217/782-2113

TITLE V - CLEAN AIR ACT PERMIT PROGRAM (CAAPP) PERMIT
and
TITLE I PERMIT[1]

PERMITTEE

H & R Industries, Inc.
Attn: Kris Kluge, General Manager
30553 South Dixie Highway
Beecher, Illinois 60401

Application No.: 95120148 I.D. No.: 197818AAA
Applicant's Designation: Date Received: December 12, 1995
Operation of: Polyester Resin Product Manufacturing Process
Date Issued: November 1, 2000 Expiration Date[2]: November 1, 2005
Source Location: 30553 South Dixie Highway, Beecher, Will County
Responsible Official: Kris Kluge, General Manager

This permit is hereby granted to the above-designated Permittee to operate a polyester resin product manufacturing plant, pursuant to the above referenced permit application. This permit is subject to the conditions contained herein.

If you have any questions concerning this permit, please contact Jonathan Sperry at 217/782-2113.

Donald E. Sutton, P.E.
Manager, Permit Section
Division of Air Pollution Control

DES:JS:psj

cc: Illinois EPA, FOS Region #1
USEPA

[1] This permit may contain terms and conditions which address the applicability, and compliance if determined applicable, of Title I of the CAA and regulations promulgated thereunder, including 40 CFR 52.21 – federal PSD and 35 IAC Part 203 – Major Stationary Sources Construction and Modification. Any such terms and conditions are identified within this permit.

[2] Except as provided in Condition 8.7 of this permit.

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1.0 SOURCE IDENTIFICATION

1.1 Source

H & R Industries, Inc.
30553 South Dixie Highway
Beecher, Illinois 60401
708/946-3244

ID No.: 197818AAA
Standard Industrial Classification: 3089, Plastic Products

1.2 Owner/Parent Company

Gary M. Hase
30553 South Dixie Highway
Beecher, Illinois 60401

1.3 Operator

H & R Industries, Inc.
30553 South Dixie Highway
Beecher, Illinois 60401

Robert Adams
708/946-3244

1.4 General Source Description

H & R Industries, Inc. manufactures polyester resin plastic products (e.g., plastic and composite insulated storage containers, electrical enclosures, housings for generators, freezer modules and doors, storm boxes, CO_2 tanks).

2.0 LIST OF ABBREVIATIONS/ACRONYMS USED IN THIS PERMIT

Act	Illinois Environmental Protection Act [415 ILCS 5/1 et seq.]
AP-42	Compilation of Air Pollution Emission Factors, Volume 1, Stationary Point and Other Sources (and Supplements A through E), USEPA, Office of Air Quality Planning and Standards, Research Triangle Park, NC 27717
ATU	Allotment Trading Unit
Btu	British thermal unit
CO_2	Carbon Dioxide
CAA	Clean Air Act [42 U.S.C. Section 7401 et seq.]
CAAPP	Clean Air Act Permit Program
CFA	Composite Fabricators Association
CFR	Code of Federal Regulations
cm	centimeter
ERMS	Emissions Reduction Market System
ft^3	cubic foot
gal	gallon
hr	hour
HAP	Hazardous Air Pollutant
IAC	Illinois Administrative Code
I.D. No.	Identification Number of Source, assigned by Illinois EPA
ILCS	Illinois Compiled Statutes
Illinois EPA	Illinois Environmental Protection Agency
kg	kilogram
lb	pound
Mg	Megagram
m	meter
MMA	Methyl Methacrylate
mmBtu	Million British Thermal Units
mo	month
MW	Megawatt
N/A	Not applicable
NESHAP	National Emission Standards for Hazardous Air Pollutants
NMMA	National Marine Manufacturers Association
NO_x	Nitrogen Oxides
NVS	non-vapor suppressant
PM	Particulate Matter
ppm	parts per million
PSD	Prevention of Significant Deterioration
psi	pounds per square inch
RMP	Risk Management Plan
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SO_2	Sulfur Dioxide

T	Ton
T1	Title I – identifies Title I conditions that have been carried over from an existing permit
T1N	Title I New – identifies Title I conditions that are being established in this permit
T1R	Title I Revised – identifies Title I conditions that have been carried over from an existing permit and subsequently revised in this permit
UEF	Unified Emission Factor
USEPA	United States Environmental Protection Agency
VOM	Volatile Organic Material
VS	Vapor-suppressant
VSR	Vapor Suppressed Resin
yr	year

3.0 INSIGNIFICANT ACTIVITIES

3.1 Identification of Insignificant Activities

The following activities at the source constitute insignificant activities as specified in 35 IAC 201.210:

3.1.1 Activities determined by the Illinois EPA to be insignificant activities, pursuant to 35 IAC 201.210(a)(1) and 201.211, as follows:

Diesel Fuel Tank (275 Gallons)

3.1.2 Activities that are insignificant activities based upon maximum emissions, pursuant to 35 IAC 201.210(a)(2) or (a)(3), as follows:

Natural Gas-Fired Rotational Molders (Poly Machines)
Dust Hog Baghouses

3.1.3 Activities that are insignificant activities based upon their type or character, pursuant to 35 IAC 201.210(a)(4) through (18), as follows:

Direct combustion units designed and used for comfort heating purposes and fuel combustion emission units as follows: (A) Units with a rated heat input capacity of less than 2.5 mmBtu/hr that fire only natural gas, propane, or liquefied petroleum gas; (B) Units with a rated heat input capacity of less than 1.0 mmBtu/hr that fire only oil or oil in combination with only natural gas, propane, or liquefied petroleum gas; and (C) Units with a rated heat input capacity of less than 200,000 Btu/hr which never burn refuse, or treated or chemically contaminated wood [35 IAC 201.210(a)(4)].

Storage tanks of organic liquids with a capacity of less than 10,000 gallons and an annual throughput of less than 100,000 gallons per year, provided the storage tank is not used for the storage of gasoline or any material listed as a HAP pursuant to Section 112(b) of the CAA [35 IAC 201.210(a)(10)].

3.1.4 Activities that are considered insignificant activities pursuant to 35 IAC 201.210(b).

3.2 Compliance with Applicable Requirements

Insignificant activities are subject to applicable requirements notwithstanding status as insignificant activities. In

particular, in addition to regulations of general applicability, such as 35 IAC 212.301 and 212.123 (Condition 5.2.2), the Permittee shall comply with the following requirements, as applicable:

3.2.1 For each cold cleaning degreaser, the Permittee shall comply with the applicable equipment and operating requirements of 35 IAC 215.182, 218.182, or 219.182.

3.2.2 For each particulate matter process emission unit, the Permittee shall comply with the applicable particulate matter emission limit of 35 IAC 212.321 or 212.322. For example, the particulate matter emissions from a process emission unit shall not exceed 0.55 pounds per hour if the emission unit’s process weight rate is 100 pounds per hour or less, pursuant to 35 IAC 266.110.

3.2.3 For each organic material emission unit that uses organic material, e.g., a mixer or printing line, the Permittee shall comply with the applicable VOM emission limit of 35 IAC 215.301, 218.301, or 219.301, which requires that organic material emissions not exceed 8.0 pounds per hour or do not qualify as photochemically reactive material as defined in 35 IAC 211.4690.

3.3 Addition of Insignificant Activities

3.3.1 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type that is identified in Condition 3.1, until the renewal application for this permit is submitted, pursuant to 35 IAC 201.212(a).

3.3.2 The Permittee must notify the Illinois EPA of any proposed addition of a new insignificant activity of a type addressed by 35 IAC 201.210 (a) and 201.211 other than those identified in Condition 3.1, pursuant to Section 39.5(12)(b) of the Act.

3.3.3 The Permittee is not required to notify the Illinois EPA of additional insignificant activities present at the source of a type identified in 35 IAC 201.210(b).

