

## STATEMENT OF BASIS

For the issuance of Draft Air Permit # 0921-AOP-R4 AFIN: 16-00181

1. PERMITTING AUTHORITY:

Arkansas Department of Environmental Quality  
8001 National Drive  
Little Rock, Arkansas 72219-8913

2. APPLICANT:

Quebecor World – Jonesboro Division  
4708 Krueger Drive  
Jonesboro, Arkansas 72401

3. PERMIT WRITER:

Paul Osmon

4. PROCESS DESCRIPTION AND NAICS CODE:

NAICS Description: Heatset Web Offset Printing  
NAICS Code: 323110

5. SUBMITTALS:

June 23, 2005

6. REVIEWER'S NOTES:

This permit modification is issued for a facility expansion. The facility proposes to install 3 new presses (SN-15, SN-16, and SN-17) and to install a new regenerative thermal oxidizer (SN-18) which will be sized to control the emissions from all of the presses. The existing oxidizers will remain in place and operable. They will be used to control the facility at a reduced operating rate when the new oxidizer is off line as an alternate operating scenario. All emission limits have been recalculated based on higher destruction efficiencies in the new oxidizer, successfully stack testing the existing oxidizers at a higher efficiency, and most material usage limits have been reduced. The printing press authorized by the previous permit modification (SN-14) was not installed.

7. COMPLIANCE STATUS:

The following summarizes the current compliance of the facility including active/pending enforcement actions and recent compliance activities and issues.

There are no active/pending enforcement actions related to this facility.

8. APPLICABLE REGULATIONS:

PSD Applicability

Did the facility undergo PSD review in this permit (i.e., BACT, Modeling, etc.)? N

Has the facility undergone PSD review in the past? N

Is the facility categorized as a major source for PSD? N

    ≥ 100 tpy and on the list of 28? N

    ≥ 250 tpy all other? N

PSD Netting

Was netting performed to avoid PSD review in this permit? N

Source and Pollutant Specific Regulatory Applicability

Source	Pollutant	Regulation (NSPS, NESHAP or PSD)
None	NA	

9. EMISSION CHANGES:

The following table summarizes plantwide emission changes associated with this permitting action.

Plantwide Permitted Emissions (tpy)			
Pollutant	Permit # 0921-AOP-R3	Permit # 0921-AOP-R4	Change
PM	2.1	3.3	1.2
PM <sub>10</sub>	2.1	3.3	1.2
SO <sub>2</sub>	0.2	0.3	0.1
VOC	298.9	248.3	-50.6
CO	22.6	36.1	13.5
NO <sub>x</sub>	26.9	42.9	16.0
Glycol Ethers	12.61	15.30	2.68
R.T. 1.0 HAP	78.8	58.02	-20.78
R.T. 0.1 HAP	0.01	0.01	0

10. MODELING:

Criteria Pollutants

Pollutant	Emission Rate (lb/hr)	NAAQS Standard ( $\mu\text{g}/\text{m}^3$ )	Averaging Time	Highest Concentration ( $\mu\text{g}/\text{m}^3$ )	% of NAAQS
PM <sub>10</sub>	0.8	50	Annual	NA	0%
		150	24-Hour	NA	0%
SO <sub>2</sub>	0.1	80	Annual	NA	0%
		1300	3-Hour	NA	0%
		365	24-Hour	NA	0%
VOC	87.7	0.12	1-Hour (ppm)	0.0160	13.3%
CO	8.3	10,000	8-Hour	NA	0%
		40,000	1-Hour	NA	0%
NO <sub>x</sub>	9.8	100	Annual	NA	0%

Non-Criteria Pollutants:

1<sup>st</sup> Tier Screening (PAER)

Estimated hourly emissions from the following sources were compared to the Presumptively Acceptable Emission Rate (PAER) for each compound. The Department has deemed the PAER to be the product, in lb/hr, of 0.11 and the Threshold Limit Value ( $\text{mg}/\text{m}^3$ ), as listed by the American Conference of Governmental Industrial Hygienists (ACGIH).

