



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
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TO: Interested Parties / Applicant
DATE: January 14, 2005
RE: Moore Wallace North America, an RR Donnelley Company / 071-20380-00024
FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this approval is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for considerations at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosures
FNPER-MOD.dot 1/10/05



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

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January 14, 2005

Mr. Stephen Thornton
Moore Wallace North America, an RR Donnelley Company
709 A Avenue East
Seymour, Indiana 47274

Re: 071-20380-00024
First Minor Permit Revision to
FESOP 071-13917-00024

Dear Mr. Thornton:

Moore Wallace North America, an RR Donnelley Company was issued a Federally Enforceable State Operation Permit (FESOP) on February 25, 2002 for a stationary lithographic printing operation. A letter requesting changes to this permit was received on November 16, 2004. Pursuant to the provisions of 326 IAC 2-8-11.1 a minor permit revision to this permit is hereby approved as described in the attached Technical Support Document.

The revision consists of the addition of two (2) heatset web offset lithographic printing presses and a third regenerative thermal oxidizer pollution control system for VOC emissions control. These changes will increase the potential to emit of VOC of the entire source but the source-wide VOC emissions will remain at 65.6 tons per year as limited by existing FESOP. With this VOC potential emission limitation, the source will remain a minor source and the allowable emissions will remain below the Part 70 permit threshold.

Pursuant to 326 IAC 2-8-11.1, this permit shall be revised by incorporating the minor permit revision into the permit. All other conditions of the permit shall remain unchanged and in effect. Please attach a copy of this modification and the following revised permit pages to the front of the original permit.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5. If you have any questions on this matter, please contact Femi Ogunsola/EVP, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call at (973) 575-2555, press 0 and ask for Femi Ogunsola or extension 3241.

Sincerely,

Original signed by
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments
(FO/EVP)

cc: File – Jackson County
U.S. EPA, Region V
Jackson County Health Department
Air Compliance Section Inspector – Vaughn Ison
Compliance Data Section -
Administrative and Development
Technical Support and Modeling

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Minor Permit Revision to a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name:	Moore Wallace North America, an RR Donnelley Company
Source Location:	709 A Avenue East, Seymour, Indiana 47274
County:	Jackson
SIC Code:	2752
Operation Permit No.:	071-13917-00024
Operation Permit Issuance Date:	February 25, 2002.
Minor Permit Revision No.:	071-20380-00024
Permit Reviewer:	Femi Ogunsola/EVP

The Office of Air Quality (OAQ) has reviewed a minor permit revision application from Moore Wallace North America relating to the operation of a stationary lithographic printing plant.

History

On November 16, 2004, the Office of Air Quality (OAQ) received a letter informing OAQ of a proposal to add two (2) heatset web offset lithographic printing presses and a third regenerative thermal oxidizer pollution control system for VOC emissions control and requesting minor permit revisions to existing FESOP 071-13917-00024, issued on February 25, 2002.

The revision consists of the addition of two (2) heatset web offset lithographic printing presses, equipped with natural gas-fired dryer exhaust controlled by a thermal oxidizer. The presses can operated independently of each other or may operate in a tandem mode with associated in-line equipment. Press AIG-009 will be a 6-unit, single web press and press AIG-010 will be an 8-unit, double web press. The thermal oxidizer pollution control system will be expanded with the addition of a third regenerative thermal oxidizer (TAB-3) that will operate in a triplex mode with the existing two regenerative thermal oxidizers. These changes will increase the VOC potential emissions but the overall source –wide VOC potential emission limitation will remain at 65.6 tons per year as required by the existing FESOP. Therefore, the source will remain a minor source and the allowable emissions will remain below the Part 70 permit threshold.

Since there is no increase in VOC potential emission limitation of 65.6 tons per year and the source will limit the emission from the new additional facilities to less than twenty-five (25) tons per year before control. Pursuant to 326 IAC 2-8-11.1(d)(3), (5) and (7) the application is reviewed as a minor permit revision to existing FESOP.

This Technical Support Document reflects the changes consisting of the addition of two (2) heatset web offset lithographic printing presses and a third regenerative thermal oxidizer pollution control system for VOC emissions control to the source and revisions to the compliance requirements in FESOP 071-13917-00024 as follows:

Permitted Emission Units and Pollution Control Equipment

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

Eight (8) heatset web offset printing presses, controlled by **three (3)** parallel natural gas fired thermal oxidizers (ID Nos. TAB-1, TAB-2 **and** TAB-3), with a maximum heat input rate of 0.7, 1.98, and 9.0 million British thermal units (MMBtu) per hour, respectively, exhausting through stack ID No. TAB-1, TAB-2, **and** TAB-3 respectively, including:

- (a) one (1) heatset web offset printing press (ID No. AIG-002) installed in April 1993, with a maximum line speed of 1,080 feet per minute and a maximum print width of 25 inches, with associated in-line equipment;
- (b) one (1) heatset web offset printing press (ID No. AIG-004) installed in March 1994 with two (2) lines, each with a maximum line speed of 1,400 feet per minute and each with a maximum print width of 36 inches, with associated in-line equipment;
- (c) one (1) heatset web offset printing press (ID No. AIG-005) installed in November 1994 with two (2) lines, each with a maximum line speed of 1,200 feet per minute and each with a maximum print width of 50 inches, with associated in-line equipment;
- (d) one (1) heatset web offset printing press (ID No. AIG-006) installed in July 1996, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (e) one (1) heatset web offset printing press (ID No. AIG-007) installed in May 1998, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment; and
- (f) one (1) heatset web offset printing press (ID No. AIG-008) installed in May 1999, with two (2) lines, each maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment.
- (g) One (1) heatset web offset printing press (ID No. AIG-009) installed in January 2005, with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment; and**
- (h) One (1) heatset web offset printing press (ID No. AIG-010) installed in January 2005, with two (2) lines, each with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment.**

Unpermitted Emission Units and Pollution Control Equipment

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

Existing Approvals

The source has been operating under the previous FESOP renewal F071-13917-00024 issued on February 25, 2002 with an expiration date of February 25, 2007, and the following amendments and revisions:

- (a) First Administrative Amendment No.: 071-15805-00024 issued on April 23, 2002.

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

- (a) FESOP Renewal F071-13917-00024 issued on February 25, 2002; and expires on February 25, 2007.

Condition D.1.4 (Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]):

The testing requirements condition D.1.4 in the last FESOP renewal approval required the source to perform VOC testing for VOC capture system and the two (2) natural gas fired thermal oxidizers (TAB-1 and TAB-2) . This condition also requires the source to repeat the test at least once every five years from the date of valid compliance demonstration.

Reason for change: The source with this Minor Permit Revision will be adding a third thermal oxidizer to be identified as TAB-3. The new thermal oxidizer (TAB-3) is expected to be operational by July 1, 2005 and will be required to be tested 180 days after the startup of the new thermal oxidizer. The source is requesting clarification to the current condition D.1.4 for the required date of the next testing for the two existing thermal oxidizers (TAB-1 and TAB-2). The source expects that this testing will be done at the same time as the new third thermal oxidizer (TAB-3) so that subsequent testing of the three thermal oxidizers will be conducted within the same time frame. Therefore, the two (2) existing thermal oxidizers along with the capture system will be tested within 180 days after the startup of the new thermal oxidizer provided the testing is conducted within five (5) years of the last testing of the two (2) existing thermal oxidizers (TAB-1 and TAB-2). Testing all the three thermal oxidizer at the same time is necessary since they are used simultaneously as control devices to control VOC emissions and all have to be in operation when any or all the lithographic printing presses are in operation. The source shall repeat the testing at least once every five years from the date of the compliance with the testing requirements discussed above. Therefore changes have been made to Condition D.1.4 (Testing Requirements) without replication therein.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

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

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

An administratively complete minor permit revision to FESOP renewal application for the purposes of this review was received on November 16, 2004. Additional information was received on December 3, 2004 requesting that the initial request for the significant permit revision be changed to minor permit revision.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document (page 1 through 7 of TSD Appendix A)

Unrestricted Potential Emissions for this revision

This table reflects the unrestricted potential emissions of the source, excluding the emission limits that were contained in the previous FESOP.