4.0 SIGNIFICANT EMISSION UNITS AT THIS SOURCE

Emission Unit	Description	Date Constructed	Emission Control Equipment
SB-1	Spray Booth 1 (Gelcoat/Paint Spray Operation)	Prior to 4/1984	Booth Filters
DB-1	Dust Booth 1 (Cutting and Grinding Operation)	Prior to 4/1984	Booth Filters
SB-2	Spray Booth 2 (Gelcoat/Resin Spray Operation)	Prior to 4/1984	Booth Filters
SB-3	Spray Booth 3 (Resin Spray Operation)	Prior to 4/1984	Booth Filters, Eurovac Dust Collection System
SB-4	Spray Booth 4 (Resin Spray Operation	1/1987	Booth Filters, Eurovac Dust Collection System
SB-5	Spray Booth 5 (Gelcoat/Resin Spray Operation	10/2000	Booth Filters

5.0 OVERALL SOURCE CONDITIONS

5.1 Source Description

5.1.1 This permit is issued based on the source requiring a CAAPP permit as a major source of VOM emissions.

5.1.2 This permit is also issued based on the source being a major source of HAPs.

5.2 Applicable Regulations

5.2.1 Specific emission units at this source are subject to particular regulations as set forth in Section 7 (Unit-Specific Conditions) of this permit.

5.2.2 In addition, emission units at this source are subject to the following regulations of general applicability:

a. No person shall cause or allow the emission of fugitive particulate matter from any process, including any material handling or storage activity, that is visible by an observer looking generally overhead at a point beyond the property line of the source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 IAC 212.301 and 212.314.

b. i. This source shall be operated under the provisions of an operating program prepared by the Permittee and submitted to the Illinois EPA for its review. Such operating program shall be designed to significantly reduce fugitive particulate matter emissions [35 IAC 212.309(a)].

ii. The operating program shall be amended from time to time by the Permittee so that the operating program is current. Such amendments shall be consistent with the requirements set forth by this Condition and shall be submitted to the Illinois EPA [35 IAC 212.312].

iii. All normal traffic pattern roads and parking facilities located at this source shall be paved or treated with water, oils, or chemical dust suppressants. All paved areas shall be cleaned on a regular basis. All areas treated with water, oils, or chemical dust suppressants shall have the treatment applied

on a regular basis, as needed, in accordance with the operating program [35 IAC 212.306].

c. Emissions of smoke or other particulate matter from any emission unit shall not exceed 30% opacity, except that opacity of greater than 30% but less than 60% shall be allowed for periods aggregating 8 minutes in any 60 minute period provided that such more opaque emissions permitted during any 60 minute period shall occur from only one such emission unit located within a 305 m (1000 ft) radius from the center point of any such emission unit owned and operated by the permittee and provided further that such more opaque emissions permitted from each such unit shall be limited to 3 times per 24 hour period pursuant to 35 IAC 212.123(a) and (b).

5.2.3 The permittee shall comply with the standards for recycling and emissions reduction of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

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.

5.2.4 Risk Management Plan

Should this stationary source, as defined in 40 CFR Section 68.3, become subject to the Accidental Release Prevention regulations in 40 CFR Part 68, then the owner or operator shall submit [40 CFR 68.215(a)(2)(i) and (ii)]:

a. A compliance schedule for meeting the requirements of 40 CFR Part 68 by the date provided in 40 CFR 68.10(a); or

b. A certification statement that the source is in compliance with all requirements of 40 CFR Part 68, including the registration and submission of the Risk Management Plan (RMP), as part of the annual compliance certification required by 40 CFR Part 70 or 71.

5.2.5 a. Should this stationary source become subject to a regulation under 40 CFR Parts 60, 61, or 63, or 35 IAC after the date issued of this permit, then the owner or operator shall, in accordance with the applicable regulation(s), comply with the applicable requirements by the date(s) specified and shall certify compliance with the applicable requirements of such regulation(s) as part of the annual compliance certification, as required by 40 CFR Part 70 or 71.

b. No later than upon the submittal for renewal of this permit, the owner or operator shall submit, as part of an application, the necessary information to address either the non-applicability of, or demonstrate compliance with all applicable requirements of any potentially applicable regulation which was promulgated after the date issued of this permit.

c. This stationary source will be subject to 40 CFR Part 63, Subpart WWWW, Reinforced Plastic Composites Production, when such rule becomes final and effective. The Permittee shall comply with the applicable requirements of such regulation by the date(s) specified in such regulation and shall certify compliance with the applicable requirements of such regulation as part of the annual compliance certification required by 40 CFR Part 70 or 71 beginning in the year that compliance is required under a final and effective rule.

5.2.6 Episode Action Plan

a. If the source is required to have an episode action plan pursuant to 35 IAC 244.142, the Permittee shall maintain at the source and have on file with the Illinois EPA a written episode action plan (plan) for reducing the levels of emissions during yellow alerts, red alerts, and emergencies, consistent with safe operating procedures. The plan shall contain the information specified in 35 IAC 244.144.

b. The Permittee shall immediately implement the appropriate steps described in this plan should an air pollution alert or emergency be declared.

c. If a change occurs at the source which requires a revision of the plan (e.g., operational change, change in the source contact person), a copy of the revised plan shall be submitted to the Illinois EPA for review within 30 days of the change. Such plans shall be further revised if disapproved by the Illinois EPA.

d. For sources required to have a plan pursuant to 35 IAC 244.142, a copy of the original plan and any subsequent revisions shall be sent to:

i. Illinois EPA, Compliance Section; and

ii. For sources located in Cook County and outside of the city of Chicago: Cook County Department of Environmental Control; or

iii. For sources located within the city of Chicago: Chicago Department of Environmental Control.

5.3 Non-Applicability of Regulations of Concern

None

5.4 Source-Wide Operational and Production Limits and Work Practices

In addition to the source-wide requirements in the Standard Permit Conditions in Section 9, the Permittee shall fulfill the following source-wide operational and production limitations and/or work practice requirements:

None

5.5 Source-Wide Emission Limitations

5.5.1 Permitted Emissions for Fees

The annual emissions from the source, not considering insignificant activities as addressed by Section 3.0 of this permit, shall not exceed the following limitations. The overall source emissions shall be determined by adding emissions from all emission units. Compliance with these limits shall be determined on a calendar year basis. These

limitations (Condition 5.5.1) are set for the purpose of establishing fees and are not federally enforceable.

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	85.50
Sulfur Dioxide (SO_2)	----
Particulate Matter (PM)	10.00
Nitrogen Oxides (NO_x)	----
HAP, not included in VOM or PM	----
TOTAL	95.50

5.5.2 Emissions of Hazardous Air Pollutants

This permit is issued based on the emissions of HAPs as listed in Section 112(b) of the Clean Air Act is being equal to or exceeding 10 tons per year of a single HAP or 25 tons per year of any combination of such HAPs, so that this source is considered a major source for HAPs.

5.5.3 Other source-wide emission limitations are not set for this source pursuant to either the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21, Illinois EPA rules for Major Stationary Sources Construction and Modification, 35 IAC Part 203, or Section 502(b)(10) of the CAA. However, there may be unit specific emission limitations set forth in Section 7 of this permit pursuant to these rules.

5.6 General Record keeping Requirements

5.6.1. The Permittee shall maintain records of the following items to demonstrate compliance with Condition 5.5.1, pursuant to Section 39.5(7)(b) of the Act:

Total annual emissions of the source, determined as the total of the emission data required to be kept by Section 7 (Unit Specific Condition) of this permit.

5.6.2 Retention and Availability of Records

a. All records and logs required by this permit shall be retained for at least five years from the date of entry (unless a longer retention period is specified by the particular Record keeping provision herein), shall be kept at a location at the source that is readily accessible to the Illinois EPA or USEPA, and

shall be made available for inspection and copying by the Illinois EPA or USEPA upon request.

b. The Permittee shall retrieve and print, on paper during normal source office hours, any records retained in an electronic format (e.g., computer) in response to an Illinois EPA or USEPA request for records during the course of a source inspection.

5.7 General Reporting Requirements

5.7.1 General Source-Wide Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of the source with the requirements of this permit as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken.

5.7.2 Annual Emission Report

The annual emission report required pursuant to Condition 9.7 shall contain emissions information for the previous year.

5.8 General Operational Flexibility/Anticipated Operating Scenarios

N/A

5.9 General Compliance Procedures

5.9.1 General Procedures for Calculating Allowable Emissions

Compliance with the source-wide emission limits specified in Condition 5.5 shall be based on the recordkeeping requirements of Conditions 5.6 and 5.7, and Compliance Procedures in Section 7 (Unit Specific Conditions) of this permit.

6.0 EMISSIONS REDUCTION MARKET SYSTEM (ERMS)

6.1 Description of ERMS

The ERMS is a “cap and trade” market system for major stationary sources located in the Chicago ozone nonattainment area. It is designed to reduce VOM emissions from stationary sources to contribute to further reasonable progress toward attainment, as required by Section 182(c) of the Clean Air Act.

