



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: May 6, 2009

RE: MonoSol / 091 - 27326 - 00138

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

Notice of Decision: Approval - Effective Immediately

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

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

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

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

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

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

Enclosures
FNPER.dot12/03/07



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

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

**New Source Construction and Federally Enforceable
State Operating Permit
OFFICE OF AIR QUALITY**

**MonoSol, LLC
1609 Genesis Drive
LaPorte, Indiana 46350**

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. 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. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-8-11.1, applicable to those conditions

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

Operation Permit No.: F091-27326-00138	
Issued by:  Chrystal A. Wagner, Section Chief Permits Branch Office of Air Quality	Issuance Date: May 6, 2009 Expiration Date: May 6, 2014

TABLE OF CONTENTS

SECTION A	SOURCE SUMMARY	4
A.1	General Information [326 IAC 2-8-3(b)]	4
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]	4
A.3	Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(l)]	5
A.4	FESOP Applicability [326 IAC 2-8-2]	5
SECTION B	GENERAL CONDITIONS	6
B.1	Definitions [326 IAC 2-8-1]	6
B.2	Revocation of Permits [326 IAC 2-1.1-9(5)]	6
B.3	Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]	6
B.4	Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]	6
B.5	Term of Conditions [326 IAC 2-1.1-9.5]	6
B.6	Enforceability [326 IAC 2-8-6] [IC 13-17-12]	6
B.7	Severability [326 IAC 2-8-4(4)]	7
B.8	Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]	7
B.9	Duty to Provide Information [326 IAC 2-8-4(5)(E)]	7
B.10	Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]	7
B.11	Annual Compliance Certification [326 IAC 2-8-5(a)(1)]	7
B.12	Compliance Order Issuance [326 IAC 2-8-5(b)]	8
B.13	Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]	8
B.14	Emergency Provisions [326 IAC 2-8-12]	9
B.15	Prior Permits Superseded [326 IAC 2-1.1-9.5]	11
B.16	Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]	11
B.17	Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]	11
B.18	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]	11
B.19	Permit Renewal [326 IAC 2-8-3(h)]	12
B.20	Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]	12
B.21	Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]	13
B.22	Source Modification Requirement [326 IAC 2-8-11.1]	14
B.23	Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]	14
B.24	Transfer of Ownership or Operational Control [326 IAC 2-8-10]	14
B.25	Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]	15
B.26	Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]	15
B.27	Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]	15
SECTION C	SOURCE OPERATION CONDITIONS	16
	Emission Limitations and Standards [326 IAC 2-8-4(1)]	16
C.1	Particulate Emission Limitations For Processes with Process Weight Rates Less Than One Hundred (100) Pounds per Hour [326 IAC 6-3-2]	16
C.2	Overall Source Limit [326 IAC 2-8]	16
C.3	Opacity [326 IAC 5-1]	16
C.4	Open Burning [326 IAC 4-1] [IC 13-17-9]	17
C.5	Incineration [326 IAC 4-2] [326 IAC 9-1-2]	17
C.6	Fugitive Dust Emissions [326 IAC 6-4]	17
C.7	Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]	17
	Testing Requirements [326 IAC 2-8-4(3)]	18
C.8	Performance Testing [326 IAC 3-6]	18
	Compliance Requirements [326 IAC 2-1.1-11]	19
C.9	Compliance Requirements [326 IAC 2-1.1-11]	19

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]	19
C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]	19
C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63].....	19
C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]	19
Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]	20
C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68].....	20
C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]	20
C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5].....	20
Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]	21
C.16 Emission Statement [326 IAC 2-6]	21
C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5].....	21
C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11].....	22
Stratospheric Ozone Protection	22
C.19 Compliance with 40 CFR 82 and 326 IAC 22-1	22
SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS: Film Casting Lines	23
Emission Limitations and Standards [326 IAC 2-8-4(1)]	24
D.1.1 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4(1)].....	24
D.1.2 Particulate Emission Limitations [326 IAC 6-3-2]	24
D.1.3 Preventive Maintenance Plan.....	24
Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]	24
D.1.4 Record Keeping Requirement.....	24
D.1.5 Reporting Requirements	24
SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS: Boilers	25
Emission Limitations and Standards [326 IAC 2-8-4(1)]	25
D.2.1 Particulate Matter Limitation (PM) [326 IAC 6-2].....	25
D.2.2 Preventive Maintenance Plan.....	25
CERTIFICATION	26
EMERGENCY OCCURRENCE REPORT	27
FESOP Quarterly Report	29
Affidavit of Construction	30

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary polyvinyl alcohol (PVOH) film manufacturing plant.

Source Address:	1609 Genesis Drive, LaPorte, Indiana 46350
Mailing Address:	1701 County Line Road, Portage, IN 46368
General Source Phone Number:	(219) 762-3165
SIC Code:	3081
County Location:	LaPorte
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) One (1) film casting line, identified as Line 7, constructed in 2008 under an exemption, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-008 and V-0013), and two (2) weigh hoppers each with a maximum throughput rate of 4,000 pounds per hour, controlled by fabric filters and exhausting at vents V-003 and V-004.
- (b) One (1) film casting line, identified as Line 8, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-009 and V-0014), and two (2) weigh hoppers each with a maximum throughput rate of 4,000 pounds per hour, controlled by fabric filters and exhausting at vents V-003 and V-004.
- (c) One (1) film casting line, identified as Line 9, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-026 and V-028); film cast line exhausting at vents V-003 and V-004.
- (d) One (1) film casting line, identified as Line 10, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum

throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-033 and V-0035); film cast line exhausting at vents V-030 and V-031.

- (e) One (1) film casting line, identified as Line 11, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-034 and V-0039); film cast line exhausting at vents V-030 and V-031.
- (f) One (1) bulk resin storage silo (identified as Silo #1), approved for construction in 2009, with a maximum storage capacity of 71,000 pounds and a maximum off loading rate of 32,000 pounds per hour, controlled by bin vent filters and exhausting at stacks V041 and V042.

