Compliance testing shall be conducted on the asphalt coater (coating rolls) and coating surge tank identified as EU 6.1, the material surfacing applicator cooling section identified as EU 7.2, and the ventilators, identified as ID# 93 for PM, PM-10 and VOC within thirty-six (36) to forty-eight (48) months of issuing this FESOP. All testing shall be performed according to the provisions of 326 IAC 3-2.1 (Source Sampling Procedures) and by methods in the approved test protocol. The test protocol shall be submitted to:

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

at least thirty-five (35) days before the intended test date. [326 IAC 3-2.1-2(a)]

Compliance Monitoring [326 IAC 2-8-5(a)(1)]

C.7 Compliance Monitoring [326 IAC 2-8-4(3)]

Compliance with applicable requirements shall be documented in accordance with the provisions of 326 IAC 2-8-4(3). The Permittee shall be responsible for installing any necessary equipment and initiating any additional monitoring no more than ninety (90) days after receipt of this permit. If due to circumstances beyond its control, this schedule cannot be met, the Permittee shall notify:

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

in writing, with full justification of the reasons for inability to meet this date and a schedule which it expects to meet. If a denial of the request is not received before the monitoring is fully implemented, the schedule shall be deemed approved. The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(C)(33).

C.8 Maintenance of Monitoring Equipment [326 IAC 1-6]

The Permittee shall perform all necessary maintenance and make all necessary attempts to keep all required monitoring equipment in proper operating condition at all times. In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem.

The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. Preventive maintenance plans of the monitors shall be implemented. In addition prompt correction, as indicated, shall be initiated within the time frames specified, whenever the parameters monitored fall outside of the indicated values.

C.9 Monitoring Methods [326 IAC 3]

Any monitoring or testing performed to meet the requirements of this permit shall be performed, whenever applicable according to the provisions of 326 IAC 3, or 40 CFR part 60, Appendix A,

as appropriate, unless some other method is specified in this permit.

C.10 Pressure Gauge Specifications

Whenever a condition in this permit requires the taking of pressure drop across any part of the unit or its control device the gauge employed shall have a scale such that the expected normal reading shall be no less than 20 percent of full scale and be accurate within ±2 percent of full scale reading. The instrument shall be quality assured and maintained as specified by the vendor.

Corrective Actions [326 IAC 2-8-4(1)] [326 IAC 2-8-5(1)]

C.11 Failure to Take Corrective Action

For each unit for which parametric monitoring is required, appropriate corrective actions as described in the Preventive Maintenance Plan shall be taken when indicated by monitoring information. Failure to take corrective action following an excursion of a surrogate monitoring parameter within the prescribed time will constitute a violation of the permit unless taking the corrective action set forth in the Plan would be unreasonable.

After investigating the reason for the excursion, the Permittee may be excused from taking further corrective action for any of the following reasons:

(a) Providing that prompt action was taken to correct the monitoring equipment, that the monitoring equipment malfunctioned, giving a false reading; or

(b) The Permittee has determined that the parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied; or

(c) An automatic measurement was taken when the process was not operating; or

(d) The Permittee determines that the process has already returned to operating within "normal" parameters and no corrective action is required.

Records shall be kept of all instances in which the action values were not met and of all corrective actions taken. In the event of an "emergency", the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

C.12 Actions Related to Noncompliance Demonstrated by a Stack Test

Whenever the results of the stack test performed in conformance with Condition C.6 - Performance Testing, of this permit exceed the level specified in any condition of this permit, appropriate corrective actions shall be submitted to IDEM-OAM within 30 (thirty) days of receipt of the test results. These actions shall be implemented immediately unless notified by OAM that they are not acceptable. The Permittee shall minimize emissions while the corrective actions are being implemented.

Record Keeping and Reporting [326 IAC 2-8-4(3)]

C.13 Monitoring Data Availability

All observations, sampling, maintenance procedures, and record keeping, required as a condition of this permit shall be performed at all times the equipment is operating at normal representative conditions. Records shall be kept of the times that the equipment is not operating. If the equipment is operating but abnormal conditions prevail, additional observations and sampling

should be taken with a record made of the nature of the abnormality. If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded. At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed 5 percent of the operating time in any quarter. Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason.

C.14 General Record Keeping Requirements

(a) Records of all required monitoring data and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location and available within one hour upon verbal request of an IDEM, OAM representative, for a minimum of three (3) years. They may be stored elsewhere for the remaining two years providing they are made available within thirty (30) days after written request.

(b) Records of required monitoring information shall include:

(1) the date, place, and time of sampling or measurements;

(2) the dates analyses were performed;

(3) the company or entity performing the analyses;

(4) the analytic techniques or methods used;

(5) the results of such analyses; and

(6) the operating conditions existing at the time of sampling or measurement.

(c) Support information shall include:

(1) copies of all reports required by this permit;

(2) all original strip chart recordings for continuous monitoring instrumentation;

(3) all calibration and maintenance records;

(4) all preventive maintenance and corrective actions that were implemented. Such records shall briefly describe what was done and indicate who did it;

(5) relevant work purchases orders;

(6) quality assurance and quality control procedures;

(7) operator’s standard operating procedures;

(8) manufacturer's specifications or their equivalent; and

(9) equipment "troubleshooting" guidance.

C.15 General Reporting Requirements

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

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

(b) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be timely if:

(1) Delivered by U.S. mail and postmarked on or before the date it is due; or

(2) Delivered by any other method if it is received and stamped by IDEM, OAM, on or before the date it is due.

(c) All instances of deviations from any requirements of this permit must be clearly identified in such reports.

(d) Any corrective actions taken as a result of an exceedance of a limit, an excursion from the parametric values, or a malfunction that may have caused excess emissions must be clearly identified in such reports.

(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

(a) four (4) combustion emission units (EU) consisting of:
- (1) one (1) natural gas fired asphalt preheater #1 identified as EU 1.1, rated at 2.5 Million British thermal units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 65;
- (2) one (1) natural gas fired asphalt preheater #2 (asphalt saturant preheater) identified as EU 1.2, rated at 1.5 million British thermal units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 66;
- (3) one (1) natural gas fired filler heater (asphalt saturant preheater) identified as EU 1.3, rated at 2.5 million British thermal units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 15; and
- (4) one (1) natural gas fired hot oil heater identified as EU 1.4, rated at 2.1 million British thermal units per hour and using No. 2 fuel oil as a backup, exhausting at one (1) stack identified as 67.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 Volatile Organic Compounds

The sum of the No. 2 fuel oil used at the source by all four combustion units is limited to 216,240 gallons per twelve (12) consecutive months. The total for each month shall not exceed the difference between the annual limit minus the sum of actual gallons used in the previous eleven (11) months. Compliance is based on the total gallons used during the previous 12 months. During the first 12 months of operation under this permit, the sum of the No. 2 fuel oil, shall be limited such that the total gallons divided by the accumulated months of operation shall not exceed 18,020 gallons per month.

The above condition will have the effect of limiting total volatile organic compound (VOC) emissions from the four combustion units to 0.27 tons per twelve (12) month period rolled on a monthly basis and will limit both total particulate matter and particulate matter with aerodynamic diameter at or below 10 microns (PM_{10}) emissions from the four combustion units to 0.65 tons per twelve (12) month period rolled on a monthly basis. Therefore, the requirements of 326 IAC 2-7 do not apply.

D.1.2 Sulfur Dioxide (SO_2)

The sulfur content of the No. 2 fuel oil combusted shall not exceed 0.486%. Compliance with this condition, when combined with the fuel usage limits in Condition D.1.1, will limit sulfur dioxide emissions to less than 25 tons per year. Therefore 326 IAC 7-1.1 (SO_2 Emissions Limitations) will not apply.

D.1.3 Particulate Matter (PM)

(a) Pursuant to 326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating), the emissions from EU 1.2 and from EU 1.4 are limited to 0.8 pounds of particulate matter per million British thermal units and the emissions from EU 1.1 are limited to 0.576 pounds of particulate matter per million British thermal units.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.1.4 Quantity of No. 2 Fuel Oil Used

The Permittee shall maintain records at the source of the quantity of No. 2 fuel oil used. The records shall be complete and sufficient to establish compliance with the throughput limits and/or VOC, particulate matter and PM_{10} emission limits established in this permit. The records shall contain a minimum of the following:

(a) the quantity of No. 2 fuel oil used for each month;

(b) the 12 month rolling quantity of No. 2 fuel oil used; and

(c) the sulfur content of the No. 2 fuel oil used.

D.1.5 Quarterly Reporting

A quarterly summary to document compliance with operation condition number D.1.1 shall be submitted, to the address listed in Section C.15 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

SECTION D.2 FACILITY OPERATION CONDITIONS

(b) three (3) storage tanks consisting of:
- (1) one (1) 40,000 gallon capacity asphalt tank #1 rated at 200 gallons per minute and identified as EU 2.1, with a fiber filter bed to control particulate matter, exhausting at one (1) stack identified as 71;
- (2) one (1) 10,000 gallon capacity adhesive tank #7, currently out of service to be placed back in service, rated at 200 gallons per minute and identified as EU 2.2, with particulate matter to be controlled by fiber bed filter and exhausting to one (1) unlabeled stack; and
- (3) one (1) 10,000 gallon capacity adhesive tank #7A, to be built, rated at 200 gallons per minute and identified as EU 2.3, with particulate matter to be controlled by fiber bed filter and exhausting to one (1) unlabeled stack.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 Volatile Organic Compounds and particulate Matter (PM and PM_{10})

(a) Pursuant to 326 IAC 12 (40 CFR part 60.110b - Subpart Kb - Standards of Performance for Volatile Organic Compound Storage Vessels), records of the dimensions and capacity of asphalt tank #1 shall be maintained for the life of the facility to document that the capacity of this tank is greater than 75 m^3 and less than 151 m^3 (e.g. 147 m^3). To comply with this regulation, the maximum true vapor pressure (TVP) of the materials stored shall be less than 15 kPa (2.176 psia) at the temperature stored.

(b) The throughput for asphalt tank #1 is limited to 14,251,200 gallons per twelve (12) consecutive months. The total for each month shall not exceed the difference between the annual limit minus the sum of actual gallons used in the previous eleven (11) months. Compliance is based on the total gallons used during the previous 12 months. During the first 12 months of operation under this permit, the sum of the throughputs shall be limited such that the total gallons divided by the accumulated months of operation shall not exceed 1,187,600 gallons per month.

(c) Pursuant to 326 IAC 12 (40 CFR part 60.470, Subpart UU - Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture), the asphalt storage tank #1 (EU 2.1) visible emissions shall be limited to zero (0) percent.

(d) The throughput for each adhesive tank 7 and 7A is limited to 1,295,640 gallons per twelve (12) consecutive months. The total for each month shall not exceed the difference between the annual limit minus the sum of actual gallons used in the previous eleven (11) months. Compliance is based on the total gallons used during the previous 12 months. During the first 12 months of operation under this permit, the sum of the throughputs shall be limited such that the total gallons divided by the accumulated months of operation shall not exceed 107,970 gallons per month for each tank.

This operating condition will limit total volatile organic compounds (VOC) emissions from the three tanks to 4.15 tons per twelve (12) month period rolled on a monthly basis and shall limit total particulate matter and PM_{10} emissions to 0.12 tons per twelve (12) month period rolled on a monthly basis. Therefore, the requirements of 326 IAC 2-7 do not apply.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.2.2 Pressure Readings

The Permittee shall take readings of the total static pressure drop across each tank's fiber filter bed controlling this operation, at least once per day when the tanks are in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across each fiber filter bed shall be maintained within the range of 0.25 and 4 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with condition C.10 - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.2.3 Daily Visible Emission Observations

Daily visible emission notations of the fiber filter bed stack exhaust for each tank shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. 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. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.2.4 Operational parameters

The Permittee shall maintain daily records at the stationary source of the following:

(a) inlet and outlet differential static pressure;

(b) cleaning cycle: frequency and differential pressure;

(c) fan speed/current and flow rate;

(d) daily visible emission observations;

(e) checklist with dates and initials for each preventive action performed; and

(f) records of corrective actions.

D.2.5 Throughput of Materials

The Permittee shall maintain records at the source of the throughput for each tank. The records shall be complete and sufficient to establish compliance with the throughput limits and/or VOC, particulate matter and PM_{10} emission limits established in this permit. The records shall contain a minimum of the following:

(a) the throughput of material through each tank for each month;

(b) the 12 month rolling total throughput of materials through each tank;

(c) the types of liquid stored;

(d) the maximum true vapor pressure of the liquid as stored; and

(f) the results of annual inspections performed in compliance 326 IAC 8-4-3(b)(1)(B) & 8-4-3(d) on the storage vessels.

D.2.6 Reporting of Deviations

Any deviations of operational parameters noted in the records kept pursuant to Condition D.2.4 shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted in accordance with Condition B.12.

D.2.7 Quarterly Reporting

A quarterly summary to document compliance with operation condition number D.2.1 shall be submitted, to the address listed in Section C.15 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

D.2.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for each baghouse at this facility.

SECTION D.3 FACILITY OPERATION CONDITIONS

(c)	one (1) 30,000 gallon capacity asphalt tank #2 rated at 200 gallons per minute and identified as EU 3.1, exhausting at one (1) stack identified as 72.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 Volatile Organic Compounds and particulate Matter (PM and PM_{10})
The throughput for asphalt tank #2 is limited to 14,251,200 gallons per twelve (12) consecutive months. The total for each month shall not exceed the difference between the annual limit minus the sum of actual gallons used in the previous eleven (11) months. Compliance is based on the total gallons used during the previous 12 months. During the first 12 months of operation under this permit, the throughput shall be limited such that the total gallons divided by the accumulated months of operation shall not exceed 1,187,600 gallons per month.

