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

Neo Resins
3110 West State Road 28
Frankfort, Indiana 46041

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

This permit is issued 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.

Operation Permit No.: F023-12762-00023	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality *Original signed by Paul Dubenetzky*	Issuance Date: May 1, 2001 Expiration Date: May 1, 2006

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 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 acrylic latex emulsions manufacturing plant.

Authorized individual:	Steven V. Dalton, Plant Manager
Source Address:	3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address:	3110 West State Road 28, Frankfort, Indiana 46041
SIC Code:	2821
Source Location Status:	Clinton
County Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD; Minor Source, Section 112 of the Clean Air Act 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) batch acrylic latex emulsion manufacturing facility consisting of three (3) feed tanks, two (2) closed polymerization vessels, four (4) blending tanks, one (1) coalescing make-up tank, one (1) zinc make-up tank equipped with a baghouse, and twenty-two (22) product storage tanks. Raw material and products are transferred using a closed system. VOC and HAP emissions are controlled by one (1) 95% efficient, catalytic oxidizer, which exhausts at stack S-1. The maximum throughput is 78.84 million pounds of product per year. The facility was initially constructed in 1986, with a polymerization vessel, feed tank, and blending tank added in 1989 and additional blending tank (identified as BTk-14) added in 2001.

(b) Two (2) natural gas-fired boilers, constructed in June 1986, each having a maximum heat input capacity of five (5) million British thermal units per hour. Both boilers use #2 fuel oil as an alternative fuel. The boilers are identified as SEU-2 and SEU-3. Boiler SEU-2 exhausts to stack S-14 and boiler SEU-3 exhausts to stack S-15. The boilers are an insignificant source when burning natural gas.

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, as defined in 326 IAC 2-7-1(21):

(a) Storage tanks emitting less than five (5) tons/year of VOCs, less than one (1) tons/year of a single HAP, and less than two and one-half (2.5) tons per year of any combination of HAPs. The source has the following fourteen (14) above-ground, fixed-roof dome storage tanks:

(1) Storage tank TK-101, constructed in November 1986, having a capacity of 5,330 gallons and used to store ethyl acrylate;

(2) Storage tank TK-102, constructed in November 1986, having a capacity of 5,630 gallons and used to store acrylonitrile;

(3) Storage tank TK-103, constructed in November 1986, having a capacity of 5,330 gallons and used to store isobutylacrylate;

(4) Storage tank TK-105, constructed in November 1986, having a capacity of 8,515 gallons and used to store n-butyl acrylate;

(5) Storage tank TK-106, constructed in November 1986, having a capacity of 8,210 gallons and used to store n-butyl methacrylate;

(6) Storage tank TK-107, constructed in November 1986, having a capacity of 8,210 gallons and used to store 2-ethylhexyl acrylate;

(7) Storage tank TK-108, constructed in November 1986, having a capacity of 8,210 gallons and used to store methyl methacrylate;

(8) Storage tank TK-109, constructed in November 1986, having a capacity of 8,520 gallons and used to store styrene;

(9) Storage tank TK-110, constructed in November 1986, having a capacity of 8,210 gallons and used to store styrene;

(10) Storage tank TK-111, constructed in November 1986, having a capacity of 8,520 gallons and used to store glycol ethers;

(11) Storage tank TK-112, constructed in November 1986, having a capacity of 8,210 gallons and used to store a hydrocarbon blend;

(12) Storage tank TK-125, constructed in April 1987, having a capacity of 6,310 gallons and used to store acrylic acid;

(13) Storage tank TK-126, constructed in April 1987, having a capacity of 4,295 gallons and used to store methacrylic acid;

(14) Storage tank TK-349, constructed in April 1987, having a capacity of 8,032 gallons and used to store fuel oil #2.

Tank breathing emissions of VOCs and HAPs from storage tanks TK-101, TK-102, TK-103, TK-105, TK-106, TK-107, TK-108, TK-109, TK-110, TK-111, and TK-112 are controlled by the operation of conservation vents on each storage tank and using one (1) catalytic oxidizer, which has a control efficiency of 95%. Emissions from the catalytic oxidizer are exhausted through stack S-1. VOC and HAP emissions during filling operations for tanks TK-101, TK-102, TK-103, TK-105, TK-106, TK-107, TK-108, TK-109, TK-110, TK-111, TK-112, TK-125, and TK-126 are controlled using one (1) vapor balance system, which has a control efficiency of 90 percent.

(b) Cleaners and solvents characterized as follows:

(1) Having a vapor pressure equal to or less than 2 Kpa; 15 mmHg; or 0.3 psi measured at 38 °C (100 °F); or

(2) Having a vapor pressure equal to or less than 0.7 Kpa; 5 mmHg; or 0.1 psi measured at 20 °C (68 °F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches; soldering equipment, welding equipment.

(d) Activities associated with the treatment of wastewater streams with an oil and grease content of less than or equal to 10 % by volume.

(e) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

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

(g) Diesel generators not exceeding 1600 horsepower.

(h) Stationary fire pumps.

(i) A laboratory as defined in 326 IAC 2-7-1(20)(c).

(j) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

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).

A.5 Prior Permit Conditions

(a) This permit shall be used as the primary document for determining compliance with applicable requirements established by previously issued permits.

(b) If, after issuance of this permit, it is determined that the permit is in nonconformance with an applicable requirement that applied to the source on the date of permit issuance, including any term or condition from a previously issued construction or operation permit, IDEM, OAQ, shall immediately take steps to reopen and revise this permit and issue a compliance order to the Permittee to ensure expeditious compliance with the applicable requirement until the permit is reissued.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

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.

B.2 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.3 Permit Term [326 IAC 2-8-4(2)]

This permit is issued for a fixed term of five (5) years from the original date, 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.

B.4 Enforceability [326 IAC 2-8-6]

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

B.5 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.6 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.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)] [326 IAC 2-8-5(a)(4)]

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

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

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

(b) 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 the "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 or, for information claimed to be confidential, the Permittee may furnish such records directly to the U. S. EPA along with a claim of confidentiality.[326 IAC 2-8-4(5)(E)]

(c) The Permittee may include a claim of confidentiality in accordance with 326 IAC 17. 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.9 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.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

(a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit, except those specifically designated as not federally enforceable, is grounds for:

(1) Enforcement action;

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

(3) Denial of a permit renewal application.

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

(c) An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in condition B, Emergency Provisions.

B.11 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.

(c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 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 in letter form no later than July 1 of each year to:

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

(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, IDEM, OAQ, may require to determine the compliance status of the source.

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

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, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

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

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

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

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

(b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.

(c) 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 contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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.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 describes the following:

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

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

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

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ, 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 No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section) or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967

Failure to notify IDEM, OAQ, by telephone or facsimile within four (4) daytime business hours after the beginning of the emergency, or after the emergency is discovered or reasonably should have been discovered, shall constitute a violation of 326 IAC 2-8 and any other applicable rules. [326 IAC 2-8-12(f)]

(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 Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

The notice 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 the "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) 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.