A.3 Insignificant Activities [326 IAC 2-7-1(21)][326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities:

- (a) Two (2) natural gas fired boilers identified as L7/8 Boiler, constructed in 2008 under an exemption, and L9/10/11 Boiler, approved for construction in 2009, each with a maximum rated capacity of 6.3 MMBtu/hr. [326 IAC 6-2-4]
- (b) Four (4) bulk organic liquid storage tanks, identified as Bulk Storage Tank 1, Bulk Storage Tank 2, Bulk Storage Tank 3, and Bulk Storage Tank 4, each with a maximum storage capacity of 4,600 gallons, storing glycerine and venting to the atmosphere. Bulk Storage Tank 1 and Bulk Storage Tank 2 were constructed in 2007. Bulk Storage Tank 3 and Bulk Storage Tank 4 are approved for construction in 2009.
- (c) Cooling Tower with a maximum capacity of 405 gpm approved for construction in 2009.
- (d) Eight (8) natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

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 the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-8-1]

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

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

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

B.3 Affidavit of Construction [326 IAC 2-5.1-3(h)] [326 IAC 2-5.1-4][326 IAC 2-8]

This document shall also become the approval to operate pursuant to 326 IAC 2-5.1-4 and 326 IAC 2-8 when prior to the start of operation, the following requirements are met:

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

B.4 Permit Term [326 IAC 2-8-4(2)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

-
- (a) This permit, F091-27326-00138, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.
 - (b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

B.5 Term of Conditions [326 IAC 2-1.1-9.5]

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

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

B.6 Enforceability [326 IAC 2-8-6] [IC 13-17-12]

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

B.7 Severability [326 IAC 2-8-4(4)]

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

B.8 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.9 Duty to Provide Information [326 IAC 2-8-4(5)(E)]

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

B.10 Certification [326 IAC 2-8-3(d)][326 IAC 2-8-4(3)(C)(i)][326 IAC 2-8-5(1)]

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

B.11 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

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

- (b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ, on or before the date it is due.
- (c) The annual compliance certification report shall include the following:

- (1) The appropriate identification of each term or 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 consistent with 326 IAC 2-8-4(3); and
- (5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

The submittal by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.12 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ 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.13 Preventive Maintenance Plan [326 IAC 1-6-3][326 IAC 2-8-4(9)][326 IAC 2-8-5(a)(1)]

(a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

- (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
- (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and
- (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

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

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

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

(b) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or

potential to emit. The PMPs do not require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

B.14 Emergency Provisions [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 in 326 IAC 2-8-12.

- (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 describe 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 in this permit;
- (4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, and Northwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

- (5) For each emergency lasting one (1) hour or more, the Permittee submitted the attached Emergency Occurrence Report Form or its equivalent, either by mail or facsimile to:

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

within two (2) working days of the time when emission limitations were exceeded due to the emergency.

The notice fulfills 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 an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.
 - (e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) be revised in response to an emergency.
 - (f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition 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 (g)(2)(B) of this condition.
- (h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

B.15 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of permits established prior to F091-27326-00138 and issued pursuant to permitting programs approved into the state implementation plan have been either:
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted.
- (b) All previous registrations and permits are superseded by this permit.

B.16 Termination of Right to Operate [326 IAC 2-8-9][326 IAC 2-8-3(h)]

The Permittee's right to operate this source terminates with the expiration of this permit unless a timely and complete renewal application is submitted at least nine (9) months prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-8-3(h) and 326 IAC 2-8-9.

B.17 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. A deviation required to be reported pursuant to an applicable requirement that exists independent of this permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report.

The Quarterly Deviation and Compliance Monitoring Report does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

B.18 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) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Federally Enforceable State Operating Permit 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)] The notification by the Permittee does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:
- (1) That this permit 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, OAQ 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 practicable. [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, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-8-8(c)]

B.19 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, OAQ and shall include 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(21) and 326 IAC 2-7-1(40). The renewal application does require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

- (b) A timely renewal application is one that is:
 - (1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if, subsequent to the completeness determination, the Permittee fails to submit by the deadline specified in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.20 Permit Amendment or Revision [326 IAC 2-8-10][326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 whenever the Permittee seeks to amend or modify this permit.
- (b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

B.21 Operational Flexibility [326 IAC 2-8-15][326 IAC 2-8-11.1]

- (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 a 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) Any approval required by 326 IAC 2-8-11.1 has been obtained;
 - (3) The changes do not result in emissions which exceed the limitations provided in this permit (whether expressed herein as a rate of emissions or in terms of total emissions);
 - (4) The Permittee notifies the:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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; and
 - (5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-8-15(b) through (d). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (b) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-8-15(c).
- (c) 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). No prior notification of IDEM, OAQ, or U.S. EPA is required.
- (d) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.22 Source Modification Requirement [326 IAC 2-8-11.1]

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

B.23 Inspection and Entry [326 IAC 2-8-5(a)(2)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

- (a) Enter upon the Permittee's premises where a FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.24 Transfer of Ownership or Operational Control [326 IAC 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.
- (b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

B.25 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16][326 IAC 2-1.1-7]

- (a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.
- (b) Failure to pay may result in administrative enforcement action or revocation of this permit.
- (c) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.26 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit modification under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction, work is suspended for a continuous period of one (1) year or more.

B.27 Credible Evidence [326 IAC 2-8-4(3)][326 IAC 2-8-5][62 FR 8314] [326 IAC 1-1-6]

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

Pursuant to 326 IAC 6-3-2(e)(2), particulate emissions from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than 100 pounds per hour and the methods in 326 IAC 6-3-2(b) through (d) do not apply shall not exceed 0.551 pounds per hour.

C.2 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

(a) Pursuant to 326 IAC 2-8:

- (1) The potential to emit any regulated pollutant, except particulate matter (PM), from the entire source shall be limited to less than one hundred (100) tons per twelve (12) consecutive month period.
- (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
- (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.