Pollutant	Unrestricted Potential Emissions (tons/yr)
PM	0.00
PM ₁₀	0.00
SO ₂	0.00
VOC	44.78
CO	0.00
NO _x	0.00

HAPs	Unrestricted Potential Emissions (tons/yr)
Glycol Ether	2.59
Vinyl Acetate	3.15
Cumene	0.68
Xylene	0.21
Total	6.63

Potential to Emit of this revision

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

Pollutant	Potential to Emit (tons/yr)
PM	0.00
PM ₁₀	0.00
SO ₂	0.00
VOC	24.48
CO	0.00
NO _x	0.00

HAPs	Potential to Emit (tons/yr)
Glycol Ether	1.35
Vinyl Acetate	1.62
Cumene	0.42
Xylene	0.13
Total	3.52

- (a) The source wide potential to emit (as defined in 326 IAC 2-7-1(29)) as a result of this revision for each criteria pollutant is less than 100 tons per year, the potential to emit of any single HAP is less than ten (10) tons per year, and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is less than twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 2-7. The source will remain as a FESOP.

Justification for Revision

The FESOP is being revised through a Minor Permit Revision pursuant to 326 IAC IAC 2-8-11.1(d)(3), (5) and (7), since the modification does not requires an adjustment to the emissions cap limitations but will use a production limit to limit the VOC emissions from this revision to less than twenty-five (25) tons per year.

Potential to Emit After Issuance

The source has opted to remain a FESOP source. The table below summarizes the potential to emit, reflecting all limits of the emission units. Any control equipment is considered enforceable only after issuance of this FESOP and only to the extent that the effect of the control equipment is made practically enforceable in the permit. Since the source has not constructed any new emission units, the source's potential to emit is based on the emission units included in the original FESOP.

Process/emission unit	Potential To Emit (tons/year)							
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs	
							Single	Total
Previous Approval (AIG-002, 004, 005, 006, 007, 008 and Insignificant Activities)	0.55	2.19	0.17	65.6	24.24	28.89	3.86 (Glycol Ethers)	5.04
This Minor Permit Revision (AIG-009 and AIG-010)	0.00	0.00	0.00	24.48 [#]	0.00	0.00	1.62 (Vinyl Acetate)	3.52
Total Emissions	0.55	2.19	0.17	<65.6	24.24	28.89	3.86	8.56

Note: [#]The source will adopt a production limit to limit potential emission of VOC to 24.48 tons per year by limiting the ink consumption to 750 tons per year. By limiting the VOC potential emissions to less than 25 tons per year to remain a FESOP source. The source has opted to retain the VOC emission limitation cap of 65.6 tons because of time constraint to commence construction. By retaining the previous emission cap of 65.6 tons per year, the revision for addition of the two presses and a third thermal oxidizer will be reviewed as a Minor Permit Revision to the FESOP permit.

County Attainment Status

The source is located in Jackson County.

Pollutant	Status
PM ₁₀	attainment
SO ₂	attainment
NO ₂	attainment
1-hour Ozone	attainment
8-hour Ozone	basic non-attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Jackson County has been designated as nonattainment for the 8-hour ozone standard. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for nonattainment new source review.
- (b) Jackson County has been classified as attainment or unclassifiable in Indiana for all criteria pollutants other than Ozone. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability for the source section.

- (c) **Fugitive Emissions**
Since this type of operation is not one of the 28 listed source categories under 326 IAC 2-2 or 2-3 and since there are no applicable New Source Performance Standards that were in effect on August 7, 1980, the fugitive particulate matter (PM) and volatile organic compound (VOC) emissions are not counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD, Part 70, or FESOP Definition (emissions after controls, based on 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/yr)
PM	0.55
PM-10	2.19
SO ₂	0.17
VOC	65.6
CO	24.24
NO _x	28.86
Single HAP	3.86
Combination HAPs	5.04

- (a) This existing source is not a major stationary source because no nonattainment regulated pollutant is emitted at a rate of 100 tons per year or greater, and it is not in one of the 28 listed source categories.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this revision.

The two (2) lithographic printing presses, identified as AIG-009 and AIG010, are not subject to the requirements of the New Source Performance Standard, 326 IAC 12, (40 CFR 60, Subpart QQ), because they are heatset web offset lithographic presses, not publication rotogravure printing presses.

- (b) The two (2) printing presses, identified as AIG-009 and AIG010 are not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), (40 CFR 63.820, Subpart KK) because they are heatset web offset lithographic printing presses and not publication rotogravure, packaging rotogravure, or wide-web flexographic.

There are no NESHAP (40 CFR Parts 61 and 63) included in this revision.

State Rule Applicability – Entire Source

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, and after approval of this minor permit revision, the total volatile organic compounds (VOCs) delivered at the applicators of the eight (8) presses shall be limited such that potential VOC emissions will be less than 65.60 tons per twelve (12) consecutive month period, with compliance determined at the end of each month. The potential single volatile organic hazardous air pollutant (VHAP) and combined VHAP emissions are limit to less than ten (10) and twenty-five (25) tons per twelve (12) consecutive month period, respectively, with compliance determined at the end of each month. Therefore, the requirements of 326 IAC 2-7 do not apply. This source is still subject to 326 IAC 2-8-4 (FESOP).

326 IAC 2-2 (Prevention of Significant Deterioration)

This modification to an existing minor stationary source, which was initially constructed in 1993 after the August 7, 1977 rule applicability date, is not major because the source, which is not one of the 28 listed source categories, does not have the potential to emit of 250 tons per year or more of any criteria pollutant after enforceable controls and limitations. The source will continue to be both a FESOP and minor stationary source after this modification and no attainment regulated pollutant shall be emitted at a rate of 100 tons per year, which is less than the 250 ton per year PSD major source threshold. Therefore, the PSD requirements of 326 IAC 2-2 (Prevention of Significant Deterioration, PSD) continue to not apply.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))

This revision is not subject to 326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP)). This source does not have the uncontrolled potential to emit of 10 tons per year of any single HAP or 25 tons per year of any combination of HAPs. Therefore, the requirements of this rule do not apply to this revision nor to this source.

326 IAC 2-6 (Emission Reporting)

This source is located in Jackson County and the potential to emit of all regulated criteria pollutant is less than one hundred (100) tons per year. Therefore, 326 IAC 2-6 does not apply.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability – Individual Facilities

326 IAC 8-1-6 (New Facilities; General Reduction Requirements)

The two (2) new additional lithographic printing presses, identified as AIG-009 and AIG-010 are not subject to the requirements of 326 IAC 8-1-6 because the potential VOC emissions from two presses together will be limited to less than twenty-five (25) tons per year. Pursuant to FESOP renewal F071-13917-00024, the two (2) thermal oxidizers (ID Nos. TAB-1 and TAB-2) have been determined as BACT for the presses. Thermal oxidizer (TAB-3) shall also be considered BACT since it is being added to the control system.

Pursuant to 326 IAC 8-1-6 (New Facilities; General Reduction requirements), the eight (8) heatset web offset printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG-010) shall be controlled by three (3) natural gas fired thermal oxidizers, TAB-1, TAB-2 and TAB-3, with a maximum heat input rate of 0.7, 1.98 and 9.0 MMBtu/hr, respectively, at a minimum temperature of 1,400°F or a minimum temperature determined in the compliance test to maintain a minimum capture efficiency of 100 percent for press ready inks, a minimum capture efficiency of 70 percent for press ready fountain solutions and a minimum capture efficiency of 40 percent for automatic cleaning solutions and a minimum destruction efficiency of 95 percent of captured volatile organic compounds. The thermal oxidizers shall be in operation at all times during which any of the eight (8) printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG-010).

326 IAC 8-5-5 (Graphic Arts Operations)

The eight (8) printing presses (identified as AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG-010) are not subject to the requirements of 326 IAC 8-5-5, because the eight (8) printing presses do not involve packaging rotogravure, publication rotogravure or flexographic printing.

Testing Requirements

- (a) The permittee shall perform VOC testing to verify compliance with the VOC capture and destruction of the two (2) natural gas fired thermal oxidizers (TAB-1 and TAB-2) as listed in D.1.1 utilizing Methods 25 or 25A (40 CFR 60, Appendix A) for VOC, or other methods as approved by the Commissioner. The last VOC testing for these two thermal oxidizers (TAB-1 and TAB-2) was conducted on May 8, 2002.
- (b) During the period within 180 days after the startup of the thermal oxidizer identified as TAB-3, the Permittee shall perform VOC testing to verify compliance with the VOC capture and destruction as listed in D.1.1, utilizing Methods 25 or 25A (40 CFR 60, Appendix A) for VOC, or other methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration.

