John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

9/10/2014

Certified Mail

No	TOXIC REVIEW
Yes	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
No	NSPS
No	NESHAPS
No	NETTING
No	MODELING SUBMITTED
No	SYNTHETIC MINOR TO AVOID TITLE V
Yes	FEDERALLY ENFORCABLE PTIO (FEPTIO)
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Matt Coltharp
The Cyril-Scott Company
3950 LANCASTER-NEW LEXINGTON RD
PO BOX 310
LANCASTER, OH 43130

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL AND OPERATE
Facility ID: 0123010198
Permit Number: P0116598
Permit Type: Administrative Modification
County: Fairfield

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA) Air Pollution Permit-to-Install and Operate (PTIO) which will allow you to install, modify, and/or operate the described emissions unit(s) in the manner indicated in the permit. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTIO is a final action of the Director and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of $70.00, made payable to "Ohio Treasurer Josh Mandel," which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/survey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Ohio EPA DAPC, Central District Office at (614)728-3778or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Erica R. Engel-Ishida, Interim Manager
Permit Issuance and Data Management Section, DAPC

Cc: Ohio EPA-CDO

Response to Comments

Facility ID:	0123010198
Facility Name:	The Cyril-Scott Company
Facility Description:	Commercial printing, lithographic
Facility Address:	3950 LANCASTER-NEW LEXINGTON RD Lancaster, OH 43130 Fairfield County
Permit:	P0116598, Permit-To-Install and Operate - Administrative Modification
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Lancaster Eagle Gazette on 07/31/2014. The comment period ended on 08/31/2014.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

1. Topic: None

a. Comment: None

b. Response: None

FINAL

Division of Air Pollution Control
Permit-to-Install and Operate
for
The Cyril-Scott Company

Facility ID:	0123010198
Permit Number:	P0116598
Permit Type:	Administrative Modification
Issued:	9/10/2014
Effective:	9/10/2014
Expiration:	9/10/2019

Division of Air Pollution Control
Permit-to-Install and Operate
for
The Cyril-Scott Company

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Authorization

Facility ID:	0123010198
Application Number(s):	A0050332, M0002674, M0002676, A0050403
Permit Number:	P0116598
Permit Description:	Administrative modification to accommodate the installation of a regenerative thermal oxidizer (RTO) to replace multiple catalytic oxidizers and to establish enforceable restrictions on the VOC emissions from the HWOPLs for the purpose of avoiding Major Source status under the non-attainment new source review (NANSR) program.
Permit Type:	Administrative Modification
Permit Fee:	$1,000.00
Issue Date:	9/10/2014
Effective Date:	9/10/2014
Expiration Date:	9/10/2019

Permit Evaluation Report (PER) Annual Date: Jan 1 - Dec 31, Due Feb 15

This document constitutes issuance to:

The Cyril-Scott Company
3950 LANCASTER-NEW LEXINGTON RD
Lancaster, OH 43130

of a Permit-to-Install and Operate for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Central District Office
50 West Town Street, 6th Floor
P.O. Box 1049
Columbus, OH 43216-1049
(614)728-3778

The above named entity is hereby granted this Permit-to-Install and Operate for the air contaminant source(s) (emissions unit(s))listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the described emissions unit(s) will operate in compliance with applicable State and federal laws and regulations.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0116598
Permit Description: Administrative modification to accommodate the installation of a regenerative thermal oxidizer (RTO) to replace multiple catalytic oxidizers and to establish enforceable restrictions on the VOC emissions from the HWOPLs for the purpose of avoiding Major Source status under the non-attainment new source review (NANSR) program.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**K008**
Company Equipment ID:	#142
Superseded Permit Number:	01-1291
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K015**
Company Equipment ID:	#132
Superseded Permit Number:	01-08690
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K017**
Company Equipment ID:	#125
Superseded Permit Number:	01-08532
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K018**
Company Equipment ID:	#115
Superseded Permit Number:	01-08814
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K019**
Company Equipment ID:	#137 & #138
Superseded Permit Number:	01-08865
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K022**
Company Equipment ID:	#165
Superseded Permit Number:	01-6398
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K024**
Company Equipment ID:	#124
Superseded Permit Number:	01-08093
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K025**
Company Equipment ID:	#128 & #129
Superseded Permit Number:	01-08420
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K027**
Company Equipment ID:	#122
Superseded Permit Number:	P0107090
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**K028**
Company Equipment ID:	#134

Superseded Permit Number:	P0107409
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. What does this permit-to-install and operate ("PTIO") allow me to do?

This permit allows you to install and operate the emissions unit(s) identified in this PTIO. You must install and operate the unit(s) in accordance with the application you submitted and all the terms and conditions contained in this PTIO, including emission limits and those terms that ensure compliance with the emission limits (for example, operating, recordkeeping and monitoring requirements).

2. Who is responsible for complying with this permit?

The person identified on the "Authorization" page, above, is responsible for complying with this permit until the permit is revoked, terminated, or transferred. "Person" means a person, firm, corporation, association, or partnership. The words "you," "your," or "permittee" refer to the "person" identified on the "Authorization" page above.

The permit applies only to the emissions unit(s) identified in the permit. If you install or modify any other equipment that requires an air permit, you must apply for an additional PTIO(s) for these sources.

3. What records must I keep under this permit?

You must keep all records required by this permit, including monitoring data, test results, strip-chart recordings, calibration data, maintenance records, and any other record required by this permit for five years from the date the record was created. You can keep these records electronically, provided they can be made available to Ohio EPA during an inspection at the facility. Failure to make requested records available to Ohio EPA upon request is a violation of this permit requirement.

4. What are my permit fees and when do I pay them?

There are two fees associated with permitted air contaminant sources in Ohio:

- PTIO fee. This one-time fee is based on a fee schedule in accordance with Ohio Revised Code (ORC) section 3745.11, or based on a time and materials charge for permit application review and permit processing if required by the Director.

  You will be sent an invoice for this fee after you receive this PTIO and payment is due within 30 days of the invoice date. You are required to pay the fee for this PTIO even if you do not install or modify your operations as authorized by this permit.

- Annual emissions fee. Ohio EPA will assess a separate fee based on the total annual emissions from your facility. You self-report your emissions in accordance with Ohio Administrative Code (OAC) Chapter 3745-78. This fee assessed is based on a fee schedule in ORC section 3745.11 and funds Ohio EPA's permit compliance oversight activities. For facilities that are permitted as synthetic minor sources, the fee schedule is adjusted annually for inflation. Ohio EPA will notify you when it is time to report your emissions and to pay your annual emission fees.

5. When does my PTIO expire, and when do I need to submit my renewal application?

This permit expires on the date identified at the beginning of this permit document (see "Authorization" page above) and you must submit a renewal application to renew the permit. Ohio EPA will send a renewal notice to you approximately six months prior to the expiration date of this permit. However, it is

very important that you submit a complete renewal permit application (postmarked prior to expiration of this permit) even if you do not receive the renewal notice.