This operating limit shall limit total volatile organic compounds (VOC) emissions from the tank to 3.57 tons per twelve (12) month period rolled on a monthly basis and shall limit total particulate matter and PM_{10} emissions from the tank to 1.01 tons per twelve (12) month period rolled on a monthly basis. Therefore, the requirements of 326 IAC 2-7 do not apply.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.3.2 Daily Visible Emissions Observations
Daily visible emission notations of the tank stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. 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. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when abnormal emission is observed. Pursuant to 326 IAC 5-1-2 (1), visible emissions shall meet the following limitations:

(a) visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings; and

(b) visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes in a six hour period.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.3.3 Operational parameters
The Permittee shall maintain daily records at the stationary source of the following:

(a) daily visible emission observations;

(b) checklist with dates and initials for each preventive action performed; and

(c) records of corrective actions.

D.3.4 Throughput of Materials

The Permittee shall maintain records at the source of the throughput for the tank. The records shall be complete and sufficient to establish compliance with the throughput limits and/or VOC, particulate matter and PM_{10} emission limits established in this permit. The records shall contain a minimum of the following:

(a) the throughput of material through the tank for each month;

(b) the 12 month rolling total throughput of materials through the tank;

(c) the types of liquid stored;

(d) the maximum true vapor pressure of the liquid as stored; and

(e) the results of annual inspections performed in compliance 326 IAC 8-4-3(b)(1)(B) & 8-4-3(d) on the storage vessels.

D.3.5 Reporting

Any deviations shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted in accordance with Condition B.12.

D.3.6 Quarterly Reporting

A quarterly summary to document compliance with operation condition number D.3.1 shall be submitted, to the address listed in Section C.15 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

SECTION D.4 FACILITY OPERATION CONDITIONS

(d) nine (9) storage vessels controlled by twelve (12) baghouses consisting of:
- (1) one (1) filler silo #1 rated at 64.2 thousand cubic feet per hour and identified as EU 4.1 with particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 74 and 75;
- (2) one (1) filler silo #2 rated at 32.1 thousand cubic feet per hour and identified as EU 4.2, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 77;
- (3) one (1) filler silo #4 rated at 64.2 thousand cubic feet per hour and identified as EU 4.3 with particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 80 and 81;
- (4) one (1) parting agent silo #3 rated at 32.1 thousand cubic feet per hour and identified as EU 4.4, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 79;
- (5) one (1) parting agent use bin rated at 27 thousand cubic feet per hour and identified as EU 4.5, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 14A;
- (6) one (1) filler upper surge hopper rated at 54 thousand cubic feet per hour and identified as EU 4.7, with particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 15A and 15B;
- (7) one (1) filler lower surge hopper rated at 27 thousand cubic feet per hour and identified as EU 4.8, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 15C;
- (8) one (1) surfacing material silo #7 rated at 30 thousand cubic feet per hour and identified as EU 4.10, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 89; and
- (9) one (1) surfacing material receiving bin rated at 30 thousand cubic feet per hour and identified as EU 4.11, with particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 90.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.4.1 Particulate Matter (PM and PM_{10})

This operating condition imposes no limitation below the potential to emit for total particulate matter and PM_{10} emissions from the nine (9) storage vessels controlled by the twelve (12) baghouses. The potential emissions from these baghouses are 1.03 pounds per hour. At this emission rate in conjunction with the other operating conditions stated elsewhere in the permit, total source particulate matter and PM_{10} emissions are limited to less than 100 tons per year, therefore, the requirements of 326 IAC 2-7 do not apply.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.4.2 Pressure Readings

The Permittee shall take readings of the total static pressure drop across each baghouse exhaust controlling this operation, at least once per day when the process is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across each baghouse exhaust shall be maintained within the range of 0.25 and 4 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions

for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with condition C.10 - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.4.3 Daily Visible Emission Observations

(a) Pursuant to 326 IAC 12 (40 CFR part 60.470, Subpart UU - Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture), the raw material silos (EU 4.1 through 4.11) visible emissions shall be limited to 1 percent.

(b) Daily visible emission notations of each baghouse stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. 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. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when abnormal emission is observed.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.4.4 Operational parameters

The Permittee shall maintain daily records at the stationary source of the following:

(a) inlet and outlet differential static pressure;

(b) cleaning cycle: frequency and differential pressure;

(c) fan speed/current and flow rate;

(d) daily visible emission observations;

(e) checklist with dates and initials for each preventive action performed; and

(f) records of corrective actions.

D.4.5 Reporting of Deviations

Any deviations of operational parameters noted in the records kept pursuant to Condition D.4.3 shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted in accordance with Condition B.12.

D.4.6 Quarterly Reporting

A quarterly summary to document compliance with section shall be submitted, to the address listed in Section C.15 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

D.4.7 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for

each baghouse at this facility.

SECTION D.5 FACILITY OPERATION CONDITIONS

(e)	one (1) asphalt filler mixer rated at 300 gallons per minute (gallons per minute) and identified as EU 5.1.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.5.1 Volatile Organic Compounds and particulate Matter (PM and PM_{10})
The throughput for the asphalt filler mixer is limited to 28,502,400 gallons per twelve (12) consecutive months. The total for each month shall not exceed the difference between the annual limit minus the sum of actual gallons used in the previous eleven (11) months. Compliance is based on the total gallons used during the previous 12 months. During the first 12 months of operation under this permit, the throughput shall be limited such that the total gallons divided by the accumulated months of operation shall not exceed 2,375,200 gallons per month.

This operating limit shall limit total volatile organic compounds (VOC) emissions from the tank to 4.31 tons per twelve (12) month period rolled on a monthly basis and shall limit total particulate matter and PM_{10} emissions from the tank to 0.95 tons per twelve (12) month period rolled on a monthly basis. Therefore, the requirements of 326 IAC 2-7 do not apply.

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.5.2 Daily Visible Emission Observations
Daily visible emission notations of the mixer stack exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously “normal” means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. 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. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when abnormal emission is observed. Pursuant to 326 IAC 5-1-2 (1), visible emissions shall meet the following limitations:

(a) visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings; and

(b) visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes in a six hour period.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.5.3 Operational parameters
The Permittee shall maintain daily records at the stationary source of the following:

(a) daily visible emission observations;

(b) checklist with dates and initials for each preventive action performed; and

(c) records of corrective actions.

D.5.4 Throughput of Materials

The Permittee shall maintain records at the source of the throughput for the mixer. The records shall be complete and sufficient to establish compliance with the throughput limits and/or VOC, particulate matter and PM_{10} emission limits established in this permit. The records shall contain a minimum of the following:

(a) the throughput of asphalt through the mixer for each month;

(b) the 12 month rolling total throughput of asphalt through the mixer; and

(c) the maximum true vapor pressure of the asphalt as used.

D.5.5 Reporting of Deviations

Any deviations of operational parameters noted in the records kept pursuant to Condition D.5.3 shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted in accordance with Condition B.12.

D.5.6 Quarterly Reporting

A quarterly summary to document compliance with operation condition number D.5.1 shall be submitted, to the address listed in Section C.15 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

SECTION D.6 FACILITY OPERATION CONDITIONS

(f) five (5) facilities with limited production rates consisting of:
- (1) six (6) surfacing material silos #1 - 6 identified as EU 4.9, all exhausting at one (1) stack identified as 20;
- (2) one (1) asphalt coater (coating rolls) and coating surge tank identified as EU 6.1, exhausting at one stack identified as 36;
- (3) one (1) material surfacing applicator (material surfacing area) rated at 471 thousand cubic feet per hour and identified as EU 7.1, with particulate matter controlled by one (1) baghouse, exhausting at one stack identified as 14;
- (4) one (1) cooling section identified as EU 7.2, exhausting at two (2) stacks identified as 41 and 42; and
- (5) fugitive emissions from ventilators, identified as ID# 93.

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

D.6.1 Volatile Organic Compounds and particulate Matter (PM and PM_{10})
The production of asphalt intermediates and final products through each facility is limited to 454,200 tons per twelve (12) consecutive months. The total for each month shall not exceed the difference between the annual limit minus the sum of actual tons produced in the previous eleven (11) months. Compliance is based on the total tons produced during the previous 12 months. During the first 12 months of operation under this permit, the production shall be limited such that the total production in tons divided by the accumulated months of operation shall not exceed 37,850 tons per month.

(a) EU 4.9
This operating limit will limit total particulate matter and PM_{10} emissions from EU 4.9 to 0.39 tons per twelve (12) month period rolled on a monthly basis.

(b) EU 6.1

(i) The operating limit established by this condition will limit total particulate matter and PM_{10} emissions from EU 6.1 to 16.1 tons per twelve (12) month period rolled on a monthly basis and total VOC emissions from EU 6.1 to 20.7 tons per twelve (12) month period rolled on a monthly basis.

(ii) Pursuant to 326 IAC 6-3-2 (Process Operations) the asphalt coater and coating surge tank particulate matter emissions shall not exceed 44.9 pounds per hour. The operating limit established by this condition will ensure compliance by limited emissions to below the state allowable emissions rate of 196.66 tons per year.

(iii) Pursuant to 326 IAC 12 (40 CFR part 60.470, Subpart UU - Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture), the asphalt coater and coating surge tank particulate matter emissions shall not exceed 0.04 kilograms per megagram of asphalt shingle or mineral-surfaced roll roofing produced. The operating limit established by this condition will ensure compliance by limited emissions to below the NSPS allowable emissions of 18.17 tons per year.

(iv) Pursuant to 326 IAC 12 (40 CFR part 60.470, Subpart UU - Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture), the asphalt coater and coating surge tank exhaust gas opacity shall not exceed 20 percent and any visible emissions from the asphalt coater and coating surge tank exhaust capture system shall not exceed 20 percent for any consecutive 60 minute period of valid observations.

(c) EU 7.1
This operating limit shall limit total particulate matter and PM_{10} emissions from EU 7.1 to 5.9 tons per twelve (12) month period rolled on a monthly basis and total VOC emissions from EU 7.1 to 0.68 tons per twelve (12) month period rolled on a monthly basis.

(d) EU 7.2
This operating limit shall limit total particulate matter and PM_{10} emissions from EU 7.2 to 61.3 tons per twelve (12) month period rolled on a monthly basis and total VOC emissions from EU 7.2 to 7.95 tons per twelve (12) month period rolled on a monthly basis.

(e) ID# 93
This operating limit shall limit total particulate matter and PM_{10} emissions from ID# 93 to 8.10 tons per twelve (12) month period rolled on a monthly basis and total VOC emissions from ID# 93 to 22.09 tons per twelve (12) month period rolled on a monthly basis.

Therefore, the requirements of 326 IAC 2-7 do not apply.

Testing [326 IAC 2-8-4(3)]

D.6.2 Testing Requirements
Compliance testing shall be conducted (pursuant to Condition C.6 Performance Testing) on the asphalt coater (coating rolls) and coating surge tank identified as EU 6.1, the material surfacing applicator cooling section identified as EU 7.2, and the ventilators, identified as ID# 93 for PM, PM-10 and VOC within thirty-six (36) to forty-eight (48) months of issuing this FESOP. All testing shall be performed according to the provisions of 326 IAC 3-2.1 (Source Sampling Procedures) and by methods in the approved test protocol. The test protocol shall be submitted to the address listed in Condition C.6 at least thirty-five (35) days before the intended test date. [326 IAC 3-2.1-2(a)]

Compliance Monitoring Requirements [326 IAC 2-8-5(a)(1)]

D.6.3 Pressure Readings
The Permittee shall take readings of the total static pressure drop across the EU 7.1 baghouse exhaust controlling this operation, at least once per day when the process is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the EU 7.1 baghouse exhaust shall be maintained within the range of 0.25 and 4 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

The instrument used for determining the pressure shall comply with condition C.10 - Pressure Gauge Specifications, be subject to approval by IDEM, OAM, and shall be calibrated at least once every six (6) months.

D.6.4 Daily Visible Emission Observations

Daily visible emission notations of the EU 6.1 coater and coating surge tank exhaust stack, the EU 7.1 baghouse stack exhaust, the EU 7.2 stack exhaust and the ID# 93 ventilators exhaust shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, 80 percent of the time the process is in operation, not counting startup or shut down time. 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. A trained employee is an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when abnormal emission is observed. Pursuant to 326 IAC 5-1-2 (1), visible emissions shall meet the following limitations:

(a) visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings; and

(b) visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes in a six hour period.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

D.6.5 Operational parameters

The Permittee shall maintain daily records at the stationary source of the following:

(a) inlet and outlet differential static pressure;

(b) cleaning cycle: frequency and differential pressure;

(c) fan speed/current and flow rate;

(d) daily visible emission observations;

(e) checklist with dates and initials for each preventive action performed; and

(f) records of corrective actions.

D.6.6 Reporting of Deviations

Any deviations of operational parameters noted in the records kept pursuant to Condition D.6.5 shall be reported in accordance with Condition B.15 and summarized in the annual certification submitted in accordance with Condition B.12. Reporting in accordance with Condition D.6.2 shall be submitted in accordance with 326 IAC 3-2.1.

D.6.7 Quarterly Reporting

A quarterly summary to document compliance with operation condition number D.6.1 shall be submitted, to the address listed in Section C.15 - General Reporting Requirements, using the enclosed forms or their equivalent, within thirty (30) days after the end of the calendar quarter being reported.

D.6.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Condition B.13 of this permit, is required for each baghouse at this facility.

State Form 47738 (5-96)

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005

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

Please check what document is being certified:

9 Deviation Occurrence Reporting Form (For Control Equipment Monitoring)

9 Deviation Occurrence Reporting Form (For Material Usage, Quality, Etc.)

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Other (specify) _____

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Signature:

Printed Name:

Title/Position:

Date:

State Form 47739 (5-96)

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
DEVIATION OCCURRENCE REPORT
(For Control Equipment Monitoring Only)

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005

A separate copy of this report must be submitted for **each** monitoring device on all control equipment listed in this permit. Attach a signed certification to complete this report.