The testing in (a) and (b) above shall be performed at the same time within 180-day period specified in (b) above, provided the testing is conducted within five (5) years of the last testing of the two (2) existing thermal oxidizers (TAB-1 and TAB-2). Since compliance with the VOC destruction efficiency and operating temperature specified for oxidizers in the FESOP is needed to demonstrate compliance with 326 IAC 2-8 (FESOP), 326 IAC 2-2 and 326 IAC 8-1-6 this testing requirement is continued and shall be repeated for all the three thermal oxidizers (TAB-1, TAB-2 and TAB-3) at least once every five years.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also in Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

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

- (1) The three (3) natural gas fired thermal oxidizers have applicable compliance monitoring conditions as specified below:
 - (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers (TAB-1, TAB-2 and TAB-3) for measuring operating temperature. The output of this system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 1400°F.

- (b) The Permittee shall determine the hourly average temperature from the most recent valid stack test that demonstrates compliance with limits in condition D.1.1, as approved by IDEM.
- (c) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature as observed during the compliant stack test.

These monitoring conditions are necessary because the three (3) thermal oxidizers (TAB-1, TAB-2 and TAB-3) for the eight (8) printing presses, (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG010) must operate properly to ensure compliance with 326 IAC 2-8 (FESOP) and 326 IAC 8-1-6 (New Facilities; General Reduction Requirements).

Proposed changes to the FESOP Renewal F 071-13917-00024

The permit language is changed to read as follows (deleted language appears as ~~strikeouts~~, new language appears in **bold**):

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

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]
- C.12 Maintenance of Emission Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]
- C.13 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]
- C.14 Pressure Gauge Specifications

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

- C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]
- C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.17 Actions Related to Noncompliance Demonstrated by a Stack Test

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

- C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]
- C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 FACILITY OPERATION CONDITIONS

Eight (8) heat set web offset printing presses24

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

- D.1.1 FESOP Limit [326 IAC 2-8-4][326 IAC 8-1-6]
- D.1.2 FESOP Hazardous Air Pollutant Limit [326 IAC 2-8]
- D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
- D.1.5 Volatile Organic Compounds (VOC)
- D.1.6 Volatile Organic Compound Control
- D.1.7 VOC and HAP Emissions

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

- ~~D.1.8 Parametric Monitoring Thermal Oxidizer Temperature~~

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

- D.1.9 Record Keeping Requirements
- D.1.10 Reporting Requirements

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SECTION D.1

FACILITY OPERATION CONDITIONS

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

~~Six~~ **Eight (68)** heatset web offset printing presses controlled by three (3) parallel natural gas fired thermal oxidizers (ID Nos. TAB-1, ~~and~~ TAB-2 **and** TAB-3), with maximum heat input rates of 0.7, ~~and~~ 1.98, **and** 9.0 million British thermal units (MMBtu) per hour, respectively, exhausting through stack ID No. TAB-1, ~~and~~ TAB-2 **and** TAB-3, respectively, including:

- (a) One (1) heatset web offset printing press (ID No. AIG-002) installed in April 1993, with a maximum line speed of 1,080 feet per minute and a maximum print width of 25 inches, with associated in-line equipment;
- (b) One (1) heatset web offset printing press (ID No. AIG-004) installed in March 1994 with two (2) lines, each a maximum line speed of 1,400 feet per minute and each with a maximum print width of 36 inches, with associated in-line equipment;
- (c) One (1) heatset web offset printing press (ID No. AIG-005) installed in November 1994 with two (2) lines, each a maximum line speed of 1,200 feet per minute and each with a maximum print width of 50 inches, with associated in-line equipment;
- (d) One (1) heatset web offset printing press (ID No. AIG-006) installed in July 1996, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (e) One (1) heatset web offset printing press (ID No. AIG-007) installed in May 1998, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (f) One (1) heatset web offset printing press (ID No. AIG-008) installed in May 1999, **with two (2) lines, each** with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (g) **One (1) heatset web offset printing press (ID No. AIG-009) installed in January 2005, with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment; and**
- (h) **One (1) heatset web offset printing press (ID No. AIG-010) installed in January 2005, with two (2) lines, each with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;**

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

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

D.1.1 FESOP Limit [326 IAC 2-8-4] [326 IAC 8-1-6] [326 IAC 2-2]

- (a) **The total volatile organic compounds (VOC) emissions from the two (2) printing presses AIG-009 and AIG-010 shall be limited to less than twenty five (25) tons per twelve (12) consecutive month period. Therefore requirements of rule 326 IAC 8-1-6 is not applicable to these two (2) printing presses.**
- (b) The total volatile organic compounds (VOC) delivered to the applicators of the ~~six~~ **eight (68)** printing presses AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, ~~and~~ AIG-008, **AIG-009 and AIG-010** shall be limited such that the controlled VOC emissions shall not exceed 65.60 tons per twelve (12) consecutive month period based on the following **Best Available Control Technology (BACT) determination:**

- (1) 20 percent (by weight) ink VOC retention in the substrate for heatset offset printing;
 - (2) **50 percent (by weight) manual cleaning solution VOC retention in the cleaning towels;**
 - ~~(2)~~(3) A VOC capture system which shall achieve:
 - (A) 100 percent (%) minimum efficiency, by weight, for press ready inks;
 - (B) 70 percent (%) minimum efficiency, by weight, for press ready fountain solutions; and
 - (C) 40 percent (%) minimum efficiency, by weight, for automatic cleaning solutions.
 - ~~(3)~~(4) A minimum destruction efficiency of 95 percent (%), by weight, of captured VOC at the ~~two~~ **three** thermal oxidizers, TAB-1, ~~and~~ **TAB-2 and TAB-3.**
- (c) Compliance with the requirements of condition D.1.1(b) shall limit the potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) shall not apply.

D.1.2 FESOP Hazardous Air Pollutant Limit [326 IAC 2-8]

Pursuant to 326 IAC 2-8, the total volatile organic hazardous air pollutants (VHAP) delivered to the applicators of the ~~six~~ **eight (68)** printing presses AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, ~~and~~ AIG-008, **AIG-009 and AIG-010** shall be limited such that the source wide single HAP and month period, respectively. Therefore the requirements of 326 IAC 2-7 shall not apply.

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

- (a) The permittee shall perform VOC **testing to verify compliance and destruction of** ~~for~~ VOC capture ~~system~~ and destruction of the two (2) natural gas fired thermal oxidizers (TAB-1 and TAB-2) as listed in D.1., utilizing Methods 25 or 25A (40 CFR 60, Appendix A) for VOC, or other methods as approved by the Commissioner. ~~This test shall be performed to establish the minimum operating temperature to demonstrate compliance with the control efficiencies in Condition D.1.4. This test~~ **The last VOC testing was conducted on May 8, 2002** shall be repeated at least once every five years from this ~~date of this valid compliance demonstration.~~ Testing shall be conducted in accordance with Section C – Performance Testing.
- (b) **The permittee shall perform VOC testing to verify compliance with VOC capture and destruction of thermal oxidizer (TAB-3) within 180 days after start-up of thermal oxidizer as listed in D.1.1 utilizing Methods 25 or 25A (40 CFR 60, Appendix A) for VOC, or other methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing.**

The testing in (a) and (b) above shall be performed at the same time, within the 180-day period specified in (b) above, provided the testing is conducted within five (5) years of the last testing of the two (2) existing thermal oxidizers (TAB-1 and TAB-2). Since compliance with the VOC destruction efficiency and operating temperature specified for oxidizers in the FESOP is needed to demonstrate compliance with 326 IAC 2-8 (FESOP), 326 IAC 2-2 and 326 IAC 8-1-6, this testing requirement is continued and shall be repeated for all the three thermal oxidizers (TAB-1, TAB-2 and TAB-3) at least once every five years.