(b) Pursuant to 326 IAC 2-2 (PSD), potential to emit particulate matter (PM) from the entire source shall be limited to less than two hundred-fifty (250) tons per twelve (12) consecutive month period.

(c) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.

(d) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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

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

Method 9 or fifteen (15) one (1) minute non-overlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]

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

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

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

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

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

C.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

All required notifications shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project. The notifications do not require a certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (e) **Procedures for Asbestos Emission Control**
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.
- (f) **Demolition and Renovation**
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).
- (g) **Indiana Licensed Asbestos Inspector**
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos.

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

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

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

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

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

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

- (b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) Pursuant to 326 IAC 3-6-4(b), all test reports must be received by IDEM, OAQ not later than forty-five (45) days after the completion of the testing. An extension may be granted

by IDEM, OAQ if the Permittee submits to IDEM, OAQ a reasonable written explanation not later than five (5) days prior to the end of the initial forty-five (45) day period.

Compliance Requirements [326 IAC 2-1.1-11]

C.9 Compliance Requirements [326 IAC 2-1.1-11]

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

Compliance Monitoring Requirements [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.10 Compliance Monitoring [326 IAC 2-8-4(3)][326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, all monitoring and record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later. If required by Section D, the Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, the Permittee may extend the compliance schedule related to the equipment for an additional ninety (90) days provided the Permittee notifies:

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

in writing, prior to the end of the initial ninety (90) day compliance schedule, with full justification of the reasons for the inability to meet this date.

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

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

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

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

C.12 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)][326 IAC 2-8-5(1)]

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

Corrective Actions and Response Steps [326 IAC 2-8-4][326 IAC 2-8-5(a)(1)]

C.13 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [326 IAC 2-8-4] [326 IAC 2-8-5]

- (a) Upon detecting an excursion or exceedance, the Permittee shall restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.
- (b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:
 - (1) initial inspection and evaluation;
 - (2) recording that operations returned to normal without operator action (such as through response by a computerized distribution control system); or
 - (3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.
- (c) A determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include, but is not limited to, the following:
 - (1) monitoring results;
 - (2) review of operation and maintenance procedures and records; and/or
 - (3) inspection of the control device, associated capture system, and the process.
- (d) Failure to take reasonable response steps shall be considered a deviation from the permit.
- (e) The Permittee shall maintain the following records:
 - (1) monitoring data;
 - (2) monitor performance data, if applicable; and
 - (3) corrective actions taken.

C.15 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4][326 IAC 2-8-5]

- (a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

- (b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.
- (c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

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

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

C.16 Emission Statement [326 IAC 2-6]

- (a) Pursuant to 326 IAC 2-6-3(a)(1), the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen or volatile organic compounds into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

The statement must be submitted to:

Indiana Department of Environmental Management
Technical Support and Modeling Section, Office of Air Quality
100 North Senate Avenue
MC 61-50 IGCN 1003
Indianapolis, Indiana 46204-2251

The emission statement does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

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

C.17 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance or ninety (90) days of initial start-up, whichever is later.

C.18 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. Any deviation from permit requirements, the date(s) of each deviation, the cause of the deviation, and the response steps taken must be reported. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
- (c) Unless otherwise specified in this permit, any notice, report, or other submission required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.
- (d) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit or the date of initial start-up, whichever is later, and ending on the last day of the reporting period. Reporting periods are based on calendar years, unless otherwise specified in this permit. For the purpose of this permit, "calendar year" means the twelve (12) month period from January 1 to December 31 inclusive.

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

Pursuant to 40 CFR 82 (Protection of Stratospheric Ozone), Subpart F, except as provided for motor vehicle air conditioners in Subpart B, the Permittee shall comply with the standards for recycling and emissions reduction:

- (a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.
- (b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.
- (c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS: Film Casting Lines

Emissions Unit Description:

- (a) One (1) film casting line, identified as Line 7, constructed in 2008 under an exemption, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-008 and V-0013), and two (2) weigh hoppers each with a maximum throughput rate of 4,000 pounds per hour, controlled by fabric filters and exhausting at vents V-003 and V-004.
- (b) One (1) film casting line, identified as Line 8, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-009 and V-0014), and two (2) weigh hoppers each with a maximum throughput rate of 4,000 pounds per hour, controlled by fabric filters and exhausting at vents V-003 and V-004.
- (c) One (1) film casting line, identified as Line 9, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-026 and V-028); film cast line exhausting at vents V-003 and V-004.
- (d) One (1) film casting line, identified as Line 10, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-033 and V-0035); film cast line exhausting at vents V-003 and V-004.
- (e) One (1) film casting line, identified as Line 11, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-034 and V-0039); film cast line exhausting at vents V-003 and V-004.
- (f) One (1) bulk resin storage silo (identified as Silo #1), approved for construction in 2009, with a maximum storage capacity of 71,000 pounds and a maximum off loading rate of 32,000 pounds per hour, controlled by bin vent filters and exhausting at stacks V041 and V042.

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

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

D.1.1 Hazardous Air Pollutants (HAPs) [326 IAC 2-8-4(1)]

The single HAP usage limit for the source shall be less than ten (10) tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

Compliance with the above limit, combined with the potential to emit VOC at the source, shall limit the VOC emissions from the entire source to less than 100 tons per year and limit the individual lines to less than 25 tons per year, and render 326 IAC 2-7 (Part 70 Permits), 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants), and 326 IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable.