Stack/Vent ID:
Control Equipment: (ex: thermal oxidizer, scrubber, baghouses)
Type of parameter Monitored: (ex: temperature, pressure drop, efficiency)
9 Continuously **9** Periodically, at a frequency of:
Parameter Operating Restrictions/Range: (ex: 1,400^{0}F, 2-4 pounds per square inch pressure drop)
Report Covers From: To: (date: month/day/yr)
9 No Deviations from the parameter Restriction/Range Occurred During the Monitoring Period. Complete Records Maintained at the Facility Verify Compliance with this Condition.
9 Summary of Deviations from the parameter Restriction/Range During the Monitoring Period are Identified Below. Complete Records Maintained at the Facility.

	For parameter Recorded Continuously	For parameter Recorded Periodically
Total Unit Operating Time		
Total Time of Deviations (Identify All Deviations)		
Percent of Time Indicating Deviations ([2]/[1]x100)		

Date of Deviation	Start/Stop Time of Deviation (Continuous Monitoring Only)	Actual Value Recorded	Reason for Deviation & Corrective Action Taken

State Form 47741 (5-96)

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
DEVIATION OCCURRENCE REPORT

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005

A separate copy of this report must be submitted for **each** material type, quantity usage and operation limitation (except control equipment monitoring) listed in this permit .
Attach a signed certification to complete this report.

Stack/Vent ID:
Equipment/Operation:
Parameter Subject to Material Type, Quantity Usage or Operation Limitations Specified in the Permit: (ex: 2500 lb per day, 300 hours per yr, 5000 gallons per month)
Determination Period for this parameter: (ex: 365-day rolling sum, fixed monthly rate)
9 Permit Has No Rate Limitations for this parameter.
Content Restriction for this parameter: (ex: maximum of 40 percent VOC in inks, 0.5 percent sulfur content)
Demonstration Method for this parameter: (ex: MSDS, Supplier, material sampling & analysis)
9 Permit Has No Content Limitations for this parameter.
Comments:

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

FESOP Quarterly Report
Form D.1

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005
Facility: Four (4) combustion emission units - EU 1.1, EU 1.2, EU 1.3, and EU 1.4
Parameter: Total No. 2 fuel oil, or its equivalents, used
Limit: 216,240 gallons per 12-month period rolled on a monthly basis; 18,020 gallons per month during first 12-months of FESOP

Past 12 Months	Total (gallons)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
12 Month Total	

9 No deviations of the above limit occurred this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

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

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

FESOP Quarterly Report
Form D.2

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005
Facility: Three Storage Tanks - EU 2.1, EU 2.2, and EU 2.3
Parameter: Total Throughput Each Tank
Limit: Asphalt Tank #1: 14,251,200 gallons per 12-month period rolled on a monthly basis; 1,187,600 gallons per month during first 12-months of FESOP
Adhesive Tank 7 or 7A: 1,295,640 gallons per 12-month period rolled on a monthly basis; 107,970 gallons per month during first 12-months of FESOP

Past 12 Months	EU 2.1 Tank _____ (gallons)	EU 2.2 Tank _____ (gallons)	EU 2.3 Tank _____ (gallons)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
12 Month Total			

9 No deviations of the above limit occurred this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

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

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

FESOP Quarterly Report
Form D.3

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005
Facility: Asphalt Storage Tank #2 - EU 3.1
Parameter: Total Throughput
Limit: 14,251,200 gallons per 12-month period rolled on a monthly basis; 1,187,600 gallons per month during first 12-months of FESOP

Past 12 Months	Tank _____ (gallons)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
12 Month Total	

9 No deviations of the above limit occurred this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

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

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

FESOP Quarterly Report
Form D.5

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005
Facility: Asphalt Filler Mixer - EU 5.1
Parameter: Total Throughput
Limit: 28,502,400 gallons per 12-month period rolled on a monthly basis; 2,375,200 gallons per month during first 12-months of FESOP

Past 12 Months	Mixer _____ (gallons)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
12 Month Total	

9 No deviations of the above limit occurred this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

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

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

FESOP Quarterly Report
Form D.6

Source Name: Owens Corning
Source Address: 128 W. Eighth Street, Brookville, Indiana 47012
FESOP No.: F047-5160-00005
Facility: Five (5) facilities EU 4.9, EU 6.1, EU 7.1, EU 7.2, and ID# 93
Parameter: Total Product Production Rate
Limit: 454,200 tons per 12-month period rolled on a monthly basis; 37,850 tons per month during first 12-months of FESOP

Past 12 Months	Product Production (tons)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
12 Month Total	

9 No deviations of the above limit occurred this month.

9 Deviation/s occurred in this month.
Deviation has been reported on: _____

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

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for a
Federally Enforceable State Operating Permit (FESOP)

Source Background And Description

Source Name:	**Owens Corning**
Source Location:	**128 W. Eighth Street, Brookville, IN 47012**
County:	**Franklin**
Operation Permit No.:	**F047-5160-00005**
Permit Reviewer:	**Richard A. Moore Jr.**

The Office of Air Management (OAM) has reviewed a Federally Enforceable State Operating Permit (FESOP) application from Owens Corning relating to the production of Asphalt Felt & Coatings Roofing Products.

The source consists of the following approvals (permits, registrations, exemptions, etc.) with the following emission units and pollution control devices:

Permit No. 24-01-90-0022 issued on 10/31/86:

(a) one (1) natural gas fired asphalt preheater #2 (asphalt saturant preheater) identified as emission unit (EU) 1.2, rated at 1.5 Million British Thermal Units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 66 (constructed in 1947);

(b) one (1) natural gas fired filler heater (asphalt saturant preheater) identified as EU 1.3, rated at 2.5 Million British Thermal Units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 15 (constructed in 1979);

(c) one (1) natural gas fired hot oil heater identified as EU 1.4, rated at 2.1 Million British Thermal Units per hour and using No. 2 fuel oil as a backup, exhausting at one (1) stack identified as 67 (constructed in 1982);

(d) one (1) asphalt coater (coating rolls) and coating surge tank identified as EU 6.1, exhausting at one stack identified as 36 (constructed in 1982);

(e) one (1) limestone bulk material handling system consisting of:

(1) one (1) filler upper surge hopper rated at 54 thousand cubic feet per hour and identified as EU 4.7, with particulate matter (PM) controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 15A and 15B (constructed in 1979);

(2) one (1) filler lower surge hopper rated at 27 thousand cubic feet per hour and identified as EU 4.8, with Particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 15C (constructed in 1979); and

(3) one (1) asphalt filler mixer rated at 300 gallons per minute and identified as EU 5.1;

(f) one (1) bulk handling system consisting of:

(1) six (6) surfacing material silos #1 - 6 identified as EU 4.9, all exhausting at one (1) stack identified as 20 (constructed between 1980 and 1986); and

(2) one (1) material surfacing applicator (material surfacing area) rated at 471 thousand cubic feet per hour and identified as EU 7.1, with Particulate matter controlled by one (1) baghouse, exhausting at one stack identified as 14 (with a registration for the new baghouse issued 4/28/88).

Registration No. 047-2192 issued on 11/4/91:

(a) one (1) parting agent silo #3 rated at 32.1 thousand cubic feet per hour and identified as EU 4.4, with Particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 79 (constructed in 1991).

Registration No. 047-3399 issued on 12/21/93:

(a) one (1) filler silo #4 rated at 64.2 thousand cubic feet per hour and identified as EU 4.3 with Particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 80 and 81.

Registration No. 047-5078 issued on 2/16/96:

(a) one (1) surfacing material silo #7 rated at 30 thousand cubic feet per hour and identified as EU 4.10, with Particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 89; and

(b) one (1) surfacing material receiving bin rated at 30 thousand cubic feet per hour and identified as EU 4.11, with Particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 90.

Exemption issued 1/20/88:

(a) one (1) filler silo #2 rated at 32.1 thousand cubic feet per hour and identified as EU 4.2, with Particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 77 (constructed in 1991).

Exemption notification letter dated 2/11/91 consisting of:

(a) one (1) natural gas fired asphalt preheater #1 identified as EU 1.1, rated at 2.5 million British Thermal Units per hour and using No.2 fuel oil as a backup, exhausting at one (1) stack identified as 65; and replacing

(b) one (1) natural gas fired asphalt saturant preheater, rated at 4.5 million British Thermal Units per hour and using No.2 fuel oil as a backup, contained in permit no. 24-01-90-0022 which was removed.

The following equipment has been removed or taken out of service at the source:

(a) Permit No. 24-01-90-0022, one (1) asphalt spray applicator; and

(b) Exemption dated 9/28/87, one (1) lower crushed stone surge hopper.

The source consists of the following emission units and pollution control devices for which formal documentation from the state does not exist:

(a) one (1) 40,000 gallon capacity asphalt tank #1 rated at 200 gallons per minute and identified as EU 2.1, with a registration issued 9/4/90 to add a fiber filter bed to control particulate matter, exhausting at one (1) stack identified as 71;

(b) one (1) 30,000 gallon capacity asphalt tank #2 rated at 200 gallons per minute and identified as EU 3.1, exhausting at one (1) stack identified as 72 (constructed in 1947);

(c) one (1) filler silo #1 rated at 64.2 thousand cubic feet per hour and identified as EU 4.1 with Particulate matter controlled by two (2) baghouses with each exhausting at one (1) individual stack identified as 74 and 75 (constructed in 1979);

(d) one (1) parting agent use bin rated at 27 thousand cubic feet per hour and identified as EU 4.5, with Particulate matter controlled by one (1) baghouse, exhausting at one (1) stack identified as 14A (constructed in 1991);

(e) one (1) parting agent recycle system rated at 27 thousand cubic feet per hour and identified as EU 4.6 (constructed in 1994); and

(f) one (1) cooling section limited to 51.8 tons per year and identified as EU 7.2, exhausting at two (2) stacks identified as 41 and 42 (constructed in 1989).

The source consists of the following new sources:

(a) one (1) 10,000 gallon capacity adhesive tank #7, currently out of service to be placed back in service, rated at 200 gallons per minute and identified as EU 2.2, with Particulate matter controlled by fiber bed filter and exhausting to one (1) unlabeled stack; and

(b) the addition of one (1) 10,000 gallon capacity adhesive tank #7A, rated at 200 gallons per minute and identified as EU 2.3, with Particulate matter controlled by fiber bed filter and exhausting to one (1) unlabeled stack.

The source also includes the following fugitive emission sources:

(a) VOC emissions from pumps, valves , flanges, etc., identified as ID# 92;

(b) fugitive emissions from ventilators, identified as ID# 93; and

(c) fugitive emissions from material unloading, identified as ID# 94.

The source also includes the following insignificant activities:

(a) Natural gas-fired combustion sources with heat input equal to or less than ten million

(10,000,000) British Thermal Units per hour. This includes one (1) 0.58 Million British Thermal Units per hour rated furnace, eleven (11) 0.075 Million British Thermal Units per hour individually rated furnaces, and one (1) 0.25 Million British Thermal Units per hour rated boiler;

(b) propane or liquefied petroleum gas, or butane-fired combustion sources with heat input equal to or less than six million (6,000,000) British Thermal Units per hour;

(c) equipment powered by internal combustion engines of capacity equal to or less than 500,000 British Thermal Units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British Thermal Units per hour;

(d) Combustion source flame safety purging on startup;

(e) the following VOC and HAP storage containers:

(1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons;

(2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;

(f) machining where an aqueous cutting coolant continuously floods the machining interface;

(g) degreasing operations that do not exceed 145 gallons per 12 months, except if subject to 326 IAC 20-6;

(h) Cleaners and solvents characterized as follows:

(1) having a vapor pressure equal to or less than 2 kilopascal; 15 millimeter of mercury; or 0.3 pounds per square inch measured at 38 degrees C (100 ^{o}F) or;

(2) having a vapor pressure equal to or less than 0.7 kilopascal; 5 millimeter of mercury; or 0.1 pounds per square inch measured at 20 ^{o}C (68 ^{o}F);

the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months;

(i) the following equipment related to manufacturing activities not resulting in the emission of hazardous air pollutants (HAPs); brazing equipment, cutting torches, soldering equipment welding equipment;

(j) closed loop heating and cooling systems.

(k) noncontact cooling tower systems with forced and induced draft not regulated under NESHAP;

(l) replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;

(m) process vessel degassing and cleaning to prepare for internal repairs;

(n) paved and unpaved roads and parking lots with public access, identified as ID# 91;

(o) Blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling tower;

(p) on-site fire and emergency response training approved by the department;

(q) a laboratory as defined in 326 IAC 2-7-1(20)(C);

(r) ink jet printer;

(s) adhesive use tank #1;

(t) adhesive melt tank #1;

(u) adhesive melt tank #2;

(v) adhesive use tank #2;

(w) laminating adhesive use tank;

(x) laminating adhesive melt tank;

(y) adhesive applicator #1;

(z) adhesive applicator #2;

(aa) laminating adhesive applicator pan.

Enforcement Issue

There are no Enforcement actions pending.

Recommendation

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

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

A complete FESOP application for the purposes of this review was received on December 28, 1995, with additional information received on October 18, 21 and 23, 1996.

Potential to Emit (PTE) Calculations

See Appendix A Potential to Emit (PTE) Calculations pages 1 through 17 for detailed calculations.

Total PTE

PTE is defined as "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design." [326 IAC 2-7-1(28)]

Pollutant	PTE (tons/year)
PM	295.4
PM-10	210.4
SO_2	35.8*
VOC	107.9
CO	35.7
NO_x	7.2

Note: For the purpose of determining Title V applicability for particulates, PM-10, not PM, is the regulated pollutant in consideration.

* This source has emissions of H_2S which are reported here as SO_2 by multiplying H_2S (tpy) x 64/34.