D.1.6 Volatile Organic Compound Control

- (a) The capture system ~~and the two (2) thermal oxidizers, identified as TAB-1 and TAB-2~~ shall be in operation at all times when the ~~six eight (68)~~ printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, ~~and AIG-008, and AIG-009 and AIG-010~~) are in operation. **All emissions from the capture system shall be directed to one of the three (3) thermal oxidizers, identified as TAB-1, TAB-2 and TAB-3.**
- (b) When operating the ~~six eight (68)~~ printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, ~~and AIG-008, and AIG-009 and AIG-010~~), the thermal oxidizers (TAB-1, ~~and TAB-2 and/or TAB-3~~), ~~with a maximum heat input rate of 0.7 and 1.98 million MMBtu/hr, respectively,~~ **controlling the VOC emissions** shall maintain a minimum operating temperature of 1,400°F or a temperature determined in the most recent compliance stack tests to maintain a minimum destruction efficiency of 95 percent of captures volatile organic compounds. Compliance with this condition shall deem 326 IAC 8-1-6 and 326 IAC 2-8 satisfied.
- (c) When operating the ~~six eight (68)~~ printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, ~~AIG-009 and AIG-010~~), the VOC capture system (~~the press dryers~~) shall maintain a ~~minimum duct pressure or fan amperage or duct pressure or fan amperage determined in the most recent compliance stack tests~~ **negative pressure** to maintain a minimum capture efficiency of 100 percent for press ready inks, a minimum capture efficiency of 70 percent for press ready fountain solutions, and a minimum capture efficiency of 40 percent for automatic cleaning solutions. Compliance with this condition shall deem 326 IAC 8-1-6 and 326 IAC 2-8 satisfied.

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.1.8 Parametric Monitoring Thermal Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers (TAB-1, ~~and TAB-2, and TAB-3~~) for measuring operating temperature. The output of the system shall be recorded, ~~and that temperature shall be greater than or equal to the temperature used to demonstrate compliance during the most recent compliance stack test~~ **as an hourly average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 1400°F.**
- (b) ~~The duct pressure or fan amperage shall be observed at least once per week when the thermal oxidizers are in operation. This pressure or amperage shall be maintained within the range established in the most recent compliance stack test.~~ **The Permittee shall determine the hourly average temperature from the most recent valid stack test that demonstrates compliance with limits in condition D.1.1, as approved by IDEM.**
- (c) ~~The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the reading is outside the above mentioned range for any one reading. Failure to take response steps in accordance with Section C — Compliance Response Plan — Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.~~ **On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature as observed during the compliant stack test.**

Recordkeeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2, and D.1.7, the Permittee shall maintain records in accordance with (1) through (75) below. Records maintained for (1) through (75) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Conditions D.1.1, D.1.2, and D.1.7

- (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents;
 - ~~(2) A log of the dates of use;~~
 - (32) The heatset offset printing ink, fountain solution; cleaning solution; and miscellaneous other solvent solution usages for each month;
 - (43) The total VOC usage for each month and the weight of the VOCs emitted for each compliance period;
 - (54) The total HAP usage for each month and the weight of single and total HAPs emitted for each compliance period; **and**
 - (65) The continuous temperature records for the thermal oxidizers and the temperatures used to demonstrate compliance during the most recent compliance stack test.
 - ~~(6) Weekly records of the duct pressure or fan amperage.~~
- (b) All records shall be maintained in accordance with Section C – General Record Keeping Requirements of this permit.

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

FESOP QUARTERLY REPORT

Source Name: Moore Wallace North America
 Source Address: 709 A Avenue East, Seymour, Indiana 47274
 Mailing Address: P.O. Box 385, Seymour, Indiana 47274
 FESOP No.: 071-13917-00024
 Facility: ~~Six~~ **Eight (68)** heatset web offset presses (ID Nos. AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, **AIG-009, AIG-010**)
 Parameter: Volatile Organic Compounds (VOC)
 Limit: Total VOC emissions from these ~~six~~ **eight (68)** presses combined shall not exceed 65.06 ton/yr, based on (1) 20% (wt.) ink VOC retention in the substrate for offset printing; (2) **50% (wt.) manual cleaning solution VOC retention in cleaning towels**; (3) the following capture efficiencies for the capture system of the thermal oxidizer controlling the ~~six~~ **eight (68)** presses: ink – 100%, fountain solution – 70%, and automatic cleaning solution 40%; and each thermal oxidizer minimum destruction efficiency of captured VOC of 95% (wt.).

YEAR: _____

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

- No deviations occurred in this quarter.
- Deviations occurred in this quarter.
 Deviation has been reported on: _____

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

Attach a signed certification to complete this report.

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

FESOP QUARTERLY REPORT

Source Name: Moore Wallace North America
 Source Address: 709 A Avenue East, Seymour, Indiana 47274
 Mailing Address: P.O. Box 385, Seymour, Indiana 47274
 FESOP No.: 071-13917-00024
 Facility: ~~Six~~ **Eight (68)** heatset web offset presses (ID Nos. AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, **AIG-009, AIG-010**)
 Parameter: Single HAP and total HAP emissions
 Limit: The total combined emissions of the worst case single VHAP and total VHAPs from these ~~six~~ **eight (68)** presses combined shall not exceed 10 and 25 tons per year, respectively, based on (1) 20% (wt.) ink VHAP retention in the substrate for offset printing; (2) **50% (wt.) manual cleaning solution VHAP retention in cleaning towels**; (3) the following capture efficiencies for the capture system of the thermal oxidizer controlling the ~~six~~ **eight (68)** presses: ink – 100%, fountain solution – 70%, and automatic cleaning solution 40%; and each thermal oxidizer minimum destruction efficiency of captured VOC of 95% (wt.).

YEAR: _____

Month	Column 1a	Column 1a	Column 2a	Column 2a	Column 1a + 2a	Column 1b + 2b
	Single HAP This Month	Total HAP This Month	Single HAP Previous 11 months	Total HAP Previous 11 Months	Single HAP 12 Month Total	Total HAP 12 Month Total
Month 1						
Month 2						
Month 3						

- No deviations occurred in this quarter.
- Deviations occurred in this quarter.
 Deviation has been reported on: _____

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

Attach a signed certification to complete this report.

Conclusion

The permit revision shall be subject to the conditions of the attached proposed **Minor Permit Revision No. 071-20380-00024**.



Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.in.gov/idem

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

**Moore Wallace North America, an RR Donnelley Company
709 A Avenue East
Seymour, Indiana 47274**

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

The Permittee must comply with all conditions of this permit. Noncompliance with any provision of this permit is grounds for enforcement action; permit termination, revocation and reissuance, or modification; and denial of a permit renewal application. It shall not be a defense for the Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. An emergency does constitute an affirmative defense in an enforcement action provided the Permittee complies with the applicable requirements set forth in Section B, Emergency Provisions.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: F071-13917-00024	
Issued by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: February 25, 2002 Expiration Date: February 25, 2007
First Minor Permit Revision 071-20380-00024	Pages affected: 3, 4, 5, 24, 25, 26, 27, 31, 32
Issued by: Original signed by Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: January 14, 2005



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

- C.11 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]
- C.12 Maintenance of Emission Monitoring Equipment [326 IAC 2-8-4(3)(A)(iii)]
- C.13 Monitoring Methods [326 IAC 3][40 CFR 60][40 CFR 63]
- C.14 Pressure Gauge Specifications

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5]

- C.15 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]
- C.16 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.17 Actions Related to Noncompliance Demonstrated by a Stack Test

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

- C.18 General Record Keeping Requirements [326 IAC 2-8-4(3)][326 IAC 2-8-5]
- C.19 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.20 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 FACILITY OPERATION CONDITIONS

Eight (8) heat set web offset printing presses 24

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

- D.1.1 FESOP Limit [326 IAC 2-8-4][326 IAC 8-1-6]
- D.1.2 FESOP Hazardous Air Pollutant Limit [326 IAC 2-8]
- D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)][326 IAC 2-1.1-11]
- D.1.5 Volatile Organic Compounds (VOC)
- D.1.6 Volatile Organic Compound Control
- D.1.7 VOC and HAP Emissions
- D.1.8 Thermal Oxidizer Temperature

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

- D.1.9 Record Keeping Requirements
- D.1.10 Reporting Requirements

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Quarterly Deviation and Compliance Monitoring Report Form 33

SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-8-3(b)]

The Permittee owns and operates a stationary source, operation of heatset web offset printing press operation.