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

- (a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), particulate emissions from the Weigh Hoppers shall not exceed 6.52 pounds per hour when operating at a process weight rate of two (2) tons per hour. The pound per hour limitation was calculated with the following equation:

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

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

- (b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the Resin Silo#1 shall not exceed 26.3 pounds per hour when operating at a process weight rate of sixteen (16) tons per hour. The pound per hour limitation was calculated with the following equation:

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

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

D.1.3 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

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

D.1.4 Record Keeping Requirement

- (a) To document compliance with Condition D.1.1, the Permittee shall maintain monthly records of the single HAP usage.
- (b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.5 Reporting Requirements

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS: Boilers

Emissions Unit Description:

- (a) Two (2) natural gas fired boilers identified as L7/8 Boiler, constructed in 2008 under an exemption, and L9/10/11 Boiler, approved for construction in 2009, each with a maximum rated capacity of 6.3 MMBtu/hr. [326 IAC 6-2-4]

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

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

D.2.1 Particulate Matter Limitation (PM) [326 IAC 6-2]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating): Emission limitations for facilities specified in 326 IAC 6-2-1(d) particulate emissions from each of the 6.3 MMBtu/hr boilers shall not exceed 0.56 pounds per million Btu heat input (lb/MMBtu) from each boiler. This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

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

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

D.2.2 Preventive Maintenance Plan

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the boilers.

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

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: MonoSol, LLC
Source Address: 1609 Genesis Drive, LaPorte, Indiana 46350
Mailing Address: 1701 County Line Road, Portage, IN 46368
FESOP Permit No.: F091-27326-00138

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

Please check what document is being certified:

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

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

Signature:

Printed Name:

Title/Position:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Phone: (317) 233-0178
Fax: (317) 233-6865**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: MonoSol, LLC
Source Address: 1609 Genesis Drive, LaPorte, Indiana 46350
Mailing Address: 1701 County Line Road, Portage, IN 46368
FESOP Permit No.: F091-27326-00138

This form consists of 2 pages

Page 1 of 2

- This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two (2) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency:
Describe the cause of the Emergency:

If any of the following are not applicable, mark N/A

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N Describe:
Type of Pollutants Emitted: TSP, PM-10, SO ₂ , VOC, NO _x , CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

A certification is not required for this report.

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

FESOP Quarterly Report

Source Name: MonoSol, LLC
Source Address: 1609 Genesis Drive, LaPorte, Indiana 46350
Mailing Address: 1701 County Line Road, Portage, IN 46368
FESOP Permit No.: F091-27326-00138
Parameter: Single HAP Usage
Limit: Less than ten (10) tons per twelve (12) consecutive month period

YEAR: _____

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

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

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

Attach a signed certification to complete this report.

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

MonoSol, LLC
1609 Genesis Drive
LaPorte, Indiana 46350

Affidavit of Construction

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

1. I live in _____ County, Indiana and being of sound mind and over twenty-one (21) years of age, I am competent to give this affidavit.
2. I hold the position of _____ for _____
(Title) (Company Name)
3. By virtue of my position with _____, I have personal
(Company Name)
knowledge of the representations contained in this affidavit and am authorized to make these representations on behalf of _____
(Company Name)
4. I hereby certify that MonoSol, LLC 1609 Genesis Drive, LaPorte, Indiana 46350, completed construction of the polyvinyl alcohol (PVOH) film manufacturing plant on _____ in conformity with the requirements and intent of the construction permit application received by the Office of Air Quality on **Reviewer: Insert date application received at IDEM** and as permitted pursuant to New Source Construction Permit and Federally Enforceable State Operating Permit No. F091-27326-00138, Plant ID No. 091-00138 issued on _____.
5. **Permittee, please cross out the following statement if it does not apply:** Additional (operations/facilities) were constructed/substituted as described in the attachment to this document and were not made in accordance with the construction permit.

Further Affiant said not.

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

Signature _____
Date _____

STATE OF INDIANA)
)SS

COUNTY OF _____)

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

Signature _____
Name _____ (typed or printed)

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

**Technical Support Document (TSD) for a New Source Construction and
Federally Enforceable State Operating Permit (FESOP)**

Source Description and Location
--

Source Name:	MonoSol, LLC
Source Location:	1609 Genesis Drive, LaPorte, IN 46350
County:	LaPorte
SIC Code:	3081
Operation Permit No.:	F091-27326-00138
Permit Reviewer:	Michael S. Brooks

On December 22, 2008, the Office of Air Quality (OAQ) received an application from MonoSol, LLC, related to the construction and operation of a new stationary polyvinyl alcohol (PVOH) film manufacturing plant.

County Attainment Status

The source is located in LaPorte County.

Pollutant	Designation
SO ₂	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O ₃	Attainment effective July 19, 2007, for the 8-hour ozone standard. ¹
PM ₁₀	Unclassifiable effective November 15, 1990.
NO ₂	Cannot be classified or better than national standards.
Pb	Not designated.
¹ Unclassifiable or attainment effective November 15, 1990, for the 1-hour standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(a) Ozone Standards

Volatile organic compounds (VOC) and Nitrogen Oxides (NOx) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NOx emissions are considered when evaluating the rule applicability relating to ozone. LaPorte County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) LaPorte County has been classified as attainment for PM2.5. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for PM2.5 emissions, and the effective date of these rules is July 15, 2008. Indiana has three (3) years from the publication of these rules to revise its PSD rules, 326 IAC 2-2, to include those requirements. The May 8, 2008, rule revisions require IDEM to regulate PM10 emissions as a surrogate for PM2.5 emissions until 326 IAC 2-2 is revised.

- (c) Other Criteria Pollutants
LaPorte County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this type of operation is not one (1) of the twenty-eight (28) listed source categories under 326 IAC 2-2 or 326 IAC 2-7, and there is no applicable New Source Performance Standard that was in effect on August 7, 1980, fugitive emissions are not counted toward the determination of PSD and Part 70 Permit applicability.