The ERMS addresses VOM emissions during a seasonal allotment period from May 1 through September 30. Participating sources must hold “allotment trading units” (ATUs) for their actual seasonal VOM emissions. Each year participating sources are issued ATUs based on allotments set in the sources’ CAAPP permit. These allotments are established from historical VOM emissions or “baseline emissions” lowered to provide the emission reduction from stationary sources required for further progress.

By December 31 of each year, the end of the reconciliation period following the seasonal allotment period, each source should have sufficient ATUs in its account to cover its actual VOM emissions during the preceding season. An account’s balance as of December 31 will include any valid ATU transfer agreements entered into as of December 31 of the given year, provided such agreements are promptly submitted to the Illinois EPA for entry into the account database. The Illinois EPA will then retire ATUs in sources’ accounts in amounts equivalent to their seasonal emissions. When a source does not appear to have sufficient ATUs in its account, the Illinois EPA will issue a notice to the source to begin the process for Emissions Excursion Compensation.

In addition to receiving ATUs pursuant to their allotments, participating sources may also obtain ATUs from the market, including ATUs bought from other participating sources and general participants in the ERMS that hold ATUs (35 IAC 205.630) and ATUs issued by the Illinois EPA as a consequence of VOM emission reductions from an Emission Reduction Generator or an Intersector Transaction (35 IAC 205.500 and 205.510). During the reconciliation period, sources may also buy ATUs from a secondary reserve of ATUs managed by the Illinois EPA, the Alternative Compliance Market Account (35 IAC 205.710). A source may also transfer or sell the ATUs that it holds to other sources or participants (35 IAC 205.630).

6.2 Applicability

a. Emissions of VOM from the source for the seasonal allotment period of May 1 through September 30 of each year shall not exceed 15 tons, not including VOM emissions from insignificant units and activities as identified in

Section 3 of this permit. This limitation is established at the request of the source to exempt it from the requirements of 35 IAC Part 205, Emissions Reduction Market System (ERMS) pursuant to 35 IAC 205.205.

6.3 Recordkeeping and Reporting

a. The Permittee shall maintain the following records to determine compliance with the above limitation:

i. Records of operating data and other information for each individual emission unit or group of related emission units at the source, as specified in Sections 5 and 7 of this permit, as appropriate to determine VOM emissions during the seasonal allotment period;

ii. Records of the VOM emissions in tons during the seasonal allotment period, with supporting calculations, for each individual emission unit or group of related emission units at the source, determined in accordance with the procedures specified in Sections 5 and 7 of this permit;

iii. Total VOM emissions from the source in tons during each seasonal allotment period.

b. The Permittee shall submit the seasonal emissions component of the annual emissions report by (October 31, November 30) of each year, reporting emissions of VOM during the seasonal allotment period, in accordance with 35 IAC 205.205(b) and 205.300.

c. In the event that the source's VOM emissions during the seasonal allotment period exceed 15 tons, the source shall no longer be exempt from the ERMS and beginning with the following seasonal allotment period, shall comply with 35 IAC 205.200, by holding allotment trading units (ATUs) for its VOM emissions during each seasonal allotment period.

6.4 Federal Enforceability

Section 6.0 becomes federally enforceable upon approval of the ERMS by USEPA as part of Illinois’ State Implementation Plan.

7.0 UNIT SPECIFIC CONDITIONS

7.1 Units 01-05 - Polyester Resin Product Manufacturing Processes

7.1.1 Description

H & R Industries, Inc., manufactures polyester resin plastic products (i.e., plastic and composite insulated storage containers, electrical enclosures, generators housing, freezer module and doors, storm box, CO_2 tanks).

H & R Industries, Inc., employs the use of unsaturated polyester resins reinforced with glass fibers. These resins may be used in conjunction with various inorganic filler materials such as calcium carbonate, ATH, talc, mica, or small glass spheres, among others. In some instances, a variety of other reinforcement fibers such as carbon fibers, aramid fibers, and others may be used. In some instances, epoxy, or methacrylate based resins, among others, may be used.

The resin materials used in this industry are generally referred to as thermosetting resins. The thermosetting polyester resins used are complex polymers resulting from the cross-linking reaction of a liquid unsaturated resin with a vinyl type monomer, most commonly styrene.

In order to be used in the fabrication process, the liquid resin must be mixed with an initiator, often referred to as a catalyst, which will initiate the polymerization into the solid, thermoset plastic. These initiators are typically organic peroxides (usually methyl ethyl ketone peroxide or benzoyl peroxide).

The styrene monomer in the liquid resin serves the dual purpose of a reactive vinyl monomer, and a diluent, reducing the resin to a workable viscosity. During the processing of the polyester resin, a measurable amount of styrene monomer will evaporate. Most of the styrene monomer becomes cross-linked into the solid thermoset plastic. The styrene must provide the cross-link reaction, or the resin will not polymerize.

This plant was constructed prior to January 1987 in Will County, which is a severe ozone nonattainment area. They use a spray lay-up process, nonvapor-suppressed resin, nonvapor-suppressed gel coat, hand lay-up, and closed molding. In the future the plant has plans to use continuous lamination, pultrusion, filament winding, and polymer casting process.

7.1.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description	Emission Control Equipment
SB-1	Spray Booth #1 (Gelcoat/Paint Spray Operation)	Booth Filters
DB-1	Dust Booth #1 (Cutting and Grinding Operations)	Booth Filters
SB-2	Spray Booth #2 (Gelcoat/Resin Spray Operation)	Booth Filters
SB-3	Spray Booth #3 (Resin Spray Operation)	Booth Filters, Eurovac Dust Collection System
SB-4	Spray Booth #4 (Resin Spray Operation)	Booth Filters, Eurovac Dust Collection System
SB-5	Spray Booth #5 (Gelcoat/Resin Spray Operation)	Booth Filters

7.1.3 Applicable Regulations

a. The “affected polyester resin product manufacturing process” for the purpose of these unit-specific conditions, is a process for manufacturing polyester resin plastic products, as listed in Condition 7.1.2.

b. Each affected polyester resin product manufacturing process is subject to 35 IAC 218.301, which states that:

No person shall cause or allow the discharge of more than 3.6 kg/hr (8 lb/hr) of organic material into the atmosphere from any emission unit, with the following exception: If no odor nuisance exists the limitations of 35 IAC 218.301 shall only apply to photochemically reactive material [35 IAC 218.301].

c. Each affected polyester resin product manufacturing process is subject to 35 IAC 218 Subpart CC: Polyester Resin Manufacturing Process. The requirements of 35 IAC 218 Subpart CC shall apply to a source's polyester resin products manufacturing process emission units and associated handling of materials, cleanup activity, and formulation activity [35 IAC 218.660(a)(2)].

d. Each affected polyester resin product manufacturing process at the source is subject to 35 IAC 212.321(a), which requires that:

No person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321 (See also Attachment 2) [35 IAC 212.321(a)].

7.1.4 Non-Applicability of Regulations of Concern

a. The affected polyester resin product manufacturing process is not subject to 35 IAC 218 Subpart QQ: Miscellaneous Formulation Manufacturing Process because the requirements of 35 IAC Subpart QQ shall not apply to a source's miscellaneous formulation manufacturing process emission units which are included within the category specified by 35 IAC 218 Subpart CC [35 IAC 218.940(b)(2)].

b. The affected polyester resin product manufacturing process is not subject to 40 CFR 63, Subparts U and JJJ: National Emission Standards for Hazardous Air Pollutants: Group I and IV Polymers and Resins, because the manufacture of polyester products is not included in these regulations.

