TITLE 326 AIR POLLUTION CONTROL BOARD

FINDINGS AND DETERMINATION OF THE COMMISSIONER
PURSUANT TO IC 13-14-9-7 AND SECOND NOTICE OF COMMENT PERIOD
LSA Document #09-221

DEVELOPMENT OF NEW RULES CONCERNING APPLICATION OF REASONABLY AVAILABLE CONTROL TECHNOLOGY (RACT) FOR VOLATILE ORGANIC COMPOUND (VOC) EMISSIONS FROM OFFSET LITHOGRAPHIC PRINTING AND LETTERPRESS PRINTING, INDUSTRIAL SOLVENT CLEANING OPERATIONS, AND MISCELLANEOUS INDUSTRIAL ADHESIVES

PURPOSE OF NOTICE

The Indiana Department of Environmental Management (IDEM) has developed draft rule language for new rules in 326 IAC 8 for application of reasonably available control technology (RACT) to limit emissions of volatile organic compound (VOC) from offset lithographic printing and letterpress printing, industrial solvent cleaning operations, and miscellaneous industrial adhesives in ozone nonattainment counties. The purpose of this notice is to seek public comment on the draft rule, including suggestions for specific language to be included in the rule. IDEM seeks comment on the affected citations listed and any other provisions of Title 326 that may be affected by this rulemaking.

CITATIONS AFFECTED: 326 IAC 8; 326 IAC 8-16; 326 IAC 8-17; 326 IAC 8-22.

AUTHORITY: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11.

STATUTORY REQUIREMENTS

IC 13-14-9-7 recognizes that under certain circumstances it may be appropriate to reduce the number of public comment periods routinely provided. In cases where the commissioner determines that the rulemaking policy alternatives available to IDEM are so limited that the notice of first public comment period would provide no substantial benefit, IDEM may forgo this comment period and proceed directly to the notice of second public comment period.

If the commissioner makes the determination of limited rulemaking policy alternatives required by IC 13-14-9-7, the commissioner shall prepare written findings and include them in the second notice of public comment period published in the Indiana Register. This document constitutes the commissioner's written findings pursuant to IC 13-14-9-7.

The statute provides for this shortened rulemaking process if the commissioner determines that "the rulemaking policy alternatives available to the department are so limited that the public notice and comment period under (IC 13-14-9-3)... would provide no substantial benefit to:

(1) the environment; or

(2) persons to be regulated or otherwise affected by the proposed rule.".

BACKGROUND

Section 182(b)(2) of the Clean Air Act requires implementation of RACT for sources of VOCs in moderate ozone nonattainment areas, for which U.S. EPA has published a Control Technique Guideline (CTG). CTGs are used under U.S. EPA regulations to presumptively define RACT. Indiana is currently under a federal time clock that expires in September 2009 for implementing VOC RACT in counties that were designated as nonattainment for the 8-hour standard for ozone (85 ppb). States with moderate ozone nonattainment areas are also required to update existing VOC RACT regulations within one year of U.S. EPA issuing an updated CTG or before a county can be redesignated as attaining the standard. U.S. EPA has issued new CTGs for offset lithographic and letterpress printing, industrial solvent cleaning, and miscellaneous industrial adhesives. Adoption of VOC RACT rules updated with the most recent CTGs in Lake and Porter counties, both currently designated as moderate nonattainment areas, is necessary for amending the state implementation plan (SIP) to secure redesignation approval by U.S. EPA consistent with current federal regulations.

Although IDEM expects Lake and Porter counties to be redesignated as attainment by early 2010, there is no guarantee that the counties will in fact be redesignated. This is primarily due to uncertainty associated with the meteorological conditions from one ozone season to another. Therefore, sources need to be prepared to comply with the requirements of this rulemaking on April 1, 2011. However, it is IDEM's intention to repeal or amend these rules once Lake County and Porter County are redesignated as attainment for the 1997 8-hour standard for ozone (85 ppb). IDEM is currently in discussions with U.S. EPA in regards to available options for removing the rules as applicable regulations at which point these VOC RACT controls could become contingency measures in the maintenance plan. These VOC RACT rules were not part of the control measures that IDEM used to demonstrate redesignation of attainment. Redesignation could be effective in early 2010, which means that it is

possible that these requirements may be repealed prior to the compliance date.

This proposed rulemaking adds VOC RACT rules in Article 8 consistent with the control recommendations in (that is, presumptive RACT) the applicable CTG for facilities located in Lake County and Porter County. IDEM is proposing that the new requirements from the revised CTGs for Lake County and Porter County facilities would be applicable on and after April 1, 2011. The CTGs are available on U.S. EPA's website at:

http://www.epa.gov/ttn/naaqs/ozone/ctg_act

U.S. EPA also issued new CTGs for automobile and light duty truck assembly coatings, paper coating, metal furniture coating, large appliance coating, miscellaneous metal and plastic parts coatings, flat wood paneling, and flexible package printing. While previously issued CTGs and alternative control technology (ACT) documents for aerospace manufacturing, industrial wastewater collection and treatment, synthetic organic chemical manufacturing industry (SOCMI), and batch process have not recently been updated by U.S. EPA, IDEM is proposing to adopt rules for these source categories since IDEM had not previously adopted rules for these categories. IDEM is addressing these rulemakings in separate rulemaking notices.

Offset Lithographic Printing and Letterpress Printing (326 IAC 8-16)

This CTG includes requirements to reduce VOC emissions stemming from the use of fountain solutions, cleaning materials, and inks in offset lithographic printing and cleaning materials and inks in letterpress printing. Offset lithographic printing is comprised of heat-set web, nonheatset web, and sheet-fed presses. The control requirements for cleaning materials and fountain solutions apply to lithographic and letterpress printing operations where the emissions associated with all aspects of that operation equal or exceed 15 pounds per day actual emissions of VOC (or the equivalent of three tons per 12 month rolling period). A different applicability threshold has been set for add-on control requirements that apply only to the heatset web offset subcategory of lithographic printing and letterpress printing. The applicability for add-on controls applies to larger sources with the potential to emit from the dryer, prior to controls, greater than or equal to 25 tons per year of VOC from heatset inks.

IDEM is currently trying to identify printing operations subject to this draft rule. At this time, IDEM has not identified any sources with the potential to emit greater than 25 tons per year VOC which are subject to the add-on control requirement. IDEM through the resources of a local printing association chapter has sent a survey to lithographic and letterpress printers in Lake County and Porter County to evaluate the impact of this rule on affected sources. This survey will help provide information to IDEM on whether affected sources can meet the alcohol content or alcohol substitutes VOC content limit for fountain solutions and the VOC content limit or vapor pressure requirement for cleaning materials. This rulemaking is primarily focused on lithographic printing since letterpress printing accounts for less than one percent of all commercial printing. This rulemaking adds new rule 326 IAC 8-16 and is based on the control recommendations in the CTG (EPA-453/R-06-002 September 2006).

Industrial Solvent Cleaning Operations (326 IAC 8-17)

This CTG includes requirements to reduce VOC emissions stemming from the use of VOC containing materials in solvent cleaning operations to remove contaminants, such as adhesives, inks, paint, dirt, soil, and grease. Contaminants are removed from spray booths, parts, products, tools, machinery, equipment, vessels (tanks), floors, walls, and other production work related areas. The draft rule applies to industries where emissions associated with solvent cleaning equal or exceed 15 pounds per day actual emissions of VOC (or the equivalent of three tons per 12 month rolling period). The CTG recommends that states exclude from applicability those cleaning operations in industry sectors already covered by a CTG listed for regulation under Section 183(e) of the Clean Air Act. IDEM is currently trying to identify solvent cleaning operations subject to this draft rule. The focus is on sources that apply ink and adhesives, because these sources are not already covered by a CTG that includes its own solvent cleaning requirements. This rulemaking adds new rule 326 IAC 8-17 and is based on the control recommendations in the CTG (EPA-453/R-06-001 September 2006) and Ohio's recently adopted rule for industrial solvent cleaning at Ohio Administrative Code 3745-21-23.

Miscellaneous Industrial Adhesive Application (326 IAC 8-22)

This CTG includes requirements to reduce VOC emissions from miscellaneous industrial adhesive application. The draft rule applies to each miscellaneous industrial adhesive application process at a facility where the total actual VOC emissions from all miscellaneous industrial adhesive application processes, including related cleaning activities, are equal to or exceed three tons per 12 month rolling period, before consideration of controls. The draft rule does not apply to field application of adhesives. While the OTC model rule for this source category was used as a reference to develop the draft rule language, applicability and control requirements are limited to those required by the CTG. IDEM is currently trying to identify miscellaneous industrial adhesive application operations subject to this draft rule. This rulemaking adds new rule 326 IAC 8-22 and is based on the control recommendations in the CTG (EPA-453/R-08-005 September 2008).

The rulemaking policy alternatives are limited for this rulemaking. This rulemaking is based on the control recommendations contained in U.S. EPA's CTG documents. Although state agencies developing RACT rules may elect control approaches that differ from those described in the CTG in practice, it is difficult to establish alternative control approaches that are approvable by U.S. EPA. Thus, options for varying from the control recommendations contained in the CTG are limited.