B.15 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 Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

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

using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report.

The notification by the Permittee does require the certification by the "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 or a rule. It does not include:

(1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or

(2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

(c) Emergencies shall be included in the Quarterly Deviation and Compliance Monitoring Report.

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP 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 the "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.17 Permit Renewal [326 IAC 2-8-3(h)]

(a) The application for renewal shall be submitted using the application form or forms prescribed by IDEM, 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 the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

(b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]

(1) A timely renewal application is one that is:

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

(B) 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.

(2) If IDEM, OAQ upon receiving a timely and complete 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.

(c) Right to Operate After Application for Renewal [326 IAC 2-8-9]
If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-8 until IDEM, 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 needed to process the application.

B.18 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

(c) The Permittee may implement the 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.19 Operational Flexibility [326 IAC 2-8-15]

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

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

(2) Any approval required by 326 IAC 2-8-11.1 has been obtained;

(3) The changes do not result in emissions which exceed the emissions allowable under 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

and

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

in advance of the change by written notification at least ten (10) days in advance of the proposed change. The Permittee shall attach every such notice to the Permittee's copy of this permit; and

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

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

(b) The Permittee may make Section 502(b)(10) of the Clean Air Act changes (this term is defined at 326 IAC 2-7-1(36)) without a permit revision, subject to the constraint of 326 IAC 2-8-15(a) and the following additional conditions:

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

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

(3) Any change in emissions; and

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

The notification which shall be submitted by the Permittee does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1.

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

(d) Alternative Operating Scenarios [326 IAC 2-8-15(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

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

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

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

(e) Utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.22 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "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 2-8-11(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]

(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 317-233-0425 (ask for OAQ, Technical Support and Modeling Section), to determine the appropriate permit fee.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

C.1 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 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) 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.

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

C.2 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

C.3 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. 326 IAC 4-1-3(a)(2)(A) and (B) are not federally enforceable.

C.4 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

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

C.5 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). 326 IAC 6-4-2(4) is not federally enforceable.

C.6 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of 326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

(b) The Permittee shall ensure that a written notification is sent on a form provided by the Commissioner at least ten (10) working days before asbestos stripping or removal work or before demolition begins, per 326 IAC 14-10-3, and shall update such notice as necessary, including, but not limited to the following:

(1) When the amount of affected asbestos containing material increases or decreases by at least twenty percent (20%); or

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

(c) The Permittee shall ensure that the notice is postmarked or delivered according to the guidelines set forth in 326 IAC 14-10-3(2).

(d) The notice to be submitted shall include the information enumerated in 326 IAC 14-10-3(3).

All required notifications shall be submitted to:

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

The notifications do not require a certification by the "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 14-10-4 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) Indiana Accredited Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Accredited Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited is federally enforceable.

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

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

(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "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 the "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 source 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. 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. 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 Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

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

Unless otherwise specified in the approval for the new emissions unit, 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 performed 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 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

(a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(b) Whenever a condition in this permit requires the measurement of a temperature, flow rate, or pH level, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.

(c) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other 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 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

(a) A compliance schedule for meeting the requirements of 40 CFR 68; or

(b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP); and

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.14 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

(a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. The compliance monitoring plan can be either an entirely new document, consist in whole of information contained in other documents, or consist of a combination of new information and information contained in other documents. If the compliance monitoring plan incorporates by reference information contained in other documents, the Permittee shall identify as part of the compliance monitoring plan the

documents in which the information is found. The elements of the compliance monitoring plan are:

(1) This condition;

(2) The Compliance Determination Requirements in Section D of this permit;

(3) The Compliance Monitoring Requirements in Section D of this permit;

(4) The Record Keeping and Reporting Requirements in Section C (General Record Keeping Requirements and General Reporting Requirements) and in Section D of this permit; and

(5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee and maintained on site, and is comprised of:

(A) Reasonable response steps that may be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this permit; and

(B) A time schedule for taking reasonable response steps including a schedule for devising additional response steps for situations that may not have been predicted.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to take reasonable response steps may constitute a violation of the permit.

(c) Upon investigation of a compliance monitoring excursion, the Permittee is excused from taking further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.

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

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.

(d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.

(e) All monitoring required in Section D shall be performed at all times the equipment is operating. If monitoring is required by Section D and the equipment is not operating, then the Permittee may record the fact that the equipment is not operating or perform the required monitoring.

(f) At its discretion, IDEM may excuse the Permittee's failure to perform the monitoring and record keeping as required by Section D, if the Permittee provides adequate justification and documents that such failures do not exceed five percent (5%) of the operating time in any quarter. Temporary, unscheduled unavailability of qualified staff shall be considered a valid reason for failure to perform the monitoring or record keeping requirements in Section D.

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 and 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 documents submitted pursuant to this condition do not require the certification by the "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 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

(a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

(b) Unless otherwise specified in this permit, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.17 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

(a) The source 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 the "authorized individual" as defined by 326 IAC2-1.1-1(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 Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

(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, any quarterly report required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. The reports does require the certification by the "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 and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.18 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 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(a) One (1) batch acrylic latex emulsion manufacturing facility consisting of three (3) feed tanks, two (2) closed polymerization vessels, four (4) blending tanks, one (1) coalescing make-up tank, one (1) zinc make-up tank equipped with a baghouse, and twenty-two (22) product storage tanks. Raw material and products are transferred using a closed system. VOC and HAP emissions are controlled by one (1) 95% efficient, catalytic oxidizer, which exhausts at stack S-1. The maximum throughput is 78.84 million pounds of product per year. The facility was initially constructed in 1986, with a polymerization vessel, feed tank, and blending tank added in 1989 and an additional blending tank (identified as BTtk-14) added in 2001.

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

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

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

Emissions of hazardous air pollutants from the latex emulsion manufacturing facility shall be limited to less than nine (9) tons of a single HAP and less than twenty-four (24) tons of any combination of HAPs per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 2-7 not applicable.

D.1.2 Volatile Organic Compounds (VOCs) [326 IAC 8-1-6]

Pursuant to CP (12)-1621, issued on September 24, 1986, the following Best Available Control Technology shall be used to control VOC emissions from the acrylic and acrylic-styrene polymer manufacturing source:

(a) Emissions of VOCs from the following units shall be vented to the catalytic oxidizer:

(1) Feed tank vents;

(2) Polymerization vessel condenser vents;

(3) Blending tank vents; and

(4) Product finishing tanks.

(b) The monomer and solvent storage tank conservation vents (pressure side) shall be piped to the catalytic oxidizer.