HAP	PTE (tons/year)
HCL	0.07
Formaldehyde	0.06
Xylene	0.20
Benzene	0.19
Toluene	0.33
Ethyl benzene	0.06
1,1,1 Trichloroethylene	0.19
Total Polycyclic Organic Matter	1.42
Lead Compounds	0.07
Arsenic Compounds	0.003
Chromium Compounds	0.11
Cobalt Compounds	0.02
Manganese Compounds	0.56
Nickel Compounds	0.0007
Selenium Compounds	0.003
Methyl Ethyl Ketone	3.4
TOTAL HAPs	6.69

Note: Total Polycyclic Organic Matter includes 2-Methylnapthalene, Acenanapthalene, Fluorine, Naphthalene, Phenanthrene, and Pyrene.

The potential to emit (as defined in the Indiana Rule) of particulate matter with aerodynamic diameter at or below 10 microns (PM_{10}) and Volatile Organic Matter (VOC) are greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7-1.

A source with "potential to emit" high enough to make it a "major source" but whose actual emissions are below the Part 70 emission levels may elect to avoid the Part 70 Operating Permit Program by agreeing to accept a permit with federally enforceable limits that restrict its PTE to below the major source emission levels. The permit containing these restrictions is called a Federally Enforceable State Operating Permit (FESOP).

County Attainment Status

The source is located in Franklin County.

Pollutant	Status
TSP	Attainment
PM-10	Attainment
SO_2	Attainment
OZONE	Attainment
CO	Attainment
NO_2	Attainment

Limited PTE

The source has accepted a federally enforceable PM_{10} limit of 99 tons per year consisting of approximately 0.03 tons per year for the other insignificant activities at the source. The PM_{10} limit is attained by limiting the annual production of roofing products and by limiting the annual consumption of #2 fuel oil. By accepting this production limit, VOC emissions are also limited to 99 tons per year consisting of approximately 35 tons per year (99 - 63.65) for the other insignificant activities at the source.

The table below summarizes the total potential to emit of the significant and insignificant emission units.

	Limited PTE (tons/year)						
Process/ facility	PM	PM-10	SO2	VOC	CO	NOx	HAPs
a) EU 1.1-1.4	0.65	0.65	7.69	0.27	1.29	5.72	0
b) EU 2.1-2.3	0.12	0.12	0.34*	4.15	1.31	0	0
c) EU 3.1	1.01	1.01	0.26*	3.57	1.04	0	0
d) EU 4.1-4.5, 4.7, 4.8, 4.10, 4.11	4.51	4.51	0	0	0	0	0
e) EU 5.1	0.95	0.95	0.21*	4.31	0.49	0	0
f) EU 4.9	0.39	0.39	0	0	0	0	0.0048
EU 6.1	16.12	16.12	1.61*	20.67	1.14	0	0.70
EU 7.1	5.90	5.90	0	0.68	0	0	0
EU 7.2	61.32	61.32	0	7.95	0	0	0.6
ID93 Ventilators	8.10	8.10	0	22.09	0	0	4.03
Insignificant subtotal including: EU 4.6, ID92, and ID94	0.03	0.03	0	1.38	0	0	1.37
Total Emissions**	99.1	99.1	10.11*	65.07	5.27	5.72	6.68

* These units have emissions of H_2S which are reported here as SO_2 by multiplying H_2S (tpy) x 64/34.
** Does not include PM and PM_{10} from fugitive road dust emissions.

Attached Tables A through F summarize the permit conditions and requirements.

Federal Rule Applicability

326 IAC 12, (40 CFR Part 60.470, Subpart UU-Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture)

The coater/coating surge tank (saturator, EU 6.1) and mineral handling and storage facilities are subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.470 through 60.474, Subpart UU). The limitations of this rule are as follows:

(a) coater/coating surge tank (saturator, EU 6.1):

(1) Particulate matter emissions shall not exceed 0.04 kilograms per megagram of asphalt shingle or mineral-surfaced roll roofing produced or 18.17 tons per year;

(2) exhaust gas opacity shall not exceed 20 percent; and

(3) any visible emissions from a coater/coating surge tank (saturator, EU 6.1) capture system shall not exceed 20 percent of any period of consecutive valid observations totaling 60 minutes.

(b) for the raw material silos (EU 4.1 through 4.11) the visible emissions shall be limited to 1 percent.

(c) for asphalt storage tank #1 (EU 2.1) the visible emissions shall be limited to zero (0) percent.

Asphalt storage tank #2 (EU 3.1) is not subject to the requirements of Subpart UU since it was constructed in 1947 prior to the rule applicability date of November 18, 1980. A copy of the federal rule will be enclosed with the permit.

326 IAC 12, (40 CFR Part 60.670 through 60.676, Subpart OOO-Standards of Performance for Nonmetallic Mineral Processing Plants)

The mineral handling and storage facilities are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.670 through 60.676, Subpart OOO) since they are not located at a non-metallic mineral processing plant and there is no crushing or grinding of non-metallic minerals at the source.

326 IAC 12, (40 CFR Part 60.110, Subpart K; 40 CFR Part 60.110a, Subpart Ka; and 40 CFR Part 60.110b, Subpart Kb-Standards of Performance for Storage Vessels)

The existing 40,000 gallon asphalt storage tank #1 (EU 2.1) is subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110b, Subpart Kb) “Standards of Performance for Volatile Organic Liquid Storage Vessels” since it was modified after July 23, 1984 and the storage capacity is greater than 40 cubic meters. A copy of the federal rule will be enclosed with the permit.

The existing 30,000 gallon asphalt tank #2 (EU 3.1), and the two 10,000 gallon adhesive tanks (EU 2.2 and EU 2.3) are not subject to the New Source Performance Standard, 326 IAC 12, (40 CFR Part 60.110, Subpart K, 60.110a, Subpart Ka, and 60.110b, Subpart Kb) “Standards of Performance for Volatile Organic Liquid Storage Vessels”. Asphalt tank #2 was built in 1947 prior to the applicability date of all three rules. While both adhesive tanks were constructed (or will be constructed) after the July 23, 1984 Subpart Kb applicability date, both tanks have a storage capacity of less than 40 cubic meters (10,567 gallons) and are therefore exempt from the provisions of these Subparts.

State Rule Applicability

326 IAC 2-6 (Emission Reporting)

This source is not subject to 326 IAC 2-6 (Emission Reporting) which would require the source to annually submit an emission statement. Pursuant to this rule, any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is enforceable. Since the source has accepted federally enforceable operating conditions which limits both Particulate matter emissions and volatile organic compounds emissions to below 100 tons per year, the requirement under 326 IAC 2-6 does not apply.

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, the amount of roofing products produced shall be limited to 454,200 tons per twelve month period, rolled on a monthly basis, and the amount of No 2. fuel oil used at asphalt preheaters #1 and #2 (EU 1.1 and EU 1.2 respectively), filler heater (EU 1.3) and hot oil heater (EU 1.4) shall be limited to 216,240 gallons per twelve month period, rolled on a monthly basis. Therefore the requirements of 326 IAC 2-7 do not apply.

326 IAC 5-1-2 (Opacity Regulations - Visible Emission Limitations)

This source is subject to 326 IAC 5-1-2 (Visible Emission Limitations) which limits visible emissions from a source or facility located in either attainment or nonattainment counties. Pursuant to 326 IAC 5-1-2 (1), visible emissions shall meet the following limitations:

(a) visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings; and

(b) visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes in a six hour period.

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

This source is subject to 326 IAC 6-2 for asphalt preheater #1 (EU 1.1) and asphalt preheater #2 (EU 1.2) and hot oil heater (EU 1.4). The latter two facilities were constructed prior to September 21, 1983 and are subject to the emission limitation under 326 IAC 6-2-3 which is determined by formula. Pursuant to this rule, the computed emission limits are 0.8 pounds of Particulate matter per Million British Thermal Units. Asphalt preheater #1 was issued an exemption notice (permit to construct) after September 21, 1983 and, therefore, is subject to the emission limitation established by formula at 326 IAC 6-2-4. Pursuant to this rule, the computed emission limit is 0.576 pounds of Particulate matter per Million British Thermal Units.

326 IAC 6-3-2 (Process Operations)

The coater/coating surge tank (saturator, EU 6.1) is subject to 326 IAC 6-3-2 (Particulate Emission Limitations). Pursuant to this rule, Particulate matter emissions shall not exceed 44.9 pounds per hour.

However, this rate would exceed the 40 CFR Part 60.470, Subpart UU allowable emission rate of 18.16 tons per year as well as the source wide FESOP limit of 94.3 tons/yr, therefore, pursuant to 40 CFR Part 60.470 the allowable emission rate is truncated to 18.17 tons/yr or 4.148 pounds per hour for the saturator and 80.83 tons/yr for other facilities at the plant (99 tons/yr less 18.17 tons/yr from the saturator).

The source will comply with the requirements under 326 IAC 6-3-2 by limiting the coater/coating surge tank (saturator, EU 6.1) production rate to less than or equal to 51.8 tons per hour with uncontrolled Particulate matter emissions of 16.1 tons/yr or 3.676 pounds per hour.

326 IAC 6-4 (Fugitive Dust Emissions)

This source is subject to 326 IAC 6-4 for fugitive dust emissions. Pursuant to 326 IAC 6-4, fugitive Particulate matter emissions shall not be visible crossing the property lines.

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)

This source is not subject to 326 IAC 6-5 for fugitive particulate matter emissions. Pursuant to 326 IAC 6-5, for any new source constructed after December 13, 1985, a fugitive dust control plan must be submitted, reviewed and approved.

Compliance Monitoring

1. The combustion of No. 2 distillate fuel has applicable compliance monitoring conditions as specified below:

   a) the consumption of No. 2 distillate fuel oil and its equivalents for the entire source must be limited to 216,240 U.S. gallons per year, based on a maximum sulfur content of 0.486%, in order to ensure compliance with 326 IAC 2-8 (FESOP).

   b) Quarterly reports shall be submitted to OAM Compliance Section. These reports shall include:
      (1) the usages of No. 2 distillate fuel oil and its equivalents each year, rolled on a monthly basis, and
      (2) the sulfur content and heat value of the fuel.

   These monitoring conditions are necessary because the sulfur content of the fuel must comply with 326 IAC 7-1.1. The source must demonstrate compliance with the FESOP limit and also with limits established in 326 IAC 2-8-4 and 326 IAC 7-1.1.

2. Asphalt Tank #1, Adhesive Tank No. 7 and Future Adhesive Tank No. 7A (EU 2.1, 2.2 & 2.3), have applicable compliance monitoring conditions as specified below:

   a) The throughput for the asphalt tank #1 shall be limited to 14,251,200 gallons of asphalt per year; and the throughput for the each adhesive tank 7 and 7A shall be limited to 1,295,640 gallons of adhesive per year, in order to ensure compliance with 326 IAC 2-8 (FESOP).

   b) The monthly throughput for each tank must be measured and recorded.

   c) The total static pressure drop across the each fabric filter device (one fiber bed filter for each EU) must each be measured and recorded daily. The pressure drop for each Fiber Bed Filter shall be maintained within the range of 0.25 and 4 inches of water. If the pressure drop is outside the proper range, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

   d) Daily visible emissions observations at the fiber bed filter stack shall be

performed by a trained employee, i.e., an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions. The employee will record whether the emissions are normal or abnormal, and if the reading is abnormal, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

e) Quarterly reports shall be submitted to the OAM Compliance Section. These reports shall include the throughput of each tank in gallons per year, rolled on a monthly basis. The reports shall also include deviations from compliance monitoring criteria, certification that corrective actions were taken, or certification that no deviations occurred during the reporting period.

These monitoring conditions are necessary because the fiber bed filters for these tanks must operate properly to ensure compliance with 326 IAC 5 (Visible Emission Limitations) and 326 IAC 6-3 (Process Operations). Additionally, the tank throughputs must be limited such that total source PM_{10} and VOC emissions are less than 100 tons per year in order to ensure compliance with 326 IAC 2-8 (FESOP).

3. Asphalt Tank #2 (EU 3.1), has applicable compliance monitoring conditions as specified below:

a) The throughput for the asphalt tank #2 shall be limited to 14,251,200 gallons of asphalt per year, in order to ensure compliance with 326 IAC 2-8 (FESOP).

b) The monthly throughput for the tank must be measured and recorded.

c) Daily visible emissions observations at the fiber bed filter stack shall be performed by a trained employee, i.e., an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions. The employee will record whether the emissions are normal or abnormal, and if the reading is abnormal, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

d) Quarterly reports shall be submitted to the OAM Compliance Section. These reports shall include the throughput of each tank in gallons per year, rolled on a monthly basis. The reports shall also include deviations from compliance monitoring criteria, certification that corrective actions were taken, or certification that no deviations occurred during the reporting period.

These monitoring conditions are necessary because the fiber bed filters for these tanks must operate properly to ensure compliance with 326 IAC 5 (Visible Emission Limitations) and 326 IAC 6-3 (Process Operations). Additionally, the tank throughputs must be limited such that total source PM_{10} and VOC emissions are less than 100 tons per year in order to ensure compliance with 326 IAC 2-8 (FESOP).

4. The Filler Silos #1, #2, and #4; the Parting Agent Silo #3 and Use Bin; Filler Upper Surge Hopper and Lower Surge Hopper; Surfacing Material Silo #7 and Receiving Bin (EU 4.1, 4.2, 4.3, 4.4, 4.5,4.7, 4.8, 4.10, and 4.11, respectively), have applicable compliance monitoring conditions as specified below:

a) No limits on the above equipment is required to ensure compliance with 326 IAC 2-8 (FESOP).

b) The total static pressure drop across the each of the 12 baghouses (one each for EU 4.2, 4.4, 4.5, 4.8, 4.10 and 4.11 and two each for EU 4.1, 4.3, and 4.7) must each be measured and recorded daily. The pressure drop for each unit shall be maintained within the range of 0.25 and 4 inches of water. If the pressure drop is outside the proper range, corrective action shall be taken in accordance with the Preventive Maintenance Plans.

c) Daily visible emissions observations at the silo's, use bin's and hopper's stacks shall be performed by a trained employee, i.e., an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions. The employee will record whether the emissions are normal or abnormal, and if the reading is abnormal, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

d) Quarterly reports shall be submitted to the OAM Compliance Section. The reports shall include deviations from compliance monitoring criteria, certification that corrective actions were taken, or certification that no deviations occurred during the reporting period.