IC 13-14-9-4 Identification of Restrictions and Requirements Not Imposed under Federal Law

No element of the draft rule imposes either a restriction or a requirement on persons to whom the draft rule applies that is not imposed under federal law. This VOC RACT rule is necessary for IDEM to meet a Clean Air Act requirement. The applicable CTGs presumptively define RACT under U.S. EPA regulations. When a state submits a RACT rule that is consistent with the presumptive RACT, the state does not need to submit additional support to demonstrate that the rule meets the Clean Air Act's RACT requirement. Section 182(b)(2) of the Clean Air Act requires IDEM to adopt VOC RACT for CTG source categories where (as described herein) applicable sources are identified in nonattainment areas of a state in order to secure redesignation of such area.

Potential Fiscal Impact

Since this rulemaking addresses a Clean Air Act requirement, there are no additional costs beyond those already imposed under federal law. A summary of cost estimates provided by U.S. EPA in each of the CTG documents is provided below. The department is asking for information from affected sources on their ability to meet the requirements in these proposed rules and to help estimate the cost of compliance. At this time, IDEM anticipates that there will be some sources subject to these draft rules in Lake County and Porter County. Potentially affected sources have been identified for offset lithographic printing, industrial solvent cleaning, and miscellaneous industrial adhesives.

Offset Lithographic Printing and Letterpress Printing

Cost estimates contained in the federal CTG estimate that the add-on control requirements for heatset dryers are a total annual cost per facility ranging from $68,607 to $305,336 in 2005 dollars. Cost estimates for the cleaning material standards are estimated at a total annual cost per facility ranging from $599 to $32,815 in 2005 dollars. The high end of this range is based on a large newspaper model plant. The CTG did not include cost estimates for controlling VOC emissions from fountain solutions. The CTG considered compliance with the fountain solution VOC content and alcohol content limits a cost savings. Indiana has not identified any sources in Lake County and Porter County that will need to install add-on controls. The department is asking for information from affected sources on the ability to meet the fountain solution and cleaning material requirements to help estimate the cost of compliance with this rule.

Industrial Solvent Cleaning Operations

According to the CTG, U.S. EPA believes that affected sources may either incur minimal additional costs or realize a savings on a case by case basis when switching to low VOC or waterbased cleaning agents, depending primarily on factors such as how much a source currently spends to operate high VOC content solvent based parts cleaners and the cost of organic solvent disposal. The department is asking for information from affected sources on the ability to meet the VOC content limits in the draft rule for cleaning materials to help estimate the cost of compliance with this rule.

Miscellaneous Adhesive Application

According to the CTG, U. S. EPA assumes that all miscellaneous industrial adhesive application facilities will choose to utilize the low VOC adhesive materials alternative. Since facilities are meeting limits in states with regulations already, low-VOC adhesives that can meet the recommended control levels in this CTG are already available at a cost that is not significantly greater than the cost of adhesives with higher VOC contents. The use of add-on controls to reduce emissions from typical adhesive application processes is a more costly alternative. U.S. EPA estimates that the annualized cost for a facility to convert to waterborne adhesives is estimated to be $2,300 (in 1993 dollars) according to a 1993 Ventura County APCD Rule 74.20 Staff Report and the 1998 California ARB RACT determination. Using the producer price index for adhesive manufacturing and scaling the 1993 annualized cost to 2007, the estimated annualized cost is $3,356. The CTG considered compliance with the work practice standards a cost savings.

Public Participation and Workgroup Information

At this time, no workgroup is planned for the rulemaking. If you feel that a workgroup or other informal discussion on the rule is appropriate, please contact Susan Bem, Rules Development Branch, Office of Legal Counsel (317) 233-5697 or (800) 451-6027 (in Indiana).

Small Business Assistance Information

IDEM established a compliance and technical assistance (CTAP) program under IC 13-28-3. The program provides assistance to small businesses and information regarding compliance with environmental regulations. In accordance with IC 13-28-3 and IC 13-28-5, there is a small business assistance program ombudsman to provide a point of contact for small businesses affected by environmental regulations. Information on the CTAP program, the monthly CTAP newsletter, and other resources available can be found at:

http://www.in.gov/idem/4108.htm

Small businesses affected by this rulemaking may contact the Small Business Regulatory Coordinator:

Alison Surface
IDEM Compliance and Technical Assistance Program - OPPTA
MC 60-04 IGCS W-041
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 232-8172 or (800) 988-7901

ctap@idem.in.gov
The Small Business Assistance Program Ombudsman is:
Brad Baughn
IDEM Small Business Assistance Program Ombudsman
MC 50-01 - IGCN 1307
100 North Senate Avenue
Indianapolis, IN 46204-2251
(317) 234-3386
bbaughn@idem.in.gov

FINDINGS

The commissioner of IDEM has prepared written findings regarding rulemaking on offset lithographic and letterpress printing, industrial solvent cleaning operations, and miscellaneous industrial adhesives. These findings are prepared under IC 13-14-9-7 and are as follows:

(1) This rulemaking is based on the control recommendations contained in U.S. EPA's CTG documents that presumptively define RACT for particular industries. Although state agencies developing RACT rules may elect control approaches that differ from those described in the CTG in practice, it is difficult to establish alternative control approaches that are approvable by U.S. EPA. Thus, options for varying from the control recommendations contained in the CTG are limited. The control requirements contained in this draft rule are equivalent to those contained in the CTG which have already gone through public comment at the federal level. This notice will provide the opportunity to comment on how these control requirements will be implemented in Indiana.

(2) I have determined that under the specific circumstances pertaining to this rule, the rulemaking policy alternatives are so limited that the public notice and comment period provided in the notice of first public comment period would provide no substantial benefit to the environment or to persons to be regulated or otherwise affected by the rule.

(3) The draft rule is hereby incorporated into these findings.

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Thomas W. Easterly
Commissioner
Indiana Department of Environmental Management

REQUEST FOR PUBLIC COMMENTS

This notice requests the submission of comments on the draft rule language, including suggestions for specific revisions to language to be contained in the rule. Mailed comments should be addressed to:

#09-221(APCB) VOC RACT Rules – New CTGs
Susan Bem Mail Code 61-49
c/o Administrative Assistant
Rules Development Branch
Office of Legal Counsel
Indiana Department of Environmental Management
100 North Senate Avenue
Indianapolis, Indiana 46204

Hand delivered comments will be accepted by the receptionist on duty at the thirteenth floor east reception desk, Indiana Department of Environmental Management, 100 North Senate Avenue, Indianapolis, Indiana.

Comments may be submitted by facsimile at the IDEM fax number: (317) 233-5517, Monday through Friday, between 8:15 a.m. and 4:45 p.m. Please confirm the timely receipt of faxed comments by calling the Rules Development Branch at (317) 233-8903.

COMMENT PERIOD DEADLINE

Comments must be postmarked, faxed, or hand delivered by May 29, 2009.

Additional information regarding this action may be obtained from Susan Bem, Rules Development Section, Office of Legal Counsel, (317) 233-5697 or (800) 451-6027 (in Indiana).

DRAFT RULE

SECTION 1. 326 IAC 8-16 IS ADDED TO READ AS FOLLOWS:

Rule 16. Offset Lithographic Printing and Letterpress Printing

326 IAC 8-16-1 Applicability

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) This rule applies to facilities in Lake and Porter counties that meet the either of the following criteria:

(1) Have actual volatile organic compound (VOC) emissions, before consideration of controls, of equal to or greater than three (3) tons per rolling twelve (12) month period from all offset lithographic printing operations, including fountain solution and cleaning activities. Offset lithographic printing presses include heatset web, nonheatset web, and sheet-fed.

(2) Have actual volatile organic compound (VOC) emissions, before consideration of controls, of equal to or greater than three (3) tons per rolling twelve (12) month period from all letterpress printing operations, including cleaning activities.

(b) Offset lithographic printing operations and letterpress printing operations otherwise exempt from the requirements of this rule based on the threshold applicability in subsection (a)(2) shall maintain records as required under section 11 of this rule.

(Air Pollution Control Board; 326 IAC 8-16-1)

326 IAC 8-16-2 Exemptions

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 2. The following exemptions apply in this rule:

(1) Any heatset web offset lithographic printing press or heatset web letterpress printing press with potential VOC emissions from the dryer (ink oil) less than twenty-five (25) tons per year before consideration of controls or any heatset web offset lithographic printing press or heatset web letterpress printing press with actual VOC emissions from the dryer (ink oil) limited through enforceable permit conditions to less than twenty-five (25) tons per year before consideration of controls is exempt from the add-on control requirements in section 4(a) of this rule.

(2) Any heatset web offset lithographic printing press used for book printing or with maximum web width of twenty-two (22) inches or less is exempt from the add-on control requirements in section 4(a) of this rule.

(3) Any offset lithographic printing press with a total fountain solution reservoir capacity of less than one (1) gallon is exempt from the fountain solution requirements in section 4(b), 4(c), or 4(d) of this rule.