7.1.5 Operational and Production Limits and Work Practices

a. Every owner or operator of an affected polyester resin product manufacturing process shall comply with the operating requirements below [35 IAC 218.666(a)]:

i. Any of the following:

A. Use polyester resin material with a monomer content as follows:

1. For polyester resin materials used for products requiring corrosion resistant or fire retardant materials, a monomer content of no more than 48% by weight as applied;

2. For polyester resin materials for products requiring a tensile strength of 10,000 psi or more, including tooling resins, a monomer content of no more than 48% by weight as applied;

3. For clear gel coat, a monomer content of no more than 50% by weight as applied;

4. For other pigmented gel coats, a monomer content of no more than 45% by weight as applied; or

5. For all other polyester resin materials, a monomer content of no more than 35% by weight as applied.

B. Use a closed-mold system or pultrusion system which will result in less than 4% weight loss of polyester resin materials;

C. Use vapor suppressed polyester resin approved by the Illinois EPA in the source's permit such that weight loss from VOM emissions does not exceed 60 grams per square meter of exposed surface area during molding; or

D. Use any materials or processes that are demonstrated to the satisfaction of the Illinois EPA to achieve VOM emission levels equivalent to any of the above. This alternative must be approved by the Illinois EPA and the USEPA in a federally enforceable permit or as a SIP revision.

ii. For spraying operations, in addition to the requirements specified in 35 IAC 218.666(a)(1) above, use only high-volume low pressure (HVLP), airless, air-assisted airless, or electrostatic spray equipment, except for touch-up and repair using a hand-held, air-atomized spray gun which has a container for polyester resin material as part of the gun.

b. Any owner or operator of an affected polyester resin product manufacturing process shall use closed

containers for all polyester resin materials, cleaning materials which contain VOM (including waste cleaning materials), and other materials that contain VOM (including waste resin materials) in such a manner as to effectively control VOM emissions to the atmosphere and in accordance with the practices described in the certification pursuant to 35 IAC 218.672(b)(2)(A) [35 IAC 218.666(b)]:

c. Any owner or operator of an affected polyester resin products manufacturing process which formulates polyester resin material at the source shall comply with the following operating requirements [35 IAC 218.666(c)]:

i. A cover shall be in place on any tank, vat, or vessel with a capacity greater than 7.5 liters (2 gallons), including a container in which polyester resin materials are delivered to the source, while polyester resin materials are being formulated. The cover shall:

A. Completely cover the tank, vat, or vessel opening except for an opening no larger than necessary to allow for safe clearance for a mixer shaft;

B. Extend at least 1.27 cm (0.5 inch) beyond the outer rim of the opening or be attached to the rim;

C. Remain closed except when adding or removing material or when sampling or inspection procedures require access; and

D. Be maintained in good condition such that, when in place, the cover maintains contact with the rim of the opening for at least 90% of the circumference of the rim.

ii. Carry out emissions shall be minimized when a mixer used for formulation of polyester resin material is being removed from a tank, vat, or vessel containing polyester resin material by allowing the material retained on the mixer blades to drain back into the tank, vat, or vessel before the mixer is completely removed from the tank, vat, or vessel.

d. Any owner or operator of affected polyester resin products manufacturing processes which as a group use more than 4 gallons per day of cleaning materials which contain more than 200 grams of VOM per liter (1.7 pound per gallon) shall use a solvent recovery system for such materials. Solvent recovery may be done at the source or by using an off-site commercial solvent recovery service. The waste residue from a solvent recovery system located at the source shall not contain more than 20% VOM by weight [35 IAC 218.666(d)].

7.1.6 Emission Limitations

There are no specific emission limitations for this unit, however, there are source wide emission limitations in Condition 5.5 that include this unit.

7.1.7 Testing Requirements

a. Testing Methods [35 IAC 218.668]:

i. The VOM content of fresh cleaning materials shall be determined from supplier data or by sampling and analysis using USEPA Reference Method 24.

ii. The VOM content of waste residue from a solvent recovery system shall be determined by sampling and analysis using USEPA Reference Method 24.

iii. The monomer content of polyester resin materials shall be determined:

A. From supplier data and operating data;

B. By sampling and analysis by the methods set forth in SCAQMD Method 312-91; or

C. By site-specific sampling and analysis methods approved by the Illinois EPA and USEPA in a federally enforceable permit.

iv. The weight loss from polyester resin material in a closed-mold system or pultrusion system during molding shall be determined:

A. From supplier data and operating data;

B. By testing of VOM emissions by the methods set forth in 35 IAC 218.105;

C. By material balance as follows:

Separately weigh the polyester resin material and the reinforcement material before they are introduced into the mold. Weigh the molded product after it has cooled so that it can be manually handled but no sooner than one hour after removal of the product from the mold. The percent weight loss shall be determined according to the following equation:

$$PWL = \left[1 - \frac{(C - B)}{A}\right] \times 100$$

Where:

PWL = Percent Weight Loss;
A = Weight of polyester resin materials;
B = Weight of reinforcement material;
C = Weight of cooled molded product after at least one hour elapsed time; or

D. By site-specific sampling and analysis methods approved by the Illinois EPA and USEPA in a federally enforceable permit.

v. The weight loss from a vapor suppressed polyester resin material per square meter of exposed surface area shall be determined:

A. From supplier data and operating data;

B. By sampling and analysis by the methods set forth in SCAQMD Method 309-91; or

C. By site-specific sampling and analysis methods approved by the Illinois EPA and USEPA in a federally enforceable permit.

vi. In the event of a difference between data obtained by sampling and analysis and other data, the data from sampling and analysis shall govern.

b. When in the opinion of the Illinois EPA it is necessary to conduct sampling and analysis to demonstrate compliance with 35 IAC 218.668, the owner or operator of a polyester resin products manufacturing process subject to the requirements of 35 IAC 218 Subpart CC, shall at his own expense, conduct such sampling and analysis in accordance with the applicable test methods and procedures specified in 35 IAC 218.668(a) (see also Condition 7.1.7(a)). The Illinois EPA's decision to invoke this subsection may be based on such factors including, but not limited to, a change in operation of the polyester resin products manufacturing process, or a reasonable belief that a previous test resulted in erroneous data [35 IAC 218.668(b) and (c)].

c. Nothing in Condition 7.1.7 shall limit the authority of USEPA pursuant to the Clean Air Act, as amended, to require sampling and analysis [35 IAC 218.688(d)].

7.1.8 Monitoring Requirements

None

7.1.9 Recordkeeping Requirements

In addition to the records required by Condition 5.6, the Permittee shall maintain records of the following items for each affected polyester resin products manufacturing process to demonstrate compliance with Conditions 5.5.1 and 7.1.3, pursuant to Section 39.5(7)(b) of the Act:

a. The owner or operator of an affected polyester resin product manufacturing process shall collect and record the following information to maintain a complete record of all polyester resin materials which are used by such polyester resin products manufacturing process [35 IAC 218.672(a)(2)]:

i. The name and identification number of each polyester resin material used in the process;

ii. The particular operating requirement with which each polyester resin material will comply, the actual monomer content of the material (percent by weight) and other relevant data to show compliance with the operating requirement, including:

A. For each polyester resin material which is classified as a material used for products requiring corrosion resistant or fire retardant materials, a material used for products requiring tensile strength of 10,000 psi or more, or a clear gel coat, justification for such classification if the material is applied to comply with the monomer content limitation of 35 IAC 218.666(a)(1)(A)(i), (ii), or (iii), respectively;

B. For each polyester resin material which is applied in a closed-mold or pultrusion system so as to comply with 35 IAC 218.666(a)(1)(B), the weight loss from the polyester resin material (percent by weight) during molding;

C. For each polyester resin material which is vapor suppressed so as to comply with 35 IAC 218.666(a)(1)(C), the type and content (percent by weight) of catalyst in the material, the maximum process temperature for resin application, the maximum gel time and the weight loss (grams per square meter exposed surface) during molding; and

D. For each polyester resin material which is approved by the Illinois EPA and the USEPA in a federally enforceable permit or as a SIP revision so as to comply with 35 IAC 218.666(a)(1)(D), information showing the VOM emission level which is achieved and the VOM emissions which would result from compliance with 35 IAC 218.666(a)(1)(A), (B), or (C).

iii. A description of the testing which was performed, in accordance with 35 IAC 218.668, to determine the monomer content of polyester resin materials and the information in 35 IAC 218.672 (a)(1)(C)(ii), (iii) and (iv) and (a)(1)(D), including data, calculations, and descriptions and results of the sampling and analysis that the owner or operator has relied upon to show compliance with 35 IAC 218.666(a)(1).

iv. The processes and applications for which each polyester resin material may be used in compliance with applicable operating requirements, including:

A. For each polyester resin material which is classified as a material used for products requiring corrosion resistant or fire retardant material or a material used for products requiring tensile strength of 10,000 psi or more which is applied to comply with the monomer content limitation of 35 IAC 218.666(a)(1)(A)(i) or (ii), respectively, the required products or circumstances for the materials' use;

B. For each polyester resin material which is applied in a closed-mold or pultrusion system so as to comply with 35 IAC 218.666(a)(1)(B) of this Subpart, the required process temperature and minimum mold cycle time or maximum pultrusion speed;