These monitoring conditions are necessary because the baghouses for the above equipment must operate properly to ensure compliance with 326 IAC 5 (Visible Emission Limitations) and 326 IAC 6-3 (Process Operations).

5. Asphalt Mixer (EU 5.1), has applicable compliance monitoring conditions as specified below:

a) The throughput for the asphalt mixer shall be limited to 28,502,400 gallons of asphalt per year, in order to ensure compliance with 326 IAC 2-8 (FESOP).

b) The monthly throughput for the mixer must be measured and recorded.

c) Daily visible emissions observations at the mixer exhaust stack shall be performed by a trained employee, i.e., an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions. The employee will record whether the emissions are normal or abnormal, and if the reading is abnormal, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

d) Quarterly reports shall be submitted to the OAM Compliance Section. These reports shall include the throughput of each tank in gallons per year, rolled on a monthly basis. The reports shall also include deviations from compliance monitoring criteria, certification that corrective actions were taken, or certification that no deviations occurred during the reporting period.

These monitoring conditions are necessary because the fiber bed filters for these tanks must operate properly to ensure compliance with 326 IAC 5 (Visible Emission Limitations) and 326 IAC 6-3 (Process Operations). Additionally, the tank throughputs must be limited such that total source PM_{10} and VOC emissions are less than 100 tons per year in order to ensure compliance with 326 IAC 2-8 (FESOP).

6. The six (6) surfacing material silos (EU 4.9), asphalt coater and coating surge tank (EU 6.1), material surfacing applicator (EU 7.1), cooling section (EU 7.2) and fugitive ventilators (ID# 93), have applicable compliance monitoring conditions as specified below:

a) The production of asphalt intermediates and finished products for these facilities shall be limited to 454,200 tons per year of roofing materials in order to ensure compliance with 326 IAC 2-8 (FESOP).

b) Test at the EU 6.1, EU 7.2 and ID# 93 exhaust stacks to determine facility Particulate matter and PM10 and VOC emissions to ensure that the requirements of 326 IAC 2-7 do not apply. Testing shall be performed within 36-48 months of FESOP issuance, and repeated no less than once every five years.

c) The total static pressure drop across the EU 7.1 Baghouse must each be measured and recorded daily. The pressure drop for the unit shall be maintained within the range of 0.25 and 4 inches of water. If the pressure drop is outside the proper range, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

d) Daily visible emissions observations at the EU 7.1 baghouse exhaust stack, EU 7.2 exhaust, and ID# ventilators shall be performed by a trained employee, i.e., an employee who has worked at the plant at least one month and has been trained in the appearance and characteristics of normal visible emissions. The employee will record whether the emissions are normal or abnormal, and if the reading is abnormal, corrective action shall be taken in accordance with the Preventive Maintenance Plan.

e) Quarterly reports shall be submitted to the OAM Compliance Section. These reports shall include the roofing products produced in tons per month, rolled on a monthly basis. The reports shall also include deviations from compliance monitoring criteria, certification that corrective actions were taken, or certification that no deviations occurred during the reporting period.

These monitoring conditions are necessary because the baghouse for the mineral surfacing applicator must operate properly to ensure compliance with 326 IAC 5 (Visible Emission Limitations) and 326 IAC 6-3 (Process Operations). Additionally, the production rate must be limited such that total source PM_{10} and VOC emissions are less than 100 tons per year in order to ensure compliance with 326 IAC 2-8 (FESOP).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 189 hazardous air pollutants set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) FESOP Application GSD-08.

This source will emit levels of air toxics less than those which constitute a major source according to Section 112 of the 1990 Amendments to Clean Air Act.

Conclusion

The operation of this Asphalt Felt & Coatings Roofing Products plant will be subject to the conditions of the attached proposed **FESOP No. F047-5160-00005.**

Table A

Stack/Vent ID: 15, 65, 66, 67			
Stack/Vent Dimensions:	Ht: Dia: temp: Flow:		
Emission Unit: Asphalt preheater #1 and #2, Filler Heater and Hot Oil Heater			
Date of Construction:	**1947 - EU 1.2, 1979 - EU 1.3,**	**1982 - EU 1.4, 1991 - EU 1.1**	
Alternative Scenario: N/A			
Pollution Control Equipment: None			
General Description of Requirement:	No. 2 fuel oil usage limit of 216,240 gallons per year		
Numerical Emission Limit:	PM limited to 99 tons per year, VOC limited to 65 tons per year*		
Regulation/Citation:	326 IAC 2-8-4		
Compliance Demonstration:	recordkeeping and reporting		
PERFORMANCE TESTING			
Parameter/Pollutant to be Tested:	N/A		
Testing Method/Analysis:			
Testing Frequency/Schedule:			
Submittal of Test Results:			
COMPLIANCE MONITORING			
Monitoring Description:	record fuel usage		
Monitoring Method:	purchase orders/invoices		
Monitoring Regulation/Citation:	326 IAC 2-8-4		
Monitoring Frequency:	monthly		
RECORD KEEPING			
Parameter/Pollutant to be Recorded:	gallons of No. 2 fuel oil consumed		
Recording Frequency:	monthly		
Submittal Schedule of Reports:	quarterly		
REPORTING REQUIREMENTS			
Information in Report:	No. 2 fuel oil usage and heat content		
Reporting Frequency/Submittal:	quarterly		
Additional Comments:	none		

* Reflects source-wide FESOP limit of 99 tons particulate matter per year and 65 tons VOC per year.

Table B

Stack/Vent ID: 71 (EU 2.1) and EU 2.3 and EU 2.3				
Stack/Vent Dimensions:	Ht:	Dia:	Temp:	Flow:
Emission Unit: asphalt tank #1 and adhesive tanks 7 and 7A				
Date of Construction: EU 2.1 - 1990	**1947, fiber filter**	**EU 2.2 and 2.3**	**filters are to be built**	
Alternative Scenario: N/A				
Pollution Control Equipment: three (3) Fiber Bed Filter (one per facility, one existing, two future)				
General Description of Requirement:	parameter monitoring	parameter monitoring		record keeping & reporting
Numerical Emission Limit:	**	**		99 tons/year*
Regulation/Citation:	326 IAC 2-8-4	326 IAC 2-8-4		326 IAC 2-8-4
Compliance Demonstration:	parameter monitoring	parameter monitoring		record keeping & reporting
PERFORMANCE TESTING	N/A			N/A
Parameter/Pollutant to be Tested:				
Testing Method/Analysis:				
Testing Frequency/Schedule:				
Submittal of Test Results:				
COMPLIANCE MONITORING				N/A
Monitoring Description:	pressure drop	visible emissions		
Monitoring Method:	gauge reading	trained employee		
Monitoring Regulation/Citation:	326 IAC 2-8-5	326 IAC 2-8-5		
Monitoring Frequency:	daily	daily		
RECORD KEEPING				
Parameter/Pollutant to be Recorded:	pressure drop	visible emissions		tank throughputs
Recording Frequency:	daily	daily		monthly
Submittal Schedule of Reports:	upon request	upon request		quarterly
REPORTING REQUIREMENTS	N/A	N/A		
Information in Report:				tank throughputs
Reporting Frequency/Submittal:				w/in 30 days after each calendar quarter
Additional Comments:				

* Reflects source-wide FESOP limit of 99 tons particulate matter per year and 65 tons VOC per year.

Table C

Stack/Vent ID: 72 (EU 3.1)				
Stack/Vent Dimensions:	Ht:	Dia:	Temp:	Flow:
Emission Unit: asphalt tank #2				
Date of Construction: EU 3.1 1947				
Alternative Scenario: N/A				
Pollution Control Equipment: None				
General Description of Requirement:	record keeping & reporting			
Numerical Emission Limit:	99 tons/year*			
Regulation/Citation:	326 IAC 2-8-4			
Compliance Demonstration:	record keeping & reporting			
PERFORMANCE TESTING	N/A			
Parameter/Pollutant to be Tested:				
Testing Method/Analysis:				
Testing Frequency/Schedule:				
Submittal of Test Results:				
COMPLIANCE MONITORING				
Monitoring Description:	visible emissions			
Monitoring Method:	trained employee			
Monitoring Regulation/Citation:	326 IAC 2-8-5			
Monitoring Frequency:	daily			
RECORD KEEPING				
Parameter/Pollutant to be Recorded:	tank throughputs and Visible Emissions			
Recording Frequency:	monthly and daily			
Submittal Schedule of Reports:	quarterly			
REPORTING REQUIREMENTS				
Information in Report:	tank throughputs			
Reporting Frequency/Submittal:	w/in 30 days after each calendar quarter			
Additional Comments:				

* Reflects source-wide FESOP limit of 99 tons particulate matter per year and 65 tons VOC per year.

Table D

Stack/Vent ID: 74, 75, 77, 80, 81, 79, 14A, 15A, 15B, 15C, 89, 90				
Stack/Vent Dimensions:	Ht:	Dia:	Temp:	Flow:
Emission Unit:	**Filler Silos #1, #2, and #4; Parting Agent Silo #3 and Use Bin, Filler Upper and Lower Surge Hoppers, Surfacing Material Silo #7 and Receiving Bin**			
Date of Construction: 1979:	**EU 4.1, EU 4.7, EU 4.8**	**1991: EU 4.2, EU 4.4, EU 4.5**	**1993: EU 4.3,**	**1996: EU 4.10, EU 4.11**
Alternative Scenario: N/A				
Pollution Control Equipment: twelve (12) Baghouses				
General Description of Requirement:	parameter monitoring	parameter monitoring		
Numerical Emission Limit:	**	**		
Regulation/Citation:	326 IAC 2-8-4	326 IAC 2-8-4		
Compliance Demonstration:	parameter monitoring	parameter monitoring		
PERFORMANCE TESTING	N/A			
Parameter/Pollutant to be Tested:				
Testing Method/Analysis:				
Testing Frequency/Schedule:				
Submittal of Test Results:				
COMPLIANCE MONITORING				
Monitoring Description:	pressure drop	visible emissions		
Monitoring Method:	gauge reading	trained employee		
Monitoring Regulation/Citation:	326 IAC 2-8-5	326 IAC 2-8-5		
Monitoring Frequency:	daily	daily		
RECORD KEEPING				
Parameter/Pollutant to be Recorded:	pressure drop	visible emissions		
Recording Frequency:	daily	daily		
Submittal Schedule of Reports:	upon request	upon request		
REPORTING REQUIREMENTS	N/A	N/A		
Information in Report:				
Reporting Frequency/Submittal:				
Additional Comments:				

* Reflects source-wide FESOP limit of 99 tons particulate matter per year

Table E

Stack/Vent ID: EU 5.1				
Stack/Vent Dimensions:	Ht:	Dia:	Temp:	Flow:
Emission Unit: asphalt mixer				
Date of Construction: pre	**1986**			
Alternative Scenario: N/A				
Pollution Control Equipment:	**None**			
General Description of Requirement:	record keeping & reporting			
Numerical Emission Limit:	99 tons/year*			
Regulation/Citation:	326 IAC 2-8-4			
Compliance Demonstration:	record keeping & reporting			
PERFORMANCE TESTING	N/A			
Parameter/Pollutant to be Tested:				
Testing Method/Analysis:				
Testing Frequency/Schedule:				
Submittal of Test Results:				
COMPLIANCE MONITORING				
Monitoring Description:	Visible Emissions			
Monitoring Method:	Trained Employee			
Monitoring Regulation/Citation:	326 IAC 2-8-5			
Monitoring Frequency:	Daily			
RECORD KEEPING				
Parameter/Pollutant to be Recorded:	mixer throughputs and Visible Emissions			
Recording Frequency:	monthly and daily			
Submittal Schedule of Reports:	quarterly			
REPORTING REQUIREMENTS				
Information in Report:	mixer throughputs			
Reporting Frequency/Submittal:	w/in 30 days after each calendar quarter			
Additional Comments:				

* Reflects source-wide FESOP limit of 99 tons particulate matter per year and 65 tons VOC per year.

Table F

Stack/Vent ID: 20, 36, 14, 41, 42, ID# 93 ventilators				
Stack/Vent Dimensions:	Ht:	Dia:	Temp:	Flow:
Emission Unit: six (6) surfacing material silos (EU 4.9), asphalt coater and coating surge tanks (EU 6.1), material surfacing applicator (EU 7.1), cooling section (EU 7.2), and fugitive emissions from ventilators (ID# 93).				
Date of Construction: EU 4.9	**1980 to 1986, EU 6.1 - 1982**	**EU 7.1 baghouse 1988**		**EU 7.2 - 1989**
Alternative Scenario: N/A				
Pollution Control Equipment: EU 7.1 only: one (1) baghouse				**All facilities**
General Description of Requirement:	parameter monitoring	parameter monitoring		record keeping & reporting
Numerical Emission Limit:	**	**		99 tons/year*
Regulation/Citation:	326 IAC 2-8-4	326 IAC 2-8-4		326 IAC 2-8-4
Compliance Demonstration:	parameter monitoring	parameter monitoring		record keeping & reporting
PERFORMANCE TESTING				N/A
Parameter/Pollutant to be Tested:	particulate matter,PM_{10} and VOC for EU 6.1, EU 7.2 and ID# 93			
Testing Method/Analysis:				
Testing Frequency/Schedule:	within 36 to 48 months after issuance			
Submittal of Test Results:	within 45 days of testing			
COMPLIANCE MONITORING				N/A
Monitoring Description:	pressure drop	visible emissions		
Monitoring Method:	gauge reading	trained employee		
Monitoring Regulation/Citation:	326 IAC 2-8-5	326 IAC 2-8-5		
Monitoring Frequency:	daily	daily		
RECORD KEEPING				
Parameter/Pollutant to be Recorded:	pressure drop	visible emissions		product production rates
Recording Frequency:	daily	daily		monthly
Submittal Schedule of Reports:	upon request	upon request		quarterly
REPORTING REQUIREMENTS	N/A	N/A		
Information in Report:				product production rates
Reporting Frequency/Submittal:				w/in 30 days after each calendar quarter
Additional Comments:				

* Reflects source-wide FESOP limit of 99 tons particulate matter per year.