(4) Any sheet-fed off-set lithographic printing press with a maximum sheet size of eleven (11) inches by seventeen (17) inches or smaller is exempt from the fountain solution control requirements in section 4(c) of this rule.

(Air Pollution Control Board; 326 IAC 8-16-2)

326 IAC 8-16-3 Definitions

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 3. The following definitions apply throughout this rule:

(1) "Alcohol" means any of the following compounds, when used as a fountain solution additive for offset lithographic printing:

(A) Ethanol.
(B) n-Propanol.
(C) Isopropanol.

(2) "Alcohol substitute" means a nonalcohol additive that contains VOC and is used in the fountain

solution. Some additives are used to reduce the surface tension of water, and others are added to prevent piling (ink buildup).
(3) "Automatic blanket wash system" means equipment used to clean lithographic blankets, which can include, but is not limited to, those utilizing a cloth and expandable bladder, brush, spray, or impregnated cloth system.
(4) "Batch" means a supply of fountain solution that is prepared and used without alteration until completely used or removed from the printing process. For purposes of this rule, the term may apply to solutions prepared in either discrete batches or solutions that are continuously blended with automatic mixing units.
(5) "Cleaning material" means a liquid solvent or solution used to clean the operating surfaces of a printing press and its parts. For purposes of this rule, the term includes, but is not limited to:
(A) blanket wash;
(B) roller wash;
(C) plate cleaner;
(D) metering roller cleaner;
(E) impression cylinder washes;
(F) rubber rejuvenators; and
(G) other cleaners;
used for cleaning a press, press parts, or to remove dried ink or coating from the areas around the press. For purposes of this rule, the term does not include cleaners used on electronic components of a press, prepress cleaning operations (for example, platemaking), postpress cleaning operations (for example, binding), cleaning supplies (for example, detergents) used to clean the floor (other than dried ink) in the area around a press, or cleaning performed in parts washers or cold cleaners.
(6) "Composite partial vapor pressure" means the sum of the partial pressures of the VOC compounds in a solvent.
(7) "Fountain solution" means a mixture of water and other volatile and nonvolatile chemicals and additives used in the lithographic printing operations that maintains the quality of the printing plate including preventing debris buildup (for example, spray power, paper fiber, coating particles, dried ink particles, and other materials), and increases viscosity and reduces the surface tension of the water so that it spreads easily across the printing plate surface. The fountain solution wets the nonimage area so that the ink is maintained within the image areas. Nonvolatile additives include mineral salts and hydrophilic gums. Alcohol and alcohol substitutes are the most common VOC additives used to reduce the surface tension of the fountain solution.
(8) "Fountain solution reservoir" means the collection tank that accepts fountain solution recirculated from the printing unit. In some cases, the tanks are equipped with cooling coils for refrigeration of the fountain solution.
(9) "Heatset" means a class of lithography that requires a heated dryer to solidify the printing inks.
(10) "Letterpress printing" means a printing process in which the:
(A) image area is raised relative to the nonimage area; and
(B) paste ink is transferred to the substrate directly from the image surface.
(11) "Lithographic printing" means a printing process where the image and nonimage areas are chemically differentiated. The image area is oil receptive, and the nonimage area is water receptive. This method differs from other printing methods where the image is a raised or recessed surface.
(12) "Nonheatset" means a class of printing that does not require a heated dryer to solidify the printing inks. Ultraviolet-cured and electron beam-cured inks are considered nonheatset.
(13) "Offset printing" means a printing process that transfers the ink film from the plate to an intermediary surface (blanket) that, in turn, transfers the ink film to the substrate.
(14) "Sheet-fed printing" means a printing process where individual sheets of substrate are fed into the press sequentially.
(15) "Web" means a lithographic printing process where a continuous roll of substrate is fed into a press.

(Air Pollution Control Board; 326 IAC 8-16-3)

326 IAC 8-16-4 Control requirements

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 4. (a) The owner or operator of a heatset web offset lithographic printing press or a heatset web

letterpress, unless exempt as specified in section 2(1) or 2(2) of this rule, shall operate a control system that meets one (1) of the following:

(1) Reduces VOC emissions from each dryer by at least ninety percent (90%) for a control system first installed before January 1, 2010.

(2) Reduces VOC emissions from each dryer by at least ninety-five percent (95%) for a control system first installed on or after January 1, 2010.

(3) Maintains a maximum VOC outlet concentration of twenty (20) parts per million by volume (ppmv), as hexane (C_6H_{14}) on a dry basis.

(b) The owner or operator of a heatset web offset lithographic printing press shall meet one (1) of the following requirements for the fountain solution used on that press:

(1) Maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight, and use no alcohol in the fountain solution.

(2) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below one and six-tenths percent (1.6%), by weight.

(3) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below three percent (3%), by weight, and refrigerate the fountain solution to below sixty (60) degrees Fahrenheit.

(c) The owner or operator of a sheet-fed offset lithographic printing press shall meet one (1) of the following requirements for the fountain solution used on that press:

(1) Maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight, and use no alcohol in the fountain solution.

(2) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight.

(3) If the fountain solution contains alcohol, maintain the as-applied VOC content of the fountain solution at or below eight and one-half percent (8.5%), by weight, and refrigerate the fountain solution to below sixty (60) degrees Fahrenheit.

(d) The owner or operator of a nonheatset web offset lithographic printing press shall maintain the as-applied VOC content of the fountain solution at or below five percent (5%), by weight, and use no alcohol in the fountain solution.

(e) Where it can be demonstrated that an offset lithographic printing press cannot be operated with fountain solutions meeting the requirements of this rule, the owner or operator may submit a petition to the commissioner requesting a site-specific reasonably available control technology (RACT) plan as specified in 326 IAC 8-1-5.

(f) The owner or operator of an offset lithographic printing press or letterpress printing press shall meet the following requirements for cleaning materials:

(1) Use not more than one hundred ten (110) gallons per rolling twelve (12) month period of cleaning materials that exceed both of the following requirements:

(A) An as-applied VOC content less than seventy percent (70%), by weight.

(B) An as-applied VOC composite partial vapor pressure less than ten (10) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(2) When not in use, all cleaning materials shall be kept in closed containers.

(Air Pollution Control Board; 326 IAC 8-16-4)

326 IAC 8-16-5 Compliance dates

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 5. The owner or operator of an offset lithographic or letter press printing press that is subject to this rule shall comply with the requirements of this rule no later than April 1, 2011, or upon initial startup of the press for new presses.

(Air Pollution Control Board; 326 IAC 8-16-5)

326 IAC 8-16-6 Compliance test methods

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 6. (a) Compliance with the add-on control requirements shall be determined by performing emission tests as follows:

(1) Run at typical operating conditions and flow rates compatible with scheduled production during any emission testing.

(2) The initial emission test shall be performed, within ninety (90) days after the compliance date or within one hundred eighty (180) days after initial startup for new presses.

(3) The negative dryer pressure shall be established during the initial test using an airflow direction indicator, such as a smoke stick or aluminum ribbons, or differential gauge. Continuous dryer air flow monitoring is not required.

(4) The test methods and procedures in 326 IAC 8-1-4(d) through 326 IAC 8-1-4(f) shall be followed. If the limit of twenty (20) ppmv is being met, only the VOC concentration of the exit exhaust shall be determined.

(b) VOC (alcohol) content of as-applied fountain solution shall be determined by using an accurate hydrometer to measure the alcohol content of the fountain solution. The hydrometer shall have a visual, analog, or digital readout with an accuracy of five-tenths percent (0.5%).

(c) VOC content of as-applied fountain solution or cleaning materials shall be determined in accordance with the following:

(1) Analysis by 40 CFR 60, Method 24*.

(2) Analytical data derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on 40 CFR 60, Method 24*.

(3) If diluted prior to use, a material balance calculation that combines 40 CFR 60, Method 24* analytical data or supplier information for the concentrated materials used to prepare the fountain solution and the proportions in which they are mixed to make the as-applied material.

(d) Temperature requirements for refrigeration shall be determined with a thermometer or other temperature detection device capable of reading to five-tenths (0.5) degree Fahrenheit.

(e) The composite partial vapor pressure of a cleaning material shall be determined according to the following:

(1) Determine the identity and quantity of each compound in a blended organic solvent using the manufacturer's product formulation data.

(2) Determine the vapor pressure of each pure VOC component by using one (1) of the following:

(A) Standard reference texts.

(B) ASTM Method D2879-92*.

(3) Calculate the composite partial vapor pressure of the cleaning material by using the following formula:

$$PP_c = \sum_{i=1}^{n} \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \frac{W_c}{MW_c} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where: W_i = **Weight of the "i"th VOC compound, in grams**

W_w = **Weight of water, in grams**

W_c = **Weight of exempt compound, in grams**

MW_i	=	Molecular weight of the "i"th VOC compound, in g/g-mole
MW_w	=	Molecular weight of water, in g/g-mole
MW_c	=	Molecular weight of exempt compound, in g/g-mole
PP_c	=	VOC composite partial vapor pressure at 20°C (68°F), in mmHg
VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C (68°F), in mmHg

***These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.**

(Air Pollution Control Board; 326 IAC 8-16-6)

326 IAC 8-16-7 Monitoring and record keeping

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 7. (a) The owner or operator of a press that is subject to add-on control requirements installing and operating VOC emission control equipment to achieve and maintain compliance shall comply with the following:

(1) Monitoring equipment requirements in 326 IAC 8-1-12(b)(2).