Background and Description of New Source Construction

The Office of Air Quality (OAQ) has reviewed a new source construction application, submitted by MonoSol, LLC on December 22, 2008, relating to the construction of a new stationary polyvinyl alcohol (PVOH) manufacturing plant. The following is a list of the proposed emission units and pollution control devices:

- (a) One (1) film casting line, identified as Line 7, constructed in 2008 under an exemption, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-008 and V-0013), and two (2) weigh hoppers each with a maximum throughput rate of 4,000 pounds per hour, controlled by fabric filters and exhausting at vents V-003 and V-004.
- (b) One (1) film casting line, identified as Line 8, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-009 and V-0014), and two (2) weigh hoppers each with a maximum throughput rate of 4,000 pounds per hour, controlled by fabric filters and exhausting at vents V-003 and V-004.
- (c) One (1) film casting line, identified as Line 9, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-026 and V-028); film cast line exhausting at vents V-003 and V-004.
- (d) One (1) film casting line, identified as Line 10, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250 gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-033 and V-0035); film cast line exhausting at vents V-030 and V-031.
- (e) One (1) film casting line, identified as Line 11, approved for construction in 2009, consisting of one (1) mixer ribbon blender with a maximum storage capacity of 1,000 gallons and a maximum throughput rate of 313 pounds of polyvinyl alcohol resin per hour, three (3) hold/run tanks with a maximum capacity of 1,300 gallons each, one (1) mini run tank with a capacity of less than 250

gallons, two (2) drying ovens each with a maximum rated capacity of 1.75 MMBtu/hr utilizing natural gas only (venting to stacks V-034 and V-0039); film cast line exhausting at vents V-030 and V-031.

- (f) One (1) bulk resin storage silo (identified as Silo #1), approved for construction in 2009, with a maximum storage capacity of 71,000 pounds and a maximum off loading rate of 32,000 pounds per hour, controlled by bin vent filters and exhausting at stacks V041 and V042.

Insignificant Activities:

- (a) Two (2) natural gas fired boilers identified as L7/8 Boiler, constructed in 2008 under an exemption, and L9/10/11 Boiler, approved for construction in 2009, each with a maximum rated capacity of 6.3 MMBtu/hr. [326 IAC 6-2-4]
- (b) Four (4) bulk organic liquid storage tanks, identified as Bulk Storage Tank 1, Bulk Storage Tank 2, Bulk Storage Tank 3, and Bulk Storage Tank 4, each with a maximum storage capacity of 4,600 gallons, storing glycerine and venting to the atmosphere. Bulk Storage Tank 1 and Bulk Storage Tank 2 were constructed in 2007. Bulk Storage Tank 3 and Bulk Storage Tank 4 are approved for construction in 2009.
- (c) Cooling Tower with a maximum capacity of 405 gpm approved for construction in 2009.
- (d) Eight (8) natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour.

Enforcement Issues

There are no pending enforcement actions related to this source.

Emission Calculations

See Appendix A of this TSD for detailed emission calculations.

Permit Level Determination – FESOP

The following table reflects the unlimited potential to emit (PTE) of the entire source before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	30.11
PM10 ⁽¹⁾	31.11
SO ₂	0.1
NO _x	16.5
VOC	206.96
CO	13.8

(1) Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

HAPs	Potential To Emit (tons/year)
Methanol	>10

TOTAL HAPs	>10/25
-------------------	------------------

- (a) The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of VOC is greater than one hundred (100) tons per year. The PTE of all other regulated criteria pollutants are less than one hundred (100) tons per year. The potential to emit (PTE) (as defined in 326 IAC 2-7-1(29)) of any single HAP is greater than ten (10) tons per year. The source would have been subject to the provisions of 326 IAC 2-7. However, the source will be issued a New Source Construction Permit (326 IAC 2-5.1-3) and a Federally Enforceable State Operating Permit (FESOP) (326 IAC 2-8), because the source will limit VOC and HAPs emissions to less than the Title V major source threshold levels.

PTE of the Entire Source After Issuance of the FESOP

The table below summarizes the potential to emit of the entire source after issuance of this FESOP, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this FESOP, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of FESOP (tons/year)								
	PM	PM10	PM2.5	SO ₂	NO _x	VOC	CO	Total HAPs	Worst Single HAP
Batch Mixing	0.37	0.37	0.37	-	-	-	-	-	-
Five (5) Film Cast Lines	0.01	0.01	0.01	-	-	10.39		<10	<10
Cooling tower	0.02	0.02	0.02	-	-	-	-	-	-
Combustion Units	0.3	1.3	1.3	0.1	16.6	0.9	13.8	negl	negl
Silo #1	0.05	0.05	0.05						
Tanks (glycerine)	-	-	-	-	-	0.01	-	-	-
Total PTE of Entire Source	0.75	1.75	1.75	0.1	16.6	11.3	13.8	<25	<10
Title V Major Source Thresholds	*NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

negl. = negligible

* Under the Part 70 Permit program (40 CFR 70), particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers (PM10), not particulate matter (PM), is considered as a "regulated air pollutant".

- (a) **FESOP Status**
 This new source is not a Title V major stationary source because the potential to emit criteria pollutants from the entire source will be limited to less than the Title V major source threshold levels. In addition, this new source is not a major source of HAPs, as defined in 40 CFR 63.41, because the potential to emit HAPs is limited to less than ten (10) tons per year for a single HAP and twenty-five (25) tons per year of total HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act and is subject to the provisions of 326 IAC 2-8 (FESOP).

In order to comply with the requirements of 326 IAC 2-8-4 (FESOP), the source shall comply with the following:

- (1) The single HAP usage limit for the source shall be less than ten (10) tons per twelve (12) consecutive month period, with compliance determined at the end of each month. This will reduce the total HAPs emissions to less than twenty-five (25) tons per twelve (12) consecutive month period and reduce the VOC emissions. Methanol is a VHAP and is the only source of VOC and HAPs emissions from the film cast lines.