Indiana Department of Environmental Management
Office of Air Management

Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

Source Name:	**Owens Corning**
Source Location:	**128 W. Eighth Street, Brookville, IN 47012**
County:	**Franklin**
Operation Permit No.:	**F047-5160-00005**
Permit Reviewer:	**Richard A. Moore Jr.**

On March 26, 1997, the Office of Air Management (OAM) had a notice published in the Brookville Democrat, Brookville, Indiana, stating that Owens Corning (Owens) had applied for a Federally Enforceable State Operating Permit (FESOP) for operating an Asphalt Felt, Coatings, and Roofing Products production plant. The notice also stated that OAM proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this FESOP should be issued as proposed. Due to the misplacement of the documentation at the public library, a second notice was published in the Brookville Democrat, Brookville, Indiana, on April 30, 1997 after a second copy of the documentation package was provided to the public library.

Upon further review, the OAM has decided to make the following changes to the FESOP:

1. The following changes shown in bold letters (for emphasis) have been made to Condition C.6 titled Performance Testing, to accurately reflect the facilities that require testing.

   The first sentence under Condition C.6 has been corrected as follows: "Compliance testing shall be conducted on the **asphalt coater (coating rolls) and coating surge tank identified as EU 6.1, the material surfacing applicator cooling section identified as EU 7.2, and the ventilators, identified as ID# 93 for PM, PM-10 and VOC** within thirty-six (36) to forty-eight (48) months of issuing this FESOP."

   The last sentence has added the correct rule cite, which is [326 IAC 3-2.1-2(a)].

   Under "Performance Testing Parameter/Pollutant to be Tested:" in Table F of the TSD, VOC should be included to be consistent with the FESOP.

2. The following changes have been made to Condition C.15 titled General Reporting Requirements in the FESOP to correctly state the time frame for the first reporting period.

   Condition (e) has been change to "(e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period.**"**

3. The following has been added to the end of Conditions D.3.2, D.5.2 and D.6.4 (previously D.6.3)

in the FESOP, to identify the required opacity limitations.

"Pursuant to 326 IAC 5-1-2 (1), visible emissions shall meet the following limitations:

(a) visible emissions shall not exceed an average of forty percent (40%) opacity in twenty-four (24) consecutive readings; and

(b) visible emissions shall not exceed sixty percent (60%) opacity for more than a cumulative total of fifteen (15) minutes in a six hour period."

4. The following additions and changes shown in bold letters (for emphasis) have been made to Condition D.4.1 titled Particulate Matter (PM and PM_{10}) in the FESOP, to clarify that the condition is not required for limiting particulate matter and PM_{10} emissions and to document that these storage vessels' potential to emit are used in determining the source total particulate matter and PM_{10} emissions which are limited.

"This operating condition **imposes no limitation below the potential to emit for** total particulate matter and PM_{10} emissions from the nine (9) **storage vessels** controlled by the twelve (12) baghouses. **The potential emissions from these baghouses are** 1.03 pounds per hour. **At this emission rate in conjunction with the other operating conditions stated elsewhere in the permit, total source particulate matter and PM_{10} emissions are limited to less than 100 tons per year,** therefore, the requirements of 326 IAC 2-7 do not apply."

5. The following has been added as Condition D.6.2 and the remaining Conditions renumbered in the FESOP:

Testing [326 IAC 2-8-4(3)]

D.6.2 Testing Requirements
Compliance testing shall be conducted (pursuant to Condition C.6 Performance Testing) on the asphalt coater (coating rolls) and coating surge tank identified as EU 6.1, the material surfacing applicator cooling section identified as EU 7.2, and the ventilators, identified as ID# 93 for PM, PM-10 and VOC within thirty-six (36) to forty-eight (48) months of issuing this FESOP. All testing shall be performed according to the provisions of 326 IAC 3-2.1 (Source Sampling Procedures) and by methods in the approved test protocol. The test protocol shall be submitted to the address listed in Condition C.6 at least thirty-five (35) days before the intended test date. [326 IAC 3-2.1-2(a)]

6. Under the Compliance Monitoring Section 6. (b) on page 14 of 20 in the TSD should read as follows to be consistent with the permit conditions stated in the FESOP:

"Testing shall be performed within 36-48 months of FESOP issuance, ..."

On April 27, 1997, Owens Corning (Owens) submitted comments on the proposed FESOP and TSD. The summary of the comments is as follows:

Comment:

1. Page 1 through 11 state “Page # of 43": Should read “Page # of 45"

Response:

The OAM has made the requested change to accurately reflect the number of pages in the FESOP which is 47 pages after these revisions.

Comment:

2. Page 4 of 45 {of the proposed permit}
   a) Section A.1
      i) Could we reword the first statement to say: “The Permitee owns and operates an Asphalt Felt, Coatings, and Roofing Products production plant.”
   b) Section A.2, (a), (2)
      i) EU 1.2 rated at 4.5 MMBtu, stack number 66 has been replaced by a 1.5 MMBtu unit.

Response:

The OAM has made the requested change to Section A.1 to accurately reflect the description of the source.

The OAM has made the requested change to Section A.2, (a), (2) to accurately reflect the description of the equipment. Since the combustion source was replaced by a lower rated unit, no emission increase would occur. This change is also reflected on Page 24 in Condition D.1 (a) (2) of the permit.

To be consistent with the permit, Page 1 of 20 item (a) of the TSD should read “... (EU) 1.2, rated at 1.5 Million British Thermal Units per hour ...”

Comment:

3. Page 5 of 45 {of the proposed permit}
   a) It refers to storage vessels as facilities? Could this be changed to say storage vessels?

Response:

The OAM has made the requested change to accurately reflect the description of the equipment. This change is also reflected on Page 3 D.4 of the table of contents and on Page 31 Condition D.4 (d) of the permit and Condition D.4.1.

Comment:

4. Page 7 of 45 {of the proposed permit, Insignificant Activities}
   a) (25) Adhesive Applicator Pan #1 should read Adhesive Applicator #1.

b) (26) Adhesive Applicator Pan #2 should read Adhesive Applicator #2.

Response:

The OAM has made the requested change (on Page 7 of 47) to accurately reflect the description of the equipment. Page 5 of 20 items (y) and (z) in the TSD should read Adhesive Applicator #1 and #2, respectively.

Comment:

5. Page 18 of 45 {of the proposed permit}
   a) Permit fee is due 4/1 of each year. We did not receive any bill in 1997. It was my understanding that the "Title V, Part 70 Fee Bill" for this year was accounted for in the 1996 payment.

Response:

Pursuant to 326 IAC 2-8-16 (d), a source that notifies OAM of its intent to file a FESOP application must continue to pay fees under 326 IAC 2-1-7.1 until an application for a FESOP is made by the applicant. If a FESOP is not approved, the source may be billed for the applicable fee under 326 IAC 2-7-19 for the calendar years 1994 and 1995 and subsequent years until a FESOP is issued.

In addition, pursuant to 326 IAC 2-7-19 (b), if a source subject to 326 IAC 2-7 or 326 IAC 2-8 does not receive a bill from the department, the applicable fee must be submitted to the department prior to September 1 in 1994 and April 1 of any subsequent year. If the source does not receive the invoice, the permittee must call the department in order to determine the appropriate permit fee, so that the source can comply with this rule.

Comment:

6. Page 21 of 45 {of the proposed permit}
   a) Section C.6, Performance Testing
      i) What is a TML Wastewater Incinerator? We currently do not have any type of incinerator on plant property.

Response:

The OAM has made changes that address this comment, (See page 1 of 7, OAM change #1) which correctly identify the facilities that are required to conduct compliance testing.

Comment:

7. Page 21 of 45 {of the proposed permit}
   a) Section C.10, Pressure Gauge Specifications
      i) The gauge employed shall have a scale such that the expected normal reading shall be no less than 20% of full scale and be accurate within ±2 percent of full scale reading. Is this a normal/reasonable gauge specification?

Response:

The OAM has determined that this is a normal and reasonable gauge specification. The OAM has further determined that this is the normal range to determine compliance when a permit condition requires pressure readings.

Comment:

8. Page 23 of 45 {of the proposed permit}
   a) The first report is due March 31, 1997? This date needs to be updated when the final Permit is issued.

Response:

The OAM has made changes that address this comment, (See page 1 of 7, OAM change #2), which correctly state the time frame for the first reporting period.

Comment:

9. Page 24 of 45 {of the proposed permit}
   a) Section D.1.1
      i) What is meant by aerodynamic diameter? I am unclear what this means.

Response:

The term is used in the context of a regulatory definition of PM_{10} which is "particulate matter with aerodynamic diameter at or below 10 microns". It is a technical definition of an effective diameter for non-spherical particles. The condition limits particulate matter (total suspended particulates) which includes all sizes of particles and PM_{10} which are those particles whose size is less than 10 microns.

Comment:

10. Page 27 of 45 {of the proposed permit}
    a) Section D.2.4, Operational parameters
       i) (b) cleaning cycle: frequency and differential pressure? Shouldn't this read "cleaning cycle: frequency"?

Response:

The OAM has determined that both the frequency of cleaning cycles and the differential pressure during cleaning cycles must be kept as records. OAM has determined that this record keeping requirement is needed to determine compliance for the permit condition that contains a particulate matter control device which conducts periodic cleaning.

Comment:

11. Page 35 of 45 {of the proposed permit}
    a) (f), (2) "asphalt coater and coating surge tank (coating rolls)" should read "asphalt coater (coating rolls) and coating surge tank"

Response:

The OAM has made the requested change (on page 36 of 47) to accurately reflect the description of the source. This change is also reflected on Page 5 of 47 (f) (2), and Page 20 of 475 Condition C.6 of the permit. Page 1 of 20 item (a) of the TSD should read as "asphalt coater (coating rolls) and coating surge tank", (See Owens Comment #12 (b) below).

The following comments were made regarding the TSD for the proposed FESOP. The summary of the comments continues below:

Comment:

12. Page 1 of 20 {of the proposed TSD}
    a) Change statement ... to the production of Asphalt Felt, Coatings, and Roofing Products .
    b) (d)"asphalt coater and coating surge tank (coating rolls)" should read "asphalt coater (coating rolls) and coating surge tank"

Response:

The OAM has addressed this comment, (See OAM Response to Owens comment #2 and comment #11 above).

Comment:

13. Page 5 of 20 {of the proposed TSD}
    a) (y) Adhesive Applicator Pan #1 should read Adhesive Applicator #1.
    b) (z) Adhesive Applicator Pan #2 should read Adhesive Applicator #2.

Response:

The OAM has addressed this comment to accurately reflect the description of the equipment, (See OAM Response to Owens comment #4 above).

As stated above a second notice was published in the Brookville Democrat, Brookville, Indiana, on April 30, 1997. As a result of this second public notice an article was published in the Brookville, Democrat on April 30, 1997 written by John Estridge. The article made numerous statements that were incorrect. Specifically, that "Owens Corning is seeking to increase the amount of particulate emissions at its Brookville Plant". Additional incorrect statements were that Owens was "... seeking to emit up to 210.4 tons per year of particulate matter ... " and that they were "... also requesting permission to emit up to 108 tons per year of Volatile Organic Compounds."

OAM has received two telephone calls and six letters from the public commenting on the proposed Owens FESOP, including a memo from Congressman Lee H. Hamilton. The summary of the comments is as follows:

Comment:

Two telephone calls were received by OAM, one from Ferry Geiling and one from Dan Doll. Both stated that they had read the newspaper article and were concerned with Owens increasing their emissions. Mr. Doll also stated that he went to the Library and noted that Owens was only repermitting their current permits and that their emissions were being lowered.

Response:

OAM responded to both telephone calls and confirmed that Owens was currently permitted to emit up to 210.4 tons per year of particulate matter and up to 108 tons per year of Volatile Organic Compounds. OAM explained that Owens was taking a lower limit of 99 tons per year of particulate matter and less than 99 tons per year of Volatile Organic Compounds to comply with the provisions of IAC 2-8. Both commenters stated their understanding of the situation and expressed that this response had addressed their concerns. They were advised to submit written comments to OAM if they were not satisfied with the response or if they had additional concerns that they wanted addressed. No additional written comments were received from these two individuals about the proposed permit.

Comment:

Six letters were received by OAM, signed by the following persons:

Patricia A. Johnson	Jennifer F. Stivers
James A. Hyde	Eileen Hyde
Jennifer F. Stivers	Aurelia Merrell
Jean Kruthaupt	Leo G. Kruthaupt
Ruth Pflum	Gregory Pflum
Thelma Gutzwieller	

Two of the letters specifically mention the newspaper article and five of the six expressed their concern with Owens increasing their emissions and with the increased air pollution coming from Owens.

Response:

OAM did not receive any comments during the first 30 days of the public notice period or in response to the Public Notice that was published which correctly states that Owens is limiting their emissions to less than 99 tons for two pollutants. To qualify for the FESOP permit, Owens has to have emissions less than 100 tons per year for each pollutant. This permit limits the emissions and does not request any emissions increases. This permit is required by IAC 2-8. The permit represents a voluntary reduction in allowable emissions from a source to comply with both federal and state regulations.

Since OAM only received the above public comments after the publication of the article in the newspaper which misstated the nature of the proposed permit, OAM believes that the intent of the final permit will address the public's concerns and that issuance of the permit is an appropriate response to their comments.

Emission Calculations

Source Name: Owens Corning
Source Location: 128 W. Eighth Street, Brookville, IN 47012
County: Franklin
Operation Permit No.: F047-5160-00005
Permit Reviewer: Richard A. Moore Jr.