(2) The control device monitoring data in 326 IAC 8-1-12(c)(6) through 326 IAC 8-1-12(c)(8) shall be collected and recorded each day of operation of the solvent cleaning operation and control device.

(b) The owner or operator of a heatset web or sheet-fed offset lithographic printing press using alcohol shall measure the following:

(1) The VOC (alcohol) content, in accordance with section 6(b) of this rule, of any altered fountain solution, at the time of alteration, in percent by weight, of the fountain solution employed in the press using an hydrometer, as follows:

(A) A standard solution shall be used to calibrate the hydrometer for the type of alcohol used in the fountain solution, in accordance with manufacturer's specifications, against measurements performed to determine compliance.

(B) The hydrometer must be corrected for temperature at least once per eight (8) hour shift or once per batch of fountain solution prepared or modified, whichever is longer.

For fountain solutions to which VOC containing material is added at the source with automatic feed equipment, VOC content shall be determined for the as-applied fountain solution based on the setting of the automatic feed equipment that makes additions of VOC containing material up to a pre-set level. The equipment used to make automatic additions must be installed, calibrated, operated, and maintained in accordance with manufacturer's specifications.

(2) The temperature, in degrees Fahrenheit, of the fountain solution, on a daily basis, if the owner or operator refrigerates the fountain solution to comply with the VOC content limit.

(c) The owner or operator of an offset lithographic printing press shall maintain records of the following information for each batch of fountain solution prepared for use in the press as follows:

(1) The volume and VOC content of each concentrated alcohol substitute added to make the batch of fountain solution.

(2) The volume of alcohol added to make the batch of fountain solution.

(3) The volume of water added to make the batch of fountain solution.

(4) The calculated VOC content of the final mixed batch.

(5) The date and time the batch was prepared.

For fountain solutions containing alcohol substitutes purchased with less than five percent (5%) VOC content before dilution, the owner or operator may maintain a current MSDS with VOC content determined by 40 CFR 60, Method 24* and does not need to keep records of VOC dilution and addition.

(d) The owner or operator of a nonheatset web offset lithographic printing press shall document all periods of time when alcohol is used in the press's fountain solution and the amount of alcohol used in each instance.

(e) The owner or operator of an offset lithographic printing press or letterpress printing press shall maintain monthly records of the following information:
(1) The total amount, in gallons, of each cleaning material used.
(2) The VOC content or VOC composite vapor pressure of all cleaning material used.
(3) The total amount, in gallons, of each cleaning material used that exceed the allowable VOC content or VOC composite partial vapor pressure.
(4) The total amount, in gallons, of all inks used.

(f) An owner or operator a heatset web offset lithographic printing or heatset web letterpress printing press that is exempt from the add-on control requirements in section 4(a) of this rule shall maintain monthly records of the following information:
(1) The total pounds of each ink used.
(2) The VOC content of each ink.
(3) The hours of operation of each press.

(g) All records required by this rule shall be maintained at the facility for a period of five (5) years.

***These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.**

(Air Pollution Control Board; 326 IAC 8-16-7)

326 IAC 8-16-8 Reporting requirements for monitoring and record keeping information

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 8. The owner or operator shall notify the department of any exceedances of requirements in section 4 of this rule within forty-five (45) days after the instance occurs.

(Air Pollution Control Board; 326 IAC 8-16-8)

326 IAC 8-16-9 Retention factors and capture efficiencies

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 9. For the purpose of determining VOC emissions from offset lithographic printing presses, the following retention factors and capture efficiencies shall be used:
(1) A portion of the VOC contained in inks and cleaning materials is retained in the printed web or in the shop towels used for cleaning. The following retention factors shall be used:
(A) A twenty percent (20%) VOC retention factor shall be used for heatset inks printed on absorptive substrates, meaning eighty percent (80%) of the VOC in the ink is emitted during the printing process and is available for capture and control by an add-on pollution control device.
(B) A ninety-five percent (95%) VOC retention factor shall be used for sheet-fed and nonheatset web inks printed on absorptive substrates, meaning five percent (5%) of the VOC in the ink is emitted during the printing process.
(C) A fifty percent (50%) VOC retention factor shall be used for cleaning material VOC in shop towels for cleaning materials with a VOC composite partial vapor pressure of not more than ten (10) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit) if the contaminated shop towels

are kept in closed containers, meaning fifty percent (50%) of the VOC used on the shop towels is emitted during the cleaning process.

(2) A portion of the VOC contained in inks, fountain solutions, and automatic blanket washes on the heatset presses is captured in the press dryer for control by add-on pollution control devices. The following capture efficiencies are to be used:

(A) A one hundred percent (100%) VOC carry over efficiency shall be used for inks. All the VOC in the ink that is not retained is assumed to be volatilized in the press dryer. Capture efficiency testing for heatset dryers is not required if it is demonstrated that pressure in the dryer is negative relative to the surrounding press room and the airflow is into the dryer.

(B) A seventy percent (70%) VOC carry over efficiency shall be used for fountain solutions containing alcohol substitutes.

(C) A forty percent (40%) VOC carry over efficiency shall be used for automatic blanket wash solutions with a VOC composite partial vapor pressure of not more than ten (10) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(Air Pollution Control Board; 326 IAC 8-16-9)

326 IAC 8-16-10 Requirements on compliance certification

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 10. (a) The owner or operator of an offset lithographic printing or letterpress printing operation shall submit to the department a compliance certification within thirty (30) days following the completion of any of the following requirements:

(1) The first documented achievement of compliance with each of the requirements in section 4(b) through 4(f) of this rule, as applicable.

(2) The installation and initial use of a VOC emission controls system for the offset lithographic printing or letterpress printing press.

(3) The installation and initial use of any monitoring device.

(4) A compliance test to demonstrate compliance with the applicable control requirement.

(b) The compliance certification under subsection (a) shall provide the following information, where applicable:

(1) A description of the requirements.

(2) A description of the VOC emission control system

(3) A description of the monitoring devices.

(4) A description of the records that document continuing compliance.

(5) The results of any compliance tests, including documentation of test data.

(6) The results of any records that document continuing compliance, including calculations.

(7) A statement by the owner or operator of the lithographic printing or letterpress printing operation as to whether the offset lithographic printing or letterpress printing press has complied with the requirement or requirements to which it is subject.

(Air Pollution Control Board; 326 IAC 8-16-10)

326 IAC 8-16-11 Record keeping requirements for exempt facilities

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 11. (a) An owner or operator an offset lithographic printing or letterpress printing facility that is otherwise exempt from the requirements of this rule based on the threshold applicability in section 1(a) of this rule shall maintain the following records on a monthly basis:

(1) The total gallons of each cleaning solvent used.

(2) The VOC content of each cleaning solvent.

(3) The total gallons of each fountain solution used.

(4) The VOC content of each fountain solution.

(5) The total pounds of each ink used.
(6) The VOC content of each ink.

(b) Records required by subsection (a) shall be submitted to the department within thirty (30) days of the receipt of a written request. If such records are not available, the source shall be considered to be subject to the requirements in section 4 of this rule.

(Air Pollution Control Board; 326 IAC 8-16-11)

SECTION 2. 326 IAC 8-17 IS ADDED TO READ AS FOLLOWS:

Rule 17. Industrial Solvent Cleaning Operations

326 IAC 8-17-1 Applicability

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) This rule applies to sources that meet the following criteria:
(1) Are located in Lake County or Porter County.
(2) Employ solvent materials in solvent cleaning operations during the production, repair, maintenance, or servicing of any of the following:
(A) Parts.
(B) Products.
(C) Tools.
(D) Machinery.
(E) Equipment.
(F) General work areas.
(3) Have actual volatile organic compound (VOC) emissions, before consideration of controls, of equal to or greater than three (3) tons per rolling twelve (12) month period from all solvent cleaning operations.

(b) Solvent cleaning operations otherwise exempt from the requirements of this rule based on the threshold applicability in subsection (a)(3) shall maintain records as required under section 10 of this rule.

(Air Pollution Control Board; 326 IAC 8-17-1)

326 IAC 8-17-2 Exemptions

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 2. (a) This rule does not apply to cleaning operations in the following source categories listed for regulation under Section 183(e) of the Clean Air Act:
(1) Aerospace coatings.
(2) Flexible packaging printing materials.
(3) Lithographic printing materials.
(4) Letterpress printing materials.
(5) Flat wood paneling coatings.
(6) Large appliance coatings.
(7) Metal furniture coatings.
(8) Paper, film, and foil coatings.
(9) Wood furniture coatings.
(10) Shipbuilding and repair coatings.
(11) Plastic parts coatings.
(12) Miscellaneous metal parts coatings.