Authorized Individual:	Vice President of Manufacturing
Source Address:	709 A Avenue East, Seymour, Indiana 47274
Mailing Address:	709 A Avenue East, Seymour, Indiana 47274
SIC Code:	2752
Source Location Status:	Jackson
County Status:	Attainment for 1-hr Ozone Standard Basic Non-attainment for 8-hr Ozone Standard Attainment for all other criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source under PSD; Minor Source, Section 112 of the Clean Air Act

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

This stationary source consists of the following emission units and pollution control devices:

Eight (8) heatset web offset printing presses, controlled by three (3) parallel natural gas fired thermal oxidizers (ID Nos. TAB-1, TAB-2 and TAB-3), with maximum heat input rate of 0.7, 1.98 and 9.0 million British thermal units (MMBtu) per hour, respectively, exhausting through stack ID No. TAB-1 and TAB-2, respectively, including:

- (a) one (1) heatset web offset printing press (ID No. AIG-002) installed in April 1993, with a maximum line speed of 1,080 feet per minute and a maximum print width of 25 inches, with associated in-line equipment;
- (b) one (1) heatset web offset printing press (ID No. AIG-004) installed in March 1994 with two (2) lines, each with a maximum line speed of 1,400 feet per minute and each with a maximum print width of 36 inches, with associated in-line equipment;
- (c) one (1) heatset web offset printing press (ID No. AIG-005) installed in November 1994 with two (2) lines, each with a maximum line speed of 1,200 feet per minute and each with a maximum print width of 50 inches, with associated in-line equipment;
- (d) one (1) heatset web offset printing press (ID No. AIG-006) installed in July 1996, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (e) one (1) heatset web offset printing press (ID No. AIG-007) installed in May 1998, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;

- (f) one (1) heatset web offset printing press (ID No. AIG-008) installed in May 1999, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (g) One (1) heatset web offset printing press (ID No. AIG-009) installed in January 2005, with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment; and
- (h) One (1) heatset web offset printing press (ID No. AIG-010) installed in January 2005, with two (2) lines, each with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

This stationary source also includes the following insignificant activities, as defined in 326 IAC 2-7-1(21):

- (a) Natural gas fired combustion sources with heat input equal to or less than 10 million British thermal units per hour;
- (b) combustion source flame safety purging on startup;
- (c) storage tanks with capacity less than or equal to 1,000 gallons and annual throughput less than 12,000 gallons;
- (d) vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids;
- (e) cleaners and solvents characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kPa, measured at 38°C, or
 - (2) having a vapor pressure equal to or less than 0.7 kPa, measured at 20°C;
- (f) the following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment;
- (g) closed loop heating and cooling systems;
- (h) infrared cure equipment;
- (i) replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment;
- (j) trimmers that do not produce fugitive emissions and that are equipped with a dust collector or trim material recovery;
- (k) paved and unpaved roads and parking lots with public access;
- (l) blowdown for any of the following: sight glass; boiler; compressors; pumps; and cooling towers;
- (m) filter or coalesce media changeout; and



SECTION D.1 FACILITY OPERATION CONDITIONS

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

Eight (8) heatset web offset printing presses controlled by three (3) parallel natural gas fired thermal oxidizers (ID Nos. TAB-1, TAB-2 and TAB-3), with maximum heat input rates of 0.7, 1.98, and 9.0 million British thermal units (MMBtu) per hour, respectively, exhausting through stack ID No. TAB-1, TAB-2 and TAB-3, respectively, including:

- (a) One (1) heatset web offset printing press (ID No. AIG-002) installed in April 1993, with a maximum line speed of 1,080 feet per minute and a maximum print width of 25 inches, with associated in-line equipment;
- (b) One (1) heatset web offset printing press (ID No. AIG-004) installed in March 1994 with two (2) lines, each a maximum line speed of 1,400 feet per minute and each with a maximum print width of 36 inches, with associated in-line equipment;
- (c) One (1) heatset web offset printing press (ID No. AIG-005) installed in November 1994 with two (2) lines, each a maximum line speed of 1,200 feet per minute and each with a maximum print width of 50 inches, with associated in-line equipment;
- (d) One (1) heatset web offset printing press (ID No. AIG-006) installed in July 1996, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (e) One (1) heatset web offset printing press (ID No. AIG-007) installed in May 1998, with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (f) One (1) heatset web offset printing press (ID No. AIG-008) installed in May 1999, with two (2) lines, each with a maximum line speed of 1,400 feet per minute and a maximum print width of 38 inches, with associated in-line equipment;
- (g) One (1) heatset web offset printing press (ID No. AIG-009) installed in January 2005, with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment; and
- (h) One (1) heatset web offset printing press (ID No. AIG-010) installed in January 2005, with two (2) lines, each with a maximum line speed of 1,800 feet per minute and a maximum print width of 38 inches, with associated in-line equipment.

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

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

D.1.1 FESOP Limit [326 IAC 2-8-4] [326 IAC 8-1-6] [326 IAC 2-2]

- (a) The total volatile organic compounds (VOC) emissions from the two (2) printing presses AIG-009 and AIG-010 shall each be limited to less than twenty five (25) tons per twelve (12) consecutive month period. Therefore requirements of rule 326 IAC 8-1-6 is not applicable to these two (2) printing presses.

- (b) The total volatile organic compounds (VOC) delivered to the applicators of the eight (8) printing presses AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG-010 shall be limited such that the controlled VOC emissions shall not exceed 65.60 tons per twelve (12) consecutive month period based on the following Best Available Control Technology (BACT) determination:
- (1) 20 percent (by weight) ink VOC retention in the substrate for heatset offset printing;
 - (2) 50 percent (by weight) manual cleaning solution VOC retention in the cleaning towels;
 - (3) A VOC capture system which shall achieve:
 - (A) 100 percent (%) minimum efficiency, by weight, for press ready inks;
 - (B) 70 percent (%) minimum efficiency, by weight, for press ready fountain solutions; and
 - (C) 40 percent (%) minimum efficiency, by weight, for automatic cleaning solutions.
 - (4) A minimum destruction efficiency of 95 percent (%), by weight of captured VOC at the three thermal oxidizers, TAB-1, TAB-2 and TAB-3.
- (c) Compliance with the requirements of condition D.1.1(a) shall limit the potential to emit of VOC to less than 100 tons per twelve (12) consecutive month period. Therefore, the requirements of 326 IAC 2-7 (Part 70) and 326 IAC 2-2 (PSD) shall not apply.

D.1.2 FESOP Hazardous Air Pollutant Limit [326 IAC 2-8]

Pursuant to 326 IAC 2-8, the total volatile organic hazardous air pollutants (VHAP) delivered to the applicators of the eight (8) printing presses AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG-010 shall be limited such that the source wide single HAP and month period, respectively. Therefore the requirements of 326 IAC 2-7 shall not apply.

D.1.3 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1), (6)] [326 IAC 2-1.1-11]

- (a) The permittee shall perform VOC testing to verify compliance with the VOC capture and destruction of the two (2) natural gas fired thermal oxidizers (TAB-1 and TAB-2) as listed in D.1.1 utilizing Methods 25 or 25A (40 CFR 60, Appendix A) for VOC, or other methods as approved by the Commissioner. The last VOC testing was conducted on May 8, 2002. Testing shall be conducted in accordance with Section C – Performance Testing.
- (b) The permittee shall perform VOC testing to verify compliance with the VOC capture and destruction of the thermal oxidizer (TAB-3) within 180 days after start-up of the thermal oxidizer as listed in D.1.1, utilizing Methods 25 or 25A (40 CFR 60, Appendix A) for VOC, or other methods as approved by the Commissioner. This test shall be repeated at least once every five years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C – Performance Testing.

The testing in (a) and (b) above shall be performed at the same time within the 180-day period specified in (b) above, provided the testing is conducted within five (5) years of the last testing of the two (2) existing thermal oxidizers (TAB-1 and TAB-2). Since compliance with the VOC destruction efficiency and operating temperature specified for oxidizers in the FESOP is needed to demonstrate compliance with 326 IAC 2-8 (FESOP), 326 IAC 2-2 and 326 IAC 8-1-6 this testing requirement is continued and shall be repeated for all the three thermal oxidizers (TAB-1, TAB-2 and TAB-3) at least once every five years.

D.1.5 Volatile Organic Compounds (VOC) and HAP

Compliance with the VOC and HAP content and usage limitations contained in Conditions D.1.1 and D.1.2 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.6 Volatile Organic Compound Control

- (a) The capture system shall be in operation at all times when the eight (8) printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, and AIG-009 and AIG-010) are in operation. All emissions from the capture system shall be directed to one of the three (3) thermal oxidizers, identified as TAB-1, TAB-2 and TAB-3
- (b) When operating the eight (8) printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG-010), the thermal oxidizers (TAB-1, TAB-2 and/or TAB-3) controlling the VOC emissions shall maintain a minimum operating temperature of 1,400°F or a temperature determined in the most recent compliance stack tests to maintain a minimum destruction efficiency of 95 percent of captured volatile organic compounds. Compliance with this condition shall deem 326 IAC 8-1-6 and 326 IAC 2-8 satisfied.
- (c) When operating the eight (8) printing presses (AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009 and AIG-010), the VOC capture system (the press dryers) shall maintain a negative pressure to maintain a minimum capture efficiency of 100 percent for press ready inks, a minimum capture efficiency of 70 percent for press ready fountain solutions, and a minimum capture efficiency of 40 percent for automatic cleaning solutions. Compliance with this condition shall deem 326 IAC 8-1-6 and 326 IAC 2-8 satisfied.