Compliance with the above single HAP usage limit shall:

- (A) Render 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)) not applicable;
 - (B) Limit the VOC emissions from the source to less than 100 tons per twelve (12) consecutive month period and render 326 IAC 2-7 (Part 70 Permits) not applicable; and
 - (C) Limit the VOC emissions from each line to less than 25 tons per twelve (12) consecutive month period and render IAC 8-1-6 (New Facilities; General Reduction Requirements) not applicable.
- (b) PSD Minor Source
This new source is not a major stationary source under the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration(PSD)) because the potential to emit of all attainment regulated pollutants is less than 250 tons per year, and this source is not in one (1) of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(gg)(1). Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Federal Rule Applicability Determination

New Source Performance Standards (NSPS)

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit.
- (b) The storage vessels are not subject to the New Source Performance Standard for Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, (40 CFR Part 60.110, Subpart K) because they do not have a capacity greater than or equal to 75 cubic meters (m³).
- (c) The two (2) natural gas fired boilers identified as L7/8 Boiler and L9 Boiler are not subject to the New Source Performance Standard for Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60.40b, Subpart Db) because they do not have a heat input capacity from fuels combusted of greater than 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/hr)).
- (d) The two (2) natural gas fired boilers identified as L7/8 Boiler and L9 Boiler are not subject to the New Source Performance Standard for Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (40 CFR Part 60.40c, Subpart Dc) because they do not have a heat input capacity from fuels combusted of greater than 2.9 megawatts (MW) (10 million British thermal units per hour (MMBtu/hr)).
- (e) The source is not subject to the New Source Performance Standard for Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry (40 CFR

Part 60.560, Subpart DDD) because it does not manufacture polypropylene, polyethylene, polystyrene, or poly (ethylene terephthalate).

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- (f) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

Compliance Assurance Monitoring (CAM)

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

State Rule Applicability Determination

The following state rules are applicable to the source:

- (a) 326 IAC 2-8-4 (FESOP)
FESOP applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (b) 326 IAC 2-2 (Prevention of Significant Deterioration (PSD))
PSD applicability is discussed under the PTE of the Entire Source After Issuance of the FESOP section above.
- (c) 326 IAC 2-4.1-1 (New Source Toxics Control)
The unlimited potential to emit of HAPs from the new units is greater than ten (10) tons per year for any single HAP. However, the source shall limit the potential to emit of HAPs from the new units to less than ten (10) tons per year for any single HAP. Therefore, the source is not subject to the requirements of 326 IAC 2-4.1. See PTE of the Entire Source After Issuance of the FESOP Section above.
- (d) 326 IAC 2-6 (Emission Reporting)
Since this source is located in LaPorte County, the Permittee shall submit an emission statement by July 1 following a calendar year when the source emits oxides of nitrogen or volatile organic compounds into the ambient air equal to or greater than twenty-five (25) tons. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.
- (e) 326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:
- (1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
 - (2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.
- (f) 326 IAC 6-4 (Fugitive Dust Emissions Limitations)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions Limitations), the source shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on

which the source is located, in a manner that would violate 326 IAC 6-4.

(g) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)

(1) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the Weigh Hoppers shall not exceed 6.52 pounds per hour when operating at a process weight rate of two (2) tons per hour. The pound per hour limitation was calculated with the following equation:

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

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

Based on calculations, the source is able to comply with this limit without the use of controls.

(2) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the Resin Silo#1 shall not exceed 26.3 pounds per hour when operating at a process weight rate of sixteen (16) tons per hour. The pound per hour limitation was calculated with the following equation:

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

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

Based on calculations, the source is able to comply with this limit without the use of controls.

(3) Pursuant to 326 IAC 6-3-1(b)(14), the Cooling Tower and the Batch Mixing process are exempt because the potential to emit for each process is less than 0.551 pounds per hour.

(h) 326 IAC 6-2-4 (Particulate Emissions Limitations for Sources of Indirect Heating)

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emissions Limitations), particulate emissions from each of the 6.3 MMBtu/hr boilers shall not exceed 0.56 pounds per million Btu heat input (lb/MMBtu) from each boiler. This limitation was calculated using the following equation:

$$Pt = \frac{1.09}{Q^{0.26}} \quad \text{Where } Pt = \text{Pounds of particulate matter emitted per million Btu} \\ \text{(lb/MMBtu) heat input.} \\ Q = \text{Total source maximum operating capacity rating in million} \\ \text{Btu per hour (MMBtu/hr) heat input.}$$

The source is able to comply with this limit, as only natural gas combustion is permitted.

(i) 326 IAC 8-1-6 (VOC Rules: General Reduction Requirements for New Facilities)

The unlimited VOC potential emissions from the film casting lines are greater than twenty-five (25) tons per year. Methanol is a VHAP and is the only source of VOC and HAPs emissions from the film cast lines. The source's single HAP usage limit shall limit the VOC potential emissions from the film casting lines to less than twenty-five (25) tons per year. Therefore, the requirements of 326 IAC 8-1-6 do not apply.

(j) 326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

(k) 326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

Compliance Determination, Monitoring and Testing Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions; however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

If the Compliance Determination Requirements are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

Conclusion and Recommendation

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant. An application for the purposes of this review was received on December 22, 2008. Additional information was received on March 5, 2009.

The construction and operation of this source shall be subject to the conditions of the attached proposed New Source Construction, New Source Review, and FESOP No. 091-27326-00138. The staff recommends to the Commissioner that this New Source Construction, New Source Review, and FESOP be approved.

IDEM Contact

- (a) Questions regarding this proposed permit can be directed to Michael S. Brooks at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 234-3533 or toll free at 1-800-451-6027 extension 4-3533.
- (b) A copy of the findings is available on the Internet at: <http://www.in.gov/ai/appfiles/idem-caats/>
- (c) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.idem.in.gov

Appendix A: Emissions Calculations

Batch Mixing

Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009

Emission Unit: Batch Making

Source description: Preparation of batch slurry mixture (liquid and solids) that is pumped to casting line systems for drying. Potential particulate emissions are due to addition of dry powder from 50 lb bags to liquid in a mixing tank.