If a complete renewal application is submitted before the expiration date, Ohio EPA considers this a timely application for purposes of ORC section 119.06, and you are authorized to continue operating the emissions unit(s) covered by this permit beyond the expiration date of this permit until final action is taken by Ohio EPA on the renewal application.

6. What happens to this permit if my project is delayed or I do not install or modify my source?

This PTIO expires 18 months after the issue date identified on the "Authorization" page above unless otherwise specified if you have not (1) started constructing the new or modified emission sources identified in this permit, or (2) entered into a binding contract to undertake such construction. This deadline can be extended by up to 12 months, provided you apply to Ohio EPA for this extension within a reasonable time before the 18-month period has ended and you can show good cause for any such extension.

7. What reports must I submit under this permit?

An annual permit evaluation report (PER) is required in addition to any malfunction reporting required by OAC rule 3745-15-06 or other specific rule-based reporting requirement identified in this permit. Your PER due date is identified in the Authorization section of this permit.

8. If I am required to obtain a Title V operating permit in the future, what happens to the operating provisions and PER obligations under this permit?

If you are required to obtain a Title V permit under OAC Chapter 3745-77 in the future, the permit-to-operate portion of this permit will be superseded by the issued Title V permit. From the effective date of the Title V permit forward, this PTIO will effectively become a PTI (permit-to-install) in accordance with OAC rule 3745-31-02(B). The following terms and conditions of this permit will no longer be applicable after issuance of the Title V permit: Section B, Term 1.b) and Section C, for each emissions unit, Term a)(2).

The PER requirements in this permit remain effective until the date the Title V permit is issued and is effective, and cease to apply after the effective date of the Title V permit. The final PER obligation will cover operations up to the effective date of the Title V permit and must be submitted on or before the submission deadline identified in this permit on the last day prior to the effective date of the Title V permit.

9. What are my obligations when I perform scheduled maintenance on air pollution control equipment?

You must perform scheduled maintenance of air pollution control equipment in accordance with OAC rule 3745-15-06(A). If scheduled maintenance requires shutting down or bypassing any air pollution control equipment, you must also shut down the emissions unit(s) served by the air pollution control equipment during maintenance, unless the conditions of OAC rule 3745-15-06(A)(3) are met. Any emissions that exceed permitted amount(s) under this permit (unless specifically exempted by rule) must be reported as deviations in the annual permit evaluation report (PER), including nonexempt excess emissions that occur during approved scheduled maintenance.

10. Do I have to report malfunctions of emissions units or air pollution control equipment? If so, how must I report?

If you have a reportable malfunction of any emissions unit(s) or any associated air pollution control system, you must report this to the [DO/LAA] in accordance with OAC rule 3745-15-06(B). Malfunctions that must be reported are those that result in emissions that exceed permitted emission levels. It is your responsibility to evaluate control equipment breakdowns and operational upsets to determine if a reportable malfunction has occurred.

If you have a malfunction, but determine that it is not a reportable malfunction under OAC rule 3745-15-06(B), it is recommended that you maintain records associated with control equipment breakdown or process upsets. Although it is not a requirement of this permit, Ohio EPA recommends that you maintain records for non-reportable malfunctions.

11. Can Ohio EPA or my local air agency inspect the facility where the emission unit(s) is/are located?

Yes. Under Ohio law, the Director or his authorized representative may inspect the facility, conduct tests, examine records or reports to determine compliance with air pollution laws and regulations and the terms and conditions of this permit. You must provide, within a reasonable time, any information Ohio EPA requests either verbally or in writing.

12. What happens if one or more emissions units operated under this permit is/are shut down permanently?

Ohio EPA can terminate the permit terms associated with any permanently shut down emissions unit. "Shut down" means the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31.

You should notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification that identifies the date on which the emissions unit was permanently shut down. The certification must be submitted by an authorized official from the facility. You cannot continue to operate an emission unit once the certification has been submitted to Ohio EPA by the authorized official.

You must comply with all recordkeeping and reporting for any permanently shut down emissions unit in accordance with the provisions of the permit, regulations or laws that were enforceable during the period of operation, such as the requirement to submit a PER, air fee emission report, or malfunction report. You must also keep all records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, for at least five years from the date the record was generated.

Again, you cannot resume operation of any emissions unit certified by the authorized official as beingpermanently shut down without first applying for and obtaining a permit pursuantto OAC Chapter 3745-31.

13. Can I transfer this permit to a new owner or operator?

You can transfer this permit to a new owner or operator. If you transfer the permit, you must follow the procedures in OAC Chapter 3745-31, including notifying Ohio EPA or the local air agency of the

change in ownership or operator. Any transferee of this permit must assume the responsibilities of the transferor permit holder.

14. Does compliance with this permit constitute compliance with OAC rule 3745-15-07, "air pollution nuisance"?

This permit and OAC rule 3745-15-07 prohibit operation of the air contaminant source(s) regulated under this permit in a manner that causes a nuisance. Ohio EPA can require additional controls or modification of the requirements of this permit through enforcement orders or judicial enforcement action if, upon investigation, Ohio EPA determines existing operations are causing a nuisance.

15. What happens if a portion of this permit is determined to be invalid?

If a portion of this permit is determined to be invalid, the remainder of the terms and conditions remain valid and enforceable. The exception is where the enforceability of terms and conditions are dependent on the term or condition that was declared invalid.

B. Facility-Wide Terms and Conditions

1. This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

   a) For the purpose of a permit-to-install document, the facility-wide terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

      (1) None.

   b) For the purpose of a permit-to-operate document, the facility-wide terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

      (1) None.

2. As stated in Ohio EPA Engineering Guide #61, a facility is presumed to have an inherent physical limitation if the facility's actual emissions of any regulated pollutant are below twenty percent of the Title V major source threshold(s) and can be substantiated by the permittee maintaining actual emission records showing that emissions are less than twenty percent of the major source threshold(s). The permittee has notified Ohio EPA of its intention to retain the provisions provided in Engineering Guide #61 for the purpose of avoiding the Title V operating program. Therefore, the permittee is considered to have an inherent physical limitation limiting emissions below the Title V major source threshold(s) until such time that the actual facility-wide emissions for any regulated pollutant exceed 20 percent of the respective pollutant threshold(s).