C. For each polyester resin material which is vapor suppressed so as to comply with 35 IAC 218.666(a)(1)(C), the required thickness of the manufactured product, the type and amount of catalyst in the resin, and the maximum process temperature and maximum gel time; and

D. For each polyester resin material which is approved by the Illinois EPA and approved by the USEPA as a SIP revision so as to comply with 35 IAC 218.666(a)(1)(D), the required process operating conditions or product specifications.

v. For each polyester resin material which is applied in a spraying operation, the type of spray equipment with which the material will be applied so as to comply with 35 IAC 218.666(a)(2).

b. The owner or operator of an affected polyester resin product manufacturing process shall collect and record all of the following information each day for each process and maintain the information at the source [35 IAC 218.672(a)(3)].

i. The name, identification number and amount of each polyester resin material applied on each process; and

ii. The specific data identified pursuant to 35 IAC 218.672(a)(2)(D) to confirm that the polyester resin material was applied in such a manner that it complied with the applicable operating requirement.

c. The owner or operator of an affected polyester resin product manufacturing process shall collect and record all the following information and maintain the information at the source [35 IAC 218.672(b)(2)].

i. The date, time and duration of scheduled inspections performed to confirm the proper use of closed containers to control VOM emissions, and any instances of improper use of closed containers, with descriptions of actual practice and corrective action taken, if any;

ii. Information on a daily basis confirming the proper use of a recovery system if one is required or is used, including operation of a recovery system at the source to produce a waste residue that is 20% or less VOM by weight and information identifying any observation of noncompliance; and

iii. Information on a daily basis on the use of cleaning materials which contain more than 200 grams of VOM per liter (1.7 pound per gallon) if a recovery system is not required or is not used. This information shall include the name, identification number, amount used and VOM content of each such cleaning material.

d. The owner or operator of an affected polyester resin manufacturing process that formulates polyester resin material at the source shall collect and record all the following information and maintain the information at the source [35 IAC 218.672(c)(2)].

i. The date, time, and duration of scheduled inspections to confirm the proper use and maintenance of covers on vats, vessels, and tanks and proper drainage of mixers and any

instance of improper use, with description of actual practice and corrective action taken, if any; and

ii. A maintenance log for covers on vats, vessels, and tanks, detailing all routine and non-routine maintenance performed and initial use of new covers, including dates of such activities.

e. The Permittee shall also keep the following records at the source:

i. Monomer content (e.g., percent by weight of styrene) in resin and gel coat, and vapor-suppressed on nonvapor-suppressed resin or gel coat;

ii. VOM content (weight percent) of any solvent and VOM-containing material used in the plant;

iii. Usage of resin, gel coat, solvent, and other VOM-containing materials (lb/yr); and

iv. Maximum process weight rate of materials used in the process (lb/hr).

7.1.10 Reporting Requirements

The Permittee shall promptly notify the Illinois EPA, Compliance Section of deviations of an affected polyester resin product manufacturing process with the permit requirements as follows, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken:

a. The owner or operator of an affected polyester resin product manufacturing process shall notify the Illinois EPA [35 IAC 218.672(a)(4)]:

i. Of any violation of the operating requirements of 35 IAC 218 Subpart CC by sending a copy of such record to the Illinois EPA within 30 days following the occurrence of the violation; and

ii. At least 30 calendar days before changing the method of compliance with the 35 IAC 218 Subpart CC from one operating requirement among 35 IAC 218.666(a)(1)(A), (B), (C), or

(D) (see also Condition 7.1.5) to another operating requirement, of compliance with all requirements of 35 IAC 218.672(a)(1). Upon changing the method of compliance from one operating requirement to another, the owner or operator shall comply with all applicable requirements.

b. The owner or operator of an affected polyester resin product manufacturing process shall notify the Illinois EPA [35 IAC 218.672(b)(3)]:

   i. Of a violation of the requirements of 35 IAC 218 Subpart CC with respect to handling practices and solvent recovery for cleaning materials by sending a copy of all such records to the Illinois EPA within 30 days following the calendar quarter in which such violation occurred; and

   ii. Within 30 calendar days of changing the handling practices for polyester resin materials, cleaning materials and waste materials or changing source practice with respect to a solvent recovery system for cleaning materials, describing the change.

c. The owner or operator of an affected polyester resin product manufacturing process shall notify the Illinois EPA [35 IAC 218.672(c)(3)]:

   i. Of a violation of the requirements of 35 IAC Subpart CC with respect to formulation of polyester resin material by sending a copy of all such records to the Illinois EPA within 30 days following the calendar quarter in which such violation occurred; and

   ii. Within 30 calendar days of changing the handling practices for formulation of polyester resin materials, describing the change.

d. At least 30 calendar days before changing the method of compliance for an affected polyester resin plastic product manufacturing operation, the applicable emission factor indicated in Condition 7.1.12, the Permittee shall certify to the Illinois EPA that the polyester resin plastic product manufacturing operation will be in compliance with the applicable

limitation of Condition 7.1.6 consistent with the requirements of the compliance certification reports of Condition 9.8.

7.1.11 Operational Flexibility/Anticipated Operating Scenarios

The permittee is authorized to make the following physical and operational change with respect to an affected polyester resin product manufacturing process without prior notification to the Illinois EPA or revision of this permit. This condition does not affect the Permittee's obligation to properly obtain a construction permit in a timely manner for any activity constituting construction or modification of the source, as defined in 35 IAC 201.102:

a. Usage of various resin, gel coat, or solvent materials without violating the emission limit in Condition 5.5.1 or the operational limits in Condition 7.1.5.

7.1.12 Compliance Procedures

Compliance with the emission limits in Condition 5.5.1 shall be determined by the recordkeeping requirements in Condition 7.1.9 and the emission calculation methodology described in (a) and (b) below:

a. Emissions of VOM from monomer contained in resin and/or gel coat:

Monomer Emission (lb) = Material usage (ton) * $\sum$ UEF (lb/ton)

Where:

$\sum$ UEF = The sum of all Unified Emission Factors for all monomers present in the material.

The Unified Emission Factors (UEF), listed in Attachment 3, are from "Technical Discussion of the Unified Emission Factors for Open Molding of Composites" (CFA, April 1999). Emissions shall be based on the actual monomer content and application method of the material. Monomer content includes the monomer content as supplied plus any extra monomer added by the operator, but before the addition of other additives such as powders and fillers.

b. Emissions from solvent usage:

VOM Emissions (lb/yr) = Solvent usage (gal/yr) * solvent density (lb/gal)

c. Compliance with the VOM emission limit in Condition 7.1.3(b) shall be determined by the maximum process weight rate (lb/hr) of VOM-containing materials and the emission determination methods of 7.1.12(a) and (b).

d. Compliance with the operational and control requirements Condition 7.1.3(c) and 7.1.5 shall be determined by the recordkeeping required by Condition 7.1.9.

e. Compliance with the PM emission limits in Condition 7.1.3(d) is assured and achieved by the proper operation and maintenance of the filters and dust collection system and the work-practices inherent in the operation of an affected polyester resin product manufacturing process.

8.0 GENERAL PERMIT CONDITIONS

8.1 Permit Shield

Pursuant to Section 39.5(7)(j) of the Act, the Permittee has requested and has been granted a permit shield. This permit shield provides that compliance with the conditions of this permit shall be deemed compliance with applicable requirements which were applicable as of the date the proposed permit for this source was issued, provided that either the applicable requirements are specifically identified within this permit, or the Illinois EPA, in acting on this permit application, has determined that other requirements specifically identified are not applicable to this source and this determination (or a concise summary thereof) is included in this permit.

This permit shield does not extend to applicable requirements which are promulgated after July 28, 1999 (the date of issuance of the draft permit) unless this permit has been modified to reflect such new requirements.

8.2 Applicability of Title IV Requirements (Acid Deposition Control)

This source is not an affected source under Title IV of the CAA and is not subject to requirements pursuant to Title IV of the CAA.

8.3 Emissions Trading Program

No permit revision shall be required for increases in emissions allowed under any approved economic incentive, marketable permits, emissions trading, or other similar programs or processes for changes that are provided for elsewhere in this permit and that are authorized by the applicable requirement. (Section 39.5(7)(o)(vii) of the Act)

As of the date of issuance of this permit, there are no such economic incentives, marketable permit or emission trading programs applicable to this source that have been approved by USEPA.