Emission Units (EU) 2.1, 2.2, and 2.3

Based on the tank calculations on the previous page

Emission Unit	Total HC	VOC 100%	PM @ 22% VOC and 90% controlled
EU 2.1	3.18	3.18	0.07
EU 2.2	0.06	0.06	0.001
EU 2.3	0.13	0.13	0.003
Total	3.37	3.37	0.074
Applicant Requested		4.15	0.12

For Carbon Monoxide (CO) and Hydrogen Sulfide (H_2S) emissions factors were obtained from AP-42 fifth edition, 1995 and are calculated as follows:

Emission Factors (EF):

CO = 1.14 milligram (mg) per cubic meter (m^3) per part per million (ppm)
= 1.14 mg/m^3/ppm

H_2S = 1.39 mg/m^3/ppm

Emissions = EF x (ppm)x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x (gallons per year)

For EU 2.1:

CO emissions = 1.14 mg/m^3/ppm x 15,000 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 14,251,200 gallons/year

= 2,009 lbs/yr = 1 tons per year

Emission Calculations

Source Name: Owens Corning
Source Location: 128 W. Eighth Street, Brookville, IN 47012
County: Franklin
Operation Permit No.: F047-5160-00005
Permit Reviewer: Richard A. Moore Jr.

Emission Units (EU) 2.1, 2.2, and 2.3 (cont.)

For EU 2.2 or EU 2.3:

CO emissions = 1.14 mg/m^3/ppm x 15,000 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 1,295,640 gallons/year

= 182 lbs/yr = 0.09 tons per year

For EU 2.1:

H_2S emissions = 1.39 mg/m^3/ppm x 1,643.5 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 14,251,200 gallons/year

= 268 lbs/yr = 0.13 tons per year

SO_2 = 0.13 tons/yr x 64/34 = 0.24 tons/yr

For EU 2.2 or EU 2.3:

H_2S emissions = 1.39 mg/m^3/ppm x 1,643.5 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 1,295,640 gallons/year

= 24 lbs/yr = 0.01 tons per year

SO_2 = 0.01 tons/yr x 64/34 = 0.02 tons/yr

Emission Unit	CO	H_2S	SO_2
EU 2.1	1.00	0.13	0.24
EU 2.2	0.09	0.01	0.02
EU 2.3	0.09	0.01	0.02
Total	1.18	0.15	0.28
Applicant Requested	1.31	0.18	0.34

Emission Calculations

Source Name: Owens Corning
Source Location: 128 W. Eighth Street, Brookville, IN 47012
County: Franklin
Operation Permit No.: F047-5160-00005
Permit Reviewer: Richard A. Moore Jr.

Emission Unit 3.1

Based on EU 2.1 Tank emission Calculations then EU 3.1 is the same except PM emissions are uncontrolled.

Emission Unit	Total HC	VOC 100%	PM @ 22% VOC uncontrolled
EU 2.1	3.18	3.18	0.70
Total	3.18	3.18	0.70
Applicant Requested		3.57	1.01

For Carbon Monoxide (CO) and Hydrogen Sulfide (H_2S) emissions factors were obtained from AP-42 fifth edition, 1995 and are calculated as follows:

CO emissions = 1.14 mg/m^3/ppm x 15,000 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 14,251,200 gallons/year

= 2,009 lbs/yr = 1 tons per year

H_2S emissions = 1.39 mg/m^3/ppm x 1,643.5 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 14,251,200 gallons/year

= 268 lbs/yr = 0.13 tons per year

SO_2 = 0.13 tons/yr x 64/34 = 0.24 tons/yr

Emission Unit	CO	H_2S	SO_2
EU 2.1	1.00	0.13	0.24
Applicant Requested	1.04	0.14	0.26

Emission Calculations

Source Name: **Owens Corning**
Source Location: **128 W. Eighth Street, Brookville, IN 47012**
County: **Franklin**
Operation Permit No.: **F047-5160-00005**
Permit Reviewer: **Richard A. Moore Jr.**

Emission Units 4.1 - 4.5, 4.7, 4.8, 4.10, and 4.11

For particulate matter (PM and PM_{10}) emissions factors were obtained from the applicants vendor and are calculated as follows:

Emission Factors (EF):

PM/PM_{10} = 0.02 grains per dry standard cubic feet of exhaust flow
= 0.02 gr/dscf

Emissions = EF x Exhaust Fan Rate c.f. per minute x 60 minutes per hour ÷ 7000 gr per pound

For EU 4.1 - EU 4.5, EU 4.7, EU 4.8, EU 4.10, and EU 4.11:

Exhaust fan rates = 1070 + 535+ 1070 + 535 + 450 + 900 + 450 + 500 + 500
= 6010 c.f. per minute

PM/PM_{10} emissions = 0.02 gr/dscf x 6,010 c.f./min x 60 min/hour ÷ 7,000 gr/lb

= 1.03 pounds per hour = 4.51 tons per year

Emission Unit 4.9

The PM/PM_{10} emission factors for EU 4.9 were developed based on testing performed by Owens Corning at various locations. The testing utilized standard test methods and were correlated with the quantity of product produced. The emissions are calculated as follows:
Emission Factors (EF):

PM/PM_{10} = 0.0017 pounds per ton of product

Emissions = EF x tons of product per year ÷ 2000 pounds per ton

PM/PM_{10} emissions = 0.0017 lb/ton x 454,200 tons per year ÷ 2000 pounds per ton
= 0.39 tons per year

Emission Calculations

Source Name: **Owens Corning**

Source Location: **128 W. Eighth Street, Brookville, IN 47012**
County: **Franklin**
Operation Permit No.: **F047-5160-00005**
Permit Reviewer: **Richard A. Moore Jr.**

Emission Unit 5.1

Based on the tank calculations

Emission Unit	Total HC	VOC 100%	PM @ 22% VOC uncontrolled
EU 5.1 PTE	10.79	10.79	2.37
EU 5.1 Limited Rates	4.31	4.31	0.95
Applicant Requested		1.87	0.53

For Carbon Monoxide (CO) and Hydrogen Sulfide (H_2S) emissions factors were obtained from AP-42 fifth edition, 1995 and are calculated as follows:

Emission Factors (EF):
CO = 1.14 mg/m^3/ppm
H_2S = 1.39 mg/m^3/ppm

Emissions = EF x (ppm)x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x (gallons per year)

For EU 5.1:

CO emissions = 1.14 mg/m^3/ppm x 3,640 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 28,502,400 gallons/year

= 975 lbs/yr = 0.49 tons per year

H_2S emissions = 1.39 mg/m^3/ppm x 649.1 ppm x 0.028 m^3/c.f. x c.f./7.48 gallon x 1 lb/454,000 mg x 28,502,400 gallons/year

= 212 lbs/yr = 0.11 tons per year

SO_2 = 0.11 tons/yr x 64/34 = 0.21 tons/yr

Emission Calculations

Source Name: **Owens Corning**
Source Location: **128 W. Eighth Street, Brookville, IN 47012**
County: **Franklin**
Operation Permit No.: **F047-5160-00005**
Permit Reviewer: **Richard A. Moore Jr.**

Emission Unit 5.1 (cont.)

Emission Unit	CO	H_2S	SO_2
EU 5.1	0.49	0.11	0.21
Applicant Requested	0.21	0.05	0.09

Emission Unit 6.1

The emission factors for the coater (EU 6.1) were developed based on testing performed at Owens Corning at various locations. The testing utilized standard test methods and were correlated with the quantity of product produced. The emissions are calculated as follows:

Emission Factors (EF):

PM/PM_{10} = 0.071 pounds per ton of product

VOC = 0.091 pounds per ton of product

CO = 0.005 pounds per ton of product

SO_2 = 0.0025 pounds per ton of product

H_2S = 0.002415 pounds per ton of product

Emissions = EF x tons of product per year ÷ 2000 pounds per ton

PM/PM_{10} emissions = 0.071 lb/ton x 454,200 tons per year ÷ 2000 pounds per ton
= 16.12 tons per year

VOC emissions = 0.091 lb/ton x 454,200 tons per year ÷ 2000 lb/ton
= 20.67 tons per year

CO emissions = 0.005 lb/ton x 454,200 tons per year ÷ 2000 lb/ton
= 1.14 tons per year

Emission Calculations

Source Name: **Owens Corning**

Source Location: **128 W. Eighth Street, Brookville, IN 47012**
County: **Franklin**
Operation Permit No.: **F047-5160-00005**
Permit Reviewer: **Richard A. Moore Jr.**

Emission Unit 6.1 (cont.)

SO_2 emissions = 0.0025 lb/ton x 454,200 tons per year ÷ 2000 lb/ton
= 0.57 tons per year

H_2S emissions = 0.002415 lb/ton x 454,200 tons per year ÷ 2000 lb/ton
= 0.55 tons per year

H_2S as SO_2 = 0.55 tons/yr x 64/34 = 1.04 tons/yr

Total SO_2 emissions = 1.04 + 0.57 = 1.61 tons per year

Emission Unit 7.1

For particulate matter (PM and PM_{10}) emissions factors were obtained from the applicant's vendor and are calculated as follows:

Emission Factors (EF):
PM/PM_{10} = 0.02 grains per dry standard cubic feet of exhaust flow
= 0.02 gr/dscf

Emissions = EF x Exhaust Fan Rate c.f. per minute x 60 minutes per hour ÷ 7000 gr per pound

For EU 7.1

Exhaust fan rates = 7, 850 c.f. per minute

PM/PM_{10} emissions = 0.02 gr/dscf x 7,850 c.f./min x 60 min/hour ÷ 7,000 gr/lb

= 1.346 pounds per hour = 5.90 tons per year

The VOC emission factors for EU 7.1 were developed based on testing performed by Owens Corning at various locations. The testing utilized standard test methods and were correlated with the quantity of product produced. The emissions are calculated as follows:

Emission Calculations

Source Name: **Owens Corning**
Source Location: **128 W. Eighth Street, Brookville, IN 47012**
County: **Franklin**

Emission Unit 7.1 (cont.)

Emission Factors (EF):

VOC = 0.003 pounds per ton of product

VOC emissions = 0.003 lb/ton x 454,200 tons per year ÷ 2000 lb/ton
= 0.68 tons per year

Emission Unit 7.2

The VOC and PM/PM_{10} emission factors for EU 7.2 were developed based on testing performed by Owens Corning at various locations. The testing utilized standard test methods and were correlated with the quantity of product produced. The emissions are calculated as follows:

Emission Factors (EF):

PM/PM_{10} = 0.270 pounds per ton of product

VOC = 0.035 pounds per ton of product

Emissions = EF x tons of product per year ÷ 2000 pounds per ton

PM/PM_{10} emissions = 0.270 lb/ton x 454,200 tons per year ÷ 2000 pounds per ton
= 61.32 tons per year

VOC emissions = 0.035 lb/ton x 454,200 tons per year ÷ 2000 lb/ton
= 7.95 tons per year

Emission Calculations

Source Name: **Owens Corning**
Source Location: **128 W. Eighth Street, Brookville, IN 47012**
County: **Franklin**
Operation Permit No.: **F047-5160-00005**
Permit Reviewer: **Richard A. Moore Jr.**

Ventilator Emissions ID# 93

The VOC and PM/PM_{10} emission factors from ventilators were developed based on testing performed by Owens Corning at various locations. The testing utilized standard test methods and were correlated with the quantity of product produced. The emissions from the asphalt mixer (EU 5.1) were captured by these factors and are subtracted from the ventilator emissions to avoid double accounting. The emissions are calculated as follows:

Emission Factors (EF):

PM/PM_{10} = 0.019 pounds per ton of product

VOC = 0.1055 pounds per ton of product

Emissions = EF x tons of product per year ÷ 2000 pounds per ton

Total Ventilator emissions including EU 5.1

PM/PM_{10} emissions = 0.019 lb/ton x 454,200 tons per year ÷ 2000 pounds per ton
= 4.31 tons per year

VOC emissions = 0.1055 lb/ton x 454,200 tons per year ÷ 2000 lb/ton
= 23.96 tons per year

Ventilator emissions = Total emissions x safety factor - EU 5.1 emissions

PM/PM_{10} emissions = (4.31 tons/year x 2.1) - 0.95 tons/yr
= 8.10 tons per year

VOC emissions = (23.96 tons/year x 1) - 1.87 tons/yr
= 22.09 tons per year

Appendix A: Emission Calculations
Potential Emissions (Tons per Year)

Owens Corning
128 W. Eighth Street, Brookville, IN 47012
F047-5160-00005
Richard A. Moore Jr.
November 7, 1996

Emission Source	EU	Pollutants (tons/yr)						
		PM	PM10	VOC	CO	SO2	NOX	HAPs
Combustion Units	1.1-1.4	0.73	0.73	0.12	1.81	25.25	7.26	
Storage Tanks Controlled	2.1-2.3	0.71	0.71	25.3	22.5	5.65		
Storage Tank	3.1	5.51	5.51	19.5	7.46	1.88		
Silos with Baghouses	4.1-4.5, 4.7, 4.8, 4.10 4.11	4.51	4.51					
Silo without Baghouse	4.9	0.39	0.39					0.0048
Asphalt Mixer	5.1	2.89	2.89	10.3	2.72	0.21		
Coater/Coating Surge Tank	6.1	16.12	16.12	20.67	1.2	1.61		0.70
Material Surfacing Applicator	7.1	5.9	5.9	0.68				
Cooling Section	7.2	61.32	61.32	7.95				0.58
Fugitive - Ventilators	93	8.1	8.1	22.09				4.03
Insignificant	Others	0.026	0.026	1.38				1.37
Total (1)	TPY	106.21	106.21	107.99	35.69	34.6	7.26	6.68

Note (1): Totals do not include fugitive road dust emissions

Appendix A: Emission Calculations
Limited Emissions (Tons per Year)

Owens Corning
128 W. Eighth Street, Brookville, IN 47012
F047-5160-00005
Richard A. Moore Jr.
November 7, 1996