D.1.3 Volatile Organic Compounds (VOCs)

Pursuant to CP (12)-1621, issued on September 24, 1986, VOC input usage shall be limited such that VOC emissions from the catalytic oxidizer shall be limited to 4.4 tons per twelve (12) consecutive month period. The catalytic oxidizer shall be operated at all times the latex emulsion manufacturing process (SEU-1) is operated. Compliance with this emission limit shall be calculated as follows:

$$\text{VOC Emissions (tons / year)} = \text{VOC Input (tons / year)} \times \left[\frac{100 - \text{Control Efficiency (\%)}}{100}\right]$$

D.1.4 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 3-2 (Process Operations), the allowable PM emission rate from the zinc make-up tank when transferring dry materials to the tank shall not exceed 3.1 pound per hour when operating at a process weight rate of 1,300 pounds per hour.

The pounds per hour limitation was calculated using the following equation:

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

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

D.1.5 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and any control devices.

Compliance Determination Requirements

D.1.6 Particulate Matter (PM)

To comply with Condition D.1.3, the baghouse for PM control shall be in operation and control emissions from the zinc make-up tank at all times solids are transferred to the tank.

D.1.7 Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs)

(a) The catalytic oxidizer shall operate with an overall efficiency of not less than 95% at all times when the emulsion manufacturing process is in operation. The emulsion manufacturing process (SEU-1) shall not be considered to be in operation when all chemical reactions, and materials charging and blending operations are complete, when no unreacted monomers, solvents, and other organics are present in the system, and when no activities other than finished product storage are taking place.

(b) The 95% efficiency is necessary to ensure compliance with 326 IAC 8-1-6 and to ensure that 326 IAC 2-7 is not applicable.

(c) The catalytic oxidizer shall be operated at or above 750°F or a temperature determined during compliance tests to maintain a minimum 95% overall efficiency.

D.1.8 Testing Requirements [326 IAC 2-8-5(a)(1), (4)][326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.1.1 and D.1.3, within fifty (50) months after issuance of this permit, the Permittee shall perform VOC and HAP testing utilizing methods as approved by the Commissioner.

(b) Additionally, if the VOC and/or HAP usage is increased or if the temperature falls below the 750°F required minimum temperature it will be considered a violation unless the Permittee performs VOC testing utilizing methods as approved by the Commissioner to ensure compliance with the 95% overall control efficiency.

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

D.1.9 Monitoring

(a) Compliance with the 750°F minimum temperature shall be monitored continuously.

(b) Eight-hour average temperatures shall be made available to IDEM upon request and one-hour temperature records will be made available within five business days from the request.

(c) The temperature shall be reported based on an eight-hour average.

(d) The catalytic oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.

(e) If a one-hour temperature is less than the established minimum temperature, this shall be considered noncompliance.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.10 Record Keeping Requirements

(a) To document compliance with Condition D.1.1 and D.1.3, the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC and HAP emission limits established in Conditions D1.1 and D.1.3.

(1) The amount of VOC and HAPs used each month. The records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those used in the manufacturing process and those used as cleanup solvents;

(2) A log of the dates of use;

(3) The weight of VOC and HAP emitted for each compliance period; and

(4) Temperature records for the catalytic oxidizer.

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

D.1.11 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.3 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 the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(b) Two (2) natural gas-fired boilers, constructed in June 1986, each having a maximum heat input capacity of five (5) million British thermal units per hour. Both boilers use #2 fuel oil as an alternative fuel. The boilers are identified as SEU-2 and SEU-3. Boiler SEU-2 exhausts to stack S-14 and boiler SEU-3 exhausts to stack S-15. The boilers are an insignificant source when burning natural gas.

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

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

D.2.1 Particulate Matter Limitation (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), the PM emissions from the two (2) five (5) MMBtu/hour heat input boilers shall be limited to 0.6 pounds per MMBtu heat input.

This limitation is based on the following equation:

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

where P_t = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and ;
Q = total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. (The maximum operating capacity rating for this source is 10 MMBtu/hr).

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

D.2.2 Visible Emissions Notations

(a) Visible emission notations of the boiler stack exhausts (S-14 and S-15) shall be performed once per shift during normal daylight operations when combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal.

(b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.

(c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

(d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

(e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.3 Record Keeping Requirements

To document compliance with Condition D.2.2, the Permittee shall maintain records of visible emissions notations of the boiler stack exhausts (S-14 and S-15) while combusting fuel oil.

D.2.4 Reporting Requirements

The natural gas fired boiler certification shall be submitted semi-annually to the address listed in Section C - General Reporting Requirements, using the reporting form located at the end of this permit, or equivalent, within thirty (30) days after the end of the period being reported. The report submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]:

(a) Storage tanks emitting less than five (5) tons/year of VOCs, less than one (1) tons/year of a single HAP, and less than two and one-half (2.5) tons per year of any combination of HAPs. The source has the following fourteen (14) above-ground, fixed-roof dome storage tanks:

(1) Storage tank TK-101, constructed in November 1986, having a capacity of 5,330 gallons and used to store ethyl acrylate;

(2) Storage tank TK-102, constructed in November 1986, having a capacity of 5,630 gallons and used to store acrylonitrile;

(3) Storage tank TK-103, constructed in November 1986, having a capacity of 5,330 gallons and used to store isobutylacrylate;

(4) Storage tank TK-105, constructed in November 1986, having a capacity of 8,515 gallons and used to store n-butyl acrylate;

(5) Storage tank TK-106, constructed in November 1986, having a capacity of 8,210 gallons and used to store n-butyl methacrylate;

(6) Storage tank TK-107, constructed in November 1986, having a capacity of 8,210 gallons and used to store 2-ethylhexyl acrylate;

(7) Storage tank TK-108, constructed in November 1986, having a capacity of 8,210 gallons and used to store methyl methacrylate;

(8) Storage tank TK-109, constructed in November 1986, having a capacity of 8,520 gallons and used to store styrene;

(9) Storage tank TK-110, constructed in November 1986, having a capacity of 8,210 gallons and used to store styrene;

(10) Storage tank TK-111, constructed in November 1986, having a capacity of 8,520 gallons and used to store glycol ethers;

(11) Storage tank TK-112, constructed in November 1986, having a capacity of 8,210 gallons and used to store a hydrocarbon blend;

(12) Storage tank TK-125, constructed in April 1987, having a capacity of 6,310 gallons and used to store acrylic acid;

(13) Storage tank TK-126, constructed in April 1987, having a capacity of 4,295 gallons and used to store methacrylic acid;

Facility Description [326 IAC 2-8-4(10)]:

14. Storage tank TK-349, constructed in April 1987, having a capacity of 8,032 gallons and used to store fuel oil #2.

Tank breathing emissions of VOCs and HAPs from storage tanks TK-101, TK-102, TK-103, TK-105, TK-106, TK-107, TK-108, TK-109, TK-110, TK-111, and TK-112 are controlled by the operation of conversation vents on each storage tank and using one (1) catalytic oxidizer, which has a control efficiency of 95%. Emissions from the catalytic oxidizer are exhausted through stack S-1. VOC and HAP emissions during filling operations for tanks TK-101, TK-102, TK-103, TK-105, TK-106, TK-107, TK-108, TK-109, TK-110, TK-111, TK-112, TK-125, and TK-126 are controlled using one (1) vapor balance system, which has a control efficiency of 90 percent.