(13) Miscellaneous industrial adhesives.
(14) Auto and light duty truck assembly coatings.

(b) The following solvent cleaning operations are exempt from all the requirements of this rule:
(1) Any solvent cleaning operation that is subject to 326 IAC 8-3 (Organic Solvent Degreasing Operations).
(2) Janitorial cleaning, including graffiti removal.
(3) Stripping of cured coatings, cured ink, or cured adhesives.
(4) Cleaning operations in printing prepress or graphic arts prepress areas, including the cleaning of film processors, color scanners, plate processors, film cleaning, and plate cleaning.

(c) The following solvent cleaning operations are exempt from the VOC content limitations in section 4 of this rule:
(1) Cleaning of the following:
(A) Solar cells.
(B) Laser hardware.
(C) Scientific instruments.
(D) High-precision optics.
(2) Cleaning conducted as part of the following:
(A) Performance laboratory tests on coatings, adhesives, or inks.
(B) Research and development programs.
(C) Laboratory tests in quality assurance laboratories.
(3) Cleaning of paper-based gaskets and clutch assemblies where the rubber is bonded to metal by means of an adhesive.
(4) Cleaning of cotton swabs to remove cottonseed oil before cleaning of high precision optics.
(5) Medical device and pharmaceutical facilities using up to one and one-half (1.5) gallons per day of solvents.
(6) Cleaning of adhesive application equipment used for thin metal laminating.
(7) Cleaning of electronic or electrical cables.
(8) Touch-up cleaning performed on printed circuit boards where surface mounted devices have already been attached.
(9) Cleaning of coating and adhesive application processes used to manufacture transdermal drug delivery product using less than three (3) gallons per day of ethyl acetate.
(10) Cleaning of application equipment used to apply coatings on satellites and radiation effect coatings.
(11) Cleaning of ultraviolet or electron beam adhesive application.
(12) Cleaning of sterilization indicating ink application equipment if the facility employs less than one and one-half (1.5) gallons per day of solvents for the cleaning.
(13) Cleaning of the following:
(A) Metering rollers.
(B) Dampening rollers.
(C) Printing plates.
(14) Cleaning of polyester resin application equipment for sources subject to 40 CFR 63, Subpart WWWW.

(d) The following solvent cleaning operations are exempt from the work practice standards in section 4(c) of this rule:
(1) Cleaning of the nozzle tips of automated spray equipment systems, except for robotic systems.
(2) Cleaning with spray bottles or containers described in section 4(b)(2) of this rule.
(3) Printing operations where the roller or blanket wash is applied automatically.

(e) Cleaning with aerosol products shall be exempt from the requirements of section 4(a) and 4(c) of this rule if the facility employs one and one-quarter (1.25) gallons or less of the aerosol products per day.

(Air Pollution Control Board; 326 IAC 8-17-2)

326 IAC 8-17-3 "Composite partial vapor pressure" defined

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 3. For purposes of this rule, "composite partial vapor pressure" means the sum of the partial pressures of the VOC compounds in a solvent.

(Air Pollution Control Board; 326 IAC 8-17-3)

326 IAC 8-17-4 VOC emissions control requirements

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 4. (a) The owner or operator of a facility that is subject to this rule shall not use a solvent to perform solvent cleaning operations unless the solvent complies with the applicable VOC content limitation as follows:

Solvent Cleaning Operation	VOC Limit (as-applied) (pounds/gallon)
Product cleaning during manufacturing process or surface preparation for coating, adhesive, or ink application:	
General	0.42
Electrical apparatus components and electronic components	0.83
Medical devices and pharmaceuticals	6.7
Repair and maintenance cleaning:	
General	0.42
Electrical apparatus components and electronic components	0.83
Medical devices and pharmaceuticals:	
Tools, equipment, and machinery	6.7
General work surfaces	5.0
Cleaning of coating or adhesive application equipment	0.42
Cleaning of ink application equipment:	
General	0.42
Flexographic printing	0.42
Gravure printing:	
Publication	0.83
Packaging	0.42
Screen printing	4.2
Ultraviolet ink and electron beam ink application equipment, except screen printing	4.2
Specialty flexographic printing	0.83
Cleaning of polyester resin application equipment not subject to 40 CFR 63, Subpart WWWW	0.42

(b) The owner or operator of a facility that is subject to this rule shall employ only the following cleaning devices and methods:

(1) Wipe cleaning.

(2) Closed containers or hand-held spray bottles from which solvents are applied without a propellant-induced force.

(3) Cleaning equipment that has a solvent container that is closed during cleaning operations, except when depositing and removing objects to be cleaned, and is closed during nonoperation with the exception of maintenance and repair to the cleaning equipment itself.

(4) Remote reservoir cleaner that complies with all of the following:

(A) Prevents solvent vapors from escaping from the solvent container by using such devices as a cover or a valve when the remote reservoir is not being used, cleaned, or repaired.

(B) Directs solvent flow in a manner that will prevent liquid solvent from splashing outside of the remote reservoir cleaner.

(C) Does not clean porous or absorbent materials, such as:

(i) cloth;
(ii) leather;
(iii) wood; or
(iv) rope.

(D) Uses only solvent containers free of all liquid leaks. Auxiliary equipment, such as pumps, pipelines, or flanges, shall not have any liquid leaks, visible tears, or cracks. Any liquid leak, visible tear, or crack detected shall be repaired within one (1) calendar day, or the leaking section of the remote reservoir cold cleaner shall be drained of all solvent and shut down until it is replaced or repaired.

(5) Nonatomized solvent flow method where the cleaning solvent is collected in a container or a collection system that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure buildup inside the container.

(6) Solvent flushing where the cleaning solvent is discharged into a container that is closed except for solvent collection openings and, if necessary, openings to avoid excessive pressure buildup inside the container. The discharged solvent from the equipment must be collected into containers without atomizing into the open air. The solvent may be flushed through the system by air or hydraulic pressure or by pumping.

(c) The owner or operator of a facility that is subject to this rule is prohibited from atomizing any solvent unless the emissions are vented to VOC emission control equipment that meets the requirements of subsection (e).

(d) Work practices shall be used to minimize VOC emissions from the use, handling, storage, and disposal of cleaning solvents and shop towels. Work practices shall include, at a minimum, but not be limited to, the following:

(1) Covering open containers and used applicators.
(2) Minimizing air circulation around cleaning operations.
(3) Properly disposing of used solvent and shop towels.
(4) Implementing equipment practices that minimize emissions, for example, keeping arts cleaners covered and maintaining cleaning equipment to repair solvent leaks.

(e) As an alternative to complying with the requirements in subsections (a) and (b), the owner or operator of a facility that is subject to this rule may comply with this rule by installing and operating VOC emission control equipment for the solvent cleaning operation. The VOC emission control equipment shall comply with the following requirements:

(1) A capture efficiency of at least ninety percent (90%), by weight, for the VOC emissions.
(2) Either a destruction efficiency of at least ninety percent (90%), by weight, or an outlet concentration of less than fifty (50) parts per million, by volume, dry basis, for the VOC emissions.

(f) As an alternative to complying with the VOC content limits in subsection (a), the owner or operator of a facility may use solvents or solvent solutions for industrial cleaning operations that have a VOC composite partial vapor pressure at or below eight (8) mmHg at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

(Air Pollution Control Board; 326 IAC 8-17-4)

326 IAC 8-17-5 Compliance dates

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 5. The owner or operator of a facility that is subject to this rule shall comply with the requirements of this rule no later than April 1, 2011, or upon initial startup of the operation for new solvent cleaning operations.

(Air Pollution Control Board; 326 IAC 8-17-5)

326 IAC 8-17-6 Compliance test methods

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 6. (a) Compliance with add-on control requirements shall be determined by performing emission tests as follows:

(1) Run at typical operating conditions and flow rates compatible with scheduled production during any emission testing.

(2) The initial emission test shall be performed, within ninety (90) days after the compliance date for the solvent cleaning operation or startup, when the control device is installed and operating to demonstrate compliance with the applicable emission control requirement.

(3) The test methods and procedures in 326 IAC 8-1-4(d) through 326 IAC 8-1-4(f) shall be followed.

(b) VOC content of solvents shall be determined in accordance with the following:

(1) Analysis by 40 CFR 60, Method 24*.

(2) Analytical data derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on 40 CFR 60, Method 24*.

(3) If diluted prior to use, a material balance calculation that combines 40 CFR 60, Method 24* analytical data or supplier information for the concentrated materials used to prepare the cleaning solvent and the proportions in which they are mixed to make the as-applied material.

(c) The composite partial vapor pressure of solvents shall be determined as follows:

(1) Determine the identity and quantity of each compound in a blended organic solvent using the manufacturer's product formulation data.

(2) Determine the vapor pressure of each pure VOC component by using one (1) of the following:

(A) Standard reference texts.

(B) ASTM Method D2879-92*.