Emission Source	EU	Pollutants (tons/yr)						
		PM	PM10	VOC	CO	SO2	NOX	HAPs
Combustion Units	1.1-1.4	0.65	0.65	0.23	1.29	7.69	5.72	
Storage Tanks Controlled	2.1-2.3	0.12	0.12	4.15	1.31	0.34		
Storage Tank	3.1	1.01	1.01	3.57	1.04	0.26		
Silos with Baghouses	4.1-4.5, 4.7, 4.8, 4.10 4.11	4.51	4.51					
Silo without Baghouse	4.9	0.39	0.39					0.0048
Asphalt Mixer	5.1	0.95	0.95	4.31	0.49	0.21		
Coater/Coating Surge Tank	6.1	16.12	16.12	20.67	1.14	1.61		0.70
Material Surfacing Applicator	7.1	5.9	5.9	0.68				
Cooling Section	7.2	61.32	61.32	7.95				0.58
Fugitive - Ventilators	93	8.1	8.1	22.09				4.03
Insignificant	Others	0.026	0.026	1.38				1.37
Total (1)	TPY	99.1	99.1	65.03	5.27	10.11	5.72	6.68

Note (1): Totals do not include fugitive road dust emissions

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors
#1 and #2 Fuel Oil

Company Name: **Owens Corning**
Address, City IN Zip: **128 W. Eighth Street, Brookville, IN 47012**
FESOP: **F047-5160-00005**
Reviewer: **Richard A. Moore Jr.**
Date: **November 7, 1996**

Maximum Potential Emissions (No. 2 Fuel Oil)

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.49
11.6	725.828571	

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	69.58 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	0.73	25.25	7.26	0.12	1.81

Methodology

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

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

Emission Factors are from AP 42, Tables 1.3-2 and 1.3-4 (SCC 1-03-005-01/02/03)

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

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Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors
#1 and #2 Fuel Oil

Company Name: **Owens Corning**
Address, City IN Zip: **128 W. Eighth Street, Brookville, IN 47012**
FESOP: **F047-5160-00005**
Reviewer: **Richard A. Moore Jr.**
Date: **November 7, 1996**

Emissions Based on No. 2 Fuel Oil Limited to 216,240 gallons/yr

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.49
11.6	216.24	

	Pollutant				
	PM	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	69.58 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	0.22	7.52	2.16	0.04	0.54

Methodology

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

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

Emission Factors are from AP 42, Tables 1.3-2 and 1.3-4 (SCC 1-03-005-01/02/03)

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

Appendix A: Emission Calculations
Potential HAP Emissions (Tons per Year)

Owens Corning
128 W. Eighth Street, Brookville, IN 47012
F047-5160-00005
Richard A. Moore Jr.
November 7, 1996

Unit ID	S/V ID	Pollutant	Cas #	Limited HAP	Max PTE	Limit PTE	Max HAP
EU 4.9	20	Lead Compounds		0.0003	0.39	0.39	0.0003
EU 4.9	20	Arsenic Compounds		0.0001	0.39	0.39	0.0001
EU 4.9	20	Chromium Compounds		0.0022	0.39	0.39	0.0022
EU 4.9	20	Cobalt Compounds		0.0003	0.39	0.39	0.0003
EU 4.9	20	Manganese Compounds		0.0018	0.39	0.39	0.0018
EU 4.9	20	Selenium Compounds		0.0001	0.39	0.39	0.0001
				0.0048			0.0048
EU 6.1	36	HCl	7647010	0.0689	20.7	20.7	0.0689
EU 6.1	36	Formaldehyde	50000	0.0223	20.7	20.7	0.0223
EU 6.1	36	Xylene	1330207	0.1362	20.7	20.7	0.1362
EU 6.1	36	Benzene	71432	0.1362	20.7	20.7	0.1362
EU 6.1	36	Toluene	108883	0.2376	20.7	20.7	0.2376
EU 6.1	36	Ethylbenzene	100414	0.0105	20.7	20.7	0.0105
EU 6.1	36	1,1,1 TCE		0.0689	20.7	20.7	0.0689
EU 6.1	36	POM		0.0146	20.7	20.7	0.0146
EU 6.1	36	Lead Compounds		0.0005	16.1	16.1	0.0005
EU 6.1	36	Chromium Compounds		0.0005	16.1	16.1	0.0005
EU 6.1	36	Cobalt Compounds		0.0005	16.1	16.1	0.0005
EU 6.1	36	Manganese Compounds		0.0005	16.1	16.1	0.0005
EU 6.1	36	Nickel Compounds		0.0007	16.1	16.1	0.0007
				0.6979			0.6979
EU 7.2	41,42	Formaldehyde	50000	0.0355	8.62	8.62	0.0355
EU 7.2	41,42	Xylene	1330207	0.0647	8.62	8.62	0.0647
EU 7.2	41,42	Benzene	71432	0.053	8.62	8.62	0.053
EU 7.2	41,42	Toluene	108883	0.0877	8.62	8.62	0.0877
EU 7.2	41,42	Ethylbenzene	100414	0.0468	8.62	8.62	0.0468
EU 7.2	41,42	1,1,1 TCE		0.1251	8.62	8.62	0.1251
EU 7.2	41,42	POM		0.0093	8.62	8.62	0.0093
EU 7.2	41,42	Lead Compounds		0.0075	67.2	67.2	0.0075
EU 7.2	41,42	Arsenic Compounds		0.0007	67.2	67.2	0.0007
EU 7.2	41,42	Chromium Compounds		0.0679	67.2	67.2	0.0679
EU 7.2	41,42	Cobalt Compounds		0.0059	67.2	67.2	0.0059
EU 7.2	41,42	Manganese Compounds		0.0727	67.2	67.2	0.0727
EU 7.2	41,42	Selenium Compounds		0.0007	67.2	67.2	0.0007
				0.5775			0.5775
EU 91		Lead Compounds		0.0005	108.6	15.1	0.003596
					188.8	26.2	

Appendix A: Emission Calculations
Potential HAP Emissions (Tons per Year)

Owens Corning
128 W. Eighth Street, Brookville, IN 47012
F047-5160-00005
Richard A. Moore Jr.
November 7, 1996

Unit ID	S/V ID	Pollutant	Cas #	Limited HAP	Max PTE	Limit PTE	Max HAP
EU 92		POM		1.37	1.38	1.38	1.37
EU 93		POM		0.0238	22	22	0.0238
EU 93		Lead Compounds		0.0602	3.79	3.79	0.0602
EU 93		Arsenic Compounds		0.0023	3.79	3.79	0.0023
EU 93		Chromium Compounds		0.042	3.79	3.79	0.042
EU 93		Cobalt Compounds		0.0142	3.79	3.79	0.0142
EU 93		Manganese Compounds		0.4876	3.79	3.79	0.4876
EU 93		Selenium Compounds		0.0024	3.79	3.79	0.0024
EU 93		MEK	78933	3.4	22	22	3.4
				4.0325			4.0325
		HCl	7647010	0.0689			0.0689
		Formaldehyde	50000	0.0578			0.0578
		Xylene	1330207	0.2009			0.2009
		Benzene	71432	0.1892			0.1892
		Toluene	108883	0.3253			0.3253
		Ethylbenzene	100414	0.0573			0.0573
		1,1,1 TCE		0.194			0.194
		POM		1.4177			1.4177
		Lead Compounds		0.069			0.072096
		Arsenic Compounds		0.0031			0.0031
		Chromium Compounds		0.1126			0.1126
		Cobalt Compounds		0.0209			0.0209
		Manganese Compounds		0.5626			0.5626
		Nickel Compounds		0.0007			0.0007
		Selenium Compounds		0.0032			0.0032
		MEK		3.4			3.4
				6.6832			6.686296

Appendix A: Emission Calculations
Natural Gas Combustion Only
MM Btu/hr 0.3 - < 10
Commercial Boiler

Company Name: **Owens Corning**
Address, City IN Zip: **128 W. Eighth Street, Brookville, IN 47012**
FESOP: **F047-5160-00005**
Reviewer: **Richard A. Moore Jr.**
Date: **November 7, 1996**

Maximum Potential Emissions (Natural Gas)

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
11.6	101.6

	Pollutant					
	PM	PM10	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	12.0	12.0	0.6	100.0	5.3	21.0
Potential Emission in tons/yr	0.61	0.61	0.03	5.08	**0.27**	1.07
Emission in tons/yr (70% Usage)	0.43	0.43	0.02	3.56	0.19	0.75
Plus Emission in tons/yr (No. 2 fuel oil)	0.22	0.22	7.52	2.16	0.04	0.54
Total Combustion Emission in tons/yr	0.65	0.65	7.54	**5.72**	0.23	**1.29**
Applicant requested Emission in tons/yr	**0.65**	**0.65**	**7.69**	5.69	0.18	1.28

Emission Limits used are shown in Bold and Underlined

Methodology

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors for NOx: uncontrolled = 100, Low Nox Burner = 17, Flue gas recirculation = 36

Emission Factors for CO: uncontrolled = 21, Low NOx Burner = 27, Flue gas recirculation = ND

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

Emission Factors from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-03-006-03

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

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Appendix A: Emission Calculations

Company Name: Owens Corning
Address, City IN Zip: 128 W. Eighth Street, Brookville, IN 47012
FESOP: F047-5160-00005
Reviewer: Richard A. Moore Jr.
Date: November 7, 1996

				Maximum	Limited
TANK NUMBER	EU2.1	EU2.2	EU2.3	EU5.1	EU5.1
PRODUCT STORED	Asphalt	Adhesive	Adhesive	Asphalt	Asphalt
TANK COLOR	Silver	Silver	Silver	Silver	Silver
TANK HEIGHT, H (ft)	29.33	16.8	36.5	29.33	29.33
TANK DIAMETER, D (ft)	15	10	12.5	15	15
TANK VOLUME, V (kBBL)	0.92	0.23	0.80	0.92	0.92
ROOF TYPE (CONE/DOME)	CONE	CONE	CONE	CONE	CONE
CONE ROOF PARAMETERS					
Tank Roof Slope (default .0625) (ft/ft)	0.0625	0.0625	0.0625	0.0625	0.0625
DOME ROOF PARAMETERS					
Dome Radius (Default=tank diameter, D)(ft)	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable
AVERAGE AMBIENT TEMP. (°F)	52.1	52.1	52.1	52.1	52.1
STORAGE TEMP. (°F)	53.44	53.44	53.44	53.44	53.44
LOCAL ATMOS PRESS. (psia)	14.7	14.7	14.7	14.7	14.7
VAPOR MOLECULAR WT. (MW)	84	84	84	84	84
THROUGHPUT, Q (Bbl/yr)	339,314	30,849	30,849	1,877,143	678,628
% OF YEAR USED	100	100	100	100	100
PAINT SOLAR ABSORPTANCE, Table 5	0.39	0.39	0.39	0.39	0.39
SOLAR INSOLATION, Table 4	1,165	1,165	1,165	1,165	1,165
IS TANK WELDED (Y/N)	Y	Y	Y	Y	Y
IF TANK IS WELDED ENTER:					
Breather Vent Press.(Default=.03)(psig)	0.03	0.03	0.03	0.03	0.03
Breather Vent Vacuum(Default=-.03)(psig)	-0.03	-0.03	-0.03	-0.03	-0.03
ADDITIONAL DATA					
DIURNAL TEMP SWING (°F)	19.8	19.8	19.8	19.8	19.8
LIQUID HEIGHT (ft)	9.40	5.40	11.70	9.40	9.40
MAXIMUM LIQUID HEIGHT (ft)	9.40	5.40	11.70	9.40	9.40
ROOF OUTAGE (ft)	0.16	0.10	0.13	0.16	0.16
VAPOR SPACE OUTAGE (ft)	20.09	11.50	24.93	20.09	20.09
AVERAGE LIQUID SURFACE TEMP, (°R)	516.02	516.02	516.02	516.02	516.02
VAPOR TEMPERATURE RANGE	26.98	26.98	26.98	26.98	26.98
MAX LIQUID SURFACE TEMP, (°R)	522.76	522.76	522.76	522.76	522.76
MIN LIQUID SURFACE TEMP, (°R)	509.28	509.28	509.28	509.28	509.28
STOCK TURNOVER RATE	1146.96	408.41	120.64	6345.19	2293.92
TVP AT MAX LIQ. SURF. TEMP (psia)	1.2100	0.1700	0.1700	1.2100	1.2100
TVP AT AVG LIQ SURF TEMP (psia)	1.0300	0.1400	0.1400	1.0300	1.0300
TVP AT MIN LIQ SURF TEMP (psia)	0.8700	0.1100	0.1100	0.8700	0.8700
TIME PERIOD EVALUATED - - - - - - - -	ANNUAL	ANNUAL	ANNUAL	ANNUAL	ANNUAL
STANDING STORAGE LOSS					
Tank Vapor Space Volume	3549.53	903.54	3059.40	3549.53	3549.53
Stock Vapor Density	0.02	0.00	0.00	0.02	0.02
Vapor Space Expansion Factor	0.07	0.05	0.05	0.07	0.07
Vented Vapor Saturation Factor	0.48	0.92	0.84	0.48	0.48
TOTAL STANDING STORAGE LOSS, lb/period	702.57	33.74	104.63	702.57	702.57
WORKING LOSS					
Working Loss Turnover Factor	0.19	0.24	0.42	0.17	0.18
Working Loss Product Factor	1.00	1.00	1.00	0.75	0.75
TOTAL WORKING LOSS, lb/period	5660.79	87.11	150.68	20877.21	7915.27
TOTAL HC EMISSIONS, lb/yr (or /season) : @ 100% VOC	6,363	121	255	21,580	8,618
TOTAL VOC EMISSIONS, ton/yr @22% VOC as PM/PM10, and 90% control	3.18	0.06	0.13	10.79	4.31
PM EMISSIONS Total, ton/yr :	0.07	0.001	0.003		

This spreadsheet is based on the "Evaporative Loss from Fixed-Roof Tanks", API Publ. 2518, 2nd Edition, October 1991.