D.1.7 VOC and HAP Emissions

- (a) Compliance with Conditions D.1.1 and D.1.2 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound (VOC) usage, and single HAP and total HAP usage for the most recent twelve (12) month period.
- (b) Compliance with Conditions D.1.1 and D.1.2 shall be demonstrated using the following equation for VOC and HAP usage: $\text{VOC, HAP usage} = [(\text{VOC, HAP input}) \times \text{control efficiency} \times \text{flash-off factor}]$

D.1.8 Thermal Oxidizer Temperature

- (a) A continuous monitoring system shall be calibrated, maintained, and operated on the thermal oxidizers (TAB-1, TAB-2, and TAB-3) for measuring operating temperature. The output of the system shall be recorded as an hourly average. From the date of issuance of this permit until the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature of 1400°F.
- (b) The Permittee shall determine the hourly average temperature from the most recent valid stack test that demonstrates compliance with limits in condition D.1.1, as approved by IDEM.

- (c) On and after the date the approved stack test results are available, the Permittee shall operate the thermal oxidizer at or above the hourly average temperature as observed during the compliant stack test.

Recordkeeping and Reporting Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.1.9 Record Keeping Requirements

- (a) To document compliance with Conditions D.1.1, D.1.2, and D.1.7, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC and HAP usage limits and/or the VOC and HAP emission limits established in Conditions D.1.1, D.1.2, and D.1.7
- (1) The amount and VOC and HAP content of each coating material and solvent used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used. Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents
 - (2) The heatset offset printing ink, fountain solution; cleaning solution; and miscellaneous other solvent solution usages for each month;
 - (3) The total VOC usage for each month and the weight of the VOCs emitted for each compliance period;
 - (4) The total HAP usage for each month and the weight of single and total HAPs emitted for each compliance period; and
 - (5) The continuous temperature records for the thermal oxidizers and the temperatures used to demonstrate compliance during the most recent compliance stack test.
- (b) All records shall be maintained in accordance with Section C – General Record Keeping Requirement of this permit.

D.1.10 Reporting Requirements

A quarterly summary of the information to document compliance with Conditions D.1.1 and D.1.2 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “authorized individual” as defined by 326 IAC 2-1.1-1(1).

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

FESOP QUARTERLY REPORT

Source Name: Moore Wallace North America
 Source Address: 709 A Avenue East, Seymour, Indiana 47274
 Mailing Address: P.O. Box 385, Seymour, Indiana 47274
 FESOP No.: 071-13917-00024
 Facility: Eight (8) heatset web offset presses (ID Nos. AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009, AIG-010)
 Parameter: Volatile Organic Compounds (VOC)
 Limit: Total VOC emissions from these eight (8) presses combined shall not exceed 65.06 ton/yr, based on (1) 20% (wt.) ink VOC retention in the substrate for offset printing; (2) 50% (wt.) manual cleaning solution VOC retention in cleaning towels; (3) the following capture efficiencies for the capture system of the thermal oxidizer controlling the eight (8) presses: ink – 100%, fountain solution – 70%, and automatic cleaning solution 40%; and each thermal oxidizer minimum destruction efficiency of captured VOC of 95% (wt.).

YEAR: _____

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

- No deviations occurred in this quarter.
- Deviations occurred in this quarter.
 Deviation has been reported on: _____

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

Attach a signed certification to complete this report.

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

FESOP QUARTERLY REPORT

Source Name: Moore Wallace North America
 Source Address: 709 A Avenue East, Seymour, Indiana 47274
 Mailing Address: P.O. Box 385, Seymour, Indiana 47274
 FESOP No.: 071-13917-00024
 Facility: Eight (8) heatset web offset presses (ID Nos. AIG-002, AIG-004, AIG-005, AIG-006, AIG-007, AIG-008, AIG-009, AIG-010)
 Parameter: Single HAP and total HAP emissions
 Limit: The total combined emissions of the worst case single VHAP and total VHAPs from these eight (8) presses combined shall not exceed 10 and 25 tons per year, respectively, based on (1) 20% (wt.) ink VHAP retention in the substrate for offset printing; (2) 50% (wt.) manual cleaning solution VHAP retention in cleaning towels; (3) the following capture efficiencies for the capture system of the thermal oxidizer controlling the eight (8) presses: ink – 100%, fountain solution – 70%, and automatic cleaning solution 40%; and each thermal oxidizer minimum destruction efficiency of captured VOC of 95% (wt.).

YEAR: _____

Month	Column 1a	Column 1a	Column 2a	Column 2a	Column 1a + 2a	Column 1b + 2b
	Single HAP This Month	Total HAP This Month	Single HAP Previous 11 months	Total HAP Previous 11 Months	Single HAP 12 Month Total	Total HAP 12 Month Total
Month 1						
Month 2						
Month 3						

- No deviations occurred in this quarter.
- Deviations occurred in this quarter.
 Deviation has been reported on: _____

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

Attach a signed certification to complete this report.

Appendix A

Company Name: Moore Wallace North America, an RR Donnelley Company
Address City IN Zip: 709 A Avenue East, Seymour, IN 47274
FESOP Revision No.: 071-20380-00024
Reviewer: Femi Ogunsola / EVP

Uncontrolled Potential Emissions (tons/year)			
Emissions Generating Activity			
Pollutant	Printing Press AIG-009	Printing Press AIG-010	TOTAL
PM	0.00	0.00	0.00
PM ₁₀	0.00	0.00	0.00
SO ₂	0.00	0.00	0.00
NOx	0.00	0.00	0.00
VOC	16.07	28.71	44.78
CO	0.00	0.00	0.00
total HAPs	2.14	4.50	6.63
worst case single HAP	1.05(Vinyl Acetate)	2.10 (Vinyl Acetate)	3.15 (Vinyl Acetate)
Total emissions based on rated capacity at 8,760 hours/year.			
Limited/Controlled Potential Emissions (tons/year)			
Emissions Generating Activity			
Pollutant	Printing Press AIG-009*	Printing Press AIG-010*	TOTAL
PM	0.00	0.00	0.00
PM ₁₀	0.00	0.00	0.00
SO ₂	0.00	0.00	0.00
NOx	0.00	0.00	0.00
VOC	8.16	16.32	24.48
CO	0.00	0.00	0.00
total HAPs	1.14	2.38	3.52
worst case single HAP	0.55 (Vinyl Acetate)	1.07 (Vinyl Acetate)	1.62 (Vinyl Acetate)
Total emissions based on rated capacity at 8,760 hours/year, after control.			

Notes:

Printing Presses AIG-009 and AIG- 010 along with existing presses AIG-002, 004, 005, 006, 007 will be controlled by three thermal oxidizers (TAB-1, TAB-2 and TAB-3) with destruction efficiency of 95%.

AIG-009 and AIG-010 are new additional emission units for this revision.