8.4 Operational Flexibility/Anticipated Operating Scenarios

8.4.1 Changes Specifically Addressed by Permit

Physical or operational changes specifically addressed by the Conditions of this permit that have been identified as not requiring Illinois EPA notification may be implemented without prior notice to the Illinois EPA.

8.4.2 Changes Requiring Prior Notification

The Permittee is authorized to make physical or operational changes that contravene express permit terms without applying for or obtaining an amendment to this permit, provided that [Section 39.5(12)(a)(i) of the Act]:

a. The changes do not violate applicable requirements;

b. The changes do not contravene federally enforceable permit terms or conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements;

c. The changes do not constitute a modification under Title I of the CAA;

d. Emissions will not exceed the emissions allowed under this permit following implementation of the physical or operational change; and

e. The Permittee provides written notice to the Illinois EPA, Division of Air Pollution Control, Permit Section, at least 7 days before commencement of the change. This notice shall:

i. Describe the physical or operational change;

ii. Identify the schedule for implementing the physical or operational change;

iii. Provide a statement of whether or not any New Source Performance Standard (NSPS) is applicable to the physical or operational change and the reason why the NSPS does or does not apply;

iv. Provide emission calculations which demonstrate that the physical or operational change will not result in a modification; and

v. Provide a certification that the physical or operational change will not result in emissions greater than authorized under the Conditions of this permit.

8.5 Testing Procedures

Tests conducted to measure composition of materials, efficiency of pollution control devices, emissions from process or control equipment, or other process, emissions, or composition parameters shall be conducted using standard test methods. Documentation of the test date, conditions, methodologies, calculations, and test results shall be retained pursuant to the recordkeeping procedures of this permit. Reports of any tests conducted as required by this permit or as the result of a request by the Illinois EPA shall be submitted as specified in Condition 8.6.

8.6 Reporting Requirements

8.6.1 Monitoring Reports

If monitoring is required by any applicable requirements or conditions of this permit, a report summarizing required monitoring as specified in the conditions of this permit shall be submitted to the Air Compliance Section of the Illinois EPA every six months as follows [Section 39.5(7)(f) of the Act]:

Monitoring Period	Report Due Date
January - June	September 1
July - December	March 1

All instances of deviations from permit requirements must be clearly identified in such reports. All such reports shall be certified in accordance with Condition 9.9.

8.6.2 Test Notifications

Unless otherwise specified elsewhere in this permit, a written test plan for any test required by this permit shall be submitted to the Illinois EPA for review at least 60 days prior to the testing pursuant to Section 39.5(7)(a) of the Act. The notification shall include at a minimum:

a. The name and identification of the affected unit(s);

b. The person(s) who will be performing sampling and analysis and their experience with similar tests;

c. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of maximum emissions and the means by which the operating

parameters for the source and any control equipment will be determined;

d. The specific determination of emissions and operation which are intended to be made, including sampling and monitoring locations;

e. The test method(s) which will be used, with the specific analysis method, if the method can be used with different analysis methods;

f. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification; and

g. Any proposed use of an alternative test method, with detailed justification.

8.6.3 Test Reports

Unless otherwise specified elsewhere in this permit, the results of any test required by this permit shall be submitted to the Illinois EPA within 60 days of completion of the testing. The test report shall include at a minimum:

a. The name and identification of the affected unit(s);

b. The date and time of the sampling or measurements;

c. The date any analyses were performed;

d. The name of the company that performed the tests and/or analyses;

e. The test and analytical methodologies used;

f. The results of the tests including raw data, and/or analyses including sample calculations;

g. The operating conditions at the time of the sampling or measurements; and

h. The name of any relevant observers present including the testing company’s representatives, any Illinois EPA or USEPA representatives, and the representatives of the source.

8.6.4 Reporting Addresses

a. The following addresses should be utilized for the submittal of reports, notifications, and renewals:

i. Illinois EPA - Air Compliance Section

Illinois Environmental Protection Agency
Bureau of Air
Compliance Section (MC 40)
P.O. Box 19276
Springfield, Illinois 62794-9276

ii. Illinois EPA - Air Regional Field Office

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

iii. Illinois EPA - Air Permit Section

Illinois Environmental Protection Agency
Divisions of Air Pollution Control
Permit Section (MC 11)
P.O. Box 19506
Springfield, Illinois 62794-9506

iv. USEPA Region 5 - Air Branch

United States EPA (AR - 18J)
Air & Radiation Branch (Illinois - Indiana)
77 W. Jackson Boulevard
Chicago, Illinois 60604

b. Unless otherwise specified in the particular provision of this permit, reports shall be sent to the Illinois EPA - Air Compliance Section with a copy sent to the Illinois EPA - Air Regional Field Office.

8.7 Obligation to Comply with Title I Requirements

Any term, condition, or requirement identified in this permit by T1, T1R, or T1N is established or revised pursuant to 35 IAC Part 203 or 40 CFR 52.21 (“Title I provisions”) and incorporated into this permit pursuant to both Section 39.5 and Title I provisions. Notwithstanding the expiration date on the first page of this permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

9.0 STANDARD PERMIT CONDITIONS

9.1 Effect of Permit

9.1.1 The issuance of this permit does not release the Permittee from compliance with State and Federal regulations which are part of the Illinois State Implementation Plan, as well as with other applicable statutes and regulations of the United States or the State of Illinois or applicable ordinances, except as specifically stated in this permit and as allowed by law and rule. [Section 39.5(7)(j)(iv) of the Act]

9.1.2 In particular, this permit does not alter or affect the following:

a. The provisions of Section 303 (emergency powers) of the Clean Air Act, including USEPA's authority under that Section;

b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;

c. The applicable requirements of the acid rain program consistent with Section 408(a) of the Clean Air Act; and

d. The ability of USEPA to obtain information from a source pursuant to Section 114 (inspections, monitoring, and entry) of the Clean Air Act.

9.1.3 Notwithstanding the conditions of this permit specifying compliance practices for applicable requirements, any person (including the Permittee) may also use other credible evidence to establish compliance or noncompliance with applicable requirements.

9.2 General Obligations of Permittee

9.2.1 Duty to Comply

The Permittee must comply with all terms and conditions of this permit. Any permit noncompliance constitutes a violation of the Clean Air Act and the Act, and is grounds for any or all of the following: enforcement action, permit termination, revocation and reissuance, modification, or denial of a permit renewal application. [Section 39.5(7)(o)(i) of the Act]

The Permittee shall meet applicable requirements that become effective during the permit term in a timely manner unless an alternate schedule for compliance with the applicable requirement is established.

9.2.2 Duty to Maintain Equipment

The Permittee shall maintain all equipment covered under this permit in such a manner that the performance or operation of such equipment shall not cause a violation of applicable requirements.

9.2.3 Duty to Cease Operation

No person shall cause, threaten or allow the continued operation of any emission unit during malfunction or breakdown of the emission unit or related air pollution control equipment if such operation would cause a violation of an applicable emission standard, regulatory requirement, ambient air quality standard or permit limitation unless such malfunction or breakdown is allowed by a permit condition. [Section 39.5(6)(c) of the Act]

9.2.4 Disposal Operations

The source shall be operated in such a manner that the disposal of air contaminants collected by the equipment operations, or activities shall not cause a violation of the Environmental Protection Act or regulations promulgated thereunder.

9.2.5 Duty to Pay Fees

The Permittee must pay fees to the Illinois EPA consistent with the fee schedule approved pursuant to Section 39.5(18) of the Act, and submit any information relevant thereto. [Section 39.5(7)(o)(vi) of the Act] The check should be payable to “Treasurer, State of Illinois” and sent to: Fiscal Services Section, Illinois Environmental Protection Agency, P.O. Box 19276, Springfield, Illinois 62794-9276.

9.3 Obligation to Allow Illinois EPA Surveillance

Upon presentation of proper credentials and other documents, the Permittee shall allow the Illinois EPA, or an authorized representative to perform the following [Section 39.5(7)(a) and (p)(ii) of the Act and 415 ILCS 5/4]:

a. Enter upon the Permittee's premises where an actual or potential emission unit is located; where any regulated equipment, operation, or activity is located 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 during hours of operation any sources, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

d. Sample or monitor any substances or parameters at any location:

   i. At reasonable times, for the purposes of assuring permit compliance; or

   ii. As otherwise authorized by the CAA, or the Act.

e. Obtain and remove samples of any discharge or emission of pollutants authorized by this permit; and

f. Enter and utilize any photographic, recording, testing, monitoring, or other equipment for the purposes of preserving, testing, monitoring, or recording any activity, discharge or emission at the source authorized by this permit.