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

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

D.3.1 Volatile Organic Compounds (VOCs)

Pursuant to CP (12)-1621, issued on September 24, 1986, the following provisions shall be used to minimize VOC emissions from the storage tank farm:

(a) The storage tanks shall be filled in the following manner:

(1) The storage tank vapors which are displaced during filling operations are to be vented back to the tank through a closed system.

(2) Filling is to be performed in such a manner as to minimize spilling of the raw materials.

(3) Any raw materials which are spilled are to be pumped into the spill tank as soon as possible after the spill.

(b) The storage tank farm shall be equipped with a spill tank and pump for the collection of spills.

(c) Emissions from the storage tanks shall be vented to the catalytic oxidizer using a closed system.

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP) CERTIFICATION

Source Name: Neo Resins
Source Address: 3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address: 3110 West State Road 28, Frankfort, Indiana 46041
FESOP No.: F 023-12762-00023

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

Please check what document is being certified:

9 Annual Compliance Certification Letter

9 Test Result (specify) _____

9 Report (specify) _____

9 Notification (specify) _____

9 Affidavit (specify) _____

9 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 BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT

Source Name: Neo Resins
Source Address: 3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address: 3110 West State Road 28, Frankfort, Indiana 46041
FESOP No.: F 023-12762-00023

This form consists of 2 pages **Page 1 of 2**

9 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 317-233-5674, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) days (Facsimile Number: 317-233-5967), 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 DATA SECTION

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
SEMI-ANNUAL NATURAL GAS FIRED BOILER CERTIFICATION

Source Name: Neo Resins
Source Address: 3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address: 3110 West State Road 28, Frankfort, Indiana 46041
FESOP No.: F 023-12762-00023

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

Report period
Beginning: _____
Ending: _____

Boiler Affected	Alternate Fuel	Days burning alternate fuel From	To

(can omit identification of boiler affected if only one gas boiler at this plant)

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:

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Neo Resins
Source Address: 3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address: 3110 West State Road 28, Frankfort, Indiana 46041
FESOP No.: F023-12762-00023
Facility: Catalytic Oxidizer
Parameter: VOCs
Limit: 4.4 tons emitted per twelve (12) consecutive month period. Emissions from the catalytic oxidizer shall be calculated using the following equation:

$$\text{VOC Emissions (tons / year)} = \text{VOC Input (tons / year)} \times \left[\frac{100 - \text{Control Efficiency (\%)}}{100}\right]$$

YEAR: _____

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

9 No deviation occurred in this quarter.

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

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

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Neo Resins
Source Address: 3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address: 3110 West State Road 28, Frankfort, Indiana 46041
FESOP No.: F023-12762-00023
Facility: Acrylic Latex Emulsion Manufacturing Plant
Parameter: Hazardous Air Pollutants (HAPs)
Limit: Less than nine (9) tons of any single HAP 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			

9 No deviation occurred in this quarter.

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

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

Attach a signed certification to complete this report.

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

FESOP Quarterly Report

Source Name: Neo Resins
Source Address: 3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address: 3110 West State Road 28, Frankfort, Indiana 46041
FESOP No.: F023-12762-00023
Facility: Acrylic Latex Emulsion Manufacturing Plant
Parameter: Hazardous Air Pollutants (HAPs)
Limit: Less than twenty-four (24) tons of any combination of HAPs 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			

9 No deviation occurred in this quarter.

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

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

Attach a signed certification to complete this report.

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

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT

Source Name: Neo Resins
Source Address: 3110 West State Road 28, Frankfort, Indiana 46041
Mailing Address: 3110 West State Road 28, Frankfort, Indiana 46041
FESOP No.: F023-12762-00023

Months: _____ to _____ Year: _____

This report is an affirmation that the source has met all the requirements stated in this permit. This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Form Completed By: ____________________

Title/Position: ____________________

Date: ____________________

Phone: ____________________

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	Neo Resins
Source Location:	3110 West State Road 28, Frankfort, Indiana 46041
County:	Clinton
SIC Code:	2821
Operation Permit No.:	F023-12762-00023
Permit Reviewer:	ERG/AB

The Office of Air Quality (OAQ) has reviewed a FESOP application from Neo Resins relating to the operation of an acrylic latex emulsions manufacturing plant.

Permitted Emission Units and Pollution Control Equipment

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

(a) One (1) batch acrylic latex emulsion manufacturing facility consisting of three (3) feed tanks, two (2) closed polymerization vessels, four (4) blending tanks, one (1) coalescing make-up tank, one (1) zinc make-up tank equipped with a baghouse, and twenty-two (22) product storage tanks. Raw material and products are transferred using a closed system. VOC and HAP emissions are controlled by one (1) 95% efficient, catalytic oxidizer, which exhausts at stack S-1. The maximum throughput is 78.84 million pounds of product per year. The facility was initially constructed in 1986, with a polymerization vessel, feed tank, and blending tank added in 1989, and an additional blending tank (identified as BTk-14) added in 2001.

(b) Two (2) natural gas-fired boilers, constructed in June 1986, each having a maximum heat input capacity of five (5) million British thermal units per hour. Both boilers use #2 fuel oil as an alternative fuel. The boilers are identified as SEU-2 and SEU-3. Boiler SEU-2 exhausts to stack S-14 and boiler SEU-3 exhausts to stack S-15. The boilers are an insignificant source when burning natural gas.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

Insignificant Activities

The source also consists of the following insignificant activities, as defined in 326 IAC 2-7-1(21):

(a) Storage tanks emitting less than five (5) tons/year of VOCs, less than one (1) tons/year of a single HAP, and less than two and one-half (2.5) tons per year of any combination of HAPs. The source has the following fourteen (14) above-ground, fixed-roof dome storage tanks:

(1) Storage tank TK-101, constructed in November 1986, having a capacity of 5,330 gallons and used to store ethyl acrylate;

(2) Storage tank TK-102, constructed in November 1986, having a capacity of 5,630 gallons and used to store acrylonitrile;

(3) Storage tank TK-103, constructed in November 1986, having a capacity of 5,330 gallons and used to store isobutylacrylate;

(4) Storage tank TK-105, constructed in November 1986, having a capacity of 8,515 gallons and used to store n-butyl acrylate;

(5) Storage tank TK-106, constructed in November 1986, having a capacity of 8,210 gallons and used to store n-butyl methacrylate;

