

Additional Special Terms and Conditions

A. Applicable Emission Limitations and/or Control Requirements:

1. The permittee shall not employ more than 83.51 tons of VOC per year based upon the monthly VOC input rates* to emissions units K006, K007, and K008. The tons per year limitation shall be based upon a rolling, twelve-month summation.

* Monthly VOC input rates = (C X D X 1- ink retention) where C = the number of gallons of each surface coating, ink, dampening solution and cleanup material employed per month (excluding water and exempt solvents) and D = the VOC content of each surface coating, ink, dampening solution and cleanup material employed per month in pounds of VOC per gallon (excluding water and exempt solvents).

2. The permittee shall not exceed the following VOC content limitations, as applied, excluding water and exempt solvents, for emissions units K006, K007, and K008:

Varnish Coating	2.8 lbs VOC/gal of coating
Aqueous Coating	3.0 lbs VOC/gal of coating
Inks (except metallic)	1.2 lbs VOC/gal of coating
Metallic Inks	2.5 lbs VOC/gal of coating
Dampening Solution	0.33 lb VOC/gal of coating
Cleanup Material	6.56 lbs VOC/gal of coating

3. The fountain solution employed in any sheet-fed offset lithographic printing press shall have a VOC content not greater than ten percent VOC (alcohol) by volume at each cooling unit.
4. The total VOC emissions from the metallic inks employed in all sheet-fed offset lithographic printing presses shall not exceed 0.258 ton during any calendar month and 2.32 tons during any period of twelve consecutive months.

B. Operational Restrictions:

1. The fountain solution employed in any sheet-fed offset lithographic printing press shall be refrigerated at each cooling unit to a temperature not to exceed sixty degrees Fahrenheit.

C. Monitoring and Record keeping Requirements:

1. The permittee shall collect and record the following information each month for emissions units K006, K007, and K008:
 - a. The name and identification of each surface coating, ink, dampening solution and cleanup material employed.
 - b. The amount in gallons of each surface coating, ink, dampening solution and cleanup material, employed, excluding water and exempt solvents.
 - c. The VOC content of each surface coating, ink, dampening solution and cleanup material, in pounds VOC per gallon, excluding water and exempt solvents.
 - d. The total VOC emissions [the summation of line (b) multiplied by line (c)] from all surface coatings, inks, dampening solutions and cleanup materials employed, in pounds or tons.
 - e. The updated rolling, twelve-month summation of VOC emissions for emissions units K006, K007 and K008, combined (the summation of the current calendar months emission total and the previous eleven calendar months emissions total).

The permittee already has records to demonstrate compliance with the rolling, twelve-month VOC emission limitation upon issuance of the permit

2. The owner or operator shall measure and record the temperature and VOC content, in percent by volume, of the fountain solution in each cooling unit on a daily basis. The VOC content of the fountain solution shall be measured using a hydrometer.

3. The owner or operator shall calculate and record the calendar month and rolling, twelve-month VOC emissions from the metallic inks employed in all of the sheet-fed offset lithographic printing presses.
4. Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of at least five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit.

D. Reporting Requirements:

1. The permittee shall submit an annual report which specifies for the previous year the total combined VOC emissions from emissions units K006, K007, and K008. This report shall be submitted by January 30 of each year.
2. The owner or operator shall notify the director of any temperature measurement of the fountain solution that exceeds sixty degrees Fahrenheit, any VOC content measurement of the fountain solution that exceeds ten percent, by volume, and any monthly and rolling twelve-month VOC emissions from the use of metallic inks that exceeds 0.258 ton and 2.32 tons, respectively. A copy of the record showing the exceedance shall be submitted to the director within forty-five days after the exceedance occurs.
3. The permittee shall submit deviation (excursion) reports which identify all exceedances of the VOC content limitation and the rolling, twelve-month emission limitation for VOC.
4. The permittee shall submit required reports in the following manner:
 - a. Reports of any required monitoring and/or record keeping information shall be submitted to the Hamilton County Department of Environmental Services.

- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any

deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (b) the probable cause of such deviations, and © any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Hamilton County Department of Environmental Services. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly, i.e., by January 30, April 30, July 30, and October 30 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

E. Compliance Methods/Testing Requirements:

1. Compliance with the emission limits in Term A.1 shall be demonstrated by the record keeping in Terms C.1. The hourly emission limitation is based on the potential to emit. Therefore, no hourly records are required to demonstrate compliance with these limits.
2. USEPA methods 24 and 24A shall be used to determine the VOC content for (a) coatings and (b) flexographic and rotogravure printing lines and related coatings, respectively. If, pursuant to section 4.3 of Method 24, 40 CFR Part 60, Appendix A, an owner or operator determines that Method 24 or 24A cannot be used for a particular coating or ink, the permittee shall so notify the Administrator of the USEPA and shall use formulation data for that coating or ink to demonstrate compliance until the USEPA provides alternative analytical procedures or alternative precision statements for Method 24 or 24A.

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PTI 14-4646
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3. Compliance with the VOC content limitations shall be determined by the record keeping required in term C.1.
4. Compliance with the VOC content and temperature limitation for the

fountain solution shall be demonstrated by the monitoring required in term C.2.

5. Compliance with the emission limits in Term A.4. shall be demonstrated by the record keeping in Terms C.1. and C.3.

F. Miscellaneous Requirements

1. This permit to install supersedes PTI 14-3516, PTI 14-3587 and PTI 14-3814 for emissions unit K006, K007 and K008.
2. This permit allows the use of the coatings and cleanup materials specified by the permittee in the application for PTI number 14-4646. In conjunction with the best available technology requirements of OAC rule 3745-31-05, the VOC emission limitation(s) specified in this permit was (were) established in accordance with the Ohio EPA's "Air Toxics Policy" and is (are) based on both the coating and cleanup material formulation data and the design parameters of the emissions unit's exhaust system, as specified in the application. Compliance with the Ohio EPA's "Air Toxics Policy" was demonstrated for each pollutant based on the Screen 3 model and a comparison of the predicted 1 hour maximum ground-level concentration to the MAGLC.