9.4 Obligation to Comply With Other Requirements

The issuance of this permit does not release the Permittee from applicable State and Federal laws and regulations, and applicable local ordinances addressing subjects other than air pollution control.

9.5 Liability

9.5.1 Title

This permit shall not be considered as in any manner affecting the title of the premises upon which the permitted source is located.

9.5.2 Liability of Permittee

This permit does not release the Permittee from any liability for damage to person or property caused by or

resulting from the construction, maintenance, or operation of the sources.

9.5.3 Structural Stability

This permit does not take into consideration or attest to the structural stability of any unit or part of the source.

9.5.4 Illinois EPA Liability

This permit in no manner implies or suggests that the Illinois EPA (or its officers, agents or employees) assumes any liability, directly or indirectly, for any loss due to damage, installation, maintenance, or operation of the source.

9.5.5 Property Rights

This permit does not convey any property rights of any sort, or any exclusive privilege. [Section 39.5(7)(0)(iv) of the Act]

9.6 Recordkeeping

9.6.1 Control Equipment Maintenance Records

A maintenance record shall be kept on the premises for each item of air pollution control equipment. As a minimum, this record shall show the dates of performance and nature of preventative maintenance activities.

9.6.2 Records of Changes in Operation

A record shall be kept describing changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under this permit, and the emissions resulting from those changes. [Section 39.5(12)(b) of the Act]

9.6.3 Retention of Records

a. Records of all monitoring data and support information shall be retained for a period of at least 5 years from the date of the monitoring sample, measurement, report, or application. Support information includes all calibration and maintenance records, original strip-chart recordings for

continuous monitoring instrumentation, and copies of all reports required by this permit. [Section 39.5(7)(e)(ii) of the Act]

b. Other records required by this permit shall be retained for a period of at least 5 years from the date of entry unless a longer period is specified by a particular permit provision.

9.7 Annual Emissions Report

The Permittee shall submit an annual emissions report to the Illinois EPA, Compliance Section no later than May 1 of the following year, as required by 35 IAC Part 254.

9.8 Requirements for Compliance Certification

Pursuant to Section 39.5(7)(p)(v) of the Act, the Permittee shall submit annual compliance certifications. The compliance certifications shall be submitted no later than May 1 or more frequently as specified in the applicable requirements or by permit condition. The compliance certifications shall be submitted to the Air Compliance Section, Air Regional Field Office, and USEPA Region 5 – Air Branch. The addresses for the submittal of the compliance certifications are provided in Condition 8.6.4 of this permit.

a. The certifications shall include descriptions on means to monitor the compliance of the source including emissions limitations, standards, and work practices in accordance with applicable requirements and permit conditions. The certification shall include the identification of each term or condition of this permit that is the basis of the certification; the compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, both currently and over the reporting period consistent with the conditions of this permit.

b. All compliance certifications shall be submitted to USEPA Region 5 in Chicago as well as to the Illinois EPA.

c. All compliance reports required to be submitted shall include a certification in accordance with Condition 9.9.

9.9 Certification

Any document (including reports) required to be submitted by this permit shall contain a certification by a responsible official of the Permittee that meets the requirements of Section 39.5(5) of

the Act [Section 39.5(7)(p)(i) of the Act]. An example Certification by a Responsible Official is included as an attachment to this permit.

9.10 Defense to Enforcement Actions

9.10.1 Need to Halt or Reduce Activity Not a Defense

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. [Section 39.5(7)(o)(ii) of the Act]

9.10.2 Emergency Provision

a. An emergency shall be an affirmative defense to an action brought for noncompliance with the technology-based emission limitations under this permit if the following conditions are met through properly signed, contemporaneous operating logs, or other relevant evidence:

i. An emergency occurred as provided in Section 39.5(7)(k) of the Act and the Permittee can identify the cause(s) of the emergency. Normally, an act of God such as lightning or flood is considered an emergency;

ii. The permitted source was at the time being properly operated;

iii. The Permittee submitted notice of the emergency to the Illinois EPA within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken; and

iv. During the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission limitations, standards, or regulations in this permit.

b. This provision is in addition to any emergency or upset provision contained in any applicable requirement. This provision does not relieve a

Permittee of any reporting obligations under existing federal or state laws or regulations.

9.11 Permanent Shutdown

This permit only covers emission units and control equipment while physically present at the indicated source location(s). Unless this permit specifically provides for equipment relocation, this permit is void for the operation or activity of any item of equipment on the date it is removed from the permitted location(s) or permanently shut down. This permit expires if all equipment is removed from the permitted location(s), notwithstanding the expiration date specified on this permit.

9.12 Reopening and Reissuing Permit for Cause

9.12.1 Permit Actions

This permit may be modified, reopened, and reissued, for cause pursuant to Section 39.5(15) of the Act. The filing of a request by the Permittee for a permit modification, revocation, and reissuance, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [Section 39.5(7)(o)(iii) of the Act]

9.12.2 Reopening and Revision

This permit must be reopened and revised if any of the following occur [Section 39.5(15)(a) of the Act]:

a. Additional requirements become applicable to the equipment covered by this permit and three or more years remain before expiration of this permit;

b. Additional requirements become applicable to an affected source for acid deposition under the acid rain program;

c. The Illinois EPA or USEPA determines that this permit contains a material mistake or inaccurate statement when establishing the emission standards or limitations, or other terms or conditions of this permit; or

d. The Illinois EPA or USEPA determines that this permit must be revised to ensure compliance with the applicable requirements of the Act.

9.12.3 Inaccurate Application

The Illinois EPA has issued this permit based upon the information submitted by the Permittee in the permit application. Any misinformation, false statement or misrepresentation in the application shall be grounds for revocation under Section 39.5(15)(b) of the Act.

9.12.4 Duty to Provide Information

The Permittee shall furnish to the Illinois EPA, within a reasonable time specified by the Illinois EPA any information that the Illinois EPA 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. Upon request, the Permittee shall also furnish to the Illinois EPA 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 USEPA along with a claim of confidentiality. [Section 39.5(7)(o)(v) of the Act]

9.13 Severability Clause

The provisions of this permit are severable, and should any one or more be determined to be illegal or unenforceable, the validity of the other provisions shall not be affected. The rights and obligations of the Permittee shall be construed and enforced as if this permit did not contain the particular provisions held to be invalid and the applicable requirements underlying these provisions shall remain in force. [Section 39.5(7)(i) of the Act]

9.14 Permit Expiration and Renewal

The right to operate terminates on the expiration date unless the Permittee has submitted a timely and complete renewal application. For a renewal to be timely it must be submitted no later than 9 and no sooner than 12 months prior to expiration. The equipment may continue to operate during the renewal period until final action is taken by the Illinois EPA, in accordance with the original permit conditions. [Section 39.5(5)(l), (n) and (o) of the Act]

10.0 ATTACHMENTS

10.1 Attachment 1 - Example Certification by a Responsible Official

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Name: _____

Official Title: _____

Telephone No.: _____

Date Signed: _____

JS:psj

10.2 Attachment 2 - Particulate Matter Emissions from Process Emission Units

10.2.1 Section 212.321 - Process Emission Units For Which Construction or Modification Commenced On or After April 14, 1972

a. Except as further provided in 35 IAC Part 212, no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of this Section.

b. Interpolated and extrapolated values of the data in subsection (c) of this Section shall be determined by using the equation:

$$E = A(P)^B$$

Where:

P = Process weight rate; and
E = Allowable emission rate; and,

i. Up to process weight rates of 408 Mg/hr (450 Ton/hr):

	Metric	English
P	Mg/hr	Ton/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

ii. For process weight rate greater than or equal to 408 Mg/hr (450 Ton/hr):

	Metric	English
P	Mg/hr	Ton/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

c. Limits for Process Emission Units For Which Construction of Modification Commenced On or After April 14,1972

Metric		English	
P	E	P	E
Mg/hr	kg/hr	Ton/hr	lbs/hr
0.05	0.25	0.05	0.55
0.1	0.29	0.10	0.77
0.2	0.42	0.20	1.10
0.3	0.64	0.30	1.35
Metric		English	
P	E	P	E
Mg/hr	kg/hr	Ton/hr	lbs/hr
0.4	0.74	0.40	1.58
0.5	0.84	0.50	1.75
0.7	1.00	0.75	2.40
0.9	1.15	1.00	2.60
1.8	1.66	2.00	3.70
2.7	2.1	3.00	4.60
3.6	2.4	4.00	5.35
4.5	2.7	5.00	6.00
9.	3.9	10.00	8.70
13.	4.8	15.00	10.80
18.	5.7	20.00	12.50
23.	6.5	25.00	14.00
27.	7.1	30.00	15.60
32.	7.7	35.00	17.00
36.	8.2	40.00	18.20
41.	8.8	45.00	19.20
45.	9.3	50.00	20.50
90.	13.4	100.00	29.50
140.	17.0	150.00	37.00
180.	19.4	200.00	43.00
230.	22.	250.00	48.50
270.	24.	300.00	53.00
320.	26.	350.00	58.00
360.	28.	400.00	62.00
408.	30.1	450.00	66.00
454.	30.4	500.00	67.00

Where:

P = Process weight rate in Mg/hr or Ton/hr, and
E = Allowable emission rate in kg/hr or lbs/hr.