(6) Storage tank TK-107, constructed in November 1986, having a capacity of 8,210 gallons and used to store 2-ethylhexyl acrylate;

(7) Storage tank TK-108, constructed in November 1986, having a capacity of 8,210 gallons and used to store methyl methacrylate;

(8) Storage tank TK-109, constructed in November 1986, having a capacity of 8,520 gallons and used to store styrene;

(9) Storage tank TK-110, constructed in November 1986, having a capacity of 8,210 gallons and used to store styrene;

(10) Storage tank TK-111, constructed in November 1986, having a capacity of 8,520 gallons and used to store glycol ethers;

(11) Storage tank TK-112, constructed in November 1986, having a capacity of 8,210 gallons and used to store a hydrocarbon blend;

(12) Storage tank TK-125, constructed in April 1987, having a capacity of 6,310 gallons and used to store acrylic acid;

(13) Storage tank TK-126, constructed in April 1987, having a capacity of 4,295 gallons and used to store methacrylic acid;

(14) Storage tank TK-349, constructed in April 1987, having a capacity of 8,032 gallons and used to store fuel oil #2.

Tank breathing emissions of VOCs and HAPs from storage tanks TK-101, TK-102, TK-103, TK-105, TK-106, TK-107, TK-108, TK-109, TK-110, TK-111, and TK-112 are controlled by the operation of conservation vents on each storage tank and using one (1) catalytic oxidizer, which has a control efficiency of 95%. Emissions from the catalytic oxidizer are exhausted through stack S-1. VOC and HAP emissions during filling operations for tanks TK-101, TK-102, TK-103, TK-105, TK-106, TK-107, TK-108, TK-109, TK-110, TK-111, TK-112, TK-125, and TK-126 are controlled using one (1) vapor balance system, which has a control efficiency of 90 percent.

(b) Cleaners and solvents characterized as follows:

(1) Having a vapor pressure equal to or less than 2 Kpa; 15 mmHg; or 0.3 psi measured at 38 °C (100 °F); or

(2) Having a vapor pressure equal to or less than 0.7 Kpa; 5 mmHg; or 0.1 psi measured at 20 °C (68 °F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(c) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches; soldering equipment, welding equipment.

(d) Activities associated with the treatment of wastewater streams with an oil and grease content of less than or equal to 10 % by volume.

(e) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.

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

(g) Diesel generators not exceeding 1600 horsepower.

(h) Stationary fire pumps.

(i) A laboratory as defined in 326 IAC 2-7-1(20)(c).

(j) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) CP PC(12) 1621, issued on September 24, 1986;

(b) OP 12-07-91-0137, issued on September 9, 1987;

(c) Amendment to OP 12-07-91-0137, issued on May 31, 1989;

(d) Registration, issued on June 1, 1989;

(e) Modification to OP 12-07-91-0137, issued on July 9, 1991;

(f) Exemption, issued on February 22, 1991;

(g) Notice-only-change (023-11123-00023), issued November 1999;

(h) Exemption 023-3193-00023, issued on September 16, 1993; and

(i) Exemption 023-12720-00023, issued on March 2, 2001.

All conditions from the previous approvals were incorporated into this FESOP except the following:

CP PC(12) 1621, issued on September 24, 1986

Condition 1:

That emissions of total VOCs from the thermal oxidizer (incinerator) shall be limited to 1.0 pounds per hour and 4.4 tons per year. Another limit may be approved by the Commissioner, based upon the results of the initial stack test.

Reason not incorporated: The 1.0 pounds per hour limit for VOCs was not incorporated in this FESOP due to a request submitted by the source that the pounds per hour emission limit be relaxed. The source has agreed to continue to comply with the 4.4 tons per year limit for VOC emissions.

Enforcement Issue

(a) Based on existing approvals, IDEM has determined that Neo Resins should have submitted a Title V or FESOP application in 1996.

(b) IDEM is reviewing this matter and will take appropriate action. The source submitted a FESOP application on October 3, 2000, which is currently being reviewed by IDEM, OAQ.

Recommendation

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

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

An administratively complete FESOP application for the purposes of this review was received on October 3, 2000. Additional information was received on December 15, 2000 and January 16, 2001.

There was no notice of completeness letter mailed to the source.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (pages 1 through 9).

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as “the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA.”

This table reflects the PTE before controls. The PTE is the maximum uncontrolled emission rates and assume the maximum production rate for two source producing a product with the worse case VOC and HAP emissions. The source controls VOC and HAP emissions using a catalytic oxidizer.

Pollutant	Potential To Emit (tons/year)
PM	5.77
PM-10	3.04
SO_2	11.11
VOC	50.32
CO	1.84
NO_x	3.13

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

HAP's	Potential To Emit (tons/year)
Ethyl acylate	2.68
Acrylonitrile	13.07
Methyl methacrylate	15.8
Styrene	5.61
Glycol Ethers	0.25
Acrylic Acid	0.2
TOTAL	37.61

The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

Actual Emissions

No previous emission data has been received from the source.

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Federally Enforceable State Operating Permit.

	Limited Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Latex Emulsion Manufacturing Facility (SEU-1)	3.1	3.1	0	4.23	0	0	24.6(a)
Gas-Fired Boilers	26.28	26.28	11.1	0.12	1.84	3.13	Negligible
Storage Tanks	0	0	0	0.05	0	0	0.4(a)
Total Emissions	29.38	29.38	11.1	4.4	1.84	3.13	(b)

(a) Total emissions in tons per year for all HAPs.
(b) HAP emissions for the entire source are limited to less than ten (10) tons of a single HAP and less than twenty-five (25) tons of any combination of HAPs per twelve (12) consecutive month period. Since the HAP emissions from the storage tanks are less than one (1) ton per year, the emissions from the emulsion manufacturing process will be limited to 9 tons of any single HAP and 24 tons of any combination of HAPs per year.

County Attainment Status

The source is located in Clinton County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC and NO_X emissions are considered when evaluating the rule applicability relating to the ozone standards. Clinton County has been designated as attainment or unclassifiable for ozone.

Federal Rule Applicability

(a) The emulsion manufacturing facility (SEU-1) is not subject to the requirements of the New Source Performance Standard 40 CFR 60, Subpart DDD - Polymers and Resins (326 IAC 12) because this facility manufactures polystyrene in a batch process. Subpart DDD applies only to polystyrene manufacturing processes that use a continuous process.

(b) The storage tanks used for raw material and fuel oil storage are not subject to the requirements of the New Source Performance Standard 40 CFR 60, Subpart Kb - 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 (326 IAC 12), because the tank capacities are all less than 40 m^3 (10,500 gallons).

(c) The boilers are not subject to the requirements of the New Source Performance Standard 40 CFR 60, Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units (236 IAC 12), because the boilers each have a maximum heat input capacity of less than 10 MMBtu/hour and were constructed prior to 1989.