OPERATION/PRODUCTION RELATED INFORMATION

<i>Parameter</i>	<i>value</i>	<i>units</i>	<i>Reference</i>
Solids additions to product slurry mixture	400	lbs	approx. eight 50lbs bags
Number of mixers	10	-	plant design
Maximum number of batches per day per mixer-line	5	batches/day	process design specification
Maximum number of batches - plant wide	18,250	batches/yr	calculated value

EMISSION RELATED INFORMATION AND CALCULATION METHODOLOGY

PM/PM₁₀ emissions are caused by adding dry powder (manual bag dumping) to the mixing vessel. Liquid is already present in the mixing tank and the mixing impellers are engaged creating a vortex to which the solids are added, minimizing dust loss. Any dust loss will be to the interior of the manufacturing building. No dust attenuation is claimed, thus, potential PM/PM₁₀ emissions equal what dust escapes the mixers.

<i>Pollutant</i>	<i>value</i>	<i>units</i>	<i>Reference</i>
PM/PM ₁₀ - solids (dust) loss due to handling/dumping	0.001	wt. pct.	Amount of loss from dry materials being handled (IDEM factor used in TSD to Permit T163-7142-00015)
	0.01	wt. pct.	IDEM factor, plus order of magnitude safety factor

POTENTIAL EMISSION CALCULATIONS - calculated at 5 batches/day per each of 6 mixers, 365 days/yr).

Pollutant	Potential Emissions	
	lbs/batch	tpy
PM/PM ₁₀ - uncontrolled loss into the building	0.04	0.37

Appendix A: Emissions Calculations

Mix Ribbon Blender and Hold/Run Tanks per Line

Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009

Batch solution consumption rate: 5 hours
Max. potential cast line operation 8760 hours/yr
max. number of batches per line 1752 batch/line-yr

pollutant:
VOC mixer: 4.62E-03 lb/batch
HAP (methanol) mixer: 0.0012 lb/batch
VOC - hold/run tank 8.80E-02 lb/batch
HAP (methanol) hold/run tank: 0.05 lb/batch

Mixer emissions:, per line		
VOC:	9.24E-04	lbs/hr
	4.05E-03	tons/yr
Methanol (HAP):	2.40E-04	lbs/hr
	1.05E-03	tons/yr

Hold/run tanks:, per line		
VOC:	0.02	lbs/hr
	0.08	tons/yr
Methanol (HAP):	0.01	lbs/hr
	0.04	tons/yr

- 1/ VOC emissions result from the liquid organic materials contained in the batch material. The mixers mixes and heats the liquid plasticizers.
- 2/ Emission rate of VOC and HAP were determined by the source using Ideal Gas Law principles.
- 3/ Material used for the calculation above represents the worse case scenario in terms of VOC/HAP emissions

METHODOLOGY

PTE (tons/year) = Max. no of batches per line per year * Emission rate (lb/batch) * 1 ton/2000 lbs

Appendix A: Emissions Calculations

Weigh Hoppers per Line

Company Name: MonoSol LLC

Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350

Permit Number: T091-27326-00138

Reviewer: Michael S. Brooks

Date: 2/18/2009

max. sack to weigh hopper transfer rate: 8,000 lbs/hr
Maximum PVOH resin throughput 2.775 millions lbs/yr per line

*Emission Calculation basis:

PM total/PM₁₀ (controlled) 0.007 lbs/ton

Pollutant:

PM total/PM₁₀ (controlled): 0.028 lbs/hr, per line
9.7125 lbs/yr
0.00 tons/yr, per line

PM total/PM₁₀ (uncontrolled) 2.8 lbs/hr, per line
12.264 tons/yr, per line

Assume all PM emissions are equal to PM₁₀.

Control = Fabric filters with 99 % efficiency

* Emission factor is from AP-42, Chapter 11.26 (Talc Processing), Table 11.26-1 SCC 3-05-089-85 (November, 1995).

Appendix A: Emissions Calculations

Film Cast Lines

Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009

Maximum raw PVOH resin consumption rate: 313 lbs/hr
as-employed resin methanol content: 3 %

Calculations:

$$313 \text{ lbs/hr} * 0.03 \text{ lbs methanol per lbs of resin} = 9.39 \text{ lbs/hr, per line}$$
$$41.13 \text{ tpy, per line}$$

- 1/ VOC emissions result from the drying of the PVOH film solution and volatilization of the free methanol contained in the solution.
- 2/ Material used for the calculation above represents the worse case scenario in terms of VOC/HAP emissions because it has the highest solution/resin consumption rate of all the products.

METHODOLOGY

PTE of VOC/Methanol (ton/year) = Max. throughput rate (lb/hour) * Weight % VOC/Methanol * 8760 hours/year * 1 ton/2000 lbs

Appendix A: Emissions Calculations

Cooling Tower

Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009

Emission Unit: Non-Contact Water Cooling Tower
Source description: Potential emissions due to release of dissolved solids in total drift from water recirculation stream.

OPERATION/PRODUCTION RELATED INFORMATION

<i>Parameter</i>	<i>value</i>	<i>units</i>	<i>Reference</i>
Type of cooling tower	Counter-current, blow-through		
Total circulating flow rate	405	gal/min	equipment design specification
	24,300	gal/hr	
Cooling tower drift (pct of recirculation flow)	0.001	percent	worse case - vendor claims zero drift
Total cooling tower drift	0.24	gal/hr	calculated value
	2.0	lbs/hr	calc value (density = 8.345 lbs/gal)

EMISSION RELATED INFORMATION AND CALCULATION METHODOLOGY

PM/PM₁₀ emissions calculated based on the total dissolved solids (TDS) content of recirculating water and resulting drift. Calculation method taken from AP-42, Section 13.4.