C. Emissions Unit Terms and Conditions

1. K008, #142

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 5 printing units, 1.513 MMBtu drying oven, chilling unit, and associated finishing operations venting to a regenerative thermal oxidizer (RTO)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)c., c)(1), d)(3), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions from the combustion of natural gas in the dryer and RTO serving this emissions unit shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 0.64 pounds per hour (lb/hr) and 2.80 tons per year (TPY). Sulfur dioxide (SO_2) emissions shall not exceed 0.004 lb/hr and 0.02 TPY. Volatile organic compound (VOC) emissions shall not exceed 0.04 lb/hr and 0.18 TPY. Carbon monoxide (CO) emissions shall

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		not exceed 0.54 lb/hr and 2.37 TPY. Particulate emissions (PE) shall not exceed 0.05 lb/hr and 0.22 TPY. See b)(2)a.
b.	OAC rule 3745-21-07(M)(4)	See b)(2)b.
c.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period. VOC emissions from the dryer shall be reduced by an overall control efficiency of at least 95%. See c)(1)
d.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations from the combustion of natural gas in the dryer and RTO for NO_X, SO_2, VOC, CO, and PE were established to reflect the potential to emit. It is not necessary to establish monitoring, recordkeeping, or reporting requirements in order to demonstrate compliance with these limitations.

b. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rule 3745-21-07(M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be limited by the following formula for each rolling 12-month period:

54.04 tons VOC ≥Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 combined

The total VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be determined in accordance with d)(3) usingthe overall control efficiency, as determined for the regenerative thermal oxidizer(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56; and

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]

(3) The permittee shall collect and record the following information for each month for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:

a. The VOC emissions rate for each emissions unit [i.e. the sum of all calculations performed in accordance with d)(2)];

b. The rolling, 12-month VOC emissions rate for each emissions unit [i.e. the sum of d)(3)a. added to the previous 11-months]; and

c. The combined, rolling, 12-month VOC emissions rate for emissions units K008, K017, K018, K019, K022, K024, K025, and K026.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance.Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

iii. each incident of deviation described in "i"or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i"or "ii" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

v. each incident of deviation described in "i"or "ii" where proper records were not maintained for the investigation and/or the corrective action(s);

vi. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

vii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

viii. each rolling, 12-month period during which the combined VOC emissions from emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 exceeded 54.04 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submittedeach year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions from the combustion of natural gas in the dryer and RTO serving this emissions unit shall not exceed the following:

NO_X emissions shall not exceed 0.64 lb/hr and 2.80 TPY;
SO_2 emissions shall not exceed 0.004 lb/hr and 0.02 TPY;
VOC emissions shall not exceed 0.04 lb/hr and 0.18 TPY;
CO emissions shall not exceed 0.54 lb/hr and 2.37 TPY; and
PE shall not exceed 0.05 lb/hr and 0.22 TPY.

Applicable Compliance Method:

The hourly emissions limitations were established by multiplying the maximum heat input capacities for the dryer (1.513 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
VOC	0.00539 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The annual emissions limitations were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

b. Emissions limitation:

VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2) and d)(3).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

2. K015, #132

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 6 printing units, 1.583 MMBtu drying oven, chilling unit, and associated finishing operations venting to catalytic incinerator S9

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)d., c)(1), d)(2), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 0.35 pounds per hour (lb/hr) and 1.53 tons per year (TPY). Sulfur dioxide (SO_2) emissions shall not exceed 0.002 lb/hr and 0.01 TPY. Volatile organic compound (VOC) emissions shall not exceed 3.66 lb/hr. Carbon monoxide (CO) emissions shall not exceed 0.71 lb/hr and 3.11 TPY. Particulate emissions (PE) shall not exceed 0.03 lb/hr and 0.13 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions from the dryer shall be reduced by an overall control efficiency of at least 95%. See b)(2)a.
b.	OAC rule 3745-21-07(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-07(M)(4)	See b)(2)c.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions shall not exceed 16.01 tons per rolling, 12-month period. See c)(1)
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

b. This emissions unit is not subject to the requirements established under OAC rule 3745-21-07(M)(2) pursuant to OAC rule 21-07(M)(3)(c)(vi).

c. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(2) and (M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K015 shall be limited by the following formula for each rolling 12-month period:

16.01 tons VOC $\geq$ Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K015

The total VOC emissions from emissions unit K015 shall be determined in accordance with d)(2) usingthe overall control efficiency, as determined for the catalytic incinerator(s)

during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]; and

d. The rolling, 12-month VOC emissions rate [i.e. the sum of d)(2)c. added to the previous 11-months].

(3) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit(s) controlled by the catalytic incinerator is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. The acceptable average temperature difference across the catalyst bed, for any 3-hour block of time (when the emissions unit(s) is/are in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

(4) The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

b. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

c. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

(5) Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(6) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

ii. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the

catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

iii. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation;

iv. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

v. any corrective actions taken to minimize or eliminate the visible particulate emissions;

vi. each rolling, 12-month period during which the VOC emissions exceeded 16.01 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submittedeach year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following:

NO_X emissions shall not exceed 0.35 lb/hr and 1.53 TPY;
SO_2 emissions shall not exceed 0.002 lb/hr and 0.01 TPY;
VOC emissions shall not exceed 3.66 lb/hr;
CO emissions shall not exceed 0.71 lb/hr and 3.11 TPY; and
PE shall not exceed 0.03 lb/hr and 0.13 TPY.

<u>Applicable Compliance Method:</u>

The hourly emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryer (1.583 MMBtu) and the catalytic incinerator (2.00 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The annual emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

Compliance with the hourly VOC emissions limitation shall be determined through emissions testing performed in accordance with f)(2).

b. Emissions limitation:

VOC emissions shall not exceed 16.01 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the hourly VOC emissions limitation (3.66 lb/hr) and the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

3. K017, #125

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 6 printing units, 2.92 MMBtu drying oven, chilling unit, and associated finishing operations venting to a regenerative thermal oxidizer (RTO)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)d., c)(1), d)(3), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 0.78 pounds per hour (lb/hr) and 3.42 tons per year (TPY). Sulfur dioxide (SO_2) emissions shall not exceed 0.005 lb/hr and 0.02 TPY. Volatile organic compound (VOC) emissions shall not exceed 5.55 lb/hr. Carbon monoxide (CO) emissions shall not exceed 0.66 lb/hr and 2.89 TPY. Particulate emissions (PE) shall not exceed 0.06 lb/hr and 0.26 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions from the dryer shall be reduced by an overall control efficiency of at least 95%. See b)(2)a.
b.	OAC rule 3745-21-07(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-07(M)(4)	See b)(2)c.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period. See c)(1)
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

b. This emissions unit is not subject to the requirements established under OAC rule 3745-21-07(M)(2) pursuant to OAC rule 21-07(M)(3)(c)(vi).

c. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(2) and (M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be limited by the following formula for each rolling 12-month period:

54.04 tons VOC ≥Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 combined.

The total VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be determined in accordance with d)(3) usingthe overall control efficiency, as determined for the regenerative thermal oxidizer(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56; and

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]

(3) The permittee shall collect and record the following information for each month for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:

a. The VOC emissions rate for each emissions unit [i.e. the sum of all calculations performed in accordance with d)(2)];

b. The rolling, 12-month VOC emissions rate for each emissions unit [i.e. the sum of d)(3)a. added to the previous 11-months]; and

c. The combined, rolling, 12-month VOC emissions rate for emissions units K008, K017, K018, K019, K022, K024, K025, and K026.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance.Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

iii. each incident of deviation described in "i"or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i"or "ii" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

v. each incident of deviation described in "i"or "ii" where proper records were not maintained for the investigation and/or the corrective action(s);

vi. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

vii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

viii. each rolling, 12-month period during which the combined VOC emissions from emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 exceeded 54.04 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submittedeach year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following:

NO_X emissions shall not exceed 0.78 lb/hr and 3.42 TPY;
SO_2 emissions shall not exceed 0.005 lb/hr and 0.02 TPY;
VOC emissions shall not exceed 5.55 lb/hr;
CO emissions shall not exceed 0.66 lb/hr and 2.89 TPY; and
PE shall not exceed 0.06 lb/hr and 0.26 TPY.