Pollutant	TLV ( $\text{mg}/\text{m}^3$ )	PAER (lb/hr) = $0.11 \times \text{TLV}$	Proposed lb/hr	Pass?
Napthalene (Printing Presses R.T. 1.0 HAP)	52	5.72	5.12	Y
Glycol Ethers (Dipropylene Glycol Monomethyl Ether)	606	66.6	15.39	Y

Pollutant	TLV (mg/m <sup>3</sup> )	PAER (lb/hr) = 0.11 × TLV	Proposed lb/hr	Pass?
Methanol/MEK (Ink Jet Printers R.T. 1.0 HAP)	262/590	28.8/64.9	7.3	Y
MEK (Press Room R.T. 1.0 HAP)	590	64.9	4.9	Y
Vinyl Acetate (Press Room R.T. 0.1 HAP)	35	3.85	0.002	Y

Other Modeling: No styrene or hydrogen sulfide emissions.

11. CALCULATIONS:

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
1, 2, 3, 4, 5, 8, 10, 13, 15, 16, 17	Material balance	Actual Usages	-	-	Point source emission from the presses are controlled by the afterburners. Spread sheet assumptions are that 80% of the ink, 40% of the automatic blanket wash, and 70% of the fountain solution are captured (point source emissions). The 20% of the ink not captured stays in the web. 50% of the Manual Blanket wash stays in the rag (not emitted). All other usage is emitted as a non-point source.
7, 9, 18	Material balance	Actual Usages	Afterburner	97%	All captured VOC and HAP from the presses undergoes 97% destruction
7, 9, 18 & press dryers	AP-42 – Natural gas combustion	PM <sub>10</sub> – 7.6 SO <sub>2</sub> – 0.6 VOC – 5.5 CO – 84.0 NO <sub>x</sub> – 100.0	-	-	Emission factors are in units of lb/MMft <sup>3</sup>

SN	Emission Factor Source (AP-42, testing, etc.)	Emission Factor (lb/ton, lb/hr, etc.)	Control Equipment	Control Equipment Efficiency	Comments
11	Material Balance	Actual Usage	None	NA	
12	Material Balance	Actual Usage	None	NA	

12. TESTING REQUIREMENTS:

The permit requires testing of the following sources.

SN	Pollutants	Test Method	Test Interval	Justification
07 & 09	VOC	25A	5 years	Necessary to prove the continued effectiveness of the control device.
18	VOC	25A	Initial & 5 years	Necessary to prove the effectiveness of the purchased equipment.

13. MONITORING OR CEMS

The permittee must monitor the following parameters with CEMS or other monitoring equipment (temperature, pressure differential, etc.)

SN	Parameter or Pollutant to be Monitored	Method (CEM, Pressure Gauge, etc.)	Frequency	Report (Y/N)
07 09 18	Afterburner Operating Temperature	Continuous Monitor	Continuous	Y

14. RECORD KEEPING REQUIREMENTS:

The following are items (such as throughput, fuel usage, VOC content, etc.) that must be tracked and recorded.

SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
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SN	Recorded Item	Permit Limit	Frequency	Report (Y/N)
All Presses	Annual Usages and contents of Ink, Automatic Blanket Wash, Manual Blanket Wash, and Fountain Solution	See Permit	Monthly	Y
Ink Jet Printers SN-11	Annual Usages and contents of MeOH Ink, MeOH Wash, and Makeup Solvent	See Permit	Monthly	Y
Misc. Solvents and Adhesives SN-12	Annual Usages and contents of Solvents and Adhesives	See Permit	Monthly	Y

15. OPACITY:

SN	Opacity	Justification for limit	Compliance Mechanism
07, 09, & 18	5%	Department Guidance	Natural gas fuel.

16. DELETED CONDITIONS:

Former SC	Justification for removal
S.C. 9	Printing Press SN-14 was not installed. New permit is less than 250 tpy; separate reporting for newly installed equipment not necessary.
Part S.C. 4	All the presses now have a single emission limit for the tpy requirements. Individual record keeping for printing supply usages by press have been removed from the permit.

17. VOIDED, SUPERCEDED, OR SUBSUMED PERMITS:

List all active permits voided/superceded/subsumed by the issuance of this permit.

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18. CONCURRENCE BY:

The following supervisor concurs with the permitting decision.

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Thomas Rheaume, P.E.