(3) Calculate the composite partial vapor pressure of the cleaning material by using the following formula:

$$PP_c = \sum_{i=1}^{n} \frac{(W_i)(VP_i)/MW_i}{\frac{W_w}{MW_w} + \frac{W_c}{MW_c} + \sum_{i=1}^{n} \frac{W_i}{MW_i}}$$

Where:

W_i	=	Weight of the "i"th VOC compound, in grams
W_w	=	Weight of water, in grams
W_c	=	Weight of exempt compound, in grams
MW_i	=	Molecular weight of the "i"th VOC compound, in g/g-mole
MW_w	=	Molecular weight of water, in g/g-mole
MW_c	=	Molecular weight of exempt compound, in g/g-mole
PP_c	=	VOC composite partial vapor pressure at 20°C (68°F), in mmHg
VP_i	=	Vapor pressure of the "i"th VOC compound at 20°C (68°F), in mmHg

***These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.**

(Air Pollution Control Board; 326 IAC 8-17-6)

326 IAC 8-17-7 Monitoring and record keeping

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11

Affected: IC 13-15; IC 13-17

Sec. 7. (a) The owner or operator of a solvent cleaning operation that is subject to one (1) or more of the VOC content limits in section 4 of this rule shall collect and record the following information each month for each cleaning material subject to a VOC content limit:

(1) The name and identification of each cleaning material and the associated solvent cleaning activity.

(2) The VOC content of each cleaning material, in pounds per gallon, as applied or the VOC composite partial vapor pressures of the solvents or solvent solutions used in the industrial cleaning operation.

(b) The owner or operator of a solvent cleaning operation installing and operating VOC emission control equipment to achieve and maintain compliance with the requirements in section 4(e) of this rule shall comply with the following:

(1) Monitoring equipment requirements in 326 IAC 8-1-12(b)(2).

(2) The control device monitoring data in 326 IAC 8-1-12(c)(6) through 326 IAC 8-1-12(c)(8) shall be collected and recorded each day of operation of the solvent cleaning operation and control device.

(c) Any owner or operator of a solvent cleaning operation that is exempt from the VOC content limits specified in section 4 of this rule, under section 2(c)(5) or 2(c)(12) of this rule, shall collect and record the following information each day for each such solvent cleaning operation:

(1) The name and identification of each solvent used in the solvent cleaning activity.

(2) The volume, in gallons, of each solvent used in the industrial cleaning operation.

(3) The total volume, in gallons, of all the solvents used in the industrial cleaning operation.

(d) Any owner or operator of a solvent cleaning operation that is exempt from the requirements in section 4(a) and 4(c) of this rule, under section 2(e) of this rule, shall collect and record the following information each day for each such solvent cleaning operation:

(1) The name and identification of each aerosol product used in the solvent cleaning activity.

(2) The volume, in gallons, of each aerosol product used in the industrial cleaning operation.

(3) The total volume, in gallons, of all the aerosol product used in the industrial cleaning operation.

(e) Any owner or operator of a solvent cleaning operation that is exempt from the VOC content limits specified in section 4 of this rule, under section 2(c)(9) of this rule, shall record each day the total volume of ethyl acetate employed in such solvent cleaning operation.

(f) All records required by this rule shall be maintained at the facility for a period of five (5) years.

(Air Pollution Control Board; 326 IAC 8-17-7)

326 IAC 8-17-8 Reporting requirements for monitoring and record keeping information

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 8. (a) The owner or operator of a solvent cleaning operation shall notify the department of the following exceedances of applicable requirements in section 4 of this rule within forty-five (45) days after the instance occurs:

(1) Each record showing the use of noncomplying solvents.

(2) Each record showing that the solvent cleaning operation exceeded an applicable maximum daily solvent usage limit specified in section 2(c)(5), 2(c)(9), 2(c)(12), or 2(e) of this rule.

(b) The owner or operator of a solvent cleaning operation that employs control equipment to comply with this rule shall submit the department quarterly summaries of the records required by section 7(b) of this rule. These quarterly reports shall:

(1) be submitted no later than April 30, July 31, October 31, and January 31; and

(2) cover records for the previous calendar quarter.

(Air Pollution Control Board; 326 IAC 8-17-8)

326 IAC 8-17-9 Requirements on compliance certification

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 9. (a) The owner or operator of an affected solvent cleaning operation shall submit to the department a compliance certification within thirty (30) days following the completion of any of the following requirements;
(1) The first documented achievement of compliance with each of the requirements in section 4 of this rule, as applicable.
(2) The installation and initial use of a VOC emission controls system for the solvent cleaning operation.
(3) The installation and initial use of any monitoring device.
(4) A compliance test to demonstrate compliance with the applicable control requirement.

(b) The compliance certification under subsection (a) shall provide the following information, where applicable:
(1) A description of the requirements.
(2) A description of the VOC emission control system.
(3) A description of the monitoring devices.
(4) A description of the records that document continuing compliance.
(5) The results on any compliance tests, including documentation of test data.
(6) The results of any records that document continuing compliance, including calculations.
(7) A statement by the owner or operator of the affected facility as to whether the solvent cleaning operation has complied with applicable requirements.

(Air Pollution Control Board; 326 IAC 8-17-9)

326 IAC 8-17-10 Record keeping requirements for exempt facilities

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 10. (a) An owner or operator employing a solvent cleaning operations that is otherwise exempt from the requirements of this rule based on the threshold applicability in section 1(a)(3) of this rule shall maintain the following records on a monthly basis:
(1) The total gallons of each cleaning solvent used.
(2) The VOC content of each cleaning solvent.

(b) Records required by subsection (a) shall be submitted to the department within thirty (30) days of the receipt of a written request. If the records are not available, the source shall be considered to be subject to the requirements in section 4 of this rule.

(Air Pollution Control Board; 326 IAC 8-17-10)

SECTION 3. 326 IAC 8-22 IS ADDED TO READ AS FOLLOWS:

Rule 22. Miscellaneous Industrial Adhesives

326 IAC 8-22-1 Applicability

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 1. (a) This rule applies to each miscellaneous industrial adhesive application process at facilities that meet the following criteria:
(1) Are located in Lake County or Porter County.
(2) Have actual volatile organic compound (VOC) emissions, before consideration of controls, of equal to or greater than three (3) tons per rolling twelve (12) month period from all miscellaneous industrial adhesive application processes and related cleaning activities.

(b) An application process consists of a series of one (1) or more adhesive applicators and any associated drying area or oven, or both, wherein an adhesive is applied, dried or cured, or both. An application process ends at the point where the adhesive is dried or cured, or prior to any subsequent application of a different adhesive. It is not necessary for an application process to have an oven or flash-off area.

(c) Industrial adhesive application operations otherwise exempt from the requirements of this rule based on the threshold applicability in subsection (a)(2) shall maintain records as required under section 7 of this rule.

(Air Pollution Control Board; 326 IAC 8-22-1)

326 IAC 8-22-2 Definitions

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 2. The following definitions apply throughout this rule:
(1) "Acrylonitrile-butadiene-styrene welding" or "ABS welding" means any process to weld acrylonitrile-butadiene-styrene pipe.
(2) "Adhesive" means any chemical substance that is applied for the purpose of bonding two (2) surfaces together other than by mechanical means.
(3) "Adhesive primer" means any product intended by the manufacturer for application to a substrate, prior to the application of an adhesive, to provide a bonding surface.
(4) "Aerosol adhesive or adhesive primer" means an adhesive or adhesive primer packaged as an aerosol product in which the spray mechanism is permanently housed in a nonrefillable can designed for hand-held application without the need for ancillary hoses or spray equipment.
(5) "Ceramic tile installation adhesive" means any adhesive intended by the manufacturer for use in the installation of ceramic tiles.
(6) "Contact bond adhesive" means an adhesive that:
(A) is designed for application to both surfaces that are to be bonded together;
(B) is allowed to dry before the two (2) surfaces are placed in contact with each other;
(C) forms an immediate bond that is impossible, or difficult, to reposition after both adhesive-coated surfaces are placed in contact with each other; and
(D) does not need sustained pressure or clamping of surfaces after the adhesive-coated surfaces have been brought together using sufficient momentary pressure to establish full contact between both surfaces.
The term does not include rubber cements that are primarily intended for use on paper substrates or vulcanizing fluids that are designed and labeled for tire repair only.
(7) "Cove base" means a flooring trim unit, generally made of vinyl or rubber, having a concave radius on one (1) edge and a convex radius on the opposite edge that is used:
(A) in forming a junction between the bottom wall course and the floor; or
(B) to form an inside corner.
(8) "Cove base installation adhesive" means any adhesive intended by the manufacturer to be used for the installation of cove base or wall base on a wall or vertical surface at floor level.
(9) "Cyanoacrylate adhesive" means any adhesive with a cyanoacrylate content of at least ninety-five percent (95%) by weight.
(10) "Ethylene propylene diene monomer roof membrane" or "EPDM roof membrane" means a prefabricated single sheet of elastomeric material that is:
(A) composed of ethylene propylene diene monomer (EPDM); and

(B) field applied to a building roof using one (1) layer or membrane material.

(11) "Flexible vinyl" means nonrigid polyvinyl chloride plastic with a least five percent (5%) by weight plasticizer content.