(d) The boilers are not subject to the requirements of the New Source Performance Standard 40 CFR 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units (236 IAC 12), because the boilers each have a maximum heat input capacity of less than 100 MMBtu/hour.

(e) The emulsion manufacturing facility (SEU-1) is not subject to the requirements of the National Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart JJJ (Group IV Polymers and Resins) because emissions from the entire source are limited to less than 10 tons/year for any single HAP and less than 25 tons/year for any combination of HAPs.

(f) The emulsion manufacturing facility (SEU-1) is not subject to the requirements of the National Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart U(Group I Polymers and Resins) because emissions from the entire source are limited to less than 10 tons/year for any single HAP and less than 25 tons/year for any combination of HAPs.

(g) The emulsion manufacturing facility (SEU-1) is not subject to the requirements of the National Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart W(Epoxy Resins and Non-Nylon Polymides) because emissions from the entire source are limited to less than 10 tons/year for any single HAP and less than 25 tons/year for any combination of HAPs.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

Although this chemical manufacturing plant is one of the twenty-eight (28) listed sources, the potential to emit for all regulated pollutants is less than 100 tons per year. This sources is, therefore, a minor source under 326 IAC 2-2, Prevention of Significant Deterioration.

326 IAC 2-6 (Emission Reporting)

This source is located in Clinton County and the potential to emit VOC, CO, SO_2, PM-10, and NO_X are less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

The source will be required to annually submit a statement of the actual emissions of all federally regulated pollutants from the source, for the purpose of fee assessment.

326 IAC 5-1 (Visible Opacity Limitations)

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

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

326 IAC 2-8-4 (FESOP)

Emissions of hazardous air pollutants (HAPs) shall be limited to less than (10) tons of a single HAP and less than twenty-five (25) tons of any combination of HAPs per twelve (12) consecutive month period. Since the potential emissions from the storage tanks are less than one (1) tons per year for any combination of HAPs, the emissions from the emulsion manufacturing plant (SEU-1) shall be limited to nine (9) tons per year for any single HAP and twenty-four (24) tons per year for any combination of HAPs. Compliance with these limits makes 326 IAC 2-7 not applicable.

State Rule Applicability - Individual Facilities

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

Pursuant to 326 IAC 6-2-4 (Particulate Matter Emission Limitations for Sources of Indirect Heating), the PM emissions from the two (2) five (5) MMBtu/hour heat input boilers shall be limited to 0.6 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$P_t = \frac{1.09}{Q^{0.26}} = \frac{1.09}{(10)^{0.26}} = 0.6$$

where P_t = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input; and ;
Q = total source maximum operating capacity rating in million Btu per hour (MMBtu/hr) heat input. The maximum operating capacity rating for this source is 10 MMBtu/hr.

For sources with Q less than 10 MMBtu per hour, the P_t shall not exceed 0.6 pounds per MMBtu heat input. For sources with Q equal to or greater than 10 MMBtu per hour and less than 10,000 MMBtu per hour, P_t shall be determined using the above equation. Since Q for this source equals 10 MMBtu per hour, the P_t was determined using the equation.

326 IAC 8-4 (Petroleum Sources)

326 IAC 8-4 (Petroleum Sources) is not applicable to this source because (1) the source is not located in Clark, Elkhart, Floyd, Hendricks, Lake, Marion, Porter, St. Joseph, Boone, Dearborn, Hamilton, Hancock, Harrison, Johnson, Morgan, Shelby, or Vanderburgh Counties; (2) the source does not operate a petroleum refinery, a bulk gasoline terminal, a bulk gasoline plant, or transport or dispense motor vehicle fuel; and (3) the source does not have a petroleum liquid storage vessel with a capacity of greater than 39,000 gallons.

326 IAC 6-3-2 (Process Operations)

When transferring dry materials to the zinc make-up tank, the particulate matter (PM) from the tank shall be limited to 3.1 pounds per hour when operating at a maximum capacity of 1,200 pounds of solids per hour:

This limit was calculated using 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:

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

The baghouse shall be in operation at all times the zinc make-up tank is used to mix dry materials, in order to comply with this limit.

326 IAC 8-1-6 (BACT)

Pursuant to CP PC(12)-1621, issued on September 24, 1986, the following Best Available Control Technology shall be used to control VOC emissions from the acrylic and acrylic-styrene polymer manufacturing source:

(a) Emissions of VOCs from the following units shall be vented to the catalytic oxidizer:

(1) Feed tank vents;

(2) Polymerization vessel condenser vents;

(3) Blending tank vents; and

(4) Product finishing tanks.

(b) The monomer and solvent storage tank conservation vents (pressure side) shall be piped to the catalytic oxidizer.

Volatile Organic Compounds (VOCs)

Pursuant to CP (12)-1621, issued on September 24, 1986, VOC emissions from the catalytic oxidizer shall be limited to 4.4 tons per twelve (12) consecutive month period. The catalytic oxidizer shall be operated at all times the latex emulsion manufacturing facility (SEU-1) is operated.

Pursuant to CP (12)-1621, issued on September 24, 1986, the following provisions shall be used to minimize VOC emissions from the storage tank farm:

(c) The storage tanks shall be filled in the following manner:

(1) The storage tank vapors which are displaced during filling operations are to be vented back to the tank through a closed system.

(2) Filling is to be performed in such a manner as to minimize spilling of the raw materials.

(3) Any raw materials which are spilled are to be pumped into the spill tank as soon as possible after the spill.

(d) The storage tank farm shall be equipped with a spill tank and pump for the collection of spills.

(e) Emissions from the storage tanks shall be vented to the catalytic oxidizer using a closed system.

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations)

326 IAC 7-1.1-1 (Sulfur Dioxide Emission Limitations) does not apply to the two (2) five (5) MM Btu/hr furnaces because the potential to emit $S0_2$ for each furnace is below the twenty-five (25) tons per year applicability threshold.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less 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 requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also 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.

The compliance monitoring requirements applicable to this source are as follows:

(a) The emulsion manufacturing facility (SEU-1) has applicable compliance monitoring conditions as specified below:

(1) The temperature of the catalytic oxidizer will be monitored continuously to ensure the temperature is maintained above 750°F.

(2) Eight-hour average temperatures will be made available to IDEM upon request and one-hour temperature records will be made available within five business days from request.

(3) The temperature will be reported based on an eight-hour average.

(4) The catalytic oxidizer shall operate with a five (5) degree buffer such that if the eight hour average temperature falls within five (5) degrees of the minimum required temperature, corrective action shall be performed and one-hour temperatures shall be investigated to determine if any temperature fell below the actual minimum temperature.

(5) If a one-hour temperature is less than the established minimum temperature, this will be considered noncompliance.

These monitoring conditions are necessary because the catalytic oxidizer must operate properly to ensure compliance with 326 IAC 8-1-6 (BACT) and 326 IAC 2-8 (FESOP).