Applicable Compliance Method:

The hourly emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryer (2.92 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The annual emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

b. Emissions limitation:

VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2) and d)(3).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the

submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

4. K018, #115

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 6 printing units, 2.92 MMBtu drying oven, chilling unit, and associated finishing operations venting to a regenerative thermal oxidizer (RTO)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)d., c)(1), d)(3), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 0.78 pounds per hour (lb/hr) and 3.42 tons per year (TPY). Sulfur dioxide (SO_2) emissions shall not exceed 0.005 lb/hr and 0.02 TPY. Volatile organic compound (VOC) emissions shall not exceed 5.0 lb/hr. Carbon monoxide (CO) emissions shall not exceed 0.66 lb/hr and 2.89 TPY. Particulate emissions (PE) shall not exceed 0.06 lb/hr and 0.26 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions from the dryer shall be reduced by an overall control efficiency of at least 95%. See b)(2)a.
b.	OAC rule 3745-21-07(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-07(M)(4)	See b)(2)c.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period. See c)(1)
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

b. This emissions unit is not subject to the requirements established under OAC rule 3745-21-07(M)(2) pursuant to OAC rule 21-07(M)(3)(c)(vi).

c. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(2) and (M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be limited by the following formula for each rolling 12-month period:

54.04 tons VOC ≥Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 combined.

The total VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be determined in accordance with d)(3) usingthe overall control efficiency, as determined for the regenerative thermal oxidizer(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56; and

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]

(3) The permittee shall collect and record the following information for each month for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:

a. The VOC emissions rate for each emissions unit [i.e. the sum of all calculations performed in accordance with d)(2)];

b. The rolling, 12-month VOC emissions rate for each emissions unit [i.e. the sum of d)(3)a. added to the previous 11-months]; and

c. The combined, rolling, 12-month VOC emissions rate for emissions units K008, K017, K018, K019, K022, K024, K025, and K026.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance.Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

iii. each incident of deviation described in "i"or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i"or "ii" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

v. each incident of deviation described in "i"or "ii" where proper records were not maintained for the investigation and/or the corrective action(s);

vi. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

vii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

viii. each rolling, 12-month period during which the combined VOC emissions from emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 exceeded 54.04 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following:

NO_X emissions shall not exceed 0.78 lb/hr and 3.42 TPY;
SO_2 emissions shall not exceed 0.005 lb/hr and 0.02 TPY;
VOC emissions shall not exceed 5.0 lb/hr;
CO emissions shall not exceed 0.66 lb/hr and 2.89 TPY; and
PE shall not exceed 0.06 lb/hr and 0.26 TPY.

Applicable Compliance Method:

The hourly emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryer (2.92 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The annual emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

b. Emissions limitation:

VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2) and d)(3).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the

submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

5. K019, #137 & #138

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 8 printing units, two - 2.0 MMBtu drying ovens, chilling unit, and associated finishing operations venting to a regenerative thermal oxidizer (RTO)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)d., c)(1), d)(3), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 0.89 pounds per hour (lb/hr) and 3.90 tons per year (TPY). Sulfur dioxide (SO_2) emissions shall not exceed 0.005 lb/hr and 0.02 TPY. Volatile organic compound (VOC) emissions shall not exceed 5.47 lb/hr. Carbon monoxide (CO) emissions shall not exceed 0.75 lb/hr and 3.29 TPY. Particulate emissions (PE) shall not exceed 0.07 lb/hr and 0.31 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions from the dryer shall be reduced by an overall control efficiency of at least 95%. See b)(2)a.
b.	OAC rule 3745-21-07(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-07(M)(4)	See b)(2)c.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period. See c)(1)
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

b. This emissions unit is not subject to the requirements established under OAC rule 3745-21-07(M)(2) pursuant to OAC rule 21-07(M)(3)(c)(vi).

c. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(2) and (M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be limited by the following formula for each rolling 12-month period:

54.04 tons VOC ≥Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 combined.

The total VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be determined in accordance with d)(3) usingthe overall control efficiency, as determined for the regenerative thermal oxidizer(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56; and

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]

(3) The permittee shall collect and record the following information for each month for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:

a. The VOC emissions rate for each emissions unit [i.e. the sum of all calculations performed in accordance with d)(2)];

b. The rolling, 12-month VOC emissions rate for each emissions unit [i.e. the sum of d)(3)a. added to the previous 11-months]; and

c. The combined, rolling, 12-month VOC emissions rate for emissions units K008, K017, K018, K019, K022, K024, K025, and K026.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance.Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

iii. each incident of deviation described in "i"or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i"or "ii" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

v. each incident of deviation described in "i"or "ii" where proper records were not maintained for the investigation and/or the corrective action(s);

vi. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

vii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

viii. each rolling, 12-month period during which the combined VOC emissions from emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 exceeded 54.04 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following:

NO_X emissions shall not exceed 0.89 lb/hr and 3.90 TPY;
SO_2 emissions shall not exceed 0.005 lb/hr and 0.02 TPY;
VOC emissions shall not exceed 5.47 lb/hr;
CO emissions shall not exceed 0.75 lb/hr and 3.29 TPY; and
PE shall not exceed 0.07 lb/hr and 0.31 TPY.

Applicable Compliance Method:

The hourly emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryers (4.0 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The annual emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

b. Emissions limitation:

VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2) and d)(3).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the

submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

6. K022, #165

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 6 printing units, 2.75 MMBtu drying oven, chilling unit, and associated finishing operations venting to a regenerative thermal oxidizer (RTO)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)d., c)(1), d)(3), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 0.77 pounds per hour (lb/hr). Sulfur dioxide (SO_2) emissions shall not exceed 0.004 lb/hr. Volatile organic compound (VOC) emissions shall not exceed 3.65 lb/hr. Carbon monoxide (CO) emissions shall not exceed 0.66 lb/hr. Particulate emissions (PE) shall not exceed 0.06 lb/hr. VOC emissions from the dryer shall be

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		reduced by an overall control efficiency of at least 95%. See b)(2)a.
b.	OAC rule 3745-21-07(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-07(M)(4)	See b)(2)c.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period. See c)(1)
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

b. This emissions unit is not subject to the requirements established under OAC rule 3745-21-07(M)(2) pursuant to OAC rule 21-07(M)(3)(c)(vi).

c. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(2) and (M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be limited by the following formula for each rolling 12-month period:

54.04 tons VOC $\geq$Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 combined.