(12) "Indoor floor covering installation adhesive" means the following:

(A) Any adhesive intended by the manufacturer for use in the installation of the following:

(i) Wood flooring.

(ii) Carpet.

(iii) Resilient tile.

(iv) Vinyl tile.

(v) Vinyl backed carpet.

(vi) Resilient sheet and roll or artificial grass.

(B) Excluded from this definition are adhesives used to install:

(i) ceramic tile; and

(ii) perimeter bonded sheet flooring with vinyl backing onto a nonporous substrate, such as flexible vinyl.

(13) "Laminate" means a product made by bonding together two (2) or more layers of material.

(14) "Metal to urethane or rubber molding or casting adhesive" means any adhesive intended by the manufacturer to bond metal to:

(A) high density or elastomeric urethane; or

(B) molded rubber materials;

in heater molding or casting processes, to fabricate products such as rollers for computer printers or other paper handling equipment.

(15) "Motor vehicle adhesive" means an adhesive, including glass bonding adhesive, used at a facility that is not an automobile or light duty truck assembly coating facility, applied for the purpose of bonding two (2) vehicle surfaces together without regard to the substrates involved.

(16) "Motor vehicle glass bonding primer" means a primer, used at a facility that is not an automobile or light duty truck assembly coating facility, that:

(A) is applied to:

(i) windshields;

(ii) other glass; or

(iii) body openings;

to prepare the glass or body opening for the application of glass bonding adhesives or the installation of adhesive bonded glass; and

(B) includes:

(i) glass bonding; and

(ii) cleaning primers;

that perform both functions (cleaning and priming of the windshield or other glass, or body openings) prior to the application of adhesive or the installation of adhesive bonded glass.

(17) "Motor vehicle weather-strip adhesive" means an adhesive, used at a facility that is not an automobile or light duty truck assembly coating facility, applied to weather-stripping materials for the purpose of bonding the weather-strip material to the surface of the vehicle.

(18) "Multipurpose construction adhesive" means any adhesive intended by the manufacturer for use in the installation or repair of various construction materials, including, but not limited to, the following:

(A) Drywall.

(B) Subfloor.

(C) Panel.

(D) Fiberglass reinforced plastic (FRP).

(E) Ceiling tile.

(F) Acoustical tile.

(19) "Outdoor floor covering installation adhesive" means any adhesive intended by the manufacturer for use in the installation of floor covering that is not in an enclosure and that is exposed to ambient weather conditions during normal use.

(20) "Panel installation" means the installation of any:

(A) plywood;

(B) predecorated hardboard (or tileboard);

(C) fiberglass reinforced plastic (FRP); and

(D) similar predecorated or nondecorated panels;

to studs or solid surfaces using an adhesive formulated for that purpose.

(21) "Perimeter bonded sheet flooring installation" means the installation of sheet flooring with vinyl backing onto a nonporous substrate using an adhesive designed to be applied only to a strip of up to

four (4) inches wide around the perimeter of the sheet flooring.
(22) "Plastics" means synthetic materials chemically formed by the polymerization of organic (carbon-based) substances. Plastics are described as follows:
(A) Usually compounded with one (1) or more of the following:
(i) Modifiers.
(ii) Extenders.
(iii) Reinforcers.
(B) Capable of being:
(i) molded;
(ii) extruded;
(iii) cast into various shapes and films; or
(iv) drawn into filaments.
(23) "Plastic solvent welding adhesive" means any adhesive intended by the manufacturer for use to dissolve the surface of plastic to form a bond between mating surfaces.
(24) "Plastic solvent welding adhesive primer" means any primer intended by the manufacturer for use to prepare plastic substrates prior to bonding or welding.
(25) "Porous material" means a substance that has tiny openings, often microscopic, in which fluids may be absorbed or discharged, including, but not limited to, paper and corrugated paperboard. For purposes of this rule, the term does not include wood.
(26) "Reinforced plastic composite" means a composite material consisting of plastic reinforced with fibers.
(27) "Rubber" means any natural or manmade rubber substrate, including, but not limited to, the following:
(A) Styrene-butadiene rubber.
(B) Polychloroprene (neoprene).
(C) Butyl rubber.
(D) Nitrile rubber.
(E) Chlorosulfonated polyethylene.
(F) Ethylene propylene diene terpolymer.
(28) "Sheet rubber lining installation" means the process of applying sheet rubber liners by hand to metal or plastic substrates to protect the underlying substrate from corrosion or abrasion. These operations also include laminating sheet rubber to fabric by hand.
(29) "Single-ply roof membrane" means a prefabricated single sheet of rubber, normally ethylene propylene diene terpolymer, that is field applied to a building roof using one (1) layer of membrane material. For purposes of this rule, the term does not include membranes prefabricated from ethylene propylene diene monomer (EPDM).
(30) "Single-ply roof membrane adhesive primer" means any primer labeled for use to clean and promote adhesion of the single-ply roof membrane seams or splices prior to bonding.
(31) "Single-ply roof membrane installation and repair adhesive" means any adhesive labeled for use in the installation or repair of single-ply roof membrane, where the following apply:
(A) Installation includes, at a minimum, the following:
(i) Attaching the edge of the membrane to the edge of the roof.
(ii) Applying flashings to vents, pipes, and ducts that protrude through the membrane.
(B) Repair includes the following:
(i) Gluing the edges of torn membrane together.
(ii) Attaching a patch over a hole.
(iii) Reapplying flashings to vents, pipes, or ducts installed through the membrane.
(32) "Structural glazing adhesive" means any adhesive intended by the manufacturer to apply any of the following to exterior building frames:
(A) Glass.
(B) Ceramic.
(C) Metal.
(D) Stone.
(E) Composite panels.
(33) "Subfloor installation" means the installation of subflooring material over floor joists, including the construction of any load bearing joists. Subflooring is covered by a finish surface material.
(34) "Thin metal laminating adhesive" means any adhesive intended by the manufacturer for use in bonding multiple layers of:
(A) metal to metal; or
(B) metal to plastic;
in the production of electronic or magnetic components in which the thickness of the bond line or

lines is less than twenty-five hundredths (0.25) mils.
(35) "Tire repair" means a process that includes:
(A) expanding a:
(i) hole;
(ii) tear;
(iii) fissure; or
(iv) blemish;
in a tire casing; and
(B) completing the process by:
(i) grinding or gouging;
(ii) applying adhesive; and
(iii) filling;
the hole or crevice with rubber.
(36) "Waterproof resorcinol glue" means a two (2) part resorcinol-resin-based adhesive designed for applications where the bond line must be resistant to conditions of continuous immersion in fresh water or salt water.

(Air Pollution Control Board; 326 IAC 8-22-2)

326 IAC 8-22-3 VOC content limits

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 3. (a) Except as provided in subsection (c) and section 4 of this rule, on and after April 1, 2011, an owner or operator applying miscellaneous industrial adhesives or adhesive primers within Lake County or Porter County shall comply with applicable VOC content limits specified in subsection (f).

(b) The VOC content limits in subsection (f) for adhesives or adhesive primers applied to particular substrates shall apply as follows:
(1) If an operator uses an adhesive that is subject to a specific VOC content limit in subsection (f), the specific limit is applicable rather than an adhesive-to-substrate limit.
(2) The applicable substrate category with the highest VOC content shall be the limit when an adhesive is used to bond dissimilar substrates together.

(c) A person using an adhesive or adhesive primer subject to this rule may comply with subsection (a) by using add-on air pollution control equipment if the equipment meets the following requirements:
(1) The VOC emissions from the use of all adhesives or adhesive primers subject to this rule are reduced by an overall capture and control efficiency of at least eighty-five percent (85%) by weight.
(2) The combustion temperature is monitored continuously if a thermal incinerator is operated.
(3) Inlet and exhaust gas temperatures are monitored continuously if a catalytic incinerator is operated.
(4) Control device efficiency is monitored continuously if a carbon absorber or control device other than a thermal or catalytic incinerator is operated.
(5) Operation records sufficient to demonstrate compliance with the requirements of this subsection are maintained as required by section 5 of this rule.

(d) Work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for adhesives, adhesive primers, cleaning materials, and waste materials. Work practices shall include the following, at a minimum:
(1) Store all VOC adhesives, adhesive primers, and cleaning materials in closed containers or pipes.
(2) Minimize spills of VOC adhesives, adhesive primers, and clean up any spill immediately.
(3) Convey any adhesives, adhesive primers, and cleaning materials in closed containers or pipes.
(4) Keep mixing vessels that contain VOC adhesives, adhesive primers, or other materials closed except when specifically in use.
(5) Clean equipment without atomizing the cleaning solvent and ensure all spent solvent is captured in a closed container.

(e) In addition to the VOC content limits in subsection (f), one (1) or a combination of the following equipment shall be used for adhesive or adhesive primer application:

(1) Electrostatic equipment.
(2) High volume low-pressure (HVLP) spray equipment.
(3) Flow coating.
(4) Roller coating or hand application, including nonspray application methods similar to hand or mechanically powered caulking gun, brush, or direct hand application.
(5) Dip coating, including electrodeposition.
(6) Airless spray.
(7) Air-assisted airless spray.
(8) Other coating application method capable of achieving a transfer efficiency equivalent to or better than that achieved by HVLP spraying.