(b) The two (2) five (5) MMBtu/hour boilers have applicable compliance monitoring conditions as specified below:

Visible emission notations of the boiler stack exhausts (S-14 and S-15) shall be performed once per shift during normal daylight operations when combusting fuel oil. A trained employee shall record whether emissions are normal or abnormal. For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

These monitoring conditions are necessary because the boilers must operate properly to ensure compliance with 326 IAC 6-2-4 (Particulate Matter Emissions Limitations for Sources of Indirect Heating).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the 1990 Clean Air Act. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Quality (OAQ) FESOP Application Form GSD-08.

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

Conclusion

The operation of this acrylic latex emulsions manufacturing plant shall be subject to the conditions of the attached proposed (FESOP No.: F023-12762-00023).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler

Company Name: **NeoResins**
Address City IN Zip: **3110 West State Road 28, Frankfort, IN 46041**
CP: **023-12762-00023**
Plt ID: **00023**
Reviewer: **ERG/AB**
Date: **12/05/00**

Two 5.0 MMBtu/hr boilers.

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
5.0	43.8

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	7.6	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.17	0.17	0.01	2.19	0.12	1.84

*PM emission factor is filterable and condensable PM.

**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

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emissions calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name: NeoResins
Address City IN Zip: 3110 West State Road 28, Frankfort, IN 46041
CP: 023-12762-00023
Plt ID: 00023
Reviewer: ERG/AB
Date: 12/05/00

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.599E-05	2.628E-05	1.643E-03	3.942E-02	7.446E-05

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.095E-05	2.409E-05	3.066E-05	8.322E-06	4.599E-05

Methodology is the same as page 1.

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

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#2 Fuel Oil

Company Name: **NeoResins**
Address, City IN Zip: **3110 West State Road 28, Frankfort, IN 46041**
CP: **023-12762-00023**
Plt ID: **00023**
Reviewer: **ERG/AB**
Date: **12/05/00**

Two 5 MMBtu/hr boilers.

Heat Input Capacity MMBtu/hr	Potential Throughput kgals/year	S = Weight % Sulfur
		0.5
5	312.857143	

	Pollutant				
	PM*	SO2	NOx	VOC	CO
Emission Factor in lb/kgal	2.0	71 *(142.0S)*	20.0	0.34	5.0
Potential Emission in tons/yr	0.3	11.1	3.1	0.1	0.8

Methodology

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

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

Emission Factors are from AP 42, Tables 1.3-1, 1.3-2, and 1.3-3 (SCC 1-03-005-01/02/03) Supplement E 9/98 (see erata file)
*PM emission factor is filterable PM only. Condensable PM emission factor is 1.3 lb/kgal.
Emission (tons/yr) = Throughput (kgals/ yr) x Emission Factor (lb/kgal)/2,000 lb/ton
Note: Check the applicable rules and test methods for PM and PM10 when using the above emission factors to confirm that the correct factor is used (i.e., condensable included/not included).

See page 2 for HAPs emission calculations.

Appendix A: Emissions Calculations
Commercial/Institutional/Residential Combustors (< 100 mmBtu/hr)
#2 Fuel Oil
HAPs Emissions

Company Name: NeoResins
Address, City IN Zip: 3110 West State Road 28, Frankfort, IN 46041
CP: 023-12762-00023
Plt ID: 00023
Reviewer: ERG/AB
Date: 12/05/00

HAPs - Metals

	Arsenic	Beryllium	Cadmium	Chromium	Lead
Emission Factor in lb/mmBtu	4.0E-06	3.0E-06	3.0E-06	3.0E-06	9.0E-06
Potential Emission in tons/yr	8.76E-05	6.57E-05	6.57E-05	6.57E-05	1.97E-04

HAPs - Metals (continued)

	Mercury	Manganese	Nickel	Selenium
Emission Factor in lb/mmBtu	3.0E-06	6.0E-06	3.0E-06	1.5E-05
Potential Emission in tons/yr	6.57E-05	1.31E-04	6.57E-05	3.29E-04

Methodology

No data was available in AP-42 for organic HAPs.
Potential Emissions (tons/year) = Throughput (mmBtu/hr)*Emission Factor (lb/mmBtu)*8,760 hrs/yr / 2,000 lb/ton

Appendix A: Emissions Calculations
VOC Emissions from Storage Tanks

Company Name: NeoResins
Address, City IN Zip: 3110 West State Road 28, Frankfort, IN 46041
CP: 023-12762-00023
Plt ID: 00023
Reviewer: ERG/AB
Date : 12/05/00

Tank ID	Material Stored	Tank Volume (gallons)	Date Constructed	Annual Throughput (gal/yr)	Control Equipment	Vapor Pressure (Psig)	Working Loss (lbs/yr)	Breathing Loss (lbs/yr)	Total Emissions (lbs/yr)	Emissions After Controls (lbs/yr)		
										Working Emissions	Breathing Emissions	Total
TK-101	Ethyl acrylate	5,330	1986	5,100	1	0.4016	4.88	48.40	53.28	0.49	2.42	2.91
TK-102	Acrylonitrile	5,630	1986	112,400	1	1.1827	167.93	93.38	261.32	16.79	4.67	21.46
TK-103	Isobutyl acrylate	5,330	1986	8,100	1	0.085	2.07	0.02	2.09	0.21	0.00	0.21
TK-105	n-butyl acrylate	8,515	1986	538,500	1	0.087	141.17	19.71	160.88	14.12	0.99	15.10
TK-106	n-butyl methacrylate	8,210	1986	429,000	1	0.04	57.36	6.67	64.03	5.74	0.33	6.07
TK-107	2-ethylhexyl acrylate	8,210	1986	179,900	1	0.008	6.23	1.74	7.97	0.62	0.09	0.71
TK-108	Methyl Methacrylate	8,210	1986	371,900	1	0.348	255.70	59.81	315.50	25.57	2.99	28.56
TK-109	Styrene	8,520	1986	411,800	1	0.058	46.67	10.58	57.25	4.67	0.53	5.20
TK-110	Styrene	8,210	1986	411,800	1	0.058	45.33	9.49	54.82	4.53	0.47	5.01
TK-111	Glycol Ethers	8,520	1986	95,200	1	0.01	2.64	2.14	4.78	0.26	0.11	0.37
TK-112	Hydrocarbon Blend	8,210	1986	43,500	1	0.02	2.46	2.83	5.29	0.25	0.14	0.39
TK-125	Acrylic Acid	6,310	1987	52,100	2	0.0358	3.20	0.76	3.96	0.32	0.76	1.08
TK-126	Methacrylic Acid	4,295	1987	51,800	2	0.02	1.57	0.12	1.69	0.16	0.12	0.28
TK-349	No. 2 Fuel Oil	8,032	1987	625,720	None	0.0053	5.67	0.71	6.38	5.67	0.71	6.38
Totals									999.24			93.72

Note : All tanks are above-ground, fixed-roof dome tanks.