**Appendix A: Emissions Calculations
Heatset Web Offset Press
AIG-009 with 95% Control Device**

Company Name: Moore Wallace North America, an RR Donnelley Company
Address City IN Zip: 709 A Avenue East, Seymour, Indiana 47274
Permit No.: FESOP MPR 071-20380-00024
Reviewer: Femi Ogunsola/EVP

Materials Used and Emissions - Maximum											
	Material Applied (gal/hr)	(#/hr)	Material Applied (gal/yr)	(ton/yr)	VOC Applied (#/hr)	Stack Emissions #/hr	ton/yr	Pressroom Emissions #/hr	ton/yr	Total Emissions #/hr	ton/yr
Paper		4,147		18,165							
Ink	13.19	110.81	115,557	485.3	42.11	1.68	7.38	0.00	0.00	1.68	7.38
Fountain Solution Concentrate	0.71	6.51	6,212	28.5	0.48	0.02	0.07	0.14	0.63	0.16	0.71
Manual Blanket Wash	0.41	2.67	3,595	11.7	2.67	0.00	0.00	1.33	5.84	1.33	5.84
Miscellaneous Materials	5.54	49.29	48,534	215.9	0.49	0.00	0.00	0.49	2.14	0.49	2.14
Total						45.75	1.70	7.45	1.97	8.62	16.07

	Total VOCs Applied	45.75 lb/hr	200.37 ton/yr
	VOC inlet to control device	34.02 lb/hr	149.02 ton/yr
Pressroom	Stack Emissions	1.70 lb/hr	7.45 ton/yr
	Fugitive Emissions	1.97 lb/hr	8.62 ton/yr
	Total Emissions	3.67 lb/hr	16.07 ton/yr

Materials Used and Emissions - Typical											
	Material Applied (gal/hr)	Material Applied (#/hr)	Material Applied (gal/yr)	(Ton/yr)	VOC Applied (#/hr)	Stack Emissions #/hr	ton/yr	Pressroom Emissions #/hr	ton/yr	Total Emissions #/hr	ton/yr
Paper		3,456		8,986							
Ink	7.33	61.56	38,109	160.1	23.39	0.94	2.43	0.00	0.00	0.94	2.43
Fountain Solution Concentrate	0.39	3.61	2,049	9.4	0.27	0.01	0.02	0.08	0.21	0.09	0.23
Manual Blanket Wash	0.27	1.78	1,423	4.6	1.78	0.00	0.00	0.89	2.31	0.89	2.31
Miscellaneous Materials	3.08	27.38	16,006	71.2	0.27	0.00	0.00	0.27	0.71	0.27	0.71
Total					25.71	0.95	2.46	1.24	3.23	2.19	5.68

	Total VOCs Applied	25.71 lb/hr	66.85 ton/yr
	VOC inlet to control device	18.90 lb/hr	49.14 ton/yr
Pressroom	Stack Emissions	0.95 lb/hr	2.46 ton/yr
	Fugitive Emissions	1.24 lb/hr	3.23 ton/yr
	Total Emissions	2.19 lb/hr	5.68 ton/yr

Press Operating Data			
Maximum	1 webs		8760 hours/year
	6 units		1800 fpm press speed
	38 in. web width		49.25 million sq in/hour
		40 # stock	
Typical	1 webs		5200 hours/year
	6 units		1500 fpm press speed
	38 in. web width		41.04 million sq in/hour
		40 # stock	

**Appendix A: Emissions Calculations
Heatset Web Offset Press
AIG-009 with 95% Control Device**

**Company Name: Moore Wallace North America, an RR Donnelley Company
Address City IN Zip: 709 A Avenue East, Seymour, Indiana 47274
Permit No.: FESOP MPR 071-20380-00024
Reviewer: Femi Ogunsola/EVP**

Materials Consumption and Composition				
Maximum	2.25 # ink/mil. sq in @	38% VOCs	8.40 lb/gal	2.250 lb ink/mill sq in
	0.0024 gal ftn sol/mill sq in/unit @	0.68 lb/gal	9.17 lb/gal	0.132 lb ftn sol/mill sq in
	0.0018 gal solvent/inch web width/unit/hour - Manual		6.50 lb VOC/gal	0.054 lb solvent/mill sq in
	0.113 gal Misc. Mat./mil. sq. in @	0.09 lb/gal	8.90 lb/gal	1.001 lb solvent/mill sq in
Typical	1.50 # ink/mil. sq in @	38% VOCs	8.40 lb/gal	1.500 lb ink/mill sq in
	0.0016 gal ftn sol/mill sq in/unit @	0.68 lb/gal	9.17 lb/gal	0.088 lb ftn sol/mill sq in
	0.0012 gal solvent/inch web width/unit/hour - Manual		6.50 lb VOC/gal	0.043 lb solvent/mill sq in
	0.075 gal Misc. Mat./mil. sq. in @	0.09 lb/gal	8.90 lb/gal	0.667 lb solvent/mill sq in

Capture/Retention Data	
Ink Oil -	20% Retention 100% Capture 0% Non-Stack
Fountain Solution -	0% Retention 70% Capture 30% Non-Stack
Manual Blanket Wash -	50% Retention 0% Capture 50% Non-Stack
Miscellaneous Materials - (Adhesives, Scratch-Off, Silicone, etc.)	0% Retention 0% Capture 100% Non-Stack

Composite Miscellaneous Materials						
	VOC Content (lb/gal)	HAP Conte (lb/gal)	Density (lb/gal)	% of Total Usage	Maximum Usage (gal/yr)	Typical Usage (gal/yr)
Remoist Glue	0.14	0.00	8.50	12.3%	5,974	1,970
Self Seal Glue	0.10	0.00	8.17	8.6%	4,177	1,377
Pocket Glue	0.11	0.10	9.90	27.8%	13,504	4,453
Spine Glue	0.03	0.00	9.20	0.6%	292	96
UV Coating	0.00	0.00	9.10	11.9%	5,790	1,910
Label Glue	0.10	0.09	8.50	18.5%	9,002	2,969
PLV Glue	0.10	0.00	8.38	8.2%	3,973	1,310
PID Diluent	0.10	0.00	8.34	0.8%	367	121
No-Stat	0.00	0.00	8.17	7.2%	3,480	1,148
Anti-Offset	0.10	0.00	8.34	4.1%	1,975	651
				100.0%	48,534	16,006
Weighted VOC Content =		0.09 lb/gal				
Weighted Density =		8.90 lb/gal				
Weighted HAP Content =		0.04 lb/gal				

**Appendix A: Emissions Calculations
Heatset Web Offset Press
AIG-010 with 95% Control Device**

**Company Name: Moore Wallace North America, an RR Donnelley Company
Address City IN Zip: 709 A Avenue East, Seymour, Indiana 47274
Permit No.: FESOP MPR 071-20380-00024
Reviewer: Femi Ogunsola/EVP**

Materials Used and Emissions - Maximum											
	Material Applied (gal/hr)	Material Applied (#/hr)	Material Applied (gal/yr)	Material Applied (ton/yr)	VOC Applied (#/hr)	Stack Emissions (#/hr)	Pressroom Emissions (ton/yr)	Pressroom Emissions (#/hr)	Total Emissions (ton/yr)	Total Emissions (#/hr)	Total Emissions (ton/yr)
Paper		8,294		36,329							
Ink	26.38	221.62	231,114	970.7	84.21	3.37	14.75	0.00	0.00	3.37	14.75
Fountain Solution Concentrate	1.89	17.35	16,566	76.0	1.29	0.05	0.20	0.39	1.69	0.43	1.89
Manual Blanket Wash	0.55	3.56	4,793	15.6	3.56	0.00	0.00	1.78	7.79	1.78	7.79
Miscellaneous Materials	11.08	98.58	97,068	431.8	0.98	0.00	0.00	0.98	4.28	0.98	4.28
Total					90.03	3.41	14.95	3.14	13.76	6.55	28.71

Total VOCs Applied	90.03 lb/hr	394.35 ton/yr
VOC inlet to control device	68.27 lb/hr	299.03 ton/yr
Pressroom Stack Emissions	3.41 lb/hr	14.95 ton/yr
Fugitive Emissions	3.14 lb/hr	13.76 ton/yr
Total Emissions	6.55 lb/hr	28.71 ton/yr

Materials Used and Emissions - Typical											
	Material Applied (gal/hr)	Material Applied (#/hr)	Material Applied (gal/yr)	Material Applied (ton/yr)	VOC Applied (#/hr)	Stack Emissions (#/hr)	Pressroom Emissions (ton/yr)	Pressroom Emissions (#/hr)	Total Emissions (ton/yr)	Total Emissions (#/hr)	Total Emissions (ton/yr)
Paper		6,912		17,971							
Ink	14.66	123.12	76,217	320.1	46.79	1.87	4.87	0.00	0.00	1.87	4.87
Fountain Solution Concentrate	1.05	9.64	5,463	25.1	0.71	0.03	0.07	0.21	0.56	0.24	0.62
Manual Blanket Wash	0.36	2.37	1,897	6.2	2.37	0.00	0.00	1.19	3.08	1.19	3.08
Miscellaneous Materials	6.16	54.77	32,011	142.4	0.54	0.00	0.00	0.54	1.41	0.54	1.41
Total					50.41	1.90	4.93	1.94	5.05	3.84	9.98