The following summarizes the results of the modeling for each pollutant:

Pollutant: Isopropyl Alcohol

TLV (ug/m³): 983,000

Maximum Hourly Emission Rate (lbs/hr): 27.44

Predicted 1 Hour Maximum Ground-Level Concentration at the Fenceline (ug/m³): 3809

Maximum Acceptable Ground-Level Concentration (MAGLC) (ug/m³): 23,405

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Any of the following changes may be deemed a "modification" to the emissions unit and, as such, prior notification to and approval from the appropriate Ohio EPA District Office or local air agency are required, including the possible issuance of modifications to PTI number 14-4646

and the operating permit:

- a. Any changes in the composition of the coatings or cleanup materials, or the use of new coatings or cleanup materials, that would result in the emission of a compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value specified in the above table.
- b. Any change to the emissions unit or its exhaust parameters (e.g., increased emission rate, reduction of exhaust gas flow rate, and decreased stack height) that would result in an exceedance of any MAGLC specified in the above table.
- c. Any change to the emissions unit or its method of operation that would either require an increase in the emission limitation(s) established by this permit or would otherwise be considered a "modification" as defined in OAC rule 3745-31-01.
- d. Any change in the composition of the coatings or cleanup materials, or use of new coatings or cleanup materials, that would result in the emission of any of the exempted organic compounds included in the definition of "VOC" [OAC rule 3745-21-01(B)(6)].

Permit Review Narrative
PTI 14-4646

International Paper
100 Progress Place
Cincinnati, OH 45246

Premise Number: 1431420687 - Modification

International Paper prints on paper with offset sheet-fed lithographic printing presses. The emissions expected are VOC and HAP emissions. This Permit to Install (PTI) is a modification to emissions units K006, K007, and K008 due to a VOC content exceedance.

The applicable regulations are OAC rule 3745-31-05, OAC rule 3745-15-07 and OAC rule 3745-21-09(II).

The facility's annual allowable, based on a summation of the potential to emit for the three printing presses, are the combined allowable for previous PTI's (14-3516, 14-3587, and 14-3814). There will be no increase in the annual allowable of 83.51 TPY VOC. The actual annual is 20.73 TPY VOC. The hourly allowable VOC emissions for the three printing lines covered under this PTI will be increased to 25.04 LBS/HR (K006), 23.72 LBS/HR (K007), and 23.51 LBS/HR (K008). The previous hourly VOC emissions were 5.93 LBS/HR, 5.93 LBS/HR, and 7.19 LBS/HR, respectively.

The HAP emissions make this facility a major facility due to the potential emissions of more than 10 TPY HAPs and 25 TPY combined HAPs. International Paper is major with the potential for a single HAP (glycol ether) of 34.45 TPY. In addition, the combined HAPs are 40.41 TPY HAPs.

Best available technologies for these emissions units include the following: emissions limitations; VOC content limitations; dampening solution refrigeration; maintenance of dampening solution below 60 degrees F; and compliance with the Air Toxics Policy. BAT study determined that usage of alternate lower VOC products are not feasible, nor the use of a thermal oxidizer or adsorber due to adverse environmental, energy, and economic impacts. Additional information on the BAT study is available in the PTI. I recommend approval of this PTI.

The permit fee is: \$600 (\$200 each based on max PWR)

Prepared by: Kerri Kahlenberg
Date prepared: October 30, 1998

Synthetic Minor Determination
International Paper
PTI 14-4646

A. Emissions Units Description

This Permit to Install (PTI) covers three existing offset sheet-fed lithographic printing presses. The Ohio EPA ID numbers for these print lines are K006, K007, and K008.

B. Facility Emissions and Attainment Status

International Paper is located in Hamilton County, Ohio. Hamilton County is designated a moderate non-attainment area for ozone. International Paper will limit the potential emissions to be a non-major source of Volatile Organic Compounds (VOC's) emissions. This permit will incorporate federally enforceable limitations, limiting the facility to 83.51 TPY VOC. The hourly VOC emissions limitations are as follows: K006 - 25.04 LBS/HR; K007 - 23.72 LBS/HR; and K008 - 23.51 LBS/HR. The facility's annual emissions will remain the same and hourly emissions will be increased as a result of this PTI. The HAP emissions make this facility a major facility due to the potential emissions of over 10 TPY HAPs and 25 TPY combined HAPs. International Paper is major with the potential for a single HAP (glycol ether) of 34.45 HAPs. In addition, the combined HAPs are 40.41 TPY HAPs.

C. Source Emissions

Potential emissions were calculated based on maximum usage of the printing lines. The emission limitations outlined in this PTI will result in a facility-wide emission rate allowable of 83.51 TPY VOC. The facility will maintain monthly records of the coating usage and VOC content to determine compliance with the allowable permit limits. They will also submit quarterly reports.

D. Conclusion

The terms and conditions in this PTI will limit the potential emissions to less than 100 TPY. The permittee will maintain records and submit reports as outlined in the additional terms and conditions for the emissions units listed in this PTI to demonstrate compliance with the allowable emission rates. International Paper will avoid the Emission Offset rule through the limits in this permit to install.

Prepared by: Kerri Kahlenberg
Date Prepared: November 20, 1998