1 = Breathing emissions controlled using a Catalytic Oxidizer with approx. 95% efficiency; Working emissions controlled using vapor balance with 90% efficiency.

2 = Working emissions controlled using vapor balance with 90% efficiency.

Methodology

VOC emissions were calculated using the TANKS 4.0 and AP-42, Section 7.1: Organic Liquid Storage Tanks

Appendix A: Emissions Calculations
HAP Emissions from Storage Tanks

Company Name: **NeoResins**
Address, City IN Zip: **3110 West State Road 28, Frankfort, IN 46041**
CP: **023-12762-00023**
Plt ID: **00023**
Reviewer: **ERG/AB**
Date: **12/05/00**

Tank ID	Material Stored	Tank Volume (gallons)	Date Constructed	Annual Throughput (gal/yr)	Control Equipment	Vapor Pressure (Psig)	Working Loss (lbs/yr)	Breathing Loss (lbs/yr)	Total Emissions (lbs/yr)	Emissions After Controls (lbs/yr)		
										Working Emissions	Breathing Emissions	Total
TK-101	Ethyl acrylate	5,330	1986	5,100	1	0.4016	4.88	48.40	53.28	0.49	2.42	2.91
TK-102	Acrylonitrile	5,630	1986	112,400	1	1.1827	167.93	93.38	261.32	16.79	4.67	21.46
TK-108	Methyl Methacrylate	8,210	1986	371,900	1	0.348	255.70	59.81	315.50	25.57	2.99	28.56
TK-109	Styrene	8,520	1986	411,800	1	0.058	46.67	10.58	57.25	4.67	0.53	5.20
TK-110	Styrene	8,210	1986	411,800	1	0.058	45.33	9.49	54.82	4.53	0.47	5.01
TK-111	Glycol Ethers	8,520	1986	95,200	1	0.01	2.64	2.14	4.78	0.26	0.11	0.37
TK-125	Acrylic Acid	6,310	1987	52,100	2	0.0358	3.20	0.76	3.96	0.32	0.76	1.08
Totals									750.91			64.59

Note : All tanks are above-ground, fixed-roof dome tanks.
1 = Breathing emissions controlled using a Catalytic Oxidizer with approx. 95% efficiency; Working emissions controlled using vapor balance with 90% efficiency.
2 = Working emissions controlled using vapor balance with 90% efficiency.

Methodology

VOC emissions were calculated using the TANKS 4.0 and AP-42, Section 7.1: Organic Liquid Storage Tanks

Appendix A: Emissions Calculations
VOC and HAP Emissions from SEU-1

Company Name: NeoResins
Address, City IN Zip: 3110 West State Road 28, Frankfort, IN 46041
CP: 023-12762-00023
Plt ID: 00023
Reviewer: ERG/AB
Date: 01/15/01

Estimate of Maximum Potential VOC Emissions

Maximum VOC emissions = 7.99 lbs/hr *

*Estimate based on stack tests conducted January 8, 1992 and assumes 95% control efficiency for the catalytic oxidizer.

Production Rate During Stack Tests = 6,338 lbs/hr

VOC Emission Rate = (7.994 lbs VOC/hr) / (6,338 lbs product/hr) = 1.26E-3 lbs of VOC/ lb product

Maximum Production = 78,840,000 lbs Product/yr

Maximum VOC Emissions = (78,840,000 lbs/yr) * (1.26E-3 lbs VOC/lb Product) = 99,338 lbs VOC/year
or
49.7 tons of VOC/year

Potential Emissions After Controls = (1-0.95) * 49.7 tons/year = 2.49 tons/year.

Appendix A: Emissions Calculations
PM Emissions from Zinc Make-up Tank

Company Name: **NeoResins**
Address, City IN Zip: **3110 West State Road 28, Frankfort, IN 46041**
CP: **023-12762-00023**
Plt ID: **00023**
Reviewer: **ERG/AB**
Date: **01/15/01**

Amount of Solids Handled (lbs)	Number of Hours per Batch	Number of Batches Per Year*	Total Solids Handled (tons/year)	PM-10 Emission Factor (lbs/ton)**	PM Emission Factor (lbs/ton)**	Max. PM-10 Emissions		Max. PM Emissions	
						Before Controls (tons/yr)	After Controls (tons/yr)***	Before Controls (tons/yr)	After Controls (tons/yr)***
1,300	1	70	45.50	0.06	0.12	2.73	0.0007	5.46	0.55

Notes:
* The maximum number of batches per year is limited by the capacity of the reactors.
**Emission factor from AP-42, Chapter 11.24.2, Table 11.24-2, SCC 3-05-024-04.
*** Assuming a control efficiency of 90% for the baghouse.

Methodology:
Emissions before controls (tons/yr) = Total solids handled (tons/yr) * PM Emission Factor (lbs/ton)
Emissions after controls (tons/yr) = Total solids handled (tons/yr) * PM-10 Emission Factor (lbs/ton)

Appendix A: Emissions Calculations
HAP Emissions from SEU-1

Company Name: NeoResins
Address, City IN Zip: 3110 West State Road 28, Frankfort, IN 46041
CP: 023-12762-00023
Plt ID: 00023
Reviewer: ERG/AB
Date: 01/15/01

Estimate of Maximum Potential HAP Emissions

Chemical	HAP	Throughput (gallons/yr)	Uncontrolled Tank Emissions (lbs/yr)	Percentage of Chemical in Total VOC Emissions	Relative Percent of Each HAP	Max. HAP Emissions (ltons/yr)
Ethyl acylate	x	5,100	53.30	5.4	7.13	2.68
Acrylonitrile	x	112,400	261.30	26.3	34.74	13.07
Isobutyl acrylate		8,100	2.10	0.2		
n-butyl acrylate		538,500	160.90	16.2		
n-butyl methacrylate		429,000	64.00	6.4		
2-ethylhexyl acrylate		179,900	8.00	0.8		
Methyl methacrylate	x	371,900	315.50	31.8	42.01	15.8
Styrene	x	823,600	112.10	11.3	14.92	5.61
Glycol Ethers	x	95,200	4.80	0.5	0.66	0.25
Hydrocarbon blend		43,500	5.30	0.5		
Acrylic Acid	x	52,100	4.00	0.4	0.53	0.2
Methacrylic Acid		51,800	1.70	0.2		
Total VOC Emissions			993.00	100		37.61
HAP Emissions (%)				75.7		

Maximum HAP Emissions (tons/year) = (49.7 tons of VOC/year) * (75.7/100) = 37.62 tons of HAP/year

Emissions for Individual HAPs was calculated as follows:

Emissions (tons/year) = (Relative Percentage of HAP (%) /100) * 37.62 tons/year