The total VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be determined in accordance with d)(3) usingthe overall control efficiency, as determined for the regenerative thermal oxidizer(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56; and

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]

(3) The permittee shall collect and record the following information for each month for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:

a. The VOC emissions rate for each emissions unit [i.e. the sum of all calculations performed in accordance with d)(2)];

b. The rolling, 12-month VOC emissions rate for each emissions unit [i.e. the sum of d)(3)a. added to the previous 11-months]; and

c. The combined, rolling, 12-month VOC emissions rate for emissions units K008, K017, K018, K019, K022, K024, K025, and K026.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance.Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

iii. each incident of deviation described in "i"or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i"or "ii" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

v. each incident of deviation described in "i"or "ii" where proper records were not maintained for the investigation and/or the corrective action(s);

vi. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

vii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

viii. each rolling, 12-month period during which the combined VOC emissions from emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 exceeded 54.04 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following:

NO_X emissions shall not exceed 0.77 lb/hr;
SO_2 emissions shall not exceed 0.004 lb/hr;
VOC emissions shall not exceed 3.65 lb/hr;
CO emissions shall not exceed 0.64 lb/hr; and
PE shall not exceed 0.06 lb/hr.

Applicable Compliance Method:

The hourly emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryer (2.75 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

b. Emissions limitation:

VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2) and d)(3).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

7. K024, #124

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 5 printing units, 3.08 MMBtu drying oven, chilling unit, and associated finishing operations venting to a regenerative thermal oxidizer (RTO)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)d., c)(1), d)(3), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 0.80 pounds per hour (lb/hr) and 3.50 tons per year (TPY). Sulfur dioxide (SO_2) emissions shall not exceed 0.005 lb/hr and 0.02 TPY. Volatile organic compound (VOC) emissions shall not exceed 5.35 lb/hr. Carbon monoxide (CO) emissions shall not exceed 0.67 lb/hr and 2.93 TPY. Particulate emissions (PE) shall not exceed 0.06 lb/hr and 0.26 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions from the dryer shall be reduced by an overall control efficiency of at least 95%. See b)(2)a.
b.	OAC rule 3745-21-07(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-07(M)(4)	See b)(2)c.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period. See c)(1)
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

b. This emissions unit is not subject to the requirements established under OAC rule 3745-21-07(M)(2) pursuant to OAC rule 21-07(M)(3)(c)(vi).

c. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(2) and (M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be limited by the following formula for each rolling 12-month period:

54.04 tons VOC ≥Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 combined.

The total VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be determined in accordance with d)(3) usingthe overall control efficiency, as determined for the regenerative thermal oxidizer(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56; and

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]

(3) The permittee shall collect and record the following information for each month for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:

a. The VOC emissions rate for each emissions unit [i.e. the sum of all calculations performed in accordance with d)(2)];

b. The rolling, 12-month VOC emissions rate for each emissions unit [i.e. the sum of d)(3)a. added to the previous 11-months]; and

c. The combined, rolling, 12-month VOC emissions rate for emissions units K008, K017, K018, K019, K022, K024, K025, and K026.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance.Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

iii. each incident of deviation described in "i"or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i"or "ii" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

v. each incident of deviation described in "i"or "ii" where proper records were not maintained for the investigation and/or the corrective action(s);

vi. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

vii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

viii. each rolling, 12-month period during which the combined VOC emissions from emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 exceeded 54.04 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following:

NO_X emissions shall not exceed 0.80 lb/hr and 3.50 TPY;
SO_2 emissions shall not exceed 0.005 lb/hr and 0.02 TPY;
VOC emissions shall not exceed 5.35 lb/hr;
CO emissions shall not exceed 0.67 lb/hr and 2.93 TPY; and
PE shall not exceed 0.06 lb/hr and 0.26 TPY.

Applicable Compliance Method:

The hourly emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryer (3.08 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The annual emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

b. Emissions limitation:

VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2) and d)(3).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the

submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

8. K025, #128 & #129

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 8 printing units, two - 6.52 MMBtu drying ovens, chilling unit, and associated finishing operations venting to a regenerative thermal oxidizer (RTO)

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)d., c)(1), d)(3), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 2.41 pounds per hour (lb/hr) and 10.56 tons per year (TPY). Sulfur dioxide (SO_2) emissions shall not exceed 0.01 lb/hr and 0.04 TPY. Volatile organic compound (VOC) emissions shall not exceed 6.94 lb/hr. Carbon monoxide (CO) emissions shall not exceed 2.03 lb/hr and 8.89 TPY. Particulate emissions (PE) shall not exceed 0.18 lb/hr and 0.79 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		VOC emissions from the dryer shall be reduced by an overall control efficiency of at least 95%. See b)(2)a.
b.	OAC rule 3745-21-07(M)(2)	See b)(2)b.
c.	OAC rule 3745-21-07(M)(4)	See b)(2)c.
d.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period. See c)(1)
e.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3).
f.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The hourly and annual emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

b. This emissions unit is not subject to the requirements established under OAC rule 3745-21-07(M)(2) pursuant to OAC rule 21-07(M)(3)(c)(vi).

c. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(2) and (M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be limited by the following formula for each rolling 12-month period:

54.04 tons VOC ≥Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 combined.

The total VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall be determined in accordance with d)(3) usingthe overall control efficiency, as determined for the regenerative thermal oxidizer(s) during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56; and

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]

(3) The permittee shall collect and record the following information for each month for emissions units K008, K017, K018, K019, K022, K024, K025, and K026 for the purpose of demonstrating compliance with the federally enforceable restriction on the potential to emit for VOC emissions:

a. The VOC emissions rate for each emissions unit [i.e. the sum of all calculations performed in accordance with d)(2)];

b. The rolling, 12-month VOC emissions rate for each emissions unit [i.e. the sum of d)(3)a. added to the previous 11-months]; and

c. The combined, rolling, 12-month VOC emissions rate for emissions units K008, K017, K018, K019, K022, K024, K025, and K026.

(4) In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

(5) The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within ± 1 percent of the temperature being measured or ± 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance.Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

a. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

b. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

(6) Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

f. a description of the corrective action;

g. the date corrective action was completed;

h. the date and time the deviation ended;

i. the total period of time (in minutes) during which there was a deviation;

j. the temperature readings immediately after the corrective action was implemented; and

k. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(7) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

ii. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

iii. each incident of deviation described in "i"or "ii" (above) where a prompt investigation was not conducted;

iv. each incident of deviation described in "i"or "ii" where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

v. each incident of deviation described in "i"or "ii" where proper records were not maintained for the investigation and/or the corrective action(s);

vi. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

vii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

viii. each rolling, 12-month period during which the combined VOC emissions from emissions unit K008, K017, K018, K019, K022, K024, K025, and K026 exceeded 54.04 tons.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following:

NO_X emissions shall not exceed 2.41 lb/hr and 10.56 TPY;
SO_2 emissions shall not exceed 0.01 lb/hr and 0.04 TPY;
VOC emissions shall not exceed 6.94 lb/hr;
CO emissions shall not exceed 2.03 lb/hr and 8.89 TPY; and
PE shall not exceed 0.18 lb/hr and 0.79 TPY.

Applicable Compliance Method:

The hourly emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryer (19.56 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The annual emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions limitations by the maximum number of hours in a year (8,760) and converting to tons by dividing by 2,000.