JS:psj

10.3 Attachment 3 - Unified Emission Factors (UEF)

Table 1 - Emission Rate in Pounds of Monomer Emitted per Ton of Resin or Gelcoat Processed

Styrene Content (%)[1]	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Application Method																		
Manual[2,4]	83	89	94	100	106	112	117	123	129	134	140	146	152	157	163	169	174	180
Mechanical Atomized[3,5]	111	126	140	154	168	183	197	211	225	240	254	268	283	297	311	325	340	354
Mechanical Atomized Controlled Spray[3,5]	86	97	108	119	130	141	152	163	174	185	196	207	218	229	240	251	262	273
Mechanical Non-Atomized[3,5]	71	74	77	80	83	86	89	93	96	99	102	105	108	111	115	118	121	124
Filament	122	127	133	138	144	149	155	160	166	171	177	182	188	193	199	204	210	215
Filament with VSR	79	83	86	90	93	97	100	104	108	111	115	118	122	125	129	133	136	140
Gelcoat	294	315	336	356	377	398	418	439	460	481	501	522	543	564	584	605	626	646
Gelcoat Controlled Spray	215	230	245	260	275	290	305	321	336	351	366	381	396	411	427	442	457	472
MMA Content (%)[1]	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Application Method																		
Gelcoat	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	225	270

[1] For styrene contents less than 33% or greater than 50% and for MMA contents greater than 18%, refer to Table 2.

[2] For Vapor Suppressed Resin (VSR), multiply the UEF from the table above by (1 - (0.5 * specific VSR reduction factor)) to obtain the correct emission factor. The VSR reduction factor is based on testing of the specific resin/suppressant formulation.

[3] For VSR, multiply the UEF from the table above by (1 - (0.45 * specific VSR reduction factor)) to obtain the correct emission factor. The VSR reduction factor is based on testing of the specific resin/suppressant formulation.

[4] For processes using covered curing after roll-out, multiply the UEF from the table above by 0.8 to obtain the correct emission factor. For Processes using covered curing without roll-out, multiply the UEF from the table above by 0.5 to obtain the correct emission factor.

[5] For processes using covered curing after roll-out, multiply the UEF from the table above by 0.85 to obtain the correct emission factor. For Processes using covered curing without roll-out, multiply the UEF from the table above by 0.55 to obtain the correct emission factor.

Table 2 - Emission Rate Equation Variables[1]

Application Method	Monomer	A_1	B_1	C_1	A_2	B_2	C_2
Manual	Styrene	1	0.126	0	1	0.286	0.0529
Mechanical Atomized	Styrene	1	0.169	0	1	0.714	0.18
Mechanical Atomized Controlled Spray	Styrene	1	0.13	0	0.77	0.714	0.18
Mechanical Non-Atomized	Styrene	1	0.107	0	1	0.157	0.0165
Filament Application	Styrene	1	0.184	0	1	0.2746	0.0298
Filament Application with VSR	Styrene	1	0.12	0	0.65	0.2746	0.0298
Gelcoat Application	Styrene	1	0.445	0	1	1.03646	0.195
Gelcoat Controlled Spray Application	Styrene	1	0.325	0	0.73	1.03646	0.195
Gelcoat Application	Methyl Methacrylate	1	0.75	0	1	0.75	0

[1] These variables and the equation below shall be used for monomer contents above or below the values included in Table 1. Variables A_1, B_1, and C_1 are used for monomer contents less than 33%. Variables A_2, B_2, and C_2 are used with monomer contents greater than or equal to 33%.

UEF = A * (B * Monomer Content - C) * 2000

Where Monomer Content is in weight percent (e.g., for a monomer content of 40%, use 0.40)

I. INTRODUCTION

This source has applied for a Clean Air Act Permit Program (CAAPP) operating permit for its existing operation. The CAAPP is the program established in Illinois for the operating permits for significant stationary sources required by the federal Clean Air Act, as amended in 1990. The conditions in a CAAPP permit are enforceable by both the Illinois Environmental Protection Agency (Illinois EPA) and the USEPA.

H & R Industries, Inc. manufactures polyester resin plastic products (e.g., plastic and composite insulated storage containers, electrical enclosures, housings for generators, freezer modules and doors, storm boxes, CO_2 tanks).

II. EMISSION UNITS

Significant emission units at this source are as follows:

Emission Unit	Description	Date Constructed	Emission Control Equipment
01	Polyester Resin Product Manufacturing Process including Spray Booth #1	prior to 4/1984	None
02	Polyester Resin Product Manufacturing Process including Dust Booth #1	prior to 4/1984	Booth Filters
03	Polyester Resin Product Manufacturing Process including Spray Booth #2	prior to 4/1984	None
04	Polyester Resin Product Manufacturing Process including Spray Booth #3	1/1987	Eurovac Dust Collection System
05	Polyester Resin Product Manufacturing process including Spray Booth #4	1/1987	Eurovac Dust Collection System

III. EMISSIONS

This source is required to have a CAAPP permit since it is a major source of emissions.

For purposes of fees, the source is allowed the following emissions:

Permitted Emissions of Regulated Pollutants

Pollutant	Tons/Year
Volatile Organic Material (VOM)	26.36
Sulfur Dioxide (SO_2)	-
Particulate Matter (PM)	1.20

Nitrogen Oxides (NO_x)	-
HAP, not included in VOM or PM	-
TOTAL	26.39

IV. APPLICABLE EMISSION STANDARDS

All emission sources in Illinois must comply with the Illinois Pollution Control Board’s emission standards. The Board's emission standards represent the basic requirements for sources in Illinois.

All emission sources in Illinois must comply with the federal New Source Performance Standards (NSPS). The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.

All emission sources in Illinois must comply with the federal National Emission Standards for Hazardous Air Pollutants (NESHAP). The Illinois EPA is administering NESHAP in Illinois on behalf of the United States EPA under a delegation agreement.

V. PROPOSED PERMIT

CAAPP

A CAAPP permit contains all conditions that apply to a source and a listing of the applicable state and federal air pollution control regulations that are the origin of the conditions. The permit also contains emission limits and appropriate compliance procedures. The appropriate compliance procedures may include inspections, work practices, monitoring, record keeping, and reporting to show compliance with these requirements. The Permittee must carry out these procedures on an on-going basis.

Title I

A combined Title I/CAAPP permit contains terms and conditions established by the Illinois EPA pursuant to authority found in Title I provisions, e.g., 40 CFR 52.21 - federal Prevention of Significant Deterioration (PSD) and 35 IAC Part 203 - Major Stationary Sources Construction and Modification. Notwithstanding the expiration date on the first page of the permit, the Title I conditions remain in effect pursuant to Title I provisions until the Illinois EPA deletes or revises them in accordance with Title I procedures.

VI. REQUEST FOR COMMENTS

It is the Illinois EPA's preliminary determination that this source’s permit application meets the standards for issuance of a CAAPP permit. The Illinois EPA is therefore proposing to issue a CAAPP permit, subject to the conditions proposed in the draft permit.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit. If substantial public interest is shown in this matter, the Illinois EPA will consider holding a public hearing in accordance with 35 Ill. Adm. Code Part 164.

JS:psj