<i>Pollutant</i>	<i>value</i>	<i>units</i>	<i>Reference</i>
TDS content of water used in cooling tower	1,800	ppm	max TDS expected from water source after being concentrated at 5 cycles

POTENTIAL EMISSION CALCULATIONS - calculated at 8,760 hrs/yr

Pollutant	Potential Emissions	
	lbs/hr	tpy
PM/PM ₁₀	0.004	0.016

= 24,300 gal/hr water flow x 0.001 gal water drift/100 gal water reirculated; = 0.24 gal/hr water drift x 8.345 lbs/gal water; = 2.0 lbs/hr water drift
 = 2.0 lbs/hr water drift x 1,800 lbs TDS per 1,000,000 lbs water; = 0.004 lb/hr PM/PM10 (TDS in water represents the PM/PM10)

Alternatively --

= 0.24 gal/hr water drift x 3.785 L/gal x 1,800 mg/L TDS x 1 lb/454,000 mg; = 0.004 lb/hr PM/PM10

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

L7/8 Boiler 6.3 MMBtu/hr, L9 Boiler 6.3 MMBtu/hr, ten (10) dryer ovens 1.75 MMBtu/hr each, eight (8) heaters 1 MMBtu/hr each

**Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009**

Heat Input Capacity
MMBtu/hr

Potential Throughput
MMCF/yr

38.1

333.8

Emission Factor in lb/MMCF	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
	1.9	7.6	0.6	100	5.5	84
				**see below		
Potential Emission in tons/yr	0.3	1.3	0.1	16.7	0.9	14.0

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

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

Methodology

All emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF = 1,000,000 Cubic Feet of Gas

Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

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

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

See page 7 for HAPs emissions calculations.

**Appendix A: Emissions Calculations
Natural Gas Combustion Only**

**L7/8 Boiler 6.3 MMBtu/hr, L9 Boiler 6.3 MMBtu/hr, ten (10) dryer ovens 1.7 MMBtu/hr each, eight (8) heaters 1 MMBtu/hr each
HAPs Emissions**

**Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009**

HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	3.504E-04	2.003E-04	1.252E-02	3.004E-01	5.674E-04

HAPs - Metals					
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03
Potential Emission in tons/yr	8.344E-05	1.836E-04	2.336E-04	6.341E-05	3.504E-04

Methodology is the same as page 6.

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

**Appendix A: Emission Calculations
PM/PM10 Emissions
PVOH Resin Silo**

**Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009**

Emission Unit	Max. Throughput Rate (lbs/hour)	* Emission Factor (lb/ton)	Controlled PTE of PM/PM10 (lbs/hour)	Controlled PTE of PM/PM10 (tons/year)	Control Efficiency %	Uncontrolled PTE of PM/PM10 (tons/year)	Uncontrolled PTE of PM/PM10 per silo (lbs/hour)
PVOH Resin Silo	32000	0.0007	0.011	0.049	99%	4.9	1.12

TOTAL

Assume all PM emissions are equal to PM10.

Control = Bin vent filters with 99 % efficiency

* There are no emission factors available for PVOH resin handling. Therefore, worst case emission factor from AP-42, Chapter 11.26 (Talc Processing), Table 11.26-1 SCC 3-05-089-85 (November 1995) was used by assuming only 10% of PM/PM10 was emitted during truck to silo off load rate.

** Particulate emission limit was determined using the Process Weight Rule (326 IAC 6-3-2).

METHODOLOGY

Controlled PTE of PM/PM10 (lbs/hour) = Max. Throughput Rate of Resin (lbs/hour) * Emission Factor (lb/ton) * 1 ton/2000 lbs

Controlled PTE of PM/PM10 (tons/year) = Max.Throughput Rate of Resin (lbs/hour) * Emission Factor (lb/ton) * 1 ton/2000 lbs * 8760 hours/year * 1 ton/2000 lbs

Uncontrolled PTE of PM/PM10 (tons/year) =Controlled PTE of PM/PM10 (tons/year) * 1/(1 - Control Efficiency %)

Uncontrolled PTE of PM/PM10 (lbs/hour) = Max. Throughput Rate of Resin (lbs/hour) * Emission Factor (lb/ton) * 1 ton/2000 lbs * 1/(1 - Control Efficiency %)

**Appendix A: Emission Calculations
Tank VOC Emissions - Maximum PTE**

Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009

Tank Number	Tank ID Number	Product Stored	Losses (Pounds per Year)		Total VOC Lbs/yr
			Standing	Working	
1	Bulk Storage Tank 1	Glycerine	0.69	3.57	4.26
2	Bulk Storage Tank 2	Glycerine	0.69	3.57	4.26
3	Bulk Storage Tank 3	Glycerine	0.69	3.57	4.26
4	Bulk Storage Tank 4	Glycerine	0.69	3.57	4.26
Total VOC			2.76	14.28	17.04
				Tons/yr:	0.01

Note: All storage tank emissions estimated using EPA's TANKS 4.0.9d software program.

**Appendix A: Emission Calculations
Summary**

Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009

Uncontrolled

	PM	PM10	SO2	Nox	VOC	CO	HAP
Batch Mixing	0.37	0.37					
Mix Ribbon Blender					negligible		negligible
Hold Run Tanks					0.4		0.2
Film Cast Lines					205.65		205.65
Weigh Hoppers	24.52	24.52					
Cooling Tower	0.02	0.02					
Combustion Units	0.3	1.3	0.1	16.5	0.9	13.8	negligible
PVOH Resin Silo	4.9	4.9					
Bulk Storage Tanks					0.01		
Total	30.11	31.11	0.1	16.5	206.96	13.8	205.85

**Appendix A: Emission Calculations
Summary**

Company Name: MonoSol LLC
Address City IN Zip: 1609 Genesis Drive, LaPorte, IN 46350
Permit Number: T091-27326-00138
Reviewer: Michael S. Brooks
Date: 2/18/2009

Controlled/Limited

	PM	PM10	SO2	Nox	VOC	CO	HAP
Batch Mixing	0.37	0.37					
Mix Ribbon Blender					negligible		negligible
Hold Run Tanks					0.4		0.2
*Film Cast Lines					<10		<10
Weigh Hoppers	0.01	0.01					
Cooling Tower	0.02	0.02					
Combustion Units	0.3	1.3	0.1	16.6	0.9	13.8	negligible
PVOH Resin Silo	0.05	0.05					
Bulk Storage Tanks					0.01		
Total	0.75	1.75	0.1	16.6	11.3	13.8	<10/25

* Limiting the Methanol input will limit both the HAPs and VOC emissions. HAP is equal to VOC for the Film Cast Lines.