(f) The VOC content limits for adhesives and adhesive primers are as follows:

Category**		VOC Content Limit	
Specialty Adhesive Application Processes		grams/liter	lb/gal
	Ceramic tile installation	130	1.1
	Contact adhesive	250	2.1
	Cove base installation	150	1.3
	Indoor floor covering installation	150	1.3
	Metal to urethane or rubber molding or casting	850	7.1
	Motor vehicle adhesive	250	2.1
	Motor vehicle weather-strip adhesive	750	6.3
	Multipurpose construction	200	1.7
	Outdoor floor covering installation	250	2.1
	Single-ply roof membrane installation or repair (except EPDM)	250	2.1
	Structural glazing	100	0.8
	Thin metal laminating	780	6.5
	Tire repair	100	0.8
	Perimeter bonded sheet vinyl flooring installation	660	5.5
	Plastic solvent welding (ABS)	400	3.3
	Plastic solvent welding (except ABS)	500	4.2
	Sheet rubber lining installation	850	7.1
	Waterproof resorcinol glue	170	1.4
Adhesive Primer Application Processes			
	Motor vehicle glass bonding primer	900	7.5
	Plastic solvent welding adhesive primer	650	5.4
	Single-ply roof membrane adhesive primer	250	2.1
	Other adhesive primer	250	2.1
Adhesives Applied to the Listed Substrate			
	Flexible vinyl	250	2.1
	Reinforced plastic composite (fiberglass)	200	1.7
	Metal	30	0.3
	Porous material (except wood)	120	1.0
	Rubber	250	2.1
	Other substrates	250	2.1
	Wood	30	0.3

**** The VOC content is determined as the weight of VOC, less water and exempt compounds.**

(Air Pollution Control Board; 326 IAC 8-22-3)

326 IAC 8-22-4 Exemptions and exceptions

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 4. (a) The requirements of this rule shall not apply to the following:
(1) The use of the following compounds:
(A) Adhesives or adhesive primers being tested or evaluated in any:
(i) research and development;
(ii) quality assurance; or
(iii) analytical;
laboratory, provided records are maintained as required in section 5 of this rule.
(B) Cyanoacrylate adhesives.
(C) Adhesives or adhesive primers that are sold or supplied by the manufacturer or supplier in containers with a net:
(i) volume of sixteen (16) fluid ounces or less; or
(ii) weight of one (1) pound or less;
except plastic solvent welding adhesives and contact adhesives.
(D) Contact adhesives that are sold or supplied by the manufacturer or supplier in containers with a net volume of one (1) gallon or less.
(E) Aerosol adhesives and aerosol adhesive primers.
(2) The use of adhesives or adhesive primers in the following operations:
(A) Tire repair operations, provided the label of the adhesive states "For tire repair only".
(B) In the assembly, repair, and manufacture of aerospace or undersea-based weapon systems.
(C) The manufacture of medical equipment.
(D) Plaque laminating operations in which adhesives are used to bond clear, polyester acetate laminate to wood with lamination equipment installed prior to July 1, 1992. Any person claiming an exemption under this subdivision shall record and maintain monthly operational records sufficient to demonstrate compliance with this exemption and in accordance with section 5 of this rule.
(E) Processes using polyester bonding putties to assemble fiberglass parts at:
(i) fiberglass boat manufacturing facilities; and
(ii) other reinforced plastic composite manufacturing facilities.

(b) Section 3 of this rule shall not apply to the use of any adhesives or adhesive primers provided the total volume of adhesives and adhesive primers applied facility wide does not exceed fifty-five (55) gallons per calendar year. Any person claiming an exemption under this subdivision shall record and maintain monthly operational records sufficient to demonstrate compliance with this exemption and in accordance with section 5 of this rule.

(Air Pollution Control Board; 326 IAC 8-22-4)

326 IAC 8-22-5 Record keeping

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 5. (a) Each person subject to this rule shall maintain records demonstrating compliance with this rule, including, but not limited to, the following information:
(1) A list of each adhesive or adhesive primer in use and in storage.
(2) A data sheet or material list that provides the following:
(A) Material name.
(B) Manufacturer identification.
(C) Material application.
(3) The use and mix ratio of the following:
(A) Catalysts.
(B) Reducers.
(C) Other components.
(4) The VOC content of each product, as supplied.
(5) The final VOC content or vapor pressure, as applied.
(6) The monthly volume of each adhesive or adhesive primer used.

(b) Any person who complies with section 3(a) of this rule through the use of add-on air pollution control equipment shall record the key operating parameters for the control equipment, including, but not limited to, the following information:
(1) The volume used per day of each adhesive or adhesive primer that:
(A) is subject to a VOC content limit in section 3(f) of this rule; and
(B) exceeds a limit listed in section 3(f) of this rule.
(2) On a daily basis, the:
(A) combustion temperature;
(B) inlet and exhaust gas temperatures; and
(C) control device efficiency, as appropriate;
under section 3(c) of this rule.
(3) Daily hours of operation.
(4) All maintenance performed, including the following:
(A) Date of maintenance.
(B) Type of maintenance.

(c) All records documenting compliance with this rule shall be:
(1) maintained for five (5) years from the date a record is created; and
(2) made available to the department within ninety (90) days of a request.

(d) For adhesives or adhesive primers subject to the laboratory testing exemption under section 4(a)(1)(A) of this rule, the person conducting the testing shall make and maintain records of all adhesive or adhesive primer materials used, including, but not limited to, the following:
(1) Product name.
(2) Product category of the material or type of application.
(3) VOC content of each material.

(Air Pollution Control Board; 326 IAC 8-22-5)

326 IAC 8-22-6 Compliance procedures and test methods

Authority: IC 13-14-8; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 6. (a) Except as provided in subsections (c) and (d), the VOC and solids content of adhesives or adhesive primers shall be determined in accordance with the following:
(1) 40 CFR 60, Appendix A, Method 24*.
(2) Analytical data derived from a material safety data sheet (MSDS) or equivalent information from the supplier as long as it is based on 40 CFR 60, Appendix A, Method 24*.

(b) The organic content of exempt organic compounds shall be determined using ASTM D4457-85*, as applicable.

(c) The VOC content for reactive adhesives shall be determined using the procedures for reactive adhesives in 40 CFR 63, Subpart PPPP, Appendix A*.

(d) If air pollution control equipment is used to meet the requirements of this rule, the owner or operator shall make the following determinations:
(1) The measurement of capture efficiency shall be conducted and reported in accordance with 326 IAC 8-1-4(c).
(2) The control efficiency shall be determined in accordance with 326 IAC 8-1-4(d) through 326 IAC 8-1-4(f).

(e) Grams of VOC per liter of adhesive, less water and exempt compounds, shall be calculated according to the following equation:

$$\text{Grams of VOC per liter of adhesive} = \frac{Ws - Ww - We}{Vm - Vw - Ve}$$

Where:
- **Ws** = **weight of volatile compounds, in grams**
- **Ww** = **weight of water, in grams**
- **We** = **weight of exempt compounds, in grams**
- **Vm** = **volume of material, in liters**
- **Vw** = **volume of water, in liters**
- **Ve** = **volume of exempt compounds, in liters**

(f) Grams of VOC per liter of material shall be calculated according to the following equation:

$$\text{Grams of VOC per liter of materials} = \frac{Ws - Ww - We}{Vm}$$

Where:
- **Ws** = **weight of volatile compounds, in grams**
- **Ww** = **weight of water, in grams**
- **We** = **weight of exempt compounds, in grams**
- **Vm** = **volume of material, in liters**

(g) Percent VOC by weight shall be calculated according to the following equation:

$$\%\ \text{VOC by weight} = (Wv / W) \times 100$$

Where:
- **Wv** = **weight of VOCs in grams**
- **W** = **weight of material in grams**

***These documents are incorporated by reference. Copies may be obtained from the Government Printing Office, 732 North Capitol Street NW, Washington, D.C. 20401 or are available for review and copying at the Indiana Department of Environmental Management, Office of Legal Counsel, Indiana Government Center North, Thirteenth Floor, 100 North Senate Avenue, Indianapolis, Indiana 46204.**

(Air Pollution Control Board; 326 IAC 8-22-6)

326 IAC 8-22-7 Record keeping requirements for exempt facilities

Authority: IC 13-14-18; IC 13-17-3-4; IC 13-17-3-11
Affected: IC 13-15; IC 13-17

Sec. 7. (a) An owner or operator applying industrial adhesives that is exempt from the requirements of this rule based on the threshold applicability in section 1(a)(2) of this rule shall maintain the following records on a monthly basis:

(1) The total gallons of each adhesive.
(2) The VOC content of each adhesive.

(b) Records required by subsection (a) shall be submitted to the department within thirty (30) days of the receipt of a written request. If the records are not available, the source shall be considered to be subject to the requirements in section 3 of this rule.

(Air Pollution Control Board; 326 IAC 8-22-7)

Notice of Public Hearing

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