If required, compliance with the hourly VOC emissions limitation shall be determined through emissions testing performed in accordance with 40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

b. Emissions limitation:

VOC emissions from emissions units K008, K017, K018, K019, K022, K024, K025, and K026 combined shall not exceed 54.04 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the combined, rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2) and d)(3).

c. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the

submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

9. K027, #122

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 6 printing units, 3.0 MMBtu drying oven, chilling unit, UV coater, UV dryer, and associated finishing operations venting to a regenerative thermal oxidizer (RTO) or catalytic incinerator S6

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)e., c)(1), d)(2), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective November 30, 2001	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 3.46 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 0.02 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 2.89 tons per rolling, 12-month period. Particulate emissions (PE) shall not exceed 0.26 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a. and b)(2)c.
b.	OAC rule 3745-31-05(A)(3), as effective December 1, 2006	See b)(2)b.
c.	ORC 3704.03(T)	Volatile organic compound (VOC) emissions from the dryer shall be reduced by an overall control efficiency of at least 95%.
d.	OAC rule 3745-21-07(M)(4)	See b)(2)d.
e.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions shall not exceed 8.51 tons per rolling, 12-month period. See c)(1)
f.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3). See b)(2)b.ii.
g.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. When U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. The following rule paragraph will apply when U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_X, SO_2, CO, and PE from this air

contaminant source since the uncontrolled potential to emit for NO_X, SO_2, CO, and PE is less than 10 tons/year; and

ii. PE shall not exceed 0.551 pounds per hour.

c. The rolling, 12-month emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

d. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K027 shall be limited by the following formula for each rolling 12-month period:

8.51 tons VOC $\geq$ Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K027

The total VOC emissions from emissions unit K027 shall be determined in accordance with d)(2) usingthe overall control efficiency, as determined for the catalytic incinerator(s) and/or regenerative thermal oxidizer during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]; and

d. The rolling, 12-month VOC emissions rate [i.e. the sum of d)(2)c. added to the previous 11-months].

(3) The following provisions apply to the emissions unit for the purpose of demonstrating continuous compliance with the overall control efficiency requirements when emissions from the dryer are vented to a thermal oxidizer:

a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

b. The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance. Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

i. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

ii. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

c. Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

vi. a description of the corrective action;

vii. the date corrective action was completed;

viii. the date and time the deviation ended;

ix. the total period of time (in minutes) during which there was a deviation;

x. the temperature readings immediately after the corrective action was implemented; and

xi. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may

request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) The following provisions apply to the emissions unit for the purpose of demonstrating continuous compliance with the overall control efficiency requirements when emissions from the dryer are vented to a catalytic incinerator:

a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit(s) controlled by the catalytic incinerator is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. The acceptable average temperature difference across the catalyst bed, for any 3-hour block of time (when the emissions unit(s) is/are in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

b. The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within + 1 percent of the temperature being measured or + 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

i. all 3 hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

ii. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

iii. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

c. Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

vi. a description of the corrective action;

vii. the date corrective action was completed;

viii. the date and time the deviation ended;

ix. the total period of time (in minutes) during which there was a deviation;

x. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

xi. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(5) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the

document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

iii. each rolling, 12-month period during which the VOC emissions exceeded 8.51 tons; and

If emissions from the dryer were vented to a thermal oxidizer during the quarter, the permittee shall include the following information:

iv. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

v. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

vi. each incident of deviation described in “iv”or “v” (above) where a prompt investigation was not conducted;

vii. each incident of deviation described in “iv”or “v” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

viii. each incident of deviation described in "iv"or "v" where proper records were not maintained for the investigation and/or the corrective action(s); and

If emissions from the dryer were vented to a catalytic incinerator during the quarter, the permittee shall include the following information:

ix. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

x. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

xi. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP):

NO_X emissions shall not exceed 3.46 tons per rolling, 12-month period;
SO_2 emissions shall not exceed 0.02 tons per rolling, 12-month period;
CO emissions shall not exceed 2.89 tons per rolling, 12-month period; and
PE shall not exceed 0.26 tons per rolling, 12-month period.

Applicable Compliance Method:

The rolling, 12-month emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryers (3.0 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The rolling, 12-month emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions values by the maximum number of hours in a rolling, 12-month period (8,760) and converting to tons by dividing by 2,000.

b. Emissions limitation:

VOC emissions shall not exceed 8.51 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2).

c. Emissions Limitation:

PE shall not exceed 0.551 pounds per hour (as applicable after U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method:

If required, compliance shall be determined through emissions tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

d. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The permittee conducted emission testing for emissions unit **K027** while venting to catalytic incinerator S6 on September 17, 2013. The RTO emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

The permittee shall demonstrate that both the RTO and catalytic incinerator are capable of achieving the required control efficiency in accordance with f)(2)d.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.

10. K028, #134

Operations, Property and/or Equipment Description:

Heatset web offset printing line (HWOPL) with 6 printing units, 3.4 MMBtu drying oven, chilling unit, UV coater, UV dryer, and associated finishing operations venting to a regenerative thermal oxidizer (RTO) or catalytic incinerator S6

a) This permit document constitutes a permit-to-install issued in accordance with ORC 3704.03(F) and a permit-to-operate issued in accordance with ORC 3704.03(G).

(1) For the purpose of a permit-to-install document, the emissions unit terms and conditions identified below are federally enforceable with the exception of those listed below which are enforceable under state law only.

a. None.

(2) For the purpose of a permit-to-operate document, the emissions unit terms and conditions identified below are enforceable under state law only with the exception of those listed below which are federally enforceable.

a. b)(1)e., c)(1), d)(2), e)(3), f)(1)b., and f)(2)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3), as effective November 30, 2001	Emissions shall not exceed the following: Nitrogen oxides (NO_X) emissions shall not exceed 3.64 tons per rolling, 12-month period. Sulfur dioxide (SO_2) emissions shall not exceed 0.02 tons per rolling, 12-month period. Carbon monoxide (CO) emissions shall not exceed 3.07 tons per rolling, 12-month period. Particulate emissions (PE) shall not exceed 0.26 tons per rolling, 12-month period.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)a. and b)(2)c.
b.	OAC rule 3745-31-05(A)(3), as effective December 1, 2006	See b)(2)b.
c.	ORC 3704.03(T)	Volatile organic compound (VOC) emissions from the dryer shall be reduced by an overall control efficiency of at least 95%.
d.	OAC rule 3745-21-07(M)(4)	See b)(2)d.
e.	OAC rule 3745-31-05(D) (Synthetic minor to avoid Non-Attainment New Source Review)	VOC emissions shall not exceed 4.16 tons per rolling, 12-month period. See c)(1)
f.	OAC rule 3745-17-11(B)(1)	The PE limitation established by this rule is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(A)(3). See b)(2)b.ii.
g.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) rule 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. When U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. The following rule paragraph will apply when U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan:

i. The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the NO_X, SO_2, CO, and PE from this air

contaminant source since the uncontrolled potential to emit for NO_X, SO_2, CO, and PE is less than 10 tons/year; and

ii. PE shall not exceed 0.551 pounds per hour.