Total VOCs Applied	50.41 lb/hr	131.08 ton/yr
VOC inlet to control device	37.93 lb/hr	98.61 ton/yr
Pressroom Stack Emissions	1.90 lb/hr	4.93 ton/yr
Fugitive Emissions	1.94 lb/hr	5.05 ton/yr
Total Emissions	3.84 lb/hr	9.98 ton/yr

Press Operating Data			
Maximum	2 webs 8 units 38 in. web width	40 # stock	8760 hours/year 1800 fpm press speed 98.50 million sq in/hour
Typical	2 webs 8 units 38 in. web width	40 # stock	5200 hours/year 1500 fpm press speed 82.08 million sq in/hour

**Appendix A: Emissions Calculations
Heatset Web Offset Press
AIG-010 with 95% Control Device**

**Company Name: Moore Wallace North America, an RR Donnelley Company
Address City IN Zip: 709 A Avenue East, Seymour, Indiana 47274
Permit No.: FESOP MPR 071-20380-00024
Reviewer: Femi Ogunsola/EVP**

Materials Consumption and Composition				
Maximum	2.25 # ink/mil. sq in @	38% VOCs	8.40 lb/gal	2.250 lb ink/mill sq in
	0.0024 gal ftn sol/mill sq in/unit @	0.68 lb/gal	9.17 lb/gal	0.176 lb ftn sol/mill sq in
	0.0018 gal solvent/inch web width/unit/hour - Manual		6.50 lb VOC/gal	0.036 lb solvent/mill sq in
	0.11 gal Misc. Mat./mil. sq. in @	0.09 lb/gal	8.90 lb/gal	1.001 lb solvent/mill sq in
Typical	1.50 # ink/mil. sq in @	38% VOCs	8.40 lb/gal	1.500 lb ink/mill sq in
	0.0016 gal ftn sol/mill sq in/unit @	0.68 lb/gal	9.17 lb/gal	0.117 lb ftn sol/mill sq in
	0.0012 gal solvent/inch web width/unit/hour - Manual		6.50 lb VOC/gal	0.029 lb solvent/mill sq in
	0.08 gal Misc. Mat./mil. sq. in @	0.09 lb/gal	8.90 lb/gal	0.667 lb solvent/mill sq in

Capture/Retention Data	
Ink Oil -	20% Retention 100% Capture 0% Non-Stack
Fountain Solution -	0% Retention 70% Capture 30% Non-Stack
Manual Blanket Wash -	50% Retention 0% Capture 50% Non-Stack
Miscellaneous Materials - (Adhesives, Scratch-Off, Silicone, etc.)	0% Retention 0% Capture 100% Non-Stack

Composite Miscellaneous Materials		VOC Cont	HAP Cont	Density	% of Total Usage	Maximum Usage	Typical Usage
		(lb/gal)	(lb/gal)	(lb/gal)		(gal/yr)	(gal/yr)
Remoist Glue	0.14	0.00	8.50	12.3%	11,947	3,940	
Self Seal Glue	0.10	0.00	8.17	8.6%	8,353	2,755	
Pocket Glue	0.11	0.10	9.90	27.8%	27,008	8,907	
Spine Glue	0.03	0.00	9.20	0.6%	584	192	
UV Coating	0.00	0.00	9.10	11.9%	11,581	3,819	
Label Glue	0.10	0.09	8.50	18.5%	18,004	5,937	
PLV Glue	0.10	0.00	8.38	8.2%	7,946	2,620	
PID Diluent	0.10	0.00	8.34	0.8%	734	242	
No-Stat	0.00	0.00	8.17	7.2%	6,960	2,295	
Anti-Offset	0.10	0.00	8.34	4.1%	3,950	1,303	
				100.0%	97,068	32,011	
Weighted VOC Content =	0.09 lb/gal						
Weighted Density =	8.90 lb/gal						
Weighted HAP Content =	0.04 lb/gal						

Appendix A: Emissions Calculations
Heatset Web Offset Press
AIG-009 with 95% Control Device
(HAP Emissions Calculations)
Company Name: Moore Wallace North America, an RR Donnelley Company
Address City IN Zip: 709 A Avenue East, Seymour, Indiana 47274
Permit No.: FESOP MPR 071-20380-00024
Reviewer: Femi Ogunsola/EVP

I. Estimated Material Composition and Emission Factors

Material (wt%)	VOC Content	Captured	Retained in Paper or Wipers
Ink	38%	100%	20%
Fountain Solution Concentrate	7%	70%	0%
Manual Blanket Wash	100%	0%	50%
Miscellaneous Materials	1%	0%	0%

5,200 Hours Average 8,760 Hours Maximum
--

II. Estimated VOC and HAP Emission Rates

Material	VOC Input (lb/hr)		VOC Emissions (lb/hr)		HAP Emissions (lb/hr)		VOC (TPY)		HAP (TPY)	
	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
Ink	23.39 0% HAP in VOC	42.11	0.94	1.68 0.0%	0.00 0.000	0.00 0.000	2.43	7.38	0.00 0.000	0.00 0.000
Fountain Solution	0.27 100% HAP in VOC	0.48 Glycol Ether	0.09	0.16 100.0%	0.090 0.090	0.162 0.162	0.23	0.71	0.233 0.233	0.708 0.708
Manual Blanket Wash	1.78 6.5% HAP in VOC	2.67 Cumene Xylene	0.89	1.33 5.0% 1.5%	0.058 0.044 0.013	0.087 0.067 0.020	2.31	5.84	0.150 0.116 0.035	0.380 0.292 0.088
Miscellaneous Materials	0.27 49.1% HAP in VOC	0.49 Vinyl Acetate	0.27	0.49 49.1%	0.133 0.133	0.240 0.240	0.71	2.14	0.347 0.347	1.051 1.051
Total	25.71	45.75	2.19	3.18	0.28	0.49	5.68	16.07	0.73	2.14

Individual HAP		Average	Maximum	Average	Maximum
	Glycol Ether	0.090	0.162	0.233	0.708
	Vinyl Acetate	0.133	0.240	0.347	1.051
	Cumene	0.044	0.067	0.116	0.292
	Xylene	0.013	0.020	0.035	0.088
Total HAP		0.281	0.488	0.730	2.138

Appendix A: Emissions Calculations
Heatset Web Offset Press
AIG-010 with 95% Control Device
(HAP Emissions Calculations)
Company Name: Moore Wallace North America, an RR Donnelley Company
Address City IN Zip: 709 A Avenue East, Seymour, Indiana 47274
Permit No.: FESOP MPR 071-20380-00024
Reviewer: Femi Ogunsola/EVP

I. Estimated Material Composition and Emission Factors

Material (wt%)	VOC Content	Captured	Retained in Paper or Wipers
Ink	38%	100%	20%
Fountain Solution Concentrate	7%	70%	0%
Manual Blanket Wash	100%	0%	50%
Miscellaneous Materials	1%	0%	0%

5,200 Hours Average
8,760 Hours Maximum

II. Estimated VOC and HAP Emission Rates

Material	VOC Input (lb/hr)		VOC Emissions (lb/hr)		HAP Emissions (lb/hr)		VOC (TPY)		HAP (TPY)	
	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum	Average	Maximum
Ink	46.79 0% HAP	84.21	1.87	3.37 0.0%	0.00 0.000	0.00 0.000	4.87	14.75	0.00 0.000	0.00 0.000
Fountain Solution	0.71 100% HAP	1.29 Glycol Ether	0.24	0.43 100.0%	0.239 0.239	0.431 0.431	0.62	1.89	0.622 0.622	1.887 1.887
Manual Blanket Wash	2.37 6.5% HAP	3.56 Cumene Xylene	1.19	1.78 5.0% 1.5%	0.077 0.059 0.018	0.116 0.089 0.027	3.08	7.79	0.200 0.154 0.046	0.506 0.389 0.117
Miscellaneous Materials	0.54 49.1 % HAP	0.98 Vinyl Acetate	0.54	0.98 49.1%	0.267 0.267	0.480 0.480	1.41	4.28	0.693 0.693	2.102 2.102
Total	50.41	90.03	3.84	5.58	0.58	1.03	9.98	28.71	1.52	4.50
Individual HAP										
		Glycol Ether			0.239	0.431			0.622	1.887
		Vinyl Acetate			0.267	0.480			0.693	2.102
		Cumene			0.059	0.089			0.154	0.389
		Xylene			0.018	0.027			0.046	0.117
	Total HAP				0.583	1.026			1.516	4.495