c. The rolling, 12-month emissions limitations for NO_X, SO_2, CO, and PE were established to reflect the potential to emit for this emissions unit. It is not necessary to develop monitoring, recordkeeping, or reporting requirements to ensure compliance with these limitations.

d. Pursuant to OAC rule 3745-21-07(M)(5)(g), the provisions of OAC rules 3745-21-07(M)(4) shall not apply to a source that is located in Fairfield County and that is within a facility having the potential to emit not more than 100 tons of organic compounds per calendar year.

c) Operational Restrictions

(1) The maximum ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K028 shall be limited by the following formula for each rolling 12-month period:

4.16 tons VOC $\geq$ Total VOC emissions from ink usage, fountain solution usage, cleanup solvent usage, and in-line finishing operation materials usage for emissions unit K028

The total VOC emissions from emissions unit K028 shall be determined in accordance with d)(2) usingthe overall control efficiency, as determined for the catalytic incinerator(s) and/or regenerative thermal oxidizer during the most recent emission test that demonstrated that the emissions unit(s) was/were in compliance.

d) Monitoring and/or Recordkeeping Requirements

(1) The VOC emissions rate from the HWOPL is a combination of fugitive emissions and the controlled emission rate from the control device. The controlled emission rate is calculated using the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 identified below and the destruction efficiency (DE) of the control device.

The permittee shall maintain the following information necessary to perform the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56 each month for this emissions unit:

a. The name and company identification for each ink;

b. The VOC content of each ink, in lbs per gallon;

c. The name and company identification for each fountain solution;

d. The VOC content of each fountain solution, in lbs per gallon;

e. The name and company identification for each cleanup solvent;

f. The VOC content for each cleanup solvent, in lbs per gallon;

g. The name and identification for each coating and/or finishing material utilized downstream from the printing line dryer(s);

h. The VOC content for each coating and/or finishing material utilized downstream from the printing line dryer(s), in lbs per gallon;

i. The total volume of each ink used;

j. The total volume of each fountain solution used;

k. The total volume of each cleanup solvent used;

l. The total volume of each coating and/or finishing material utilized downstream from the printing line dryer(s); and

m. The destruction and removal efficiency (DRE) from the control device, ascertained from the most recent performance test demonstrating that the control device was operating in compliance.

In accordance with Ohio EPA, DAPC Engineering Guide #56, the following assumptions shall be used for calculating emissions from the HWOPL:

n. 20 percent of the VOC in heatset inks are retained by the substrate, 80 percent goes to the dryer and are ducted to a control device (assuming a device is present);

o. 70 percent of the VOC from alcohol substitute(s) in fountain solution are captured into the press dryer and are ducted to a control device (assuming a device is present), 30 percent are fugitive; (Note: if alcohol is used in the fountain solution, assume all alcohol is fugitive);

p. 40 percent of the VOC from cleaning solvents used with automatic blanket washing equipment (provided that the vapor pressure of the cleaning solvent is less than 10 mm Hg at 20 degrees Celsius) are captured into the press dryer and are ducted to a control device (assuming a device is present), 60 percent are fugitive;

q. 50 percent of the cleanup solvent for hand wash cleanup operations is retained in the cloths and 50 percent is emitted as fugitive, if the cleanup solvent has a vapor pressure of 10 mm Hg or lower at 20 degrees Celsius (68 deg. F) and the cloths are stored in closed containers;

Note: Assume 100 percent of the cleanup solvent used in automatic blanket washing systems or hand wash operations is emitted as fugitive if the cleanup solvent vapor pressure is greater than 10 mm Hg at 20 degrees Celsius (68 deg. F); and

r. 100% of VOC emissions from in-line coating and finishing operations (e.g., gluing) are fugitive if they take place downstream from the printing line dryer(s).

(2) The permittee shall maintain the following informationeach month for this emissions unit:

a. The fugitive VOC emissions, as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

b. The stack VOC emissions as determined in accordance with the assumptions provided in Ohio EPA, DAPC Engineering Guide #56 and the calculation provided in Attachment I of Ohio EPA, DAPC Engineering Guide #56;

c. The total VOC emissions [i.e., the sum of d)(2)a. and d)(2)b.]; and

d. The rolling, 12-month VOC emissions rate [i.e. the sum of d)(2)c. added to the previous 11-months].

(3) The following provisions apply to the emissions unit for the purpose of demonstrating continuous compliance with the overall control efficiency requirements when emissions from the dryer are vented to a thermal oxidizer:

a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average combustion temperature within the thermal oxidizer, for any 3-hour block of time when the emissions unit(s) controlled by the thermal oxidizer is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. Until compliance testing has been conducted, the thermal oxidizer shall be operated and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manual.

b. The permittee shall properly install, operate, and maintain a continuous temperature monitor and recorder that measures and records the combustion temperature within the thermal oxidizer when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within $\pm$ 1 percent of the temperature being measured or $\pm$ 5 degrees Fahrenheit, whichever is greater. The temperature monitor and recorder shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The acceptable temperature setting shall be based upon the manufacturer's specifications until such time as any required performance testing is conducted and the appropriate temperature range is established to demonstrate compliance. Following compliance testing, the permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

i. all 3-hour blocks of time, when the emissions unit(s) controlled by the thermal oxidizer was/were in operation, during which the average combustion temperature within the thermal oxidizer was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

ii. a log (date and total time) of the downtime or bypass of the capture (collection) system and thermal oxidizer, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

These records shall be maintained at the facility for a period of three years.

c. Whenever the monitored average combustion temperature within the thermal oxidizer deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range/limit specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

vi. a description of the corrective action;

vii. the date corrective action was completed;

viii. the date and time the deviation ended;

ix. the total period of time (in minutes) during which there was a deviation;

x. the temperature readings immediately after the corrective action was implemented; and

xi. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature range/limit is effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may

request revisions to the permitted temperature range/limit based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s) for the controlled pollutant(s). In addition, approved revisions to the temperature range/limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(4) The following provisions apply to the emissions unit for the purpose of demonstrating continuous compliance with the overall control efficiency requirements when emissions from the dryer are vented to a catalytic incinerator:

a. In order to maintain compliance with the applicable emission limitation(s) contained in this permit, the acceptable average temperature of the exhaust gases immediately before the catalyst bed, for any 3-hour block of time when the emissions unit(s) controlled by the catalytic incinerator is/are in operation, shall not be more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance. The acceptable average temperature difference across the catalyst bed, for any 3-hour block of time (when the emissions unit(s) is/are in operation), shall not be less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance.

b. The permittee shall properly install, operate, and maintain continuous temperature monitors and recorder(s) that measure and record(s) the temperature immediately upstream and downstream of the incinerator's catalyst bed when the emissions unit(s) is/are in operation, including periods of startup and shutdown. Units shall be in degrees Fahrenheit. The accuracy for each thermocouple, monitor, and recorder shall be guaranteed by the manufacturer to be within + 1 percent of the temperature being measured or + 5 degrees Fahrenheit, whichever is greater. The temperature monitors and recorder(s) shall be installed, calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and the operating manuals, with any modifications deemed necessary by the permittee. The permittee shall collect and record the following information each day the emissions unit(s) is/are in operation:

i. all 3 hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

ii. all 3-hour blocks of time, when the emissions unit(s) controlled by the catalytic incinerator was/were in operation, during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference measured during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

iii. a log (date and total time) of the downtime or bypass of the capture (collection) system and catalytic incinerator control, and/or downtime of the monitoring equipment, when the associated emissions unit(s) was/were in operation.

The permittee may use a temperature chart recorder or equivalent recording device as the log that documents the temperature differential across the catalyst bed. These records shall be maintained at the facility for a period of no less than 3 years.

c. Whenever the monitored average temperature of the exhaust gases immediately before the catalyst bed and/or the average temperature difference across the catalyst bed deviates from the range or limit established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began;

ii. the magnitude of the deviation at that time;

iii. the date the investigation was conducted;

iv. the name(s) of the personnel who conducted the investigation; and

v. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range(s)/limit(s) specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

vi. a description of the corrective action;

vii. the date corrective action was completed;

viii. the date and time the deviation ended;

ix. the total period of time (in minutes) during which there was a deviation;

x. the temperature of the exhaust gases immediately before the catalyst andthe average temperature difference across the catalyst bed immediately after the corrective action was implemented; and

xi. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

The temperature ranges are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted temperature range(s) based upon information obtained during future performance tests that demonstrate compliance with the allowable emission rate(s)of the controlled pollutant(s). In addition, approved revisions to the temperature range(s) will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of an administrative modification.

(5) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emissions incident; and

e. any corrective actions taken to minimize or eliminate the visible emissions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event of an alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the

document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the District Office or Local Air Agency, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the signatory authority may be represented as provided through procedures established in Air Services.

(2) The permittee shall submit an annual Permit Evaluation Report (PER) to the Ohio EPA. The PER must be submitted by the due date identified in the Authorization section of this permit. The permit evaluation report shall cover a reporting period of no more than twelve months for each air contaminant source identified in this permit.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. all deviations (excursions) of the following emission limitations, operational restrictions and/or control device operating parameter limitations that restrict the potential to emit of any regulated air pollutant and have been detected by the monitoring, record keeping and/or testing requirements in this permit:

i. all days during which any visible particulate emissions were observed from the stack serving this emissions unit;

ii. any corrective actions taken to minimize or eliminate the visible particulate emissions;

iii. each rolling, 12-month period during which the VOC emissions exceeded 4.16 tons; and

If emissions from the dryer were vented to a thermal oxidizer during the quarter, the permittee shall include the following information:

iv. each period of time (start time and date, and end time and date)when the average combustion temperature within the thermal oxidizer was outside of the range specified by the manufacturer and/or outside of the acceptable range following any required compliance demonstration;

v. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the thermal oxidizer;

vi. each incident of deviation described in “iv”or “v” (above) where a prompt investigation was not conducted;

vii. each incident of deviation described in “iv”or “v” where prompt corrective action, that would bring the emissions unit(s) into compliance and/or the temperature within the thermal oxidizer into compliance with the acceptable range, was determined to be necessary and was not taken;

viii. each incident of deviation described in "iv"or "v" where proper records were not maintained for the investigation and/or the corrective action(s); and

If emissions from the dryer were vented to a catalytic incinerator during the quarter, the permittee shall include the following information:

ix. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature of the exhaust gases immediately before the catalyst bed was more than 50 degrees Fahrenheit below the average temperature established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance;

x. all 3-hour blocks of time (when the emissions unit(s) was/were in operation) during which the average temperature difference across the catalyst bed was less than 80 percent of the average temperature difference established during the most recent performance test that demonstrated the emissions unit(s) was/were in compliance; and

xi. any records of downtime (date and length of time) for the capture (collection) system, the catalytic incinerator, and/or the monitoring equipment when the emissions unit(s) was/were in operation.

If no deviations (excursions) occurred during a calendar quarter, the permittee shall submit a report that states that no deviations (excursions) occurred during the quarter.

The quarterly reports shall be submitted each year by January 31 (covering October to December), April 30 (covering January to March), July 31 (covering April to June), and October 31 (covering July to September), unless an alternative schedule has been established and approved by the Director (the appropriate District Office or local air agency).

f) Testing Requirements

(1) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. <u>Emissions limitations:</u>

Emissions shall not exceed the following (as applicable prior to U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP):

NO_X emissions shall not exceed 3.64 tons per rolling, 12-month period;
SO_2 emissions shall not exceed 0.02 tons per rolling, 12-month period;
CO emissions shall not exceed 3.07 tons per rolling, 12-month period; and
PE shall not exceed 0.26 tons per rolling, 12-month period.

Applicable Compliance Method:

The rolling, 12-month emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the maximum heat input capacities for the dryers (3.4 MMBtu) and the RTO (5.058 MMBtu) by the following emissions factors from AP-42, Volume I, Fifth Edition, Section 1.4, "Natural Gas Combustion", Tables1.4-1 and 1.4-2, July 1998:

Pollutant	Emissions Factor
NO_X	0.09803 lb/MMBtu
SO_2	0.00059 lb/MMBtu
CO	0.08235 lb/MMBtu
PE	0.00745 lb/MMBtu

The rolling, 12-month emissions limitations for NO_X, SO_2, CO, and PE were established by multiplying the hourly emissions values by the maximum number of hours in a rolling, 12-month period (8,760) and converting to tons by dividing by 2,000.

b. Emissions limitation:

VOC emissions shall not exceed 4.16 tons per rolling, 12-month period.

Applicable Compliance Method:

Compliance with the rolling, 12-month VOC emissions limitation shall be demonstrated through the recordkeeping required in d)(2).

c. Emissions Limitation:

PE shall not exceed 0.551 pounds per hour (as applicable after U.S. EPA approving the December 1, 2006, version of OAC rule 3745-31-05 as part of the SIP).

Applicable Compliance Method:

If required, compliance shall be determined through emissions tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5.

d. Emissions Limitation:

Visible particulate emissions from the dryer stack shall not exceed 20% opacity as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, compliance with the stack visible particulate emissions limitation shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

(2) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted within 6 months after issuance of the permit.

b. The emission testing shall be conducted to demonstrate compliance with the requirement to reduceVOC emissions from the dryer by an overall control efficiency of at least 95%.

The permittee shall demonstrate that both the RTO and catalytic incinerator are capable of achieving the required control efficiency in accordance with f)(2)d.

c. The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

40 CFR Part 60, Appendix A, Method 18 and Method 25 or Method 25A.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The control efficiency (i.e., the percent reduction in mass emissions between the inlet and outlet of the control system) shall be determined in accordance with the test methods and procedures specified in 3745-21-10 or an alternative test protocol approved by the Ohio EPA. The test methods and procedures selected shall be based on a consideration of the diversity of the organic species present and their total concentration, and on a consideration of the potential presence of